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# Changes in the attitudes of participants in a preceptor training seminar: an analysis from the viewpoint of self-efficacy and psychological distance

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**Abstract** **Purpose** : To clarify changes in the attitudes of participants in a preceptor training seminar and to abstract a model for training preceptors.

**Methods** : The subjects of the study were the 72 participants in a seminar conducted in "A" Prefecture. Six sets of data obtained from the participants before, during and after the seminar were used. Qualitative research methods were used to process these data.

**Result** : 1. From among the "practicum problems" of pre-seminar reports, four categories were extracted : (1) students' problems, (2) problems about giving guidance, (3) preceptors' problems and (4) problems with the teaching system.

2. As for "what the participants expected of students," three categories were identified : (1) students' attitudes during the practicum, (2) way of learning and (3) results of learning.

3. We compared "what the participants expected of students during the practicum" before and after the seminar. As for "students' attitudes during the practicum," 85% of the participants expected better students' attitudes before the seminar, while 28% had this expectation after the seminar.

**Conclusion** : The participants` attitudes had clearly changed. These data were analyzed from two viewpoints : "participants' psychological distance from students" and "participants' self-efficacy." These two factors were found to be closely related, and one model was abstracted.

*Key words* : practicum, training of preceptors, psychological distance, self-efficacy

## Introduction

The practicum is an important part of nursing education, and preceptors play a major role. In order to train preceptors, the Ministry of Health and Welfare of Japan (now the Ministry of Health, Labor and Welfare) has been providing subsidies to prefectures since fiscal 1996, requesting prefectures to conduct training seminars for preceptors. To evaluate these seminars, studies have been conducted on the effect of these seminars on preceptors' attitudes[1－4], but many of these studies do not address the whole picture. One of us was involved as a part-time lecturer in these seminars for preceptors for three years and observed how the participants developed their skills as preceptors. This study focused on the reflection on preceptors and the purpose was to clarify changes in the attitudes of participants in the preceptor training seminar and to abstract a model for training preceptors.

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## Methods

### 1) Subjects of the research

The subjects of this research were the 72 participants of a seminar conducted in "A" Prefecture. The average age of the subjects was 34.5 years old (with s.d. of 5.9 years), and the average number of years of employment was 12.6 years (with s.d. was 10.4 years).

### 2) Data collection method

We used the following data: (1) "practicum problems" from participants' pre-seminar reports, (2) participants' personal notes written directly before the group work (GW) regarding "what they expected of students during their practicum" (3) participants' impressions of the GW and of the lectures related to the GW, (4) participants' views of positive effects of the practicum, (5) practicum problems they encountered and (6) what the participants expected of students during their practicum. Among the six sets of data, (4) to (6) were from the follow-up questionnaire conducted three months after the seminar ended (See Figure 1).

As for data (1), we asked the participants to write a report prior to the seminar in order to determine their readiness. Six people did not submit the report. In data (2) and (3), all the participants submitted their notes with their names. After the end of the seminar, the organizer of the seminar sent a questionnaire to each participant to evaluate the seminar. With the cooperation of the organizer, data (4), (5) and (6) were taken from the follow-up questionnaire that used open-end questions. The participants were not asked to write their names on the questionnaire, but in order to be able to compare their opinions before and after the

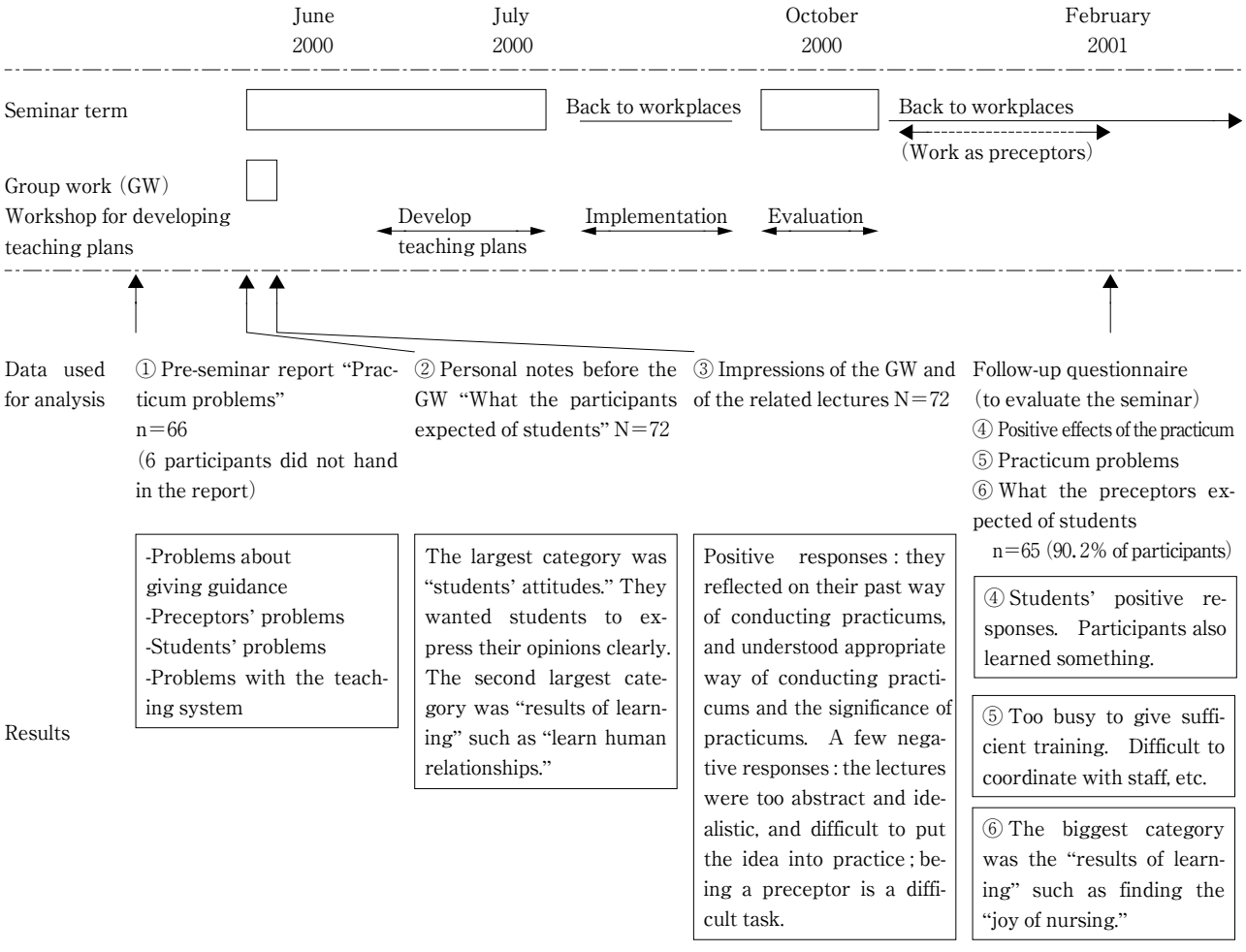


Figure 1. Flowchart for the seminar, data used in the study and results

seminar, numbers were attached to the questionnaire. The questionnaire was delivered to the participants via the heads of their organizations and mailed back to the organizer by the individual participants. Sixty-five participants (90.3%) responded to the questionnaire. For (2), (4), (5) and (6), we obtained the participants' consent to use the data in my research, but as for (1) and (3), although we gave the participants the summary of the data during the lectures, we did not obtain their approval to use the data because we did not initially intend to use them in our analysis. In order to respect their privacy, we kept them anonymous.

### 3) Data processing method

We used qualitative research methods to process the data.

As for data (1) from the pre-seminar reports, we used only the parts that we thought indicated the practicum problems. If the participants wrote about specific cases, we summarized the content. We asked for support from a researcher to check the validity of the extracted parts.

Except for data (1), we input all the comments made by the participants, using spreadsheets, writing one set of sentences in one cell. First, we extracted two to three keywords from each set of sentences and repeated sorting the keywords to find categories. We completed labeling after repeating the process: the original sentences, keywords and categories. Then, we drew a chart to show the relationship between these categories, combining similar categories, and changing the labeling of the categories to clarify the distances between the categories. Again, we examined how the original sentences fit in the categories and corrected the labeling of categories so that it would be easier to understand.

Data (2) had already been labeled and reported[5] before we worked on data (6), but in order to compare the participants' comments before and after the seminar, we put (2) and (6) together and re-labeled the categories. Trying to eliminate preconceptions, we mixed the two sets of data so that we could not identify whether the data were taken before the seminar or after the seminar. After the labeling, the data were once again sorted back into sets (2) and (6) to be compared.

We also asked two other researchers who teach at universities and have many years of experience in nursing education to support my research by checking the whole labeling process. We checked the items questioned by these researchers, reexamined them and corrected the labeling.

Using these processed data, we examined each set of data and analyzed how the participants developed their skills as preceptors.

## Results

### 1) "Practicum problems" from pre-seminar reports

From among the "practicum problems" of 152 responses ("responses" in this paper means the participants' specific each comment sorted out by category), four categories were ultimately extracted: (1) students' problems (38 responses), (2) problems about giving guidance (53 rs.), (3) preceptors' problems (31 rs.) and (4) problems with the teaching system (30 rs.).

As for problems about giving guidance that is the largest category, many of these preceptors found it difficult to deal with students' temperaments in the practicum, as the students did not act on their own initiative and lacked communication skills.

The second largest category was the students' problems. There were problems concerning students' temperaments in which they lacked "positive attitudes" and "sociability." There were also problems concerning the students' inability to learn: the participants wrote, "The students' understanding is limited," and "Students cannot keep up with changes in patients' conditions."

As for preceptors' problems, the biggest problem was that they were not confident, and the second biggest problem was that they did not have enough knowledge of the theories of nursing or of current curricula at nursing schools.

As for problems with the teaching system, the subcategories were "how the ward accepts students"

and the "teaching system on the part of the preceptors." Under the subcategory of "how the ward accepts students," there were such problems as the "environment of the ward," "staff education," "preparation for accepting students" and "lack of communication with schools." The "teaching system on the part of the preceptors" included such problems as "unable to concentrate on the practicum" and "inconsistent instructions among preceptors."

### 2) What participants expected of their students

This question was asked twice : right before the GW and at the time of the follow-up questionnaire. The number of responses that fell into this category was 208 directly before the GW and 99 in the follow-up questionnaire. The following three categories were ultimately extracted from these two sets of data : (1) students' attitudes during the practicum (125 rs.) (2) way of learning (52 rs.) and (3) results of learning (129 rs.).

As for students' attitudes during the practicum, about 60% of the responses in this category expected students to have "positive attitudes," "a sense of purpose" and "clearly expressed opinions." Here the preceptors wanted students to show what they were willing to do. Slightly over 20% of the responses were related to a student-like enthusiastic attitude, such as "cheerful," "happy," "hard-working" and "eager." There were still others who expected students to have good manners as adults.

As for results of learning, the largest subcategory (30% of the responses) was "learn the emotional area of nursing," followed by "experience emotional satisfaction," "learn the human relationships (with patients)" and "learn the cognitive area of nursing" in this order. "Learn the cognitive area of nursing" means to understand patients, nursing processes, etc.

As for way of learning, half of the responses were related to the "thinking process." This subcategory included "think deeply/show ingenuity," "use their book knowledge in practice," and "reflect on" what they learned during the practicum. "Prior preparation" attracted the second largest number of responses. The participants expected students to prepare themselves before the practicum. The subcategory, "questions," came third. Here there were contradictory responses among the participants : some said they wanted students to "feel free to ask questions" and "ask questions to have accurate knowledge," while others wanted students "not to ask questions without thinking."

### 3) Impressions of the GW and of the lectures related to the GW

Through the analysis of the impressions, the following five categories were extracted in the end : (1) I understood/learned (51 rs.), (2) I was able to reflect on what I did (37 rs.), (3) emotional impressions (35 rs.), (4) I was able to exchange opinions (24 rs.) and (5) I recognized the issues (4 rs.)."

In the largest category of I understood/learned, the participants said, "I learned about changes in the styles of practicums." (From the impressions of the lectures) They also said, "I learned about roles and responsibilities of preceptors," "I have learned that I need to understand students," and "I reflected on the different standpoints of students and preceptors." (From the impressions of the GW and of the lectures) The second largest category was I was able to reflect on what I did. The participants said, "Views were different depending on your standpoint," "I demanded too much of students," and "I reflected on what I was doing." The third largest category was emotional impressions. In this category, 60% of the responses were "positive impressions," and 40% of the responses were "negative impressions." The participants expressed such "positive impressions" as "It was useful," "I understood," "It was good," "I became more enthusiastic," "It was interesting," and "It was easy to understand." The examples of "negative impressions" were "I want to have a more clear-cut understanding," "Being a preceptor is a difficult task," and "I could understand it, but it is still difficult for me to do it." In the category of I was able to exchange opinions (in the GW), there were emotional impressions such as "I felt sympathy, sharing and encouragement," and "I enjoyed it." There were also such comments as "I was able to reflect on what I did and hear others' opinions," and "I recalled the past."

The category I recognized the issues included such comments as "I don't know how to evaluate," and "I don't know how to use the knowledge in practice."

4) Positive effects of the practicum

Among the 65 respondents to the follow-up questionnaire, 61 conducted practicums during this period. Four of the respondents misunderstood the question and wrote their impressions instead. Among the remaining 57 respondents, 34(59.7%) replied that they observed positive effects, 20(35.0%) replied that they could not say for sure whether it had positive effects or not, and 3(5.3%) said that they did not find any positive effects.

Excluding one respondent who said there were positive effects but did not write anything else, 33 of the respondents wrote various responses, and the total number of responses mentioning positive effects was 59. This means that each respondent wrote 1.8 comments on average about what they found effective. These comments belong to two categories: good mutual relationship with students (42 rs.) and I also learned something (17 rs.). The former category exceeded 70% of the total number of responses.

Among the responses under the category of good mutual relationship with students, many participants mentioned "positive responses of students." More specifically, they wrote that the students had "positive attitudes in the practicum (eager to learn, etc.)," had a "high evaluation of the practicum and of the preceptor" and made "achievements in the practicum." As for the reasons why they thought they were able to have a good mutual relationship with students, many of them said, "I felt closer to the students." A few people said, "I was able to maintain a good relationship with the students," and "I was able to learn along with the students."

The category I also learned something included such comments as "I also learned something myself," "I reflected on my nursing practice," and "I saw students' viewpoints." A smaller numbers of participants gave such responses as "I wrote a teaching plan and implemented it," and "I felt a sense of achievement as a preceptor."

5) Practicum problems (from the questionnaire)

Among the 61 participants who conducted practicums during this period, one respondent didn't write anything, 37(61.7%) said that they had some problems during the practicum, 11(18.3%) replied that they could not say for sure whether they had problems or not, and 12(20%) said they did not have any problems.

Among the 37 respondents who said they had problems, there were 48 responses in total, that is, 1.3 responses per person on average. There were four categories here: (1) problems about giving guidance (15 rs), (2) preceptors' problems (4 rs), (3) problems with the teaching system (25 rs.) and (4) problems with students and schools (4 rs.). About half of the responses fell under the category of problems with the teaching system.

As for problems with the teaching system, the most frequent responses were "not enough time to give sufficient training," followed by "difficulty in coordinating with staff members." Regarding "difficulty in coordinating with staff members," they said, "It was difficult to have good communication with the staff," "I felt a distance with the staff," "I had to be careful when I spoke to the staff." These indicate the solitary struggle of the preceptors. The third biggest subcategory was "inconsistent instructions among preceptors." "I have to teach too many students," was also voiced.

Subcategories of problems with giving guidance were "teaching problematic students," "how to give advice when students are at a loss," "students do not fully understand the instructions," "how best to instruct students" and "how to evaluate students." As for preceptors' problems, one subcategory was "I felt at a loss." Examples of the specific cases are, "I myself did not know enough," "This was the first time the ward accepted student nurses," and "I did not know the content of the education they receive at nursing schools."

As for problems with students and schools, there were two subcategories: "lack of students' capability and not enough preparation" and "lack of information

from school regarding individual students." There were only a few comments under each of the subcategories.

### 6) Comparison of "what the participants expected of students during the practicum" before and after the seminar

The comparison was made using the comments of the 65 participants who submitted both the personal notes directly before the GW (these were used as the data before the seminar) and the follow-up questionnaire (used as the data after the seminar). The categorized data were sorted out at the level of the individual participants. First, I checked whether these individual data were included in each category or not and compared the data before the seminar with those after the seminar.

Regarding the three categories, the result of the comparison was as follows: as for the category of students' attitudes during the practicum, before the seminar, 85% of the participants expected better students' attitudes and 28% after the seminar; as for way of learning, 52% before the seminar and 11% after the seminar; as for results of learning, 55% before the seminar and 82% after the seminar. The participants' expectations of students clearly changed.

Let us look at this at the subcategory level. Before the seminar, there were, overall, many responses related to students' attitudes during the practicum; as for way of learning, many responses were related to the "thinking process" and as for results of learning, many expected students to learn good "human relationships." After the seminar, there was a significant decrease in the number of responses related to the students' attitudes and to the way of learning. On the other hand, there were many more responses related to the subcategories of "learn the emotional area of nursing" and "experience emotional satisfaction" under the category of results of learning. The number of responses under this category was significantly higher than those of other categories (Figure 2).

## Discussion

The above results show that the participants' attitude had clearly changed. Let us analyze these data from two viewpoints: "participants' psychological distance from students" and "participants' self-efficacy," and from a comprehensive point of view.

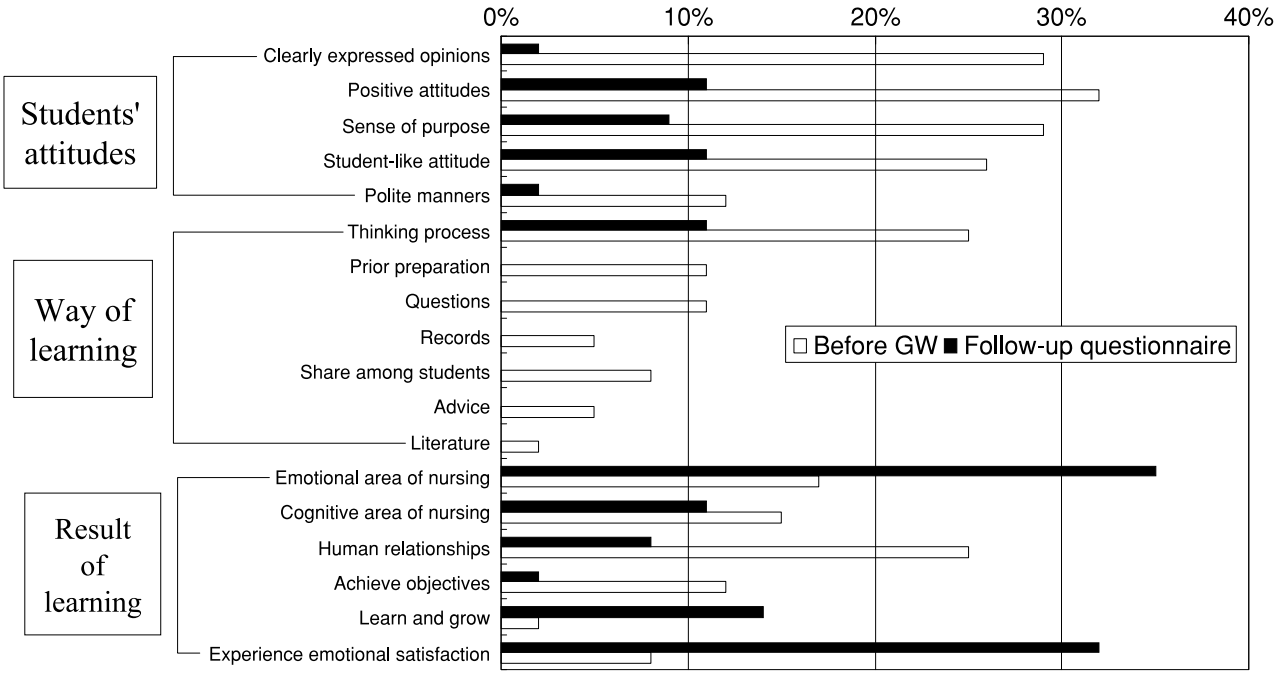


Figure 2. What the participants expected of students during the practicum

1) Participants' attitudes seen from the viewpoint of their "psychological distance" from students

When we consider "what the participants expected of students," the data before the seminar (Data(2)) and those after the seminar (Data(6)) showed a remarkable difference. This was a reflection of the change in the "participants' psychological distance from students."

There are various methods for measuring psychological distance. In studying the relationship between a mother and a child, for example, the physical distance between the mother and the child is measured by observation[6], or the mother is asked to draw a picture indicating the physical relationship between the mother and the child under a certain situation[7-10]. Among other methods, there is also a concept called "personal space" to measure physical distances to judge a person's relationship with the society[11-13].

In this study, the "participants' psychological distance from students" is indicated not by physical measurements but by concept. The psychological distance means how far the participant's mindset is from students in the practicum. "Set" is usually used to indicate muscular readiness of motor function[14]. In this study, "set" means "mindset" or readiness of mind, which shows the direction of one's judgment and thought. If the distance is close, the participant's mindset is directed toward students and close to them. This means that the participant understands the students' viewpoints or that the participant thinks he/she has the responsibility to support students. On the other hand, if the participant thinks that it is not his/her responsibility and says that students must be eager in their practicum, or if the participant has a fixed belief that students should act in a certain way, we consider that he/she is distant from students.

Let us examine the categories under "what the participants expected of students" (Data(2) and (6)) from this viewpoint in order to determine the participants' psychological distance from students. The category students' attitudes during the practicum had the largest number of responses before seminar. Many of the comments manifested the participants' stereotypic view of their students. Among the subcategories, "positive attitudes" and "clearly expressed opinions" particularly indicate that they thought students must demonstrate their willingness. Many comments in the category way of learning also showed that the participants had a fixed idea of what students must do. One example is the subcategory "prior preparation." Other examples are "not ask questions without thinking" under the subcategory of "questions," and the subcategory of "records." The subcategory of "advice" is considered distant from students because in this subcategory, the participants did not mean that they should improve their own way of giving advice or the content of their advice but that students should make the best of the preceptors' advice. However, there were also a few comments that said they wanted students to "feel free to ask questions" (under the subcategory "questions"). In this case, it is considered that they were close to students.

After the seminar, however, there were many respondents under the category results of learning, particularly under the subcategories, "learn the emotional area of learning" and "experience emotional satisfaction." These subcategories show the participants were looking at the practicum from the viewpoint of students. Therefore this category basically shows that the participants' psychological distance is closer to students than the category students' attitudes during the practicum.

When we look at the participants' psychological distance from students in different subcategories/subsubcategories, generally speaking, the participants were psychologically distant from students before the seminar, as many of the comments were related to the students' attitudes during the practicum, whereas their psychological distance clearly became closer to students after the seminar.

Similarly, the three sets of data—the pre-seminar report (Data(1)), the impressions of the GW and of the lectures (Data(3)) and the follow-up questionnaire (Data(4) and (5)) —were put in chronological order and compared from the viewpoint of the "psychological distance from students." The category "students' problems" (students' temperaments, etc.) is considered distant from students because the participants thought

they could not understand students. The "preceptors' problems" and the "problems with giving advice" are also considered distant from students because they show the participants' feelings of weakness regarding teaching students. Similarly, the subcategory "negative impressions of the GW" is also considered distant from students. The "problems with the teaching system" was about the environment of preceptors and students, and thus this category is considered at a neutral position. Similarly, when the participants reflected on themselves as indicated in the subcategories of "I was able to exchange opinions," "I was able to reflect on what I did" and "I understood/learned," it is considered that they were at a neutral distance because these comments did not address students. As a result, the participants' psychological distance from students can be illustrated as in Figure 3, which also shows that their psychological distance became closer to students after the seminar.

### 2) Changes in the participants from the viewpoint of self-efficacy

Self-efficacy is a theory advocated by Albert Bandura. Self-efficacy means a person's beliefs concerning his/her ability to successfully perform a given task or behavior[15]. People with self-efficacy believe in their ability to effectively accomplish tasks and feel confident that they can actually make use of their skills. Those with high self-efficacy are willing to take on difficult tasks (cognitive process), think they can cope with them and expect favorable results (motivational process) and actually try to take actions (selective process). Through all these processes, they have emotional stability including an appropriate level of tension (emotional process)[16,17]. Various studies have been carried out on self-efficacy of all sorts of people including patients[18–21], nurses[22], and teachers[23–25]. In the nursing practicum too, it can be said that self-efficacy is imperative for both preceptors and students[16], and there are studies that have investigated students' self-efficacy[26–28]. Many of these studies, however, are cross-sectional studies using self-efficacy scales under certain conditions.

We thought that the participants' enhanced self-efficacy might have affected their psychological distance

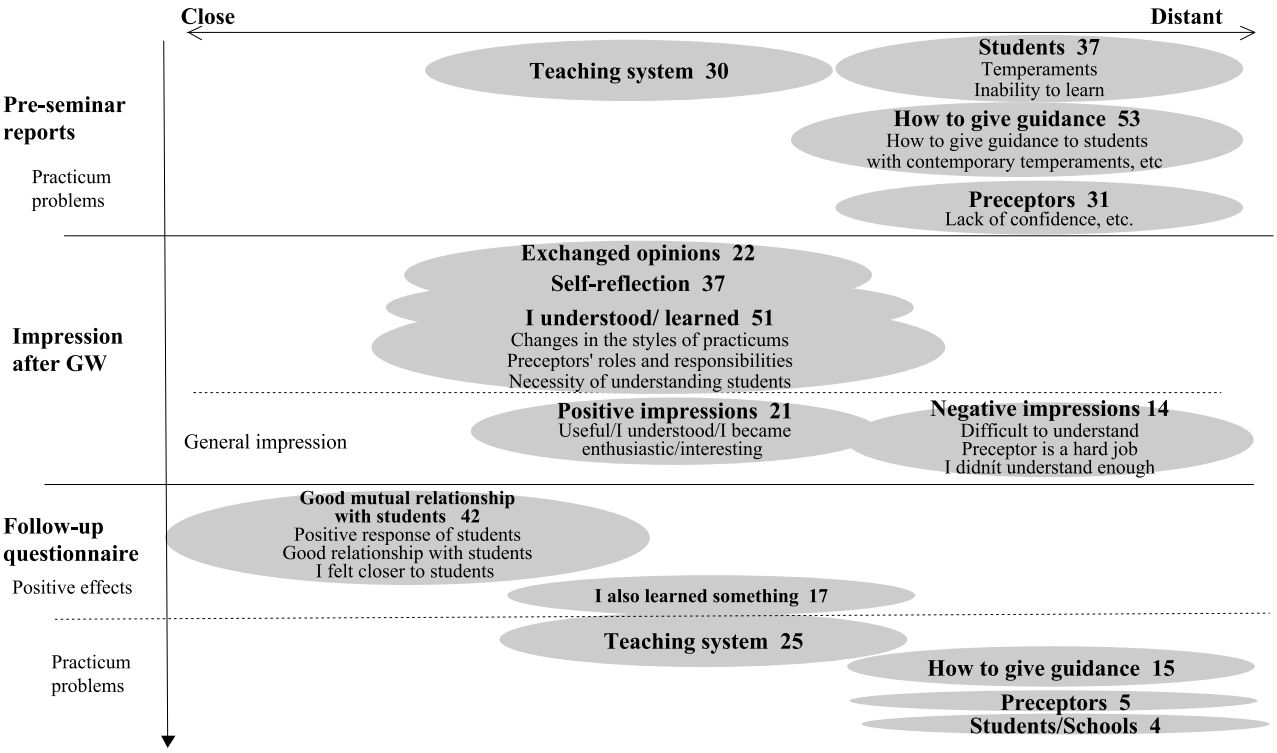


Figure 3. Participants' psychological distance from students Analysis the three sets of data in chronological order

from students and made them feel closer to students after the seminar. In order to investigate this, we extracted data that seem to indicate the participants' self-efficacy as preceptors. We used the following data : the pre-seminar report (Data(1)), the impressions of the GW and of the lectures (Data(2)), positive effects of the practicum and the practicum problems from the follow-up questionnaire (Data(4)and(5)). From these data, we extracted expressions that indicate self-efficacy itself, the participants' growth, and those relating to the four influencing factors of Bandura and summarized them in Table 1. Based on this table, we discuss the participants' self-efficacy.

It is natural that the pre-seminar reports (Data(1)) should include many expressions of low self-efficacy, as we had requested the participants to write about practicum problems. We, however, found expressions that directly indicate the participants' lack of confidence in the practicum and that they lacked in "enactive mastery experience" or "vicarious experience" in order to have confidence. This means that their self-efficacy was in fact low. As for their "physiological and affective states," there were many participants who said in the GW, as they discussed why they were attending the seminar, that they did not have any choice because they were told to attend the seminar. This shows that they did not have positive feelings regarding practicums before the seminar and that their self-efficacy was low.

In the impressions of the GW and of the lectures (Data(2)), there were many emotional expressions

Table 1 Participants' self-efficacy and contributing factors

| | | Self-efficacy/ self-growth | Four factors contributing to self-efficacy _negative factors | | | |
|---|---|---|---|---|---|---|
| | | | Enactive mastery experience | Vicarious experience | Verbal persuasion | Physiological and affective states |
| Pre-seminar reports | | -Lack of confidence in conducting practicums. | -Cannot keep up with changes.<br>-No improvement after giving advice.<br>-Lack of knowledge of nursing theory, etc. | -Have not received any training to be a preceptor. | | |
| Impressions of GW/lectures | | -I understood/ learned.<br>-I was able to reflect on what I did. | | -I learned teaching methods from the lecturer. | | -Sympathy/sharing/ encouragement.<br>-I enjoyed it..<br>-It was useful. I was able to understand well. It was good. I became more enthusiastic.<br>-Easy to understand/ interesting. |
| Follow-up questionnaire | Positive effects of the practicum | -I felt a sense of achievement as a preceptor.<br>-I also learned something. | Positive response of students (positive attitudes in the practicum, students' achievements in the practicum)<br>-I maintained a good relationship with students.<br>-I reflected on nursing. | | -Positive response of students (positive evaluation for the practicum and preceptors). | -I felt closer to students |
| | Practicum problems | | -Problems about giving guidance (students do not fully understand my instructions, etc.). | | -Problems with the teaching system (difficult to coordinate with staff members, etc.). | -I could not make the most of what I had learned at the seminar. |

that were related to the subcategories of "sympathy/sharing/encouragement" and "I enjoyed it." These expressions relate to physiological and affective states. It seems that the GW and the lectures helped them to foster self-efficacy. As there were not many clear expressions related to the physiological and affective states cited by Bandura, another framework was employed to investigate this aspect. In the Society of Humanistic Psychology (Ningen Shigi Sinri Gakkai), they use the expression "the ability of self-affirmation." The feeling of self-efficacy means that the person feels that he/she can accomplish a task or handle a situation, but the ability of self-affirmation is an affirmative feeling of the whole self. It means that a person feels that he/she is capable. In order to enhance the ability of self-affirmation, it is important for people to accept themselves as they are, as a whole. The ability of self-affirmation is said to have a profound effect on enhancing the motivation to learn[29]. When one'sability of self-affirmation is enhanced, we can assume that one's self-efficacy is enhanced too. The initial purpose of the GW discussion was to enable the participants to understand themselves better, but it was also effective for making them feel reassured. The participants said they enjoyed exchanging opinions and that they were encouraged. This means that they recognized that they were not alone but have many fellow colleagues who share similar issues. This process empowered them and enabled them to accept themselves, and in turn, was effective in enhancing their motivation in the seminar, as they thought the lectures were useful, and they became eager to attend the seminar.

In their impressions of the lectures, the participants said that they learned from the teaching method of the lectures. We considered that the lectures served as an appropriate vicarious experience.

In the positive effects of practicum in the follow-up questionnaire, there were many expressions indicating their enactive mastery experience (Table 1). The participants wrote that when they actually conducted practicums, they were glad that students responded favorably. By experiencing students' favorable responses, the participants had the best mastery experience and verbal persuasion that they could ever have to enhance their self-efficacy.

### 3) Relationship between participants' "psychological distance from students" and their "self-efficacy"—A model of participants with good results

Here the relationship between the two will be discussed.

The pre-seminar reports show that the participants were psychologically distant from students before the seminar and that their self-efficacy was low. When they had the GW in this class of "The Principles of Practicum," they sympathized with other participants, and they were reassured. This probably enhanced their self-acceptance and self-affirmation. In terms of their self-efficacy, it seems that their negative image was allayed. This process made it easier for them to reflect on themselves during the lectures after the GW, and their self-reflection reduced their psychological distance from the students. After the participants wrote their impressions of the lectures, there were no data to see the participants' attitudes until the follow-up questionnaire, but when they conducted a practicum during the period of the seminar and/or after the seminar at their workplaces, they evidently tried to be closer to their students. This in turn brought about good responses from students. The students' responses to the practicum gave great pleasure to the participants, which again enhanced the participants' self-efficacy. In this way, there was a virtuous circle : as their self-efficacy was enhanced through the GW, they felt closer to students ; as a result, the students responded better to the practicum, which in turn enhanced the participants' self-efficacy (Figure 4).

This model shows that the initial relationship with the participants is most important to close the participants' psychological distance from students. To be able to enhance their motivation and especially their self-efficacy is the key to bringing about a successful result. And the effectiveness of this model will need to be examined and confirmed by many chance forward.

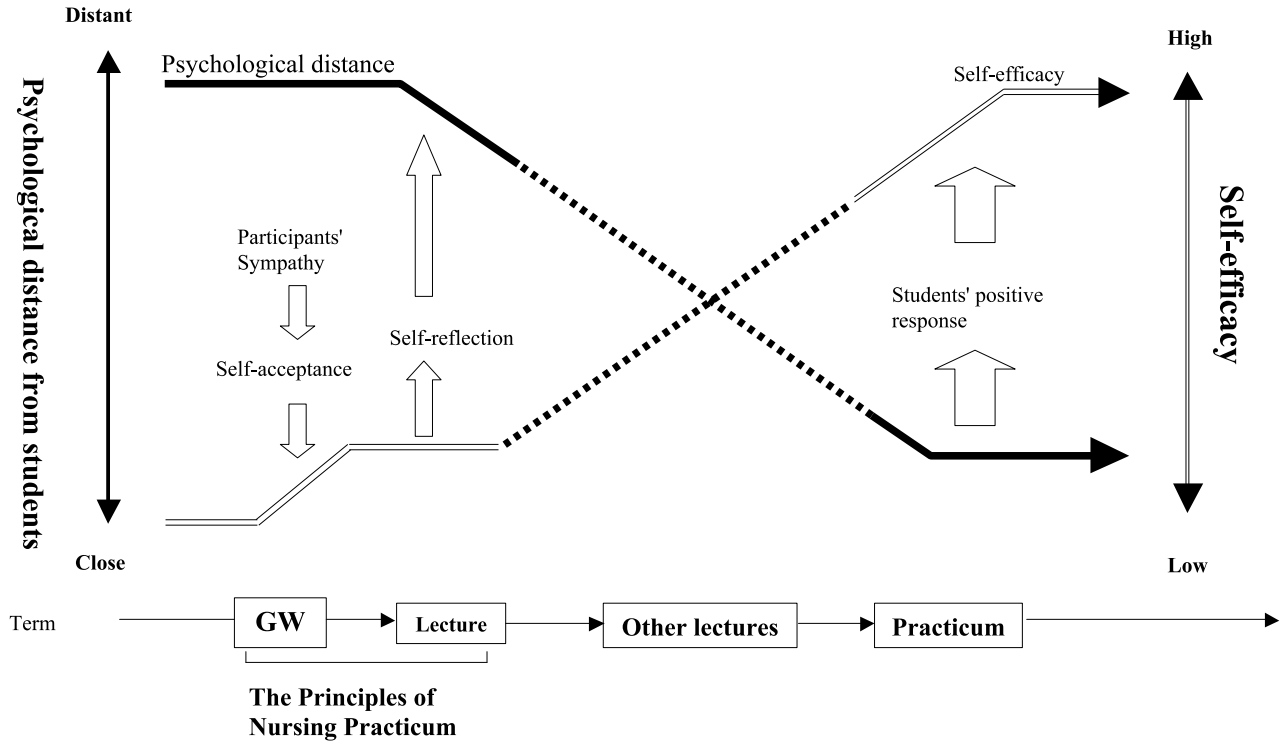


Figure 4 . Relationship between "participants' psychological distance from students" and their "self-efficacy"-Model of participants with good results

## Conclusion

By analyzing the six sets of data, we saw that the participants' attitude toward the nursing practicum had clearly changed. We analyzed these data from two viewpoints : the "participants' psychological distance from students" and "participants' self-efficacy." These two factors were closely related and play important roles in affecting the participants' attitudes. From this finding, we abstracted a model that shows the relationship between "participants' psychological distance from students" and their "self-efficacy."

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研究報告

# 地域住民の精神障害関連の行事への参加と精神障害者に対する意識調査

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**要　旨**　精神障害者が地域で生活するためには地域住民の理解と協力が不可欠である．精神障害者が参加する行事への住民の参加度と精神障害者に対する意識に加え，彼らとのつきあい方との関係を明らかにし，さらに，それによって精神障害および精神障害者に対する理解を促進するための住民への啓発方法を検討することが本報告の目的である．A県のB保健所の管轄区域の住民600人を対象とした郵送法による質問紙調査を行った．回収率は48.8%（293人）であった．地域住民のなかで精神障害者が参加する行事に参加した経験のある人は，1）精神障害への認識度が高かった，2）精神障害者の社会復帰のために「何か役に立ちたい」と思っている人が多かった，一方で3）精神障害者の社会復帰への支援に，協力できないと回答した人は全回答者の1割しかいなかった．精神障害者が地域で生活するために必要なものは「地域住民の精神障害についての関心と理解そして精神障害者に対する支援である」と，住民自らが感じていた．住民を巻き込んだ体験的啓発活動の実践が，精神障害者に対する理解や支援を拡大させることになるということが示唆された．

キーワード：精神障害，精神障害者，社会復帰，意識調査，地域住民，啓発活動

## はじめに

精神保健福祉施策は，1993年に成立した「障害者基本法」により精神障害者がはじめて障害者として福祉施策の対象として明確に位置づけられ，1995年の「精神保健及び精神障害者の福祉に関する法律」（以下，精神保健福祉法）により精神障害者の社会復帰対策が一層充実されることになった．精神保健福祉法の改正により，精神保健福祉業務の一部が都道府県から市町村に委譲され，2002年度からは市町村において通院医療費公費負担や精神保健福祉手帳の申請，精神障害者居宅介護等の支援事業，相談窓口等が開始された．また，これまで身体障害・知的障害・精神障害と障害種別ごとに分かれていた障害者施策を2005年10月の「障害者自立支援法」の成立により一元化し，市町村による一元的な福祉サービスの提供や，利用者本位のサービス体系への再編，就労支援の抜本的強化および利用者負担の見直しと，国の財政責任の明確化を通じて制度の安定化が図られることになった．このように，精神保健福祉法および障害者自立支援法を法的根拠として，精神障害者の「あたり前の生活（ノーマライゼーション）」を保障するためにさまざまな社会資源の整備が進められている．

精神障害者が地域で「あたり前の生活」を送るためには，精神保健福祉専門職者は，直接的な援助者として精神障害者を支援するという役割を担うだけにとどまらず，彼らが暮す身近なところに相談相手やよき理解者を育てることも重要な役割である．そのためにはまず精神障害者に対する地域住民の認識や支援の実態を明確にしておくことが重要である．

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精神障害者に対する否定的な態度は特に年配者に多く認められる．これは関心と知識の不足がそれを増大させているからである．また，子どもの否定的な態度は知識の不足とは関係ないことから，子どもを対象とした精神障害に関する啓発活動を行うことが有効であることが明らかにされてきている[1-2]．さらに地域住民を対象とした精神障害に関する啓発教育では，隣人の精神障害についての知的理解については期待される変化は生まれていない．しかし啓発教育で住民の精神障害者に対する態度や社会復帰への寄与が明らかにされてきている[3]．

## 目　的

本報告では，精神障害者が参加する行事への住民の参加度と精神障害者とのつきあい方との関係を明らかにすることを目的とした．この結果を，精神障害および精神障害者に対する理解を促進するための住民への啓発活動の方法を検討するための資料としたい．

## 方　法

### 1．対象者

A県の県庁所在地から約80㎞南部に位置するB郡（人口3万人弱）の6町に在住する住民600名（全住民の2.2%）を対象とした．対象者の年代範囲は20歳～60歳代とし，年代ごとに20名（男10名，女10名）を住民基本台帳から無作為抽出した．

### 2．調査方法

調査用紙および調査の主旨を明記した調査依頼状を郵送にて送付し，自記式・無記名方式で回答してもらい，同封した封書で返送してもらった．また，回収率を上げるために，はがきで全対象者に出し忘れがないよう,「暑中見舞い」形式の文書で再度依頼をした．

### 3．調査内容

調査内容は，（1）精神障害者の自立と社会参加に関する見方，（2）精神障害者が参加している行事等への参加，（3）精神障害者とのつきあい方，（4）精神障害者の社会復帰への協力，（5）精神障害者が地域生活するために必要なものについて検討した．

### 4．調査期間

この調査は，2002年7月中旬から8月末に実施した．

### 5．対象者への倫理的配慮

無記名・自記式調査票を使用し，郵送で回答を得ることにより，個人が特定されないよう配慮した．また「調査依頼状」に，データは目的以外に使用しないこと，プライバシーの保護，返送をもって調査への同意とすることなどについて説明した文章を記載し，アンケートに回答し返送してきたことで同意を得られたものとした．

### 6．分析方法

各質問項目について単純集計し，さらに年代別・町別に統計学的検定（□自乗検定）をおこなった．分析にあたっては，統計ソフトSPSS 11.0 J for windowsを使用した．

### 7．B郡の精神保健福祉の状況

2001年度現在，B郡は6町で人口3万人弱であり，精神病院入院患者176人（うち医療保護・措置59人），通院医療費公費制度利用通院患者202人の合計378人である．入院患者の在院日数は約480日で県平均より低いが,2001年5月現在の国民健康保険の疾病受療状況における入院疾病件数の1/4を精神疾患が占めるなど精神障害者に対する医療については郡内の大きな健康問題である．また，入院・通院の6割が地域の精神病院を利用し，さらに郡内の社会復帰施設を利用するなど，郡内の完結率は比較的高い．

## 結　果

### 1．対象者の概要について

600人に配布した結果，回答者数は293名で，回収率48.3%であった（表1および2）．性別は，男性41.6%，女性58.4%であった．また，年齢構成については，20歳代17.1%,30歳代14.7%,40歳代18.4%,50歳代22.9%,60歳代27.0%であった．職業は，常勤31.7%，農林水産業12.0%，パート勤務11.3%，主婦11.3%，自営業11.0%，無職10.2%であった．居住年数については，5年未満が6.1%，5～9年4.4%，10～19年11.3%，20～29年22.9%，30年以上が54.6%と半数以上を占めていた．

表1 年齢・職業別回答者数 N＝293

| | 農林水産 | 常 勤 | 自営業 | 自由業 | パート | 内 職 | 主 婦 | 学 生 | 無 職 | その他 | 回答なし | 合 計 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20代 | 1 | 23 | 0 | 0 | 6 | 0 | 6 | 4 | 1 | 7 | 2 | 50 |
| 30代 | 0 | 17 | 5 | 0 | 7 | 2 | 6 | 0 | 2 | 1 | 3 | 43 |
| 40代 | 4 | 27 | 7 | 1 | 6 | 1 | 5 | 0 | 0 | 3 | 0 | 54 |
| 50代 | 8 | 18 | 12 | 4 | 8 | 1 | 7 | 0 | 5 | 4 | 0 | 67 |
| 60代 | 22 | 8 | 8 | 0 | 6 | 3 | 9 | 0 | 22 | 0 | 1 | 79 |
| 合計 | 35 | 93 | 32 | 5 | 33 | 7 | 33 | 4 | 30 | 15 | 6 | 293 |

表2 居住年数 N＝293

| | 人数 | 割合（%） |
|---|---|---|
| 5年未満 | 18 | 6.1 |
| 5～9年 | 13 | 4.4 |
| 10～19年 | 33 | 11.3 |
| 20～29年 | 67 | 22.9 |
| 30年以上 | 160 | 54.6 |
| 回答なし | 2 | 0.7 |
| 合 計 | 293 | 100.0 |

## 2．精神障害者が参加している施設，行事等への参加

1）施設や行事参加の経験の有無

「精神障害者が参加している施設や行事に参加したことがありますか」との問に対して，「参加あり」26.6%，「参加なし」65.5%であった．

年代別でみると，「参加あり」は30歳代で37.2%と最も高く，他の各年代とも20%代であった（表3）．

次に町別でみると，D町においては「参加あり」が50.0%と最も高くなっている（表4）．

2）施設や行事参加の内容

施設や行事への参加があると答えた者に「参加したことのあるものすべてを選んでください」という問では，「病院の夏祭り等イベント参加」が61.5%と最も高かった．次いで「小規模作業所へ行った」18.3%であった．

年代別にみると，病院の夏祭り等イベント参加は，40歳代71.4%と最も高く，20歳代60.0%，30歳代は66.7%と6割を超えていた（表5）．

町別にみると，病院の夏祭り等イベント参加はF町80.0%，D町78.8%と高く，小規模作業所へ行ったのは，E町で30.0%と高かった（表6）．

## 3．精神障害者とのつきあい方について

「あなたの知人や近所の人が精神障害者になった，または精神障害者と知ったらどうしますか」の問では，「変わらず普通につきあう」48.1%，「困っているときは手を貸す」18.0%，「あまり関わらないようにする」10.0%，「わからない」15.2%であった．

年代別にみると，「困っているときは手を貸す」は20歳代6.0%，30歳代18.6%，40歳代13.7%，50歳代17.9%，60

表3 精神障害者が参加している施設や行事への参加 （年代別）

| | 20代 | | 30代 | | 40代 | | 50代 | | 60代 | | 合 計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 参加あり | 14 | 28.0 | 16 | 37.2 | 13 | 24.1 | 14 | 20.9 | 21 | 26.6 | 78 | 26.6 |
| 参加なし | 31 | 62.0 | 26 | 60.5 | 37 | 68.5 | 49 | 73.1 | 49 | 62 | 192 | 65.5 |
| 回答なし | 5 | 10.0 | 1 | 2.3 | 4 | 7.4 | 4 | 6 | 9 | 11.4 | 23 | 7.9 |
| 合 計 | 50 | 100.0 | 43 | 100.0 | 54 | 100.0 | 67 | 100.0 | 79 | 100.0 | 293 | 100.0 |

表4 精神障害者が参加している施設や行事への参加（町別） N＝293

| | C町 | | D町 | | E町 | | F町 | | G町 | | H町 | | 合 計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 参加あり | 13 | 22.8 | 27 | 50.0 | 12 | 25.5 | 5 | 12.5 | 14 | 29.8 | 7 | 14.6 | 78 | 26.6 |
| 参加なし | 38 | 66.7 | 20 | 37.0 | 33 | 70.2 | 34 | 85.0 | 27 | 57.5 | 40 | 83.3 | 192 | 65.5 |
| 回答なし | 6 | 10.5 | 7 | 13.0 | 2 | 4.3 | 1 | 2.5 | 6 | 12.8 | 1 | 2.1 | 23 | 7.9 |
| 合 計 | 57 | 100.0 | 54 | 100.0 | 47 | 100.0 | 40 | 100.0 | 47 | 100.0 | 48 | 100.0 | 293 | 100.0 |

歳代28.2%と20歳代は低く,60歳代は高くなっている(表7).

### 4．自立と社会復帰等に関する見方について

精神障害に関するさまざまな見方やイメージについて,自分の考えに近いものを選択してもらった（表8）.

1）「激しく変化する現代社会では誰でも精神障害者になる可能性がある」という質問では,「そう思う」51.5%,「どちらともいえない」22.5%,「そう思わない」17.1%であり，そう思うが最も多かった.

2）「精神病院の入院患者は，きびしい日常生活にさらされるより，病院内で苦労なく過ごす方が良い」という質問では,「そう思う」24.2%,「どちらともいえない」42.7%,「そう思わない」22.2%であり，どちらともいえないが最も多かった.

3）「精神障害者の行動は全く理解できない」という質問では,「そう思う」22.5%,「どちらともいえない」32.1%,「そう思わない」33.1%であり，そう思わないが最も多かった.

4）「妄想，幻聴のある人でも，精神病院に入院しないで社会生活のできる人が多い」という質問では,「そう思う」20.8%,「どちらともいえない」40.6%,「そう思わない」25.6%であり，どちらともいえないが最も多かった.

5）「家族に精神障害者がいるとしたら，それを人に知られるのは恥である」という質問では,「そう思う」13.3%,「どちらともいえない」33.1%,「そう思わない」43.7%であり，そう思わないが最も多かった.

表5　精神障害者が参加している施設や行事への参加内容（年代別）　（複数回答）

| | 20代 | | 30代 | | 40代 | | 50代 | | 60代 | | 合　計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N＝14 | | N＝16 | | N＝13 | | N＝14 | | N＝21 | | N＝78 | |
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 病院の夏祭り等イベント参加 | 12 | 60.0 | 14 | 66.7 | 10 | 71.4 | 13 | 59.1 | 15 | 55.6 | 64 | 61.5 |
| 小規模作業所へ行った | 3 | 15.0 | 4 | 19.1 | 2 | 14.3 | 3 | 13.6 | 7 | 25.9 | 19 | 18.3 |
| 保健所・町の行事参加 | 2 | 10.0 | 2 | 9.5 | 1 | 7.1 | 2 | 9.1 | 3 | 11.1 | 10 | 9.6 |
| その他の行事参加 | 3 | 15.0 | 1 | 4.8 | 1 | 7.1 | 4 | 18.2 | 2 | 7.4 | 11 | 10.6 |
| 合　　計 | 20 | 100.0 | 21 | 100.0 | 14 | 100.0 | 22 | 100.0 | 27 | 100.0 | 104 | 100.0 |

表6　精神障害者が参加している施設や行事への参加内容（町別）　（複数回答）

| | C町 | | D町 | | E町 | | F町 | | G町 | | H町 | | 合　計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N＝13 | | N＝27 | | N＝12 | | N＝5 | | N＝14 | | N＝7 | | N＝78 | |
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 病院の夏祭り等イベント参加 | 10 | 55.6 | 26 | 78.8 | 7 | 35.0 | 4 | 80.0 | 11 | 61.1 | 6 | 60.0 | 64 | 61.5 |
| 小規模作業所へ行った | 3 | 16.7 | 3 | 9.1 | 6 | 30.0 | 0 | 0.0 | 5 | 27.8 | 2 | 20.0 | 19 | 18.3 |
| 保健所･町の行事参加 | 1 | 5.6 | 1 | 3.0 | 6 | 30.0 | 0 | 0.0 | 1 | 5.6 | 1 | 10.0 | 10 | 9.6 |
| その他の行事参加 | 4 | 22.2 | 3 | 9.1 | 1 | 5.0 | 1 | 20.0 | 1 | 5.6 | 1 | 10.0 | 11 | 10.6 |
| 合　　計 | 18 | 100.0 | 33 | 100.0 | 20 | 100.0 | 5 | 100.0 | 18 | 100.0 | 10 | 100.0 | 104 | 100.0 |

表7　知人や隣人が精神障害者になった場合の精神障害者への支援

| | 20代 | | 30代 | | 40代 | | 50代 | | 60代 | | 合計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 困っているときは手を貸す | 3 | 6.0 | 8 | 18.6 | 7 | 13.7 | 12 | 17.9 | 22 | 28.2 | 52 | 18.0 |
| 変わらず普通につきあう | 29 | 58.0 | 22 | 51.2 | 25 | 49.0 | 29 | 43.3 | 34 | 43.6 | 139 | 48.1 |
| あまり関わらないようにする | 3 | 6.0 | 3 | 7.0 | 4 | 7.8 | 11 | 16.4 | 8 | 10.3 | 29 | 10.0 |
| わからない | 10 | 20.0 | 9 | 20.9 | 9 | 17.6 | 9 | 13.4 | 7 | 9.0 | 44 | 15.2 |
| その他 | 1 | 2.0 | 0 | 0.0 | 3 | 5.9 | 2 | 3.0 | 1 | 1.3 | 7 | 2.4 |
| 回答なし | 4 | 8.0 | 1 | 2.3 | 3 | 5.9 | 4 | 6.0 | 6 | 7.7 | 18 | 6.2 |
| 合　　計 | 50 | 100.0 | 43 | 100.0 | 51 | 100.0 | 67 | 100.0 | 78 | 100.0 | 289 | 100.0 |

＊上記1・2の両方を選択した者が，40歳代3名，60歳代1名あり，合計からは除いている.

6）「精神障害者が普通でない行動をとるのは病状の悪いときだけで，普段は社会人としての行動がとれる」という質問では，「そう思う」47.4%，「どちらともいえない」30.0%，「そう思わない」13.0%であり，そう思うが最も多かった．

7）「精神病院に入院した人でも，信頼できる友人になれる」という質問では，「そう思う」30.4%，「どちらともいえない」44.4%，「そう思わない」14.0%であり，どちらともいえないが最も多かった．

8）「精神病院が必要なのは，精神障害者の多くが乱暴をしたり興奮して傷害事件をおこすからである」という質問では，「そう思う」34.8%，「どちらともいえない」22.2%，「そう思わない」32.1%であり，そう思うが最も多かった．

9）「精神障害者は，病気の再発を防ぐために自分で健康管理をすることは期待できない」という質問では，「そう思う」27.3%，「どちらともいえない」30.4%，「そう思わない」31.1%であり，そう思わないが最も多かった．

10）「精神障害者が，一人あるいは仲間どうしでアパートを借りて生活するのは心配だ」という質問では，「そう思う」49.5%，「どちらともいえない」29.0%，「そう思わない」11.3%であり，そう思うが最も多かった．

11）「精神障害者は，事件をおこしても，決して罪に問われることはない」という質問では，「そう思う」13.0%，「どちらともいえない」15.0%，「そう思わない」61.4%であり，そう思わないが最も多かった．

### 5．精神障害者の社会復帰への協力

「あなたの町で精神障害者に対する社会復帰の取り組みがすすめられているとしたら，あなたは協力できますか」という問に対して，「手助けの内容については具体的に思いつかないが，応援はしたい」37.9%，「自分自身が精神障害者についての知識がないので，まず，精神障害について勉強し自分たちにできることを考えたい」23.8%，「精神障害者や家族の話し相手となり，困っていることを一緒に考えたり，レクリエーションに参加し

表8　精神障害者の自立や社会復帰等に関する見方

| | そう思う | | どちらともいえない | | そう思わない | | 回答なし | |
|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 激しく変化する現代社会では誰でも精神障害者になる可能性がある | 151 | 51.5 | 66 | 22.5 | 50 | 17.1 | 26 | 8.9 |
| 精神病院の入院患者は，きびしい日常生活にさらされるより，病院内で苦労なく過ごす方が良い | 71 | 24.2 | 125 | 42.7 | 65 | 22.2 | 32 | 10.9 |
| 精神障害者の行動は全く理解できない | 66 | 22.5 | 94 | 32.1 | 97 | 33.1 | 36 | 12.3 |
| 妄想，幻聴のある人でも，病院に入院しないで社会生活のできる人が多い | 61 | 20.8 | 119 | 40.6 | 75 | 25.6 | 38 | 13.0 |
| 家族に精神障害者がいるとしたら，それを人に知られるのは恥である | 39 | 13.3 | 97 | 33.1 | 128 | 43.7 | 29 | 9.9 |
| 精神障害者が，普通でない行動をとるのは病状の悪いときだけで，普段は社会人としての行動がとれる | 139 | 47.4 | 88 | 30.0 | 38 | 13.0 | 28 | 9.6 |
| 精神病院に入院した人でも，信頼できる友人になれる | 89 | 30.4 | 130 | 44.4 | 41 | 14.0 | 33 | 11.3 |
| 精神病院が必要なのは，精神障害者の多くが乱暴をしたり興奮して傷害事件をおこすからである | 102 | 34.8 | 65 | 22.2 | 94 | 32.1 | 32 | 10.9 |
| 精神障害者は，病気の再発を防ぐために自分で健康管理をすることは期待できない | 80 | 27.3 | 89 | 30.4 | 91 | 31.1 | 33 | 11.3 |
| 精神障害者が，一人あるいは仲間どうしでアパートを借りて生活するのは心配だ | 145 | 49.5 | 85 | 29.0 | 33 | 11.3 | 30 | 10.2 |
| 精神障害者は，事件を起こしても，決して罪に問われることはない | 38 | 13.0 | 44 | 15.0 | 180 | 61.4 | 31 | 10.6 |

たりしたい」5.2%，「特に参加する気はない」10.0%，「わからない」15.9%となっていた（表9）．各年代において，同様の結果を示していた．

### 6．精神障害者の地域生活で必要なもの

「精神障害者が地域で生活するためには，何が必要だと思いますか」という問にあてはまるものすべてを選択してもらった．「地域住民の精神障害者に関する理解や支援」21.4%，「社会復帰施設の整備や充実」21.0%，「精神障害者に関する知識の普及」20.7%，「行政の積極的な支援」17.4%，「偏見や差別の除去」16.8%となっていた．また，各年代別で見てもほぼ同様の傾向であった(表10)．

### 7．精神障害者が参加する行事への参加の有無と精神障害者に関する見方の関係

精神障害者が参加する行事への参加ありの人は，「精神病院の入院患者は，きびしい日常生活にさらされるより，病院内で苦労なく過ごす方が良い（$p<0.05$)」，「精神障害者の行動は全く理解できない（$p<0.001$)」，「家族に精神障害者がいるとしたら，それを人に知られるのは恥である（$p<0.05$)」，「精神病院に入院した人でも，信頼できる友人になる（$p<0.05$)」の各項目で，消極的な見方が有意に少なくない．一方，「精神障害者が，一人あるいは仲間どうしでアパートを借りて生活するのは心配だ（$p<0.001$)」と思っている人が参加なしの人に有意に多い（表11)．

また，精神障害者が参加する行事への参加の有無と知人や近所の人が精神障害者になったときのつきあい方の関係をみると「困っているときは手を貸す」「変わらず普通につきあう」は参加ありの人に多く，「あまり関わらないようにする」「わからない」については参加なしの人に多くなっている（表12)．

表9　精神障害者に対する社会復帰の取り組みへの協力

| | 20代 | | 30代 | | 40代 | | 50代 | | 60代 | | 合計 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 内容具体的にはないが，応援したい | 25 | 50.0 | 17 | 39.5 | 19 | 35.9 | 23 | 34.3 | 26 | 33.8 | 110 | 37.9 |
| まず勉強してできることを考えたい | 9 | 18.0 | 12 | 27.9 | 12 | 22.6 | 15 | 22.4 | 21 | 27.3 | 69 | 23.8 |
| 話し相手や一緒に考えたり，レクに参加したい | 1 | 2.0 | 3 | 7.0 | 1 | 1.9 | 5 | 7.5 | 5 | 6.5 | 15 | 5.2 |
| 特に参加する気はない | 3 | 6.0 | 3 | 7.0 | 6 | 11.3 | 7 | 10.5 | 10 | 13.0 | 29 | 10.0 |
| わからない | 7 | 14.0 | 6 | 14.0 | 11 | 20.8 | 12 | 17.9 | 10 | 13.0 | 46 | 15.9 |
| その他 | 1 | 2.0 | 2 | 4.7 | 0 | 0.0 | 2 | 3.0 | 0 | 0.0 | 5 | 1.7 |
| 回答なし | 4 | 8.0 | 0 | 0.0 | 4 | 7.6 | 3 | 4.5 | 5 | 6.5 | 16 | 5.5 |
| 合　計 | 50 | 100.0 | 43 | 100.0 | 53 | 100.0 | 67 | 100.0 | 77 | 100.0 | 290 | 100.0 |

＊複数回答をした者3名（40歳代1名，60歳代2名）あり．合計からは除く．

表10　精神障害者が地域で生活するために必要と思うもの　（複数回答）

| | 20代 N=46 | | 30代 N=43 | | 40代 N=49 | | 50代 N=63 | | 60代 N=73 | | 合計 N=274 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) | 人数 | 割合(%) |
| 精神障害者に関する知識の普及 | 30 | 21.6 | 28 | 22.8 | 33 | 22.8 | 34 | 19.9 | 35 | 18.0 | 160 | 20.7 |
| 偏見や差別の除去 | 22 | 15.8 | 22 | 17.9 | 24 | 16.6 | 26 | 15.2 | 36 | 18.6 | 130 | 16.8 |
| 地域住民の精神障害者に関する理解や支援 | 33 | 23.7 | 26 | 21.1 | 27 | 18.6 | 39 | 22.8 | 40 | 20.6 | 165 | 21.4 |
| 社会復帰施設の整備や充実 | 28 | 20.1 | 24 | 19.5 | 34 | 23.5 | 37 | 21.6 | 39 | 20.1 | 162 | 21.0 |
| 行政の積極的な支援 | 21 | 15.1 | 19 | 15.5 | 24 | 16.6 | 33 | 19.3 | 37 | 19.1 | 134 | 17.4 |
| 特に必要ない | 1 | 0.7 | 1 | 0.8 | 1 | 0.7 | 0 | 0.0 | 2 | 1.0 | 5 | 0.7 |
| その他 | 4 | 2.9 | 3 | 2.4 | 2 | 1.4 | 2 | 1.2 | 5 | 2.6 | 16 | 2.1 |
| 合　計 | 139 | 100.0 | 123 | 100.0 | 145 | 100.0 | 171 | 100.0 | 194 | 100.0 | 772 | 100.0 |

表11 精神障害者が参加する行事への参加の有無と精神障害者に対する見方

| | 行事参加あり N＝78 | | 行事参加なし N＝192 | |
|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) |
| ア）激しく変化する現代社会では誰でも精神障害者になる可能性がある | | | | |
| そう思う | 44 | 56.4 | 104 | 54.2 |
| そう思わない | 12 | 15.4 | 36 | 18.8 |
| どちらともいえない | 18 | 23.1 | 45 | 23.4 |
| 回答なし | 4 | 5.1 | 7 | 3.6 |
| イ）精神病院の入院患者は，きびしい日常生活にさらされるより，病院内で苦労なく過ごす方が良い＊ | | | | |
| そう思う | 18 | 23.1 | 51 | 26.6 |
| そう思わない | 27 | 34.6 | 38 | 19.8 |
| どちらともいえない | 29 | 37.2 | 91 | 47.4 |
| 回答なし | 4 | 5.1 | 12 | 6.3 |
| ウ）精神障害者の行動は全く理解できない＊＊ | | | | |
| そう思う | 7 | 9.0 | 58 | 30.2 |
| そう思わない | 36 | 46.2 | 59 | 30.7 |
| どちらともいえない | 28 | 35.9 | 62 | 32.3 |
| 回答なし | 7 | 9.0 | 13 | 6.8 |
| エ）妄想，幻聴のある人でも，病院に入院しないで社会生活のできる人が多い | | | | |
| そう思う | 24 | 30.8 | 37 | 19.3 |
| そう思わない | 20 | 25.6 | 52 | 27.1 |
| どちらともいえない | 28 | 35.9 | 87 | 45.3 |
| 回答なし | 6 | 7.7 | 16 | 8.3 |
| オ）家族に精神障害者がいるとしたら，それを人に知られるのは恥である＊ | | | | |
| そう思う | 5 | 6.4 | 34 | 17.7 |
| そう思わない | 44 | 56.4 | 81 | 42.2 |
| どちらともいえない | 26 | 33.3 | 67 | 34.9 |
| 回答なし | 3 | 3.8 | 10 | 5.2 |
| カ）精神障害者が，普通でない行動をとるのは病状の悪い時だけで，普段は社会人としての行動がとれる | | | | |
| そう思う | 48 | 61.5 | 89 | 46.4 |
| そう思わない | 9 | 11.5 | 29 | 15.1 |
| どちらともいえない | 19 | 24.4 | 64 | 33.3 |
| 回答なし | 2 | 2.6 | 10 | 5.2 |
| キ）精神病院に入院した人でも，信頼できる友人になる＊ | | | | |
| そう思う | 36 | 46.2 | 53 | 27.6 |
| そう思わない | 9 | 11.5 | 32 | 16.7 |
| どちらともいえない | 28 | 35.9 | 95 | 49.5 |
| 回答なし | 5 | 6.4 | 12 | 6.3 |
| ク）精神病院が必要なのは，精神障害者の多くが乱暴をしたり興奮して傷害事件をおこすからである | | | | |
| そう思う | 25 | 32.1 | 74 | 38.5 |
| そう思わない | 34 | 43.6 | 58 | 30.2 |
| どちらともいえない | 14 | 17.9 | 49 | 25.5 |
| 回答なし | 5 | 6.4 | 11 | 5.7 |
| ケ）精神障害者は，病気の再発を防ぐために自分で健康管理をすることは期待できない | | | | |
| そう思う | 20 | 25.6 | 55 | 28.6 |
| そう思わない | 31 | 39.7 | 60 | 31.3 |
| どちらともいえない | 23 | 29.5 | 64 | 33.3 |
| 回答なし | 4 | 5.1 | 13 | 6.8 |
| コ）精神障害者が，一人あるいは仲間どうしでアパートを借りて生活するのは心配だ＊＊ | | | | |
| そう思う | 32 | 41.0 | 110 | 57.3 |
| そう思わない | 17 | 21.8 | 16 | 8.3 |
| どちらともいえない | 25 | 32.1 | 56 | 29.2 |
| 回答なし | 4 | 5.1 | 10 | 5.2 |
| サ）精神障害者は，事件を起こしても，決して罪に問われることはない | | | | |
| そう思う | 10 | 12.8 | 28 | 14.6 |
| そう思わない | 51 | 65.4 | 125 | 65.1 |
| どちらともいえない | 13 | 16.7 | 28 | 14.6 |
| 回答なし | 4 | 5.1 | 11 | 5.7 |
| 合　計 | 78 | 100.0 | 192 | 100.0 |

□自乗検定については，回答なしを除いて分析した．＊$p<0.05$　＊＊$p<0.001$

次に，精神障害者が参加する行事への参加の有無と社会復帰への協力の関係をみると，「内容については具体的に思いつかないが，応援したい」「話し相手や一緒に考えたり，レクに参加したりしたい」と協力的なのは行事参加者に多い．また，「特に参加する気はない」「わからない」は行事参加なしの人の方が多い（表13）．

表12　精神障害者が参加する行事への参加の有無と知人や近所の人が精神障害者になったときのつきあい方

| | 行事参加あり | | 行事参加なし | |
|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) |
| 困っているときは手を貸す | 17 | 22.4 | 34 | 17.9 |
| 変わらず普通につきあう | 46 | 60.5 | 88 | 46.3 |
| あまり関わらないようにする | 3 | 3.9 | 26 | 13.7 |
| わからない | 5 | 6.6 | 37 | 19.5 |
| その他 | 2 | 2.6 | 5 | 2.6 |
| 回答なし | 3 | 3.9 | 0 | 0.0 |
| 合　計 | 76 | 100.0 | 190 | 100.0 |

＊　複数回答した４名（参加あり２名，参加なし２名）は集計から除いた．

表13　精神障害者が参加する行事への参加の有無と社会復帰への協力

| | 行事参加あり | | 行事参加なし | |
|---|---|---|---|---|
| | 人数 | 割合(%) | 人数 | 割合(%) |
| 内容具体的にはないが，応援したい | 34 | 43.6 | 74 | 39.2 |
| まず勉強してできることを考えたい | 25 | 32.1 | 42 | 22.2 |
| 話し相手や一緒に考えたり，レクに参加したい | 10 | 12.8 | 4 | 2.1 |
| 特に参加する気はない | 4 | 5.1 | 25 | 13.2 |
| わからない | 4 | 5.1 | 39 | 20.6 |
| その他 | 1 | 1.3 | 4 | 2.1 |
| 回答なし | 0 | 0.0 | 1 | 0.5 |
| 合　計 | 76 | 100.0 | 190 | 100.0 |

＊　複数回答した３名（参加なし３名）は集計から除いた．

## 考　察

精神障害が参加している施設や行事への参加したことがあるのは，全体では26.6%で，参加した内容は「病院の夏祭り等イベントへの参加」が61.5%あった．

住民の年代別にみると30歳代（37.2%）が多かった．町別ではＤ町が最も多く，50.0%が参加していた．Ｄ町住民の行事への参加割合が他の町よりも高くなったのは，Ｄ町に地域との交流を積極的に行うＩ精神病院の存在が影響していると思われる．Ｉ病院は管内唯一の精神科病院として20年以上前から地域住民と精神障害者とが触れ合う機会を作り，精神障害者への理解を深めていく活動を行っている．精神障害に対する啓発活動上で重要な役割を果たしていると考えられる．

精神障害者が参加する行事へ参加したことのある人は，「精神障害者の行動は全く理解できない」「家族に精神障害者がいるとしたら，それを人に知られるのは恥である」という考え方を否定する割合が有意に多く，「精神病院に入院した人でも，信頼できる友人になる」という項目で肯定する考え方が有意に多かった．また，精神障害者が参加する行事への参加の有無と知人や近所の人が精神障害者になったときのつきあい方の関係をみると「困っているときは手を貸す」「変わらず普通につきあう」と回答している人は，参加経験がある人に多い．「あまり関わらないようにする」「わからない」と回答した人は参加経験のない人に多くなっていた．以上の結果から，精神障害者の利用する施設との接点が多いほど，精神障害者への認識度が高いと考えられる．

次に，精神障害者が参加する行事への参加の有無と社会復帰への協力の関係をみると，「具体的にはないが，応援したい」「話し相手や一緒に考えたり，レクに参加したりしたい」と回答した人は行事参加経験者に多い．また，「特に参加する気はない」「わからない」は行事参加なしの人の方が有意に多い．清水らによれば[4]，精神病院の院外行事では特に精神障害者の「積極的」な面を，院内行事では特に「温和」な面をより強調できることが示唆されている．地域の理解と協力を得るためには，院内と院外の両方への参加を促していく必要があるだろう．行事に参加する人は，もと

もと興味や関心が高いということも考えられるが，行事に参加する人が増えることは，精神障害者への関心と理解の拡大につながると思われる．

「あなたは，精神障害を持つと思われる人をみかけたり，出会ったりしたことがありますか」との問で「ある」と答えた群と，「ない」と答えた群で精神障害者に対する見方について比較したが，同様の傾向であった．また，「精神障害者との出会い経験と知人・家族等が精神障害者になった時のつきあい方」と「精神障害者との出会い経験と社会復帰への協力」の関係については，出会いの経験の有無による差はなかった．

今回の調査では精神障害者と思われる人を含めていることや生活の中でのふれあいの程度についてはこの調査では十分把握できないこともあり，生活の中で精神障害者とふれあう機会が多いほど精神障害への理解が深いということに言及するには限界がある．しかし，精神障害者の利用する施設との接点が多いほど，精神障害者への認識度および理解度が高いと考えられる．したがって，精神病院や精神障害者関連施設が開催する行事への参加により精神障害者とのふれあいの機会を持つことは精神障害者への認識と理解を深めるためには効果的であると考えられるので，ふれあいの機会を多くしていくことが必要である．今後も各種の行事を住民に広報活動を行い，参加者を増やし，理解の輪を広げていくことが重要である．

精神障害者とのつきあい方では，「変わらず普通につきあう」が48.1%，「困っているときは手を貸す」18.0%，「あまり関わらないようにする」10.0%である．また精神障害者の社会復帰への協力では，「手助けの内容は具体的にないが，応援はしたい」37.9%，「まず，勉強してからできることを考えたい」23.8%，「精神障害者や家族の話し相手となり，困っていることを一緒に考えたり，レクリエーションに参加したりしたい」5.2%となっている．

協力内容が具体的になる程に割合は少なくなるが，「手助けの内容については具体的に思いつかないが，応援はしたい」「自分自身が精神障害者についての知識がないので，まず精神障害について勉強し，自分たちにできることを考えたい」「精神障害者や家族の話し相手となり，困っていることを一緒に考えたり，レクリエーションに参加したりしたい」を合わせると66.9%の人が何か役に立ちたいと思っていることがわかる．また，精神障害者の社会復帰に対してはっきりと否定的な回答をしている人は10.0%しかおらず，精神障害者の社会復帰に理解を示しているといえよう．

しかし，その反面，「精神障害者が，一人あるいは仲間どうしでアパートを借りて生活するのは心配だ」という質問では，約半数の49.5%が「そう思う」と答えており，近隣で単身の精神障害者を受け入れることには消極的なことが明らかになった．英語で，Not in my backyard（NIMB）という言葉がある．一般的な総論としては障害者の社会参加には賛成だが，各論として私の近くには住まないでほしいという結果が出ていると考えられる[5]．Tanakaら[6]の調査によれば患者に隣人として接した後は「他の隣人と同じように接する」（47.3%）であり，ほぼ同様の結果である．また，Tanakaらの調査結果では，統合失調症の原因について64.8%が人間関係に問題があると考え，69.9%が不安定な疾患と考えていた．さらに80%は生活状況が明らかであれば隣人として付き合う意思があると回答していた．したがって，ただ単に精神障害者を退院させるのではなく，地域の人が理解しがたい奇異な言動が出ないうちに，早く具合の悪さを発見し早期に治療を行なう必要がある．加えて精神障害者に適切な専門的治療を行い，医療から保健や福祉につながる切れ目のない支援が行える地域をつくることも，地域社会が精神障害者を受け入れやすくなる要因と考える．

精神障害者が地域で生活するために必要なものは，「地域住民の精神障害者に対する理解や支援」21.4%，「社会復帰施設の整備や充実」21.0%，「精神障害者に関する知識の普及」20.7%，「行政の積極的な支援」17.4%，「偏見や差別の除去」16.8%となっている．なかでも精神障害者が地域で生活するために必要なものについて，住民自ら「地域住民の精神障害者に対する理解や支援」と答えている．このことは，今後もっと住民を巻き込んだ体験的啓発活動を行っていくことにより，理解や支援は深まるものと考えられる．地域の精神病院，保健所，役場を中心とした精神障害および精神障害者についての正しい知識の啓発普及に加えて，体験的啓発活動次第では，精神障害者が地域社会に受け入れられ，暮らしていける場を創造できる可能性が十分にあると考えられる．

## 結　論

A県のB郡内に居住する293名を対象に，精神障害者が参加する行事への住民の参加度と精神障害者とのつきあい方との関係を明らかにし，精神障害および精神障害

者に対する理解を促進するため，住民への啓発活動の方法を検討する目的で郵送法による質問紙調査を行った．その結果，以下の結論を得た．1）精神障害者が参加する行事に参加した人は，精神障害者への認識度が高かった．行事への参加者は，もともと興味や関心が高いということも考えられるが，行事に参加する人が増えることにより精神障害者への理解や支援につながると考えられる．2）地元にI精神病院のあるD町は，精神障害者が参加している行事への参加割合が他の町よりも高い．精神病院が地域住民と精神障害者とが触れ合う機会を作り，精神障害者への理解を深めていくことが，精神障害に対する啓発活動上で重要な役割を果たす．3）精神障害者の社会復帰に「何か役に立ちたい」と思っている人が多い．精神障害に起因する社会生活のしづらさの中身を情報として住民に提供し，障害についての理解を促すことにより，さらに支援的かつ有用なかかわりを生み出せるようにする必要がある．4）精神障害者が地域で生活するために必要なものは「地域住民の精神障害者に関する理解や支援」と，住民自らが感じていた．

今後，さらに住民を巻き込んだ啓発活動を行っていくことにより，精神障害についての理解や精神障害者に対する支援は深まると考えられる．障害者自立支援法による急激な制度変化によって，障害者福祉の現場に問題が発生している現状があるが，福祉サービスが精神障害者の社会復帰や生活支援の重要な役割を担うことは間違いない．そのサービスの提供の場が，地域住民の支援や地域の理解を促進するための拠点となっていくことを期待する．

本報告は，論文筆頭者が共同研究者である，平成14年度A県特定町村等保健活動推進事業による研究成果の一部である．

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# *Survey on community resident's experiential knowledge of mental disorders and reaction to people with mental disorders*

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**Background** : It is essential for mentally disabled persons who live in the community to be understood and cooperated by local residents.

**Aim** : This study investigated the relationship between the participation of the residents to the event held in the psychiatric hospital and their attitudes towards mentally handicapped persons. The research objective is to find the method to the residents for promoting an understanding of mental disorders.

**Method** : A mail survey was conducted in the area covered by the B health center in A prefecture. The candidate 600 residents (2.2% of all residents) who live in B county were selected (age range : 20-60 y.o.). Participants comprised 293 respondents (recovery ratio : 48.8%). Comparison was carried out by the respondents who joined or did not join the event held in the psychiatric hospital.

**Results** : Their understanding of mental disorders is relatively high in the participants. Most of them are willing to do something for mentally disabled persons' social rehabilitation. Ten percent of all respondents would choose 'can't go along with mentally handicapped persons' social rehabilitation support'.

**Conclusion** : The results suggest that the provision of the opportunity for personal contact with mentally handicapped persons are important for improving the educational activity of the public about mental illnesses and considered to be important measures for promoting the acceptance and support of the mentally handicapped persons by the local residents.

*Key words* : mental disorder, people with mental disorder, attitude survey, social rehabilitation, community resident, educational activity

RESEARCH REPORT

# Analysis of a Role Lettering method performed to nursing students : first and 2nd year nursing students as the subjects

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**Abstract** One of Role Lettering methods, "time-machine message" was performed to 1st and 2nd year students at a college of nursing. The contents of time-machine messages were divided into three groups : the group of the subjects who wrote questions to themselves in the future ; the group of the subjects who wrote reports about their present situations to themselves in the future ; and the group of the subjects who wrote words of encouragement towards themselves in the future.

It was suggested that writing down a time-machine message could lead to an effect of making one to think over oneself and have a positive attitude, and also to an effect of enhancing the motivation to study.

*Key words* : role lettering, nursing students, time-machine message

## Introduction

Role Lettering is a psychological technique, developed from the field of correctional education. In this method, one stands on both of the perspectives of "oneself" and "other", and by interchanging these two roles, both of the sides mutually communicate with each other by letter[1]. Today, this method is used in areas such as clinical education and school education. The purpose of Role Lettering is to let one realize one's own problems, and it is said to have an effect of self-counseling. Thereupon, it is considered whether it is possible to apply the method as a mental support for nursing students who are learning under a tight scheduled curriculum in order to become a profession related human life. So far, there are many reports[2－9] on the high level of stress among nursing students and on their anxiety/fatigue symptoms during their clinical practice. Also, as a way to intervene such stress and troubles, there have been reports[10－11] on teaching methods to deal with such issues and the effectiveness of the use of humor. However, there have been few researches on a method of intervention working as a mental support for nursing students. Moreover, it is hard to find a report in which Role Lettering is used for such a purpose.

In this research, in order to perform Role Lettering to nursing students for the first time, the simplest method of Role Lettering, the "time-machine message" will be employed. This method involves writing letters "from me in the present to myself in the future" and "from me in the future to myself in the present". The time-machine message method is to be performed to nursing students, and subsequently the effect of it will be considered.

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## Purpose

Role Lettering will be performed to 1st and 2nd year nursing students, and subsequently it will be considered

whether it has an adequate efficacy for a method of mental support.

## Method

The subjects were 119 of 1st and 2nd year female nursing students at a college of nursing. The purpose of this research was explained, and then a form for time-machine message was distributed to them. This form consisted of a piece of paper, and the first half of the form was the space to write a letter "from me in the present to myself in the future" and the last half was to write a letter "from me in the future to myself in the present". The subjects were explained "write a letter to yourself in the future, and then reply to that letter by getting into the role of you-in-the-future". Twenty minutes were set for the writing task. The age of the-subjects-in-the-future and the content of the letter were not restricted. After writing a time-machine message, the subjects were asked to describe their impressions of having done the task, and the ages and occupations of the subjects-in-the-future.

As an ethical concern, the followings were explained: the time-machine messages would remain anonymous; cooperation was voluntary and there would be no disadvantage for not participating; the contents of the research were to be processed so that a particular participant would not be identified. On the top of that, the nursing students who had agreed to cooperate were asked to submit the completed form of time-machine message. The KJ method was employed for analysis.

## Results

The collection rate was 85.7% (102 nursing students). The valid number of the messages was 96 (the valid answer rate of 94.1%).

### 1. The ages and occupations of the subjects in the future to whom the letters were written by themselves in the present.

The ages of the subjects-in-the-future to whom the letters had been written were as shown in the Table 1. The most selected age was 30, as 22 of the subjects chose. Also, the total of 29 of the whole subjects chose to write to themselves-in-the-late-20s. The occupations of the-subjects-in-the-future to whom the subjects in the present wrote a letter were as shown in the Table 2. The largest number of 70 of the whole subjects selected their future occupation as nurse. There were 7 of the subjects who wrote their future occupation as "can't imagine".

### 2. The contents of the time-machine messages

The written contents of the time-machine messages were classified by the KJ method and divided as shown in the Table 3.

(1) The group of the subjects who wrote questions to themselves in the future (Table 4).

The most written questions were respectively: "What do you do?" (28 of the subjects), "Do you work hard as a nurse?" (22), "How are you?" (17). As the replies to these questions, the most written messages

Table 1 The chosen ages of the subjects in the future to whom letters were written

| Age : No. of the subjects | | |
|---|---|---|
| 23 : 8 | 29 : 8 | 36 : 1 |
| 24 : 4 | 30 : 22 | 40 : 4 |
| 25 : 12 | 31 : 1 | 42 : 1 |
| 26 : 4 | 32 : 2 | More than 50 : 8 |
| 27 : 8 | 33 : 1 | |
| 28 : 9 | 35 : 2 | Not answered : 1 |

Table 2 The occupations of the subjects in the future to whom letters were written

| Occupation : No. of the subjects | |
|---|---|
| Nurse : 56 | Student : 2 |
| Public health nurse : 7 | Nursing teacher : 1 |
| Midwife : 7 | Medical staff : 1 |
| Can't imagine : 7 | Unemployed : 1 |
| YOGO teacher : 6 | Others : 1 |
| Housewife : 4 | Not answered : 3 |

Table 3 The contents of the time-machine messages

1. The group of the subjects who wrote questions to themselves in the future.
2. The group of the subjects who wrote reports about their present situations to themselves in the future.
3. The group of the subjects who wrote words of encouragement towards themselves in the future.

were : "I am happy now as my dream has come true" (19), "If you don't study now, you will face many difficulties in the future" (17).

(2) The group of the subjects who wrote reports about their present situations to themselves in the future (Table 5)

The most written reports were respectively : "I am worried about my future" (11), "I am doing my best to get close to my dream" (9), "I feel discouraged as the study is hard" (6), "As the specialized study has started, I am feeling a mixture of expectation and anxiety" (6).

Table 4 The contents of the time-machine messages
—The group of the subjects who wrote questions to themselves in the future—

【From the subjects in the present to themselves in the future】
- What do you do? (28 of the subjects)
- Do you work hard as a nurse? (22)
- How are you? (17)
- Are you married? If so, have you got a child? (13)
- Have your dream come true? (11)
- Have you become a fine nurse? (10)
- Are you happy? (6)
- Do you work hard? (5)
- Do you get used to your job? (4)
- Is your work tough? (3)
- Do you try hard? (3)
- Do you still go about with the same boyfriend as the one I am with now? (2)
- Have you become and behaved like a grown-up? (2)
- Does your experiences in your school days help you? (1)
- Do you have a happy family? (1)
- Have you grown up? (1)
- Have you become a midwife? (1)
- Have you become a public health nurse? (1)
- What kind of person have you become? (1)
- What kind of grandmother have you become? (1)
- Don't you worry about small things? (1)

【From the subjects in the future to themselves in the present】
- I am happy now as my dream has come true. (19)
- If you don't study now, you will face many difficulties in the future. (17)
- It will be good to have a variety of experiences. (11)
- Try hard no matter what difficulty lies. (4)
- Enjoy the time of your youth. (3)
- I am fine. (3)
- I owe my happiness to you in the past, thank you. (2)
- Please be an honest person. (2)
- I work vary hard. (2)
- Now I am used to what I do. (1)
- I have become a midwife. (1)

As the replies to these reports, the most written messages were the followings : "You may find difficulties in your school days, but you will realize when you look back in the future that those days are the best period when you can do many things" (17), "Study hard and also play hard" (10), "Think carefully about the course of your life, and do what you have to do" (9), "Please have a variety of experiences" (8).

(3) The group of the subjects who wrote words of encouragement towards themselves in the future (Table 6)

The most written encouragements were respectively : "Please try hard to be a fine nurse" (7), "Please do your best for a happy life" (6), "Please take care of yourself and do your best" (5). As the replies to these, the most written messages were : "Please have done as much study as possible" (11), "I would like to express my thanks to you in the past" (2).

Table 5 The contents of the time-machine messages
—The group of the subjects who wrote reports about their present situations to themselves in the future—

【From the subjects in the present to themselves in the future】
- I am worried about my future. (11 of the subjects)
- I am doing my best to get close to my dream. (9)
- I feel discouraged as the study is hard. (6)
- As the specialized study has started, I am feeling a mixture of expectation and anxiety. (6)
- For now, I so often get surprised and make mistakes. (2)
- Now I feel that the study is very hard. (1)
- I want to be a far nicer person than I am now. (1)
- I am overcoming difficulties. (1)

【From the subjects in the future to themselves in the present】
- You may find difficulties in your school days, but you will realize when you look back in the future that those days are the best period when you can do many things. (17)
- Study hard and also play hard. (10)
- Think carefully about the course of your life, and do what you have to do. (9)
- Please have a variety of experiences. (8)
- Please live your days with all your might. (4)
- Please be a nurse who put oneself in a patient's place. (2)
- Now I yearn toward the old days when I was dreaming. (1)
- I thank you for your efforts which have made me what I am. (1)
- Don't be discouraged. (1)

Table 6 The contents of the time-machine messages
－The group of the subjects who wrote words of encouragement towards themselves in the future－

【From the subjects in the present to themselves in the future】
- Please try hard to be a fine nurse. (7 of the subjects)
- Please do your best for a happy life. (6)
- Please take care of yourself and do your best. (5)
- Please work hard. (3)
- Please have a fulfilling life which can satisfy you. (2)
- Keep on doing your best. (2)
- I believe your dream have already come true, so do your best on anything with pride. (1)

【From the subjects in the future to themselves in the present】
- Please have done as much study as possible. (11)
- I would like to express my thanks to you in the past. (2)
- It is necessary to make efforts to become a nurse. (1)
- Try to do things that you can do only now. (1)
- Please live your life with thoughtfulness. (1)
- I am worried about you. (1)

Table 7 The impressions of the subjects after writing the time-machine messages

- It was fun to imagine myself in the future.(19 of the subjects)
- By writing the image of myself in the future, I could clarify my goal and feel active. (19)
- I could recognize once again what I want to do in the future. (19)
- My dream has swelled.(10)
- I felt self-conscious to write to myself. (8)
- I will do my best to become like the one I wrote down in the letter as what I would be like in the future. (7)
- I would like to read my letter again some years later. (6)
- It was difficult to imagine myself in the future. (6)
- I hope my ideal life I wrote to myself in the future will come true. (6)
- I reaffirmed my own dream.(5)
- Now I can see what I should do. (4)
- I was encouraged by myself in the future.(3)
- I understand what I feel anxious about.(2)
- I felt odd to write a letter to myself in the future.(2)
- Now I would really like to know my future. (2)
- I would like to treat myself more importantly for myself-in-the-future. (1)
- I found myself relaxed by writing down my anxious feeling. (1)
- The letter sent to me from the future turned out to be similar to what my parents always tell me. (1)
- I felt refreshed. (1)

### 3. The impressions of the subjects after writing the time-machine messages (Table 7)

The most written impressions were respectively: "It was fun to imagine myself in the future" (19), "By writing the image of myself in the future, I could clarify my goal and feel active" (19), "I could recognize once again what I want to do in the future" (19). The followings were the examples of the minority impressions: "I understand what I feel anxious about" (2), "I found myself relaxed by writing down my anxious feeling" (1).

## Discussion

The nursing students to whom Role Lettering was performed in this research were in their 1st or 2nd year at school, so that most of them were at the ages of between 18 and 20. In the ages of the subjects-in-the-future, the most imagined ages were between late 20s and 30, this implied that a large number of the subjects wrote a letter to themselves-in-not-so-far-future. Because of this, it is understandable that about 80% of the subjects imagined their future occupation as nurse. Although it was only 7 of the subjects in the research who stated their future occupation as "can't imagine", it can be interpreted that there are students who are not sure about their future.

In the contents of the reports about the subjects' present situations to themselves in the future, it can be inferred from such reports as "I am worried about my future" and "I feel discouraged as the study is hard" that there are students who find difficult to be positive about becoming a nurse. They are in the period after 1 or 2 years from the enrollment in which more specialized courses of study need to be undertaken, and practical training is near at hand. Probably, they are in a transition from the period of expectation and delight at the enrollment to the period during which they may find difficulty in studying and feel anxious about their aptitude for their future jobs. Therefore, a possibility that it could use of Role Lettering as a screening to find out students in such a mental state was suggested.

To the reports of the subjects' reports about their present situations, they-in-the-future gave an advice "You may find difficulties in your school days, but you will realize when you look back in the future that those days are the best period when you can do many things".

In the impressions of the subjects, it can be inferred from the impressions such as "By writing the image of myself in the future, I could clarify my goal and feel active" and "I could recognize once again what I want to do in the future" that Role Lettering can be an opportunity for them to think over themselves and a help for them to change their feeling so that they can start thinking positively.

From the impressions "I understand what I feel anxious about" and "I found myself relaxed by writing down my anxious feeling", it can be considered that they might have been able to think about themselves in an objective way by clarifying their feelings as writing. By using this function, therefore, it is considered to be possible to apply Role Lettering into self-counseling.

As the replies to the questions and encouragements from the subjects-in-the-present, the-subjects-in-the-future returned advices with the contents such as "I want you to study now". In order to enhance one's motivation to learn, it is important for oneself to realize the necessity of learning. It was suggested that motivation for learning is reinforced by employing Role Lettering. Furthermore, it was considered that the importance of studying being told by the-subjects-in-the-future who had made their dreams come true would lead the nursing students to obtain the confidence in achieving their goals and be helpful for their self-effect to be enhanced.

## Conclusions

The time-machine messages written by the nursing students were analyzed. As a result, they wrote letters to themselves-in-the-future, the contents of which could be construed as "questions", "reports about their present situations" and "encouragements". In the replies to them, many of the subjects-in-the-future who had made their dreams come true gave advices on what the subjects-in-the-present should do for the future. It was suggested that there were effects of leading one to a positive feeling by letting one recognize one's future dream and think over oneself, and of motivating for studying. Also, it was considered that the imagining of oneself having achieved a goal would be possible to be a help in enhancing one's own self-effect. Moreover, it was found that the Role Lettering method could be expected to be used as a screening to find out students who have mental problems at early stage.

## Prospective future objectives

In this research, time-machine message was performed to all the nursing students together for only once, thus they seemed to be enjoying writing. However, if there is an increase in the level of stress as school grades advance higher, then it is possible that more serious and problematic situations may be written. In that case, it is necessary to consider a way to protect the privacy of the participant when writing down. Also, in this time, no feedback on the contents written by the nursing students was done. However, if Role Lettering is to be introduced in real situations in future, one of the issues is how to return advices to students. We would like to consider such issues continuously.

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BRIEF REPORT

# Effects of intervention with back-lying exercises with bent knees pointing upwards to prevent disuse muscle atrophy in patients with post-stroke hemiplegia

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**Abstract** The present study measured lower extremity muscle mass using DXA (Dual energy X-ray Absorptiometry) in order to verify the effectiveness of intervention with a series of movements, including lying hip raise exercise with bent knees pointing upwards, among bedridden patients with post-stroke hemiplegia in the acute post-stroke period. Subjects in the intervention group were required to perform 10 repetitions of a series of back-lying exercises once a day with researchers, in addition to the exercises performed by those in a control group. The first measurement of muscle mass was conducted at three to five days after onset, and the second measurement was conducted seven days after the first. Muscle mass in the lower extremities was reduced by approximately 600 g (decrease rate : 9%) on the paralyzed side and by 280g on the non-paralyzed side (decrease rate : 5%) in one week in the Brunnstrom stage ≤ Ⅱ subgroup (site of measurement : lower extremities) (n=8) of the control group (n=23). The decrease in muscle mass in the Brunnstrom stage ≤ Ⅱ subgroup (n=4) of the intervention group (n=15) was approximately 260g on the paralyzed side (decrease rate : 5%) and approximately 280 g (decrease rate : 5%) on the non-paralyzed side. Thus, muscle mass decreased on both sides, and this occurred regardless of degree of paralysis. Comparison of the Brunnstrom stage ≥ Ⅲ subgroups between the control and intervention groups also confirmed that the decease in muscle mass was smaller in the latter group. Thus, it was confirmed that back-lying exercises combining lower extremity movements, including hip raises with bent knees pointing upwards, prevented the decrease in lower extremity muscle mass on the paralyzed side in post-stroke patients. The present study also suggests that these exercise movements can be applied to preventive care for bedridden patients with other severe diseases.

*Key words* : effects of intervention, acute post-stroke period, lower extremity muscle, prevent disuse muscle atrophy, hip raise exercises

## Introduction

The issue of disuse syndromes, particularly disuse muscle atrophy (muscle mass decrease), in bedridden patients with severe diseases has long been discussed[1,2].

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It has been suggested that developing a rehabilitation program that focuses on the issue of muscle atrophy in the lower extremities during the bedridden period is necessary in order to facilitate early recovery from the bedridden status[3]. Nurses generally provide care, such as daily postural change and maximizing range of motion upon changing clothes, to such bedridden patients.

Although there are many reports on lower extremity muscle atrophy in patients with cerebrovascular disorders[4-9], most of these have evaluated cross sections of the lower extremities using CT and ultrasound echo, and only one study evaluated the whole muscle mass in the lower extremities[10]. Although the need for patient rehabilitation in the acute period has been recognized[3], no standardized practical methods have been established[11].

By establishing a method to prevent the decrease in lower extremity muscle mass, it is possible to not only contribute to QOL improvement in post-stroke patients, but also to help solve the problem of disuse muscle atrophy in bedridden patients with severe diseases. Conducting such a study in the field of nursing should therefore be highly meaningful.

In the present study, we instructed and assisted patients with acute post-stroke hemiplegia in a series of back-lying exercises that combined lower extremity movements, such as hip raises with bent knees pointing upwards. The effectiveness of the intervention was confirmed by examining changes in lower extremity muscle mass.

## Objective

In order to verify the effectiveness of a series of exercises we had developed, such as back-lying hip raises with bent knees pointing upwards, to preventing disuse muscle atrophy in patients with post-stroke hemiplegia, we compared changes in lower extremity muscle mass measured using DXA (Dual energy X-ray Absorptiometry) between an intervention group, in which the exercises were introduced during the acute bedridden period, and a control group not performing such exercises.

## Definitions of terms

In the present study, the following terms are defined as below : In the acute post-stroke period : This refers to the period "within two weeks from the onset of stroke."

Lower extremity muscle mass : This refers to "the muscle mass in the lower extremities, as measured using DXA." The weight of all muscles from the inguinal region to the toe was measured.

## Method

### 1. Subjects

Subjects consisted of 38 patients who were urgently admitted to hospital "A" due to stroke between May 2005 and July 2006. In these patients without impaired consciousness, hemiplegia was observed, and it was possible to carry out the first measurement at three to four days after onset and the second measurement at 10 to 11 days after onset.

### 2. Method and Analysis

Disease progress in subjects was managed using the clinical path for strokes at hospital "A." In order to avoid confusion between the control and intervention groups, the study was first conducted in the control group, and subsequently in the intervention group.

Three types of back-lying exercise, including torso twists with bent knees pointing upwards, hip raises with bent knees pointing upwards, and upward kicks with bent knees pointing upwards, in addition to the exercises performed in the control group were each performed ; ten repetitions were performed once a day (at around 4 pm) for approximately 10 minutes in the intervention group. These exercises were introduced with the expectation that contraction of the flexor and extensor muscles in the lower extremities would be facilitated by such movement. The actual movements in these exercises include isotonic muscle contraction (kick up) and closed kinetic chain (hip raise)[12]. The time of exercise was set as above in order to avoid conflict with examinations and treatments, and taking meals. The hip raise exercise with bent knees pointing upwards is

shown in Figure 1. An exercise assistant fixes the knee joints in order to prevent the bottom of the leg on the paralyzed side from sliding, and maintains the angle of knee joint flexion at around 90 to 100°. An angle of knee joint flexion ranging from 90 to 100° allows patients to remain in the easiest posture and prevents the

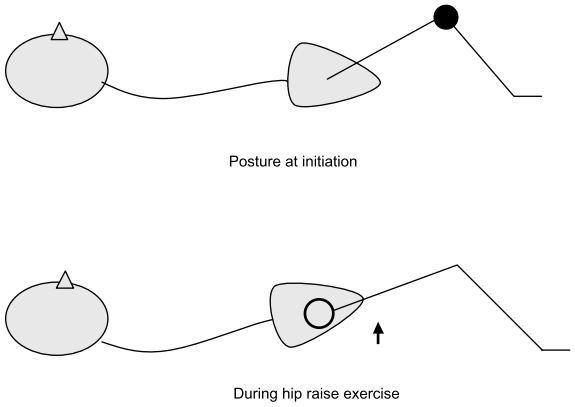


Figure 1. Scheme of hip raise exercise with bent knees pointing upwards in patients with post−stroke hemiplegia
1) The angle of knee joint flexion (●) at initiation should be kept around 90 to 100°.
2) The height of hip elevation should be 5 cm between the trochanteric region on the non- paralyzed side (○) and the bed surface.

paralyzed leg from sliding. The hip was raised until the trochanteric region on the non-paralyzed side was elevated to 5 cm. In order to ensure consistency and accuracy, we practiced this exercise program in healthy individuals prior to using it with patients. One researcher was exclusively involved in providing intervention exercises in order to eliminate differences in the contents and methods of the study. Furthermore, persons in charge of examinations, including DXA and Brunnstrom, and exercise supporters concealed individual test results and status of patients in order to maintain a clear border between researchers and evaluators. Thus, bias in the research results was minimized.

DXA (QDR Delphi (Hologic Inc. USA)) was used for measurement of muscle mass in the left and right lower extremities. Muscle mass evaluation was performed by one researcher who was skilled in DXA. The first measurement was conducted at 3 to 5 days after onset, and the second measurement was conducted on the 7 $^{th}$ day after the first measurement. Brunnstrom stage was determined by one researcher for all subjects on the day of the first DXA measurement.

For data analysis, subjects were divided into Brunnstrom stage Ⅰ to Ⅱ subgroup with mostly immobile patients (Brunnstrom stage ≤ Ⅱ group) and a Brunnstrom stage Ⅲ to Ⅴ subgroup with relatively mobile subjects (Brunnstrom stage ≥ Ⅲ group), based on degree of motion of the paralyzed lower extremity. Regarding the difference between the first and second measurements of muscle mass, average values and decrease rates were calculated for the paralyzed and non-paralyzed side in each group. Decrease rates were calculated based on the following formula: (muscle mass on first measurement − muscle mass on second measurement) / muscle mass on first measurement × 100. A Wilcoxon matched-pair signed-rank test was performed to analyze the data using SPSS 11.5 for Windows, with statistical significance being set at $P < 0.05$.

### 3. Ethical considerations

The present study was conducted after receiving the approval of the Ethics Committee for Clinical Research at Tokushima University Hospital. The contents of the study were explained to the subjects and their families. Upon verbal and written explanation that participation was voluntary, that nobody would be disadvantaged in medical treatment and nursing due to discontinuation or lack of participation in the study, and that privacy would be protected, agreement to participate was obtained in writing.

## Results

Table 1 shows the clinicodemographic background data of the 38 subjects (23 in the control group and 15 in the intervention group). In the control group, the average age of the subjects was 65.1 years (SD 13.2). Cause of stroke (primary disease) was cerebral infarction in 12 subjects, and intracranial hemorrhage in 11. Hemiplegia was left-sided in 14 subjects, and right-sided in nine. The Brunnstrom stage ≤ Ⅱ subgroup comprised eight subjects, while the Brunnstrom stage ≤ Ⅲ subgroup comprised 15 subjects. In the intervention group, the average age of the subjects was 67.0 years (SD12.0).

Cause of stroke was cerebral infarction in 12 patients and intracranial hemorrhage in three. Hemiplegia was left-sided in 11 subjects, and right-sided in four. The Brunnstrom stage ≤ Ⅱ subgroup comprised four subjects, while the Brunnstrom stage ≥ Ⅲ subgroup comprised 11 subjects.

Changes in muscle mass and decrease rates for each Brunnstrom subgroup in the intervention and control groups are shown in Table 2. The decrease in muscle mass in the control group was 292g (SD 239) on the paralyzed side and 123 g (SD 277) in the Brunnstrom stage ≥ Ⅲ subgroup. The decrease rate was 5.0% (SD 4.2) on the paralyzed side and 2.0% (SD4.5) on the non-paralyzed side; thus, a significant difference was observed ($P<0.05$). In the Brunnstrom stage ≤ Ⅱ subgroup, the decrease was 609g (SD 233) and 316 g (SD 303) on the paralyzed and non-paralyzed sides, respectively. Although the difference in decrease rate between the paralyzed and non-paralyzed sides, 9.0% (SD 3.5) and 5.0% (SD4.2), respectively, was not significant, a clear trend ($P=0.07$) was observed.

On the other hand, the decrease in muscle mass was only 77 g (SD 295) on the paralyzed side and 131 g (SD 334) on the non-paralyzed side in the Brunnstrom stage ≥ Ⅲ subgroup of the intervention group. The decrease rate was almost identical between the paralyzed and non-paralyzed sides (1.6% (SD4.4) and 1.9% (SD 5.0), respectively), and no significant difference was observed. The same trend was observed in the Brunnstrom stage ≤ Ⅱ subgroup; no significant difference was observed between the paralyzed and non-paralyzed sides in decrease in muscle mass, 267g (SD 203) and 282 g (SD 406), or in decrease rate, 4.8% (SD 4.0) and 4.8% (SD6.5), respectively.

Table 1 Background of subjects

| | | control group N=23 | intervention group N=15 | Total N=38 |
|---|---|---|---|---|
| Gender | Male | 14 | 10 | 24 |
| | Female | 9 | 5 | 14 |
| Age | 40−49 | 3 | 1 | 4 |
| | 50−59 | 7 | 3 | 10 |
| | 60−69 | 2 | 3 | 5 |
| | 70−79 | 7 | 6 | 13 |
| | Above 80 | 4 | 2 | 6 |
| Average (SD) | | 65.1 (SD13.2) | 67.0 (SD12.0) | |
| Primary disease | Cerebral infarction | 12 | 12 | 24 |
| | Intracranial hemorrhage | 11 | 3 | 14 |
| Side of paralysis | Right | 9 | 4 | 13 |
| | Left | 14 | 11 | 25 |
| Degree of hemiplegia Brunnstrom stage (lower extremities) | | | | |
| | stage Ⅲ ~ Ⅴ | 15 | 11 | 26 |
| | stage Ⅰ ~ Ⅱ | 8 | 4 | 12 |

Table 2 Average decrease and rate of decrease of lower extremity muscle mass

| | Brunnstrom stage | | Muscle amount decrease (g) Mean (SD) | Decrease rate (%) Mean (SD) | Wilcoxon matched-pair signed-rank test |
|---|---|---|---|---|---|
| control group | stage Ⅲ or above | | | | |
| | Paralyzed side | 15 | 292 (239) | 5.0 (4.2) | * |
| | Non-paralyzed side | 15 | 123 (277) | 2.0 (4.5) | |
| | stage Ⅱ or below | | | | |
| | Paralyzed side | 8 | 609 (233) | 9.0 (3.5) | n.s. |
| | Non-paralyzed side | 8 | 316 (303) | 4.8 (3.9) | |
| intervention group | stage Ⅲ or above | | | | |
| | Paralyzed side | 11 | 77 (295) | 1.6 (4.4) | n.s. |
| | Non-paralyzed side | 11 | 131 (334) | 1.9 (5.0) | |
| | stage Ⅱ or below | | | | |
| | Paralyzed side | 4 | 267 (203) | 4.8 (4.0) | n.s. |
| | Non-paralyzed side | 4 | 282 (406) | 4.8 (6.5) | |

(*; $P<0.05$ n.s.: not significant)

## Discussion

With the recent progress in our understanding of rehabilitation programs for post-stroke patients in the acute period, the importance of

providing such rehabilitation in the acute period is being recognized. However, post-stroke bedridden patients in the acute period after onset to are treated according to 2 contradicting methods, rest based on the acute period management and exercise for prevention of disuse syndromes, and thus tend to be maintained in the bedridden status. Furthermore, the need for rehabilitation has been recognized[10] according to the actual situation of disuse muscle atrophy in the lower extremity muscles in post-stroke patients[3,10]. However, no standardized practical methods have been established. By actively providing a rehabilitation program for bedridden patients in the acute stage, it is possible to break the vicious circle of disuse syndromