

ORIGINAL ARTICLE

## DEVELOPMENT AND VERIFICATION OF AN INVOLVEMENT QUESTIONNAIRE TO FACILITATE THE SOCIALIZATION OF NEW GRADUATE NURSES

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**Abstract** Aim: The purpose of this study was to develop a “questionnaire on involvement” for new graduate nurses, to measure the impact of support systems that the nurses recognized as helping them achieve socialization. The study also aimed to verify the questionnaire’s reliability and validity.

Methods: Social learning theory was used as the conceptual framework to construct a draft questionnaire containing 42 items. After examining its content validity, the questionnaire was used as the basis of a paper-based survey for 999 new graduate nurses. The reliability and validity of the questionnaire were examined using Cronbach’s  $\alpha$  coefficient, a factor analysis, and calculated correlations with the workplace social support scale and the burnout scale.

Results: The data provided by 216 participants were analyzed (valid response rate: 76.1%). Based on the factor analysis results, the questionnaire was reconstructed; the final version consisted of 21 items associated with 3 factors. The Cronbach’s  $\alpha$  coefficient for the 21 items as a whole was 0.93. The data showed a positive correlation with the workplace social support scale and a negative correlation with the burnout scale.

Conclusion: The present study confirmed the reliability, construct validity, and criterion-related validity of the questionnaire on involvement described above. New graduate nurses recognize that involvement provides a support system that promotes socialization; the questionnaire has proven useful in measuring involvement.

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**Key words:** new graduate nurse; socialization; involvement in socialization.

### Introduction

In the context of issues that reflect the need to improve clinical nursing competence and reduce the early turnover of new graduate nurses, programs that train new nursing staff have been obligated to make a good faith effort to improve results since 2010. When it comes to providing the right type of training support, new graduate nurses are known to need help with organizational socialization, as well as training to ensure their clinical nursing competence<sup>1)</sup>. It is extremely important for effective training managers to find effective ways of promoting socialization.

The term, “socialization” commonly refers to the process by which members of a group

come to internalize the values of the group<sup>2)</sup>. Organizational socialization relates this concept to organizations; it is defined as follows: “new entrants to an organization adapt themselves to the organization by learning its codes, values, and culture, playing an expected role, and acquiring the skills necessary for job performance.” Once organizational socialization is achieved, turnover intention is reduced<sup>3)</sup>. Thus, from the individual standpoint, organizational socialization is a process of workplace adaptation. According to Fisher, it is a process of change and learning for new workers<sup>4)</sup>. For people who have just found a job, the concept of socialization has two aspects: organizational and occupational socialization. Occupational socialization is “the whole

process, from finding a job to retiring, as well as the process through which a worker acquires expected job performance ability and attitude, a code of professional ethics, and work value<sup>5)</sup>. A program designed to measure the smooth and effective adaptation (socialization) of individuals joining an organization is viewed as a three-pronged organizational socialization strategy, consisting of group training, the presentation of an individual's main career path within the organization, and social interaction<sup>6)</sup>. The theme of this study, "involvement" is an aspect of social interaction, focusing on the ways in which existing organization members and stakeholders engage with new employees.

To socialize a nurse, institutions rely on the concept of socialization within a profession (professional socialization), which is defined as "a process through which the concordance of professional identity and professional role become more structured and internalized"<sup>7)</sup>. According to Kramer, the socialization of a nurse has two phases: basic education and finding a job. When an individual becomes a working nurse, re-socialization in the workplace begins; this is achieved through four phases<sup>8)</sup>. In the transition process from nursing student to nurse, both organizational socialization and professional socialization become problematic<sup>9)</sup>. In overseas studies, socialization support has been studied in the context of educational programs designed to help new graduate nurses adapt to work. It is important to incorporate both active education and socialization schemes into adaptation programs for new graduate nurses learning to provide emergency care<sup>10)</sup>. In simulations for new nursing graduates, professional role socialization, building confidence in their abilities and practice, and learning in a safe and supportive environment have been shown to be effective<sup>11)</sup>. Taormina has developed and used an organizational socialization scale, the Organizational Socialization Inventory (OSI) as an indicator to investigate ways

of preventing burnout among nurses<sup>12)</sup>. In Japan, various studies have explored the socialization of new graduate nursing professionals. One such study used the mental health inventory to measure the reality shock response of new graduate nurses adapting to a new workplace<sup>13)</sup>; another study approached workplace adaptation as a process of acquiring an identity<sup>14)</sup>.

