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## RESEARCH REPORT

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### The relationship between emotional empathy, self-acceptance and interest in disaster nursing of the nursing students who recently-enrolled in the university

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**Abstract** The purpose of this survey was to clarify relationship between emotional empathy, self-acceptance and interest in disaster nursing of the nursing students who recently-enrolled in the university. The participants were the first year students at the nursing university, and questionnaire survey was conducted in June, 2009. There were 60 response rate, 80.0% of the nursing students responded that they were interested in disaster nursing. Those students of 22.9% knew the meaning of “triage”, and 50.0% of them knew the posttraumatic stress disorder. The students who answered that they have desire to participate in the disaster rescue and nursing positively when becoming registered nurse in the future were 46 (76.7%). Therefore, it was suggested that the necessity for educating basic principle of disaster nursing at the earliest time after entering university. Moreover, there was significant differences in students who had answered that want to participate in the disaster nursing and others who had not answered so ( $59.98 \pm 5.98$  vs.  $55.57 \pm 6.60$ ;  $P=0.03$ ) in the emotional-warmth. There was also a significant difference in the emotional-coolness ( $22.00 \pm 7.64$  vs.  $30.14 \pm 10.55$ ;  $P=0.01$ ). Also, there tended to be a difference in self-acceptance (SA) of the students who interested in disaster nursing, and the students who was not so ( $19.27 \pm 4.14$  vs.  $16.25 \pm 5.26$ ;  $P=0.07$ ). Consequently, it was considered to contribute to helping students, and to improve level of SA to increase student's awareness of the disaster nursing.

*Key words* : emotional empathy, self-acceptance, interest in disaster nursing, nursing student

#### Introduction

Ongoing threats of bioterrorism and the consequences of natural disasters require nurses entering the workforce to be competent in emergency preparedness<sup>1)</sup>. It is important that all nurses in all specialties are pre-

pared to care for people affected by disasters. Therefore, it is important that disaster nursing is taught by nursing faculty as a specialty in nursing programs<sup>2)</sup>.

The previous stresses the importance, for all types of nurses, of more systematic training in disaster nursing<sup>3)</sup>.

The nursing students have the interests in disaster and disaster prevention, and have highly consciousness of their role in disaster situation. However they don't have enough provisions against disaster such as evacuation behaviors and provisions, and it is pointed out that their interests and consciousness aren't accompanied

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with specific action<sup>4)</sup>.

The on-the-job training which assumes the disaster nursing motivates students to be aware of stage of learning, and becomes the opportunity that they can consider the necessity of assimilation of basic nursing art which they had learned in each specialty fields, and they can check the degrees of their acquirement of learning<sup>5)</sup>. In Japan, however, even though there are large social expectations for disaster nursing and it is necessary to provide enough education to students, the necessity of education is not considered enough. Therefore, as social expectation for nursing activity at the time of disaster is particularly large, it is necessary to educate nursing students sufficiently on that theme.

The purpose of this survey was to acquire basic data for the education of disaster nursing. We implemented a questionnaire research about relationship between emotional empathy, self-acceptance and interest in disaster nursing of the nursing students who recently-enrolled in the university.

## Methods

### 1. Subjects

The subjects were the first year university nursing students in western Japan.

### 2. Investigation period

The questionnaire was conducted in June, 2009 when they were still new to the university.

### 3. Survey items

The questionnaire research was conducted question about interest in disaster nursing, emotional empathy and self-acceptance.

#### 1) Interest in disaster nursing

To the question concerning the interest to the disaster nursing, five choices were given for each of the items; and one to five points were allocated to the choices: more points were given in the order of the positivity about disaster nursing.

#### 2) Emotional Empathy Scale

Emotional Empathy Scale (EES)<sup>6)</sup> was developed to measure emotional empathy of young person and adult more than junior high school student. The EES con-

sists of 25 items, and this scale was consisted of three subscales; "emotional-warmth", "emotional-coolness", and "emotional-susceptibility". Emotional-warmth indicates in 10 to 70 ranges of point, emotional-coolness indicates in 10 to 70 ranges of point, emotional-susceptibility indicates in 5 to 35 ranges of point. The higher score indicate the high emotional empathy.

#### 3) Self-Acceptance Scale

Self-Acceptance Scale (SAS)<sup>7)</sup> was developed to measure self-acceptance of university student. The SAS consists of 26 items, and assesses the score in 0 to 26 ranges of point. The higher score indicate the high self-acceptance (SA).

### 4. Statistical methods

Statistical analyses using the Mann-Whitney U test was performed to compare the two groups. P values < 0.05 were considered statistically significant.

### 5. Return rate

The questionnaire was distributed to 69 of the nursing students and submitted by 60 of them (the return rate was 87.0%).

### 6. Ethical consideration

The aim of this research was explained, and the questionnaire was distributed to the students. The questionnaire was answered anonymously and the submission was their free choice. Those students who had agreed to cooperate in the research were requested to submit their completed questionnaires into a submission box. The students were explained the followings: the cooperation in the research was irrelevant to their academic results in their courses; the data would be processed in a manner in which any particular student could be not identified; and the research results would be presented in essay and presentation.

## Results

Forty eight (80.0%) nursing students were interested in disaster nursing. Those students was significantly strongly recognizing the necessity to learn the disaster nursing (P=0.002). Interested students in the disaster nursing had a significantly stronger willingness to participate in relief activities at disaster, compared with

those who had not interest it ( $P < 0.001$ ) (Table 1).

Among those students with such interests, only about 22.9% of them knew the meaning of "triage", and only 50.0% of them knew the meaning of posttraumatic stress disorder (PTSD), which implied that there is no significant difference in this aspect. Twenty one (35.0%) nursing students responded that they had the experiences of being victims of disaster. Those students who had the experiences of being victims of disaster tended to strongly recognize the need for education on disaster nursing ( $P = 0.06$ ) (Table 2).

There were no significant differences in mean of emotional-warmth of 48 students who had responded that they were interested in disaster nursing, and 12 students who was not interested in it. There tended to be a difference in mean of emotional-coolness of 48 students who had responded interested in disaster nursing, and 12 students who was not interested in it ( $P = 0.09$ ) (Table 3).

For the 46 (76.7%) students who answered that they want to participate in the disaster nursing positively

when becoming registered nurses in the future. Also, there were significant differences ( $P = 0.03$ ) in mean of emotional-warmth of 46 students who had answered that they want to participate in the disaster nursing, and 14 students who had not answered so. Moreover, there were significant differences ( $P = 0.01$ ) in mean of emotional-coolness (Table 4).

There were no significant differences in mean emotional empathy of the students' experiences as a disaster victim (Table 5).

There tended to be a difference in mean SA of the students who had responded that they were interested in disaster nursing, and mean SA of the students who was not interested in it ( $P = 0.07$ ) (Table 6).

There were no significant differences in mean of SA of students who had responded that they want to participate in the disaster rescue, and who had not answered so (Table 7).

There was no significant difference in mean SA of the students' experiences as a disaster victim (Table 8).

Table1. Comparison by difference of interest to disaster nursing

	Interest in disaster nursing (n=48)	Not interest in disaster nursing (n=12)	P value
It is necessary to study disaster nursing.	4.38±0.73	3.58±0.67	P=0.002
I want to participate in disaster-relief work in the future.	4.33±0.69	2.92±0.67	P=0.000
I know the meaning of triage.	1.94±1.58	1.33±0.89	P=0.249
I know the meaning of PTSD.	2.83±1.73	2.75±1.42	P=0.930

Table 2. Comparison by presence or absence of experience as a disaster victim

	Presence of experience as a disaster victim (n=21)	Absence of experience as a disaster victim (n=39)	P value
It is necessary to study disaster nursing.	4.48±0.68	4.08±0.81	P=0.059
I want to participate in disaster-relief work in the future.	4.14±0.66	4.00±1.00	P=0.843
I know the meaning of triage.	1.86±1.49	1.80±1.49	P=0.618
I know the meaning of PTSD.	3.24±1.67	2.59±1.63	P=0.124

Table 3. The degree of the emotional empathy by the difference in the interest to disaster nursing

	Interest in disaster nursing (n=48)	Not interested in disaster nursing (n=12)	P value
Emotional-warmth (Highest score:70)	59.52±6.32	56.67±6.28	P=0.159
Emotional-coolness (Highest score:70)	22.63±8.33	29.00±10.13	P=0.089
Emotional-susceptibility (Highest score:35)	28.06±30.27	23.33±3.30	P=0.578

Table 4. The degree of emotional empathy by the difference in whether he/she wants to participate in disaster-relief work in the future

	I want to participate in disaster -relief work in the future (n=46)	I do not want to participate in disaster-relief work in the future (n=14)	P value
Emotional-warmth (Highest score : 70)	59.98±5.98	55.57±6.60	P=0.029
Emotional-coolness (Highest score : 70)	22.00±7.64	30.14±10.55	P=0.014
Emotional-susceptibility (Highest score : 35)	28.37±30.88	23.00±3.40	P=0.371

Table 5. The difference in the degree of emotional empathy by presence or absence of experiences as a disaster victim

	Presence of experiences as a disaster victim (n=21)	Absence of experiences as a disaster victim (n=39)	P value
Emotional-warmth (Highest score : 70)	60.67±6.22	58.03±6.32	P=0.115
Emotional-coolness (Highest score : 70)	24.14±8.33	23.77±9.46	P=0.988
Emotional-susceptibility (Highest score : 35)	32.57±45.14	24.18±3.84	P=0.846

Table 6. The degree of the self-acceptance by the difference in the interest to disaster nursing

	Interest in disaster nursing (n=48)	Not interested in disaster nursing (n=12)	P value
Self-acceptance (Highest score : 26)	19.27±4.14	16.25±5.26	P=0.071

Table 7. The degree of self-acceptance by the difference in whether he/she wants to participate in disaster-relief work in the future

	I want to participate in disaster-relief work in the future (n=46)	I do not want to participate in disaster- relief work in the future (n=14)	P value
Self-acceptance (Highest score : 26)	19.22±4.06	16.86±5.49	P=0.177

Table 8. The difference in the degree of self-acceptance by presence or absence of experiences as a disaster victim

	Presence of experiences as a disaster victim (n=21)	Absence of experiences as a disaster victim (n=39)	P value
Self-acceptance (Highest score : 26)	19.81±3.55	18.05±4.89	P=0.153

## Discussion

Forty eight (80.0%) of the nursing students responded that they were interested in disaster nursing. Forty six (76.7%) students answered that they have desire to participate in the disaster nursing positively when becoming registered nurses in the future. Nursing students had a high interest in disaster nursing from the time of their entrance to university. The reason for that was suggested to be their willingness to participate in disaster relief activities to make use of their skills at the time of disaster.

The investigation of Pang and others<sup>8)</sup> was shown a similar result. In their result, most students indicated their willingness and capability in disaster relief work under supervision, and they were keen to advance their competencies in the field of disaster nursing.

It was clear that among the students those who had the experience of being a victim of disaster had a particularly strong willingness in learning disaster nursing. However, no matter how much they were interested in disaster nursing or whether or not they had the experience as a disaster victim, few students were understood the meaning of “triage” or “PTSD”.

In the Yoshida’s nationwide survey<sup>9)</sup> in 2000 intended for the 4-year university, the university with the class concerning the disaster nursing was mere 13.0%. It is predicted that the university was the phased education of the disaster nursing at the entrance into university is very few. Therefore, it was suggested that the necessity for educating basic principle of disaster nursing at the earliest time after entering university.

In Hirano’s report<sup>10)</sup>, the student who hopes for the disaster rescue they had significantly higher score in help scores normative consciousness, sympathism, and prosocial behavior, compared with the student who do not hope it. Therefore, we thought that level of emotional empathy was related to the interest in disaster nursing, the willingness to participate in disaster nursing, and the experiences as a disaster victim. However, it just showed significant differences in students’ emotional-warmth and emotional-coolness under whether they have desire to participate in the disaster nursing or

not.

Interest in disaster nursing, active participation for disaster nursing, and experiences as a disaster victim did not relation for emotional-susceptibility. It was thought that emotional-susceptibility contains the aspect that they are susceptible to external factors and sympathize rather than the warm and supportive feelings.

There is really not any significant difference between mean SA. However, Matsushita and others<sup>11)</sup> reported that the nursing student develop the SA by the process of determining participation in the disaster volunteer. In this research, mean SA of students who interested in disaster nursing showed a tendency with a high level of SA. Consequently, it was suggested that the students with high level of SA who had the high interests in disaster nursing. It was considered to contribute to helping students to improve level of SA to increase student’s awareness of the disaster nursing.

## Conclusion

80.0% of the nursing students had high interests in disaster nursing at the time of university entrance. Major findings of this study revealed that (a) those students were significantly strongly recognizing the necessity to learn a disaster nursing. (b) They had a significantly stronger willingness to participate in relief activities at disaster. (c) They have desire to participate in the disaster nursing positively when becoming registered nurses in the future. (d) Their characteristics of emotional empathy were high emotional-warmth and low emotional-coolness score. (e) Also, it was suggested that their self-acceptance is high.

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