Previous studies have carried out interview surveys of new graduate nurses and preceptors to identify ways of supporting the socialization of new graduate nurses; these have identified 14 items that can promote the independence of new graduate nurses<sup>15, 16)</sup>. Using these results, we developed an involvement questionnaire to assess how people working and interacting with new graduate nurses supported their socialization at work; this was measured in reference to the new graduate nurses' awareness. We believe that these results may help to prevent turnover.

The present study has developed an involvement questionnaire to measure the types of involvement that new graduate nurses consider helpful, and to verify the reliability and validity of the data acquired.

## Methods

1. The process of preparing draft proposals for the involvement questionnaire

1) The extraction of involvement factors that facilitate the socialization of new graduate nurses

The draft survey focused on the fact that the involvement of senior nurses was "considered helpful by new graduate nurses;" the data were obtained through semi-structured interviews with new graduate nurses. The draft combined these factors with evidence of "what senior nurses were intentionally doing to promote the socialization of new graduate nurses," obtained through an interview survey of senior nurses directly engaged in training new graduate nurses.

These interview data were coded by response,

following confirmation of similarities and differences in meaning, to clarify “the behavior that promotes the socialization of new graduate nurses.” The findings were then divided into sub-categories (grouped into responses with the same meaning) to generate categories inductively and to establish the concept for each category. These processes produced a total of 14 categories and 47 items defined as factors of involvement.

### 2. Establishing the constructive concept

The involvement questionnaire focused on social interaction-related aspects of effective socialization-assistance measures that targeted individuals; it was developed into a measurement scale based on the awareness of new graduate nurses. Socialization is a personal learning process. It is regarded as a form of social learning, in which learning “continuously and effectively changes as a result of experience and training”<sup>17)</sup>. To develop the scale, researchers noted that the socialization process constituted social learning; they assumed the constructive concept of involvement, based on social learning theory. In this theory, learning from immediate experience is established through substitution, by observing others’ behavior and its results<sup>18)</sup>. Consequently, the present study hypothesizes that socialization may be promoted as a result of involvement, namely, the direct and indirect support of people including senior nurses, supervisors, colleagues, and others, through social interaction.

### 3. Operational definition of the terms

The terms used in this study are defined as follows:

- 1) New graduate nurse: a first-year nurse who has been employed right after completing a basic nursing education program.
- 2) Socialization: the process of becoming familiar with the workplace atmosphere and the job, maintaining good relationships with other members of the team, and having the ability to exhibit responsibly appropriate behavior and provide safe nursing procedures.

- 3) Involvement to facilitate the socialization of new graduate nurses: the direct and indirect support that new graduate nurses receive from senior nurses, supervisors, colleagues, and others—support that the new graduate nurses consider helpful.

### 2. Examination of the content validity of the involvement questionnaire

To ensure the content validity of the involvement questionnaire, we asked a total of nine subjects (chief nurses who had developed education programs for new graduate nurses in hospitals with at least 500 beds in Japan’s Tohoku district; teachers at basic education institutions, and socialization specialists) to participate voluntarily in a written survey. Opinions were gathered in writing and a hearing was conducted to ensure that the content and category classifications were appropriate; the hearing also explored whether the content was sufficient for an examination of involvement promoting socialization.

The draft included 47 items in 14 categories; the opinions obtained from specialists were classified and the question items with low concordance within the category classification system were revised or deleted. The final version had 8 categories and 42 items. In the category “Teaching the right way to work,” which included content designed to promote socialization, some items were added, after distinguishing the section on organizational socialization from that on occupational socialization.

The concept, “involvement to facilitate the socialization of new graduate nurses was assumed to influence two types of socialization: organizational socialization (becoming familiar with the organization) and occupational socialization (becoming familiar with the profession) New graduate nurses enter a period of their lives in which they begin to grow as nursing professionals. Since “professionalism” refers to the attitude and behavior of individuals considered to

be professionals<sup>19)</sup>, it was seen as important for senior nurses to model these characteristics. As a nurse's professionalism will undergo long-term and fluid development and change throughout his/her career, this factor was collated with the attainment targets of new graduate nurse training (basic stance and attitude), as defined in the structure of clinical practice ability described in the Ministry of Health, Labour and Welfare report, *Conference to improve the clinical practical ability of new graduate nurses*. The draft was enhanced by adding interview questions to the category, "Share my attitude to work." Thus, 42 question items were approved for the draft involvement questionnaire.

The eight categories were as follows: "Promote the learning of tasks;" "Teach the right way of working;" "Promote occupational socialization;" "Feedback;" "Provide psychological support;" "Provide tailored individual instruction;" "Support new graduate nurses by involving others and sharing their knowledge;" and "Maintain a learning environment." For these question items in eight categories, six question items were prepared to "promote the learning of tasks" and "teach the right way of working;" five question items were prepared for each category; a total of 42 question items were developed.

### 3. Verifying the reliability and validity of the involvement questionnaire

#### 1) Data collection

##### Selecting survey subjects and institutions

Medical institutions with 200–900 beds in the Tohoku and Hokkaido region of Japan were randomly selected from the official websites of WAM NET and the Japan Council for Quality Healthcare. The objects and purpose of this study were explained to people with supervisory or management duties in every relevant hospital. From the 48 hospitals that agreed to participate in this study, we obtained the number of survey subjects; this allowed us to supply the right

number of questionnaires. A total of 999 new graduate nurses took part in the survey.

#### (2) Survey method

An anonymous self-administered questionnaire was sent to 48 medical institutions with 200–900 beds in the Hokkaido and North Tohoku region (three prefectures), which had agreed to cooperate with this study. Nursing directors were asked to distribute a request document, the survey form, and a self-addressed envelope to new graduate nurses only. Each survey subject was asked to return the completed survey directly to the researcher. The survey period was between February and March, 2012.

#### 2) Survey content

The paper-based survey included each subject's attributes (age, gender, type of license, clinical department, years of experience as an assistant nurse, and intention to continue working in the hospital), draft involvement questionnaire, existing social support scale for the workplace<sup>20)</sup>, and burnout scale<sup>21)</sup>.

#### 3) Method of analysis

SPSS 19.0 for Windows was used for the following analyses. The level of significance was set at  $p < 0.05$  or  $p < 0.01$ .

##### (1) Item analysis

Participants responded to questions on the 42-item involvement questionnaire using a 4-point scale. The response options were as follows: 4 points) describes me/the situation extremely well; 3 points) describes me/the situation somewhat; 2 points) does not describe me/the situation very well; 1 point) does not describe me/the situation at all. The mean value and standard deviation for each item were calculated and the ceiling and the floor effects were confirmed.

##### (2) Verification of construct validity (factor analysis)

To ensure the construct validity of the questionnaire, each item was scored on a scale and an exploratory factor analysis was carried out

(principal factor method; promax rotation).

(3) Verification of criterion-related validity

To ensure criterion-related validity, the correlation (Pearson's  $r$ ) was calculated using the burnout and workplace social support scales<sup>20</sup>; their existing reliability and validity were confirmed.

The workplace social support scale used to verify criterion-related validity was developed by Komaki et al.<sup>20</sup>. Based on the content of existing scales, the items in this scale were adapted to refer to the support provided by supervisors, senior nurses, and colleagues within a wide range of human relations; it was a scale of "perceived support" that implied the availability of support. The association with other scales involving young workers in their twenties employed by organizations (e.g., scale reliability; motivation at work; commitment to the organization; stress response) was also examined<sup>20</sup>.

In our study, "involvement" was used to measure aspects that the new graduate nurses were aware of. The present study used this scale because it was appropriate for the subjects and associated with the measured concept of direct and indirect involvement. The reliability and validity of this scale were verified<sup>20</sup>.

The burnout scale was developed by Pines in 1981; it was translated and revised by Inaoka to accommodate Japanese culture and the Japanese way of thinking. In this scale, a state of burnout involves physical fatigue, as well as psychological and physical exhaustion. This scale therefore consisted of these three viewpoints. Its reliability and validity were verified<sup>21</sup>. It has been reported that new graduate nurses in a state of reality shock may experience physical symptoms, anxiety, sleeplessness, social action disorder, and a tendency toward depression<sup>13, 22</sup>. It therefore seemed appropriate to measure their degree of reality shock using the burnout scale.

To use the two criterion-related validity questionnaires, we obtained the permission of the

developers.

(4) Verification of reliability

The Cronbach's  $\alpha$  coefficient of each scale was calculated to verify internal consistency.

(5) Verification of validity

To assess the intention to continue working, we compared the scores and conducted a G-P analysis.

4) Ethical considerations

We provided written information about the following topics to the institutional nursing directors at the survey institutions and to the survey subjects: the purpose of this study; voluntary participation in this study; the fact that those who chose not to participate would not be disadvantaged; the fact that subjects' anonymity would be secured and privacy was guaranteed. The receipt of questionnaires from survey subjects confirmed that those subjects had consented to participate in the study. This study was conducted after obtaining the approval of the ethical committee of the graduate school in which the researcher was registered as a doctoral student and the ethical committees of the author's affiliated institutions.

## Results

1. Attributes of the subjects

The questionnaire was distributed to 999 new graduate nurses employed by 48 hospitals with at least 200 beds in Japan's Hokkaido and Tohoku region; all consented to participate in the study. Responses were obtained from 284 participants (valid response rate: 28.4%). Of these respondents, 216 first-year post-graduation nurses without clinical experience were included in the study (valid response rate: 76.1%). Respondents with missing data on the involvement questionnaire or work experience as assistant nurses were excluded.

Table 1 shows the respondents' attributes. The

**Table 1.** Summary of the subjects

Items	Group	Frequency	n=216
			(%)
Gender	Male	12	5.6
	Female	204	94.4
License	Nurse	195	90.3
	Maternity nurse	15	6.9
	Public health nurse	6	2.8
Clinical department	Internal medicine	72	33.3
	Surgery	65	30.1
	Other	79	36.6
The intention to continue working in the institution	Yes	101	46.8
	No	26	12.0
	Neither	89	41.2

respondents consisted of 12 men and 204 women and the mean age was  $23.5 \pm 3.8$  years. When asked about their intention to continue working in their current workplace, 101 subjects (46.8%) responded "Yes," 26 subjects (12.0%) responded "No," and 89 subjects (41.2%) responded "Neither" (Table 1).

## 2. Verification of the reliability and validity of the involvement questionnaire

### 1) Examination of the question items and results of the factor analysis

The results are shown in Table 2. After confirming the mean value, standard deviation, and valid response rate for each item—and excluding items with a ceiling effect—a factor analysis (principal factor method: promax rotation) of the 216 subjects' responses to 42 items on the draft involvement questionnaire was carried out. The results were as follows: 3 factors and 21 items were extracted after the reference was defined as an eigenvalue of 1.0 or more, with factor loadings of 0.4 or more; the percentage to account for the total variance of 21 items and 3 factors prior to rotation was 57.9 %.

The eleven question items were included in the first factor (in decreasing order of factor loading); these included the following questions: "Identify something that the new graduate nurse does well and praise him/her for it," "Reduce any

feelings of tension the new graduate nurse may have," "When a new graduate nurse fails at a task, cheer him/her up without leaving him/her unattended," "Respect the new graduate nurse's opinions," "Give instructions about nursing practice firmly and clearly but with compassion; e.g., respond gently to the new graduate nurse after a stern reprimand," "To instruct a new graduate nurse in nursing practice, help him/her organize his/her workload so that he/she has some free time," and "Provide a sense of security by talking about your own experience and relating it to the new graduate nurse's experience." The subjects observed the practice situation carefully and grew more familiar with the new graduate nurse base, while giving sympathetic responses from the viewpoint of a new graduate nurse. The results indicated that new graduate nurses were aware of the various types of involvement that allowed them to carry out tasks by themselves. This category was therefore called: [Involve each new graduate nurse by promoting his/her independence while also showing respect].

There were five items associated with the second factor, including the following: "Share my own experience of self-development," "Discuss the importance of keeping promises and maintaining strict punctuality," and "Model appropriate behavior and a suitable appearance as a member of society." The new graduate

nurses obtained indirect support by observing the attitudes above. This was therefore defined as follows: [Involve the new graduate nurse by sharing my own proactive attitude toward work].

The third factor consisted of five items, including: "Create opportunities for the new graduate nurse to experience nursing procedures," "Ask other staff members to cooperate in providing guidance to the new graduate nurse," and "Provide nursing practice instructions and respond to the new graduate nurse's situation in a timely manner." When it came to nursing practice, subjects seemed to involve other staff members in enhancing the experience of new graduate nurses. They also maintained an environment in which new graduate nurses could learn by themselves, by providing clues. This situation was known as: [Involve the new graduate nurse by preparing an individually tailored environment]. There was a correlation among all of these three factors (Table 2).

For the Item-Total correlation, we confirmed the correlation between the scores for each item and the total score of the subscale to which each item belonged and found that there was no item with  $r < 0.20$ . We therefore determined that the items included in the subscale could have appropriately reflected the concept being explained.

## 2) Examination of internal consistency

The Cronbach's  $\alpha$  coefficient of the entire 21 items was 0.93. The Cronbach's  $\alpha$  coefficient by subscale was as follows: 0.92 for [Involve each new graduate nurse by promoting his/her independence while also showing respect]; 0.80 for [Involve the new graduate nurse by sharing my own proactive attitude toward work]; and 0.80 for [Involve the new graduate nurse by preparing an individually tailored environment]. Based on these results, in all the three subscales, the Cronbach's  $\alpha$  coefficient for internal consistency was 0.80 – 0.92, demonstrating sufficient

reliability.

## 3) Examination of validity

For the concurrent validity, the correlation (Pearson's  $r$ ) was calculated using two existing scales (the social support scale for the workplace and the burnout scale). The correlation between the total score of 21 items in the involvement questionnaire and the workplace social support scale was  $r = 0.77$ ; the correlation with the burnout scale was  $r = -0.49$ ; for both the correlations, the significance level was 1%.

In relation to the intention to continue working, a comparison of the mean value of the total score of 21 items showed that subjects "with the intention to continue working" were  $67.7 \pm 9.7$  (mean  $\pm$  standard deviation [SD]), while subjects "without the intention to continue working" were  $58.1 \pm 12.3$ . Subjects who responded "neither" were  $61.6 \pm 8.8$ , which indicated a significant difference ( $p < 0.05$ ) (Table 3).

A G-P analysis was carried out after classifying the results into two groups, based on the mean total scores of 21 items. There was a significant difference between the two groups; it was judged that all items corresponded appropriately to the total scores.

## Discussion

1. Verification of the reliability and validity of the involvement questionnaire

It was shown that the results of the Cronbach's  $\alpha$  coefficient confirmed the reliability of the involvement questionnaire.

The following types of validity were examined: content validity, construct validity, and criterion-related validity.

Content validity was examined by obtaining the opinions of experts specializing in socialization and new-graduate-nurse education programs, during the period when the involvement ques-

**Table 2.** Factor analysis results for the development of an involvement questionnaire

Item number	Pattern matrix	Factors		
		1	2	3
1. Involve each new graduate nurse by promoting his/her independence while also showing respect. ( $\alpha=0.92$ )				
II-37	Identify something that the new graduate nurse does well and praise him/her for it.	.869	.105	-.200
II-13	Reduce any feelings of tension the new graduate nurse may have.	.794	-.138	.126
II-29	When a new graduate nurse fails at a task, cheer him/her up without leaving him/her unattended.	.787	-.063	.061
II-38	Respect the new graduate nurse's opinions.	.778	.254	-.266
II-30	Give instructions about nursing practice firmly and clearly but with compassion; e.g., respond gently to the new graduate nurse after a stern reprimand.	.756	-.054	.146
II-39	To instruct a new graduate nurse in nursing practice, help him/her organize his/her workload so that he/she has some free time.	.750	-.077	-.026
II-21	Provide a sense of security by talking about my own experience and relating it to the new graduate nurse's experience.	.746	-.127	.137
II-12	Observe the new graduate nurse's behavior and let him/her know what he/she can do to improve.	.688	-.027	-.004
II-5	Sympathize with the new graduate nurse's anxiety.	.582	-.137	.066
II-14	Instruct the new graduate nurse in nursing practice in a way that suits his/her personality.	.547	.193	.007
II-40	Demand a proactive attitude from the new graduate nurse; encourage him/her to create opportunities to cooperate with other staff members.	.479	.202	.030
2. Involve the new graduate nurse by sharing my own proactive attitude toward work. ( $\alpha=0.80$ )				
II-36	Share my own experience of self-development.	.082	.753	-.016
II-35	Discuss the importance of keeping promises and maintaining strict punctuality.	-.138	.726	.060
II-19	Model appropriate behavior and a suitable appearance as a member of society.	-.044	.723	-.087
II-27	Involve the new graduate nurse by sharing my own proactive attitude toward work.	.114	.601	.065
II-26	Teach the new graduate nurse about the organization's customs and ways of working.	-.157	.539	.189
3. Involve the new graduate nurse by preparing an individually tailored environment. ( $\alpha=0.80$ )				
II-24	Create opportunities for the new graduate nurse to experience nursing procedures.	-.120	-.017	.735
II-23	Ask other staff members to cooperate in providing guidance to the new graduate nurse.	.179	.052	.534
II-22	Provide nursing practice instructions and respond to the new graduate nurse's situation in a timely manner.	.271	.109	.446
II-25	When providing nursing practice instructions, include elements of learning.	.060	.289	.438
II-6	When providing nursing practice instructions, take the new graduate nurse's skill level into consideration when choosing tasks.	.198	.138	.398

( $\alpha = 0.933$  of the entire 21 items)

#### Factor correlation matrix

1. Involve each new graduate nurse by promoting his/her independence while also showing respect.	1.000	.633	.631
2. Involve the new graduate nurse by sharing my own proactive attitude toward work.	.633	1.000	.590
3. Involve the new graduate nurse by preparing an individually tailored environment.	.631	.590	1.000

Factor sampling: principal factor method

Rotation: Promax with Kaiser Normalization

The percentage that accounts for the total variance of 21 items in 3 factors prior to rotation is 57.9%.

**Table 3.** The intention to continue working and a comparison of involvement scores

Items	n	Mean $\pm$ SD for 21 items	P value
With the intention to continue working	101	67.7 $\pm$ 9.7	* } *
Without the intention to continue working	26	58.1 $\pm$ 12.3	
Neither	89	61.6 $\pm$ 8.8	
Total	216	64.0	

\*P<0.05



tionnaire was being developed. In the present study, "involvement" has been used to measure the awareness of new graduate nurses working in clinical settings for the first time; its content was based on the expected role of nurses in the workplace. By obtaining the opinions of specialists, including clinical practice specialists, the text could be revised to include perspectives on working as a member of a team and questions relating to occupational socialization. They were therefore considered useful.

To confirm the construct validity, the involvement questionnaire compared graduate nurses' intention to continue working in their current workplaces, using the mean total score of 21 items. The mean total score was significantly higher among subjects who intended to continue working than among subjects who responded "no" or "neither." To develop the involvement questionnaire, the constructive concept of involvement was assumed, based on social learning theory. This study proposed the hypothesis that involvement (direct and indirect support obtained from senior nurses, supervisors, colleagues and others) could promote socialization through social interaction. The process of organizational socialization was also thought to lead to job satisfaction, identification and attachment to the organization, productivity, decreased stress, reduced job turnover, and a reduced possibility of thinking about leaving the job<sup>3</sup>.

Participants who intended to continue working in their current workplaces were expected to rank higher in the mean value of the total score for the involvement questionnaire. The findings therefore supported the view that the construct validity of the involvement questionnaire was appropriate.

When it came to criterion-related validity, there was a positive correlation with the workplace social support scale. The workplace social support scale consists of items that view social support in terms of supportive personal rela-

tionships in the workplace; these relationships were adapted to represent support from supervisors, senior nurses, and colleagues within a wide range of human relationships. This scale of "perceived support" implied the availability of support<sup>20</sup>. Participants who strongly recognized that they received social support from supportive personal relationships in the workplace tended to feel that their involvement, provided by senior nurses, promoted socialization. The results therefore indicated a correlation between awareness of support and awareness of involvement, supporting the validity of the involvement questionnaire.

Furthermore, there was a negative correlation with burnout scores, shown using the burnout scale. Studies have shown that new graduate nurses, in a state of reality shock, may develop physical symptoms, anxiety, sleeplessness, social action disorder, and a tendency toward depression<sup>13, 22</sup>; this suggests that an awareness of involvement, which promotes socialization, may prevent physical, mental, and social exhaustion. The form of reality shock experienced by new graduate nurses includes issues that the new graduate nurses must deal with themselves, on this basis of their experience. This can be addressed by "consulting with supervisors or senior nurses" and "learning on-site," according to one study<sup>23</sup>. Since the present study found a negative correlation between the involvement questionnaire and burnout scores, higher levels of awareness that involvement promotes socialization may help to relieve reality shock. We suggest that new graduate nurses can learn effectively through personal relationships in the workplace; the concept measured in the involvement questionnaire is thought to have been appropriate.

This survey was carried out in February, 2012. Findings were obtained from the responses of new graduate nurses who had worked continuously in the workplaces where they were employed (as of the end of the fiscal year) as new

graduate nurses employed in FY2012, following graduation. Consequently, the new graduate nurses, who actually continued working in their workplaces for nearly one year without turnover, tended to realize that they were receiving social support; they were aware that the senior nurses who promoted their involvement were encouraging socialization and reducing the risk of reality shock. The hypothesis that involvement can be measured using the involvement questionnaire is therefore appropriate.

Given the above, this questionnaire has been shown to have both reliability and validity; it can be used to measure involvement, which is considered helpful by new graduate nurses.

## 2. Components of involvement that facilitate socialization

It was found that involvement to facilitate the socialization of new graduate nurses consisted of three factors: [Involve each new graduate nurse by promoting his/her independence while also showing respect]; [Involve the new graduate nurse by sharing my own proactive attitude toward work]; and [Involve the new graduate nurse by preparing an individually tailored environment]. To develop the scale, researchers noted that the socialization process was a form of social learning; the constructive concept of involvement was therefore assumed, based on social learning theory. In this theory, learning from immediate experience is established through substitution, by observing another person's behavior and its results.

By collating the first factor, [Involve each new graduate nurse by promoting his/her independence while also showing respect] with the draft categories, all five items in the "provide mental support" category, two items in the "provide individual tailored instruction," and two items in the "feedback" category were included. It was suggested that an attitude of deference toward new graduate nurses helped them learn about

nursing practice in a low-stress environment.

A qualitative study of the types of support that new graduate nurses are aware of receiving from senior nurses includes the following: [Respect for new nurses], [Way of reprimanding new nurses], [Demonstrating the ideal way], and [Providing the opportunity to have an experience] as basic forms of involvement that allow new graduate nurses to [acquire skills]<sup>24)</sup>. One factor that inhibits the recovery from reality shock is "instability," which includes anxiety, inconsistency, reduced general self-esteem, and a lack of composure<sup>25)</sup>. After reviewing the literature on the turnover among new nurses in Japan after 2005, a common factor associated with turnover among study subjects was reality shock<sup>26)</sup>. To prevent turnover, it is therefore necessary to continue to provide both physical and psychological support. Involvement helps others understand the situation faced by new graduate nurses, enabling them to express consideration and share anxiety more easily and promoting the nurses' general self-esteem; self-esteem is considered an important and valid factor in studies that recommend supporting the socialization of new graduate nurses.

By collating the second factor, [Involve the new graduate nurse by sharing my own proactive attitude toward work], with the draft categories, the three items in the "teach the right way of working" category and two items in the "promote occupational socialization" category were included. The type of learning that includes observing senior nurses corresponds to the process of modeling. The content included stance and attitude; a specialist recommended including "self-development" and "attitude to work." The content also included local customs and the values of the organization. When defining the concept of organizational socialization, "an individual does not necessarily have to belong to some kind of organization in order to achieve occupational socialization and simi-

larly, there is no guarantee that a person who achieves organizational socialization achieves occupational socialization necessarily;" therefore "it is undesirable to treat both concepts as the same thing"<sup>27)</sup>. The concept of organizational socialization is further defined as follows: "For organizational socialization, 'occupational aspects' and 'organizational aspects' coexist. These two aspects are also known as 'skill-related aspects' and 'cultural aspects'"<sup>27)</sup>.

Based on the results of our study, the actions of senior nurses, in relation to both occupational and organizational aspects, were extracted as an aspect of involvement that could promote socialization among new graduate nurses. The present study hypothesized and confirmed that involvement to facilitate the socialization of new graduate nurses could influence two types of socialization: organizational socialization (becoming familiar with the organization) and occupational socialization (becoming familiar with the profession). The study findings therefore support the construct validity of involvement as a framework for research.

By collating the third factor, [Involve the new graduate nurse by preparing an individually tailored environment], with the draft categories, the two items related to "Provide tailored individual instruction," one item each related to "support new graduate nurses by involving others and sharing their knowledge," "maintain a learning environment," and "promote the learning of tasks" were included.

The interview results indicate that the new graduate nurses' work and learning process changed during a ten-month period, passing through six phases. Senior nurses provided the main learning resources during this process; new graduate nurses had to learn their work progressively, while asking for help from senior nurses during the learning process<sup>28)</sup>. To acquire the ability to work as a nurse in clinical settings, new graduate nurses must learn both nursing

procedures and ways of working, gradually extending the number of patients, disease severity, and type and range of tasks that they are responsible for.

This demonstrates the need to offer new graduate nurses the opportunity to choose their own work content, with the help of senior nurses. Social learning theory also confirms the value of establishing personal relationships with diverse role models; this factor may be an important element for researchers studying the ideal work climate, which promotes the construction of personal relationships between new graduate nurses and senior nurses.

For new graduate nurses who have recently been employed for the first time, three components seem to offer a sense of security that encourages them to remain in the workplace: [Involve each new graduate nurse by promoting his/her independence while also showing respect] and support for independent learning [Involve the new graduate nurse by preparing an individually tailored environment]. In addition, by modeling good workplace behavior [Involve the new graduate nurse by sharing my own proactive attitude toward work], experience can be directly or indirectly related to ways of learning the right content well. It is clear that such initiatives promote the learning process.

Given these results, a social learning theory viewpoint suggests that the three components influence socialization and are therefore appropriate aspects of involvement to facilitate socialization.

#### Study limitations and future perspectives

This research used a questionnaire that was distributed to 999 new graduate nurses employed by 48 hospitals with at least 200 beds in Japan's Hokkaido and Tohoku region. Responses were obtained from 284 participants (valid response rate: 28.4%) of these, 216 respondents

were used. This small sample size limits this questionnaire in becoming a standard of measurement. Also, findings were obtained from the responses of new graduate nurses who had worked continuously in the workplaces where they were employed following graduation for one year without turnover. However I found that the number of subjects and subject areas should be enlarged, along with having a clearer understanding of chronological change. This can be achieved by improving and enlarging the scope of this questionnaire followed by implementation.

### Conflict of interests

The author declares no conflicts of interest.

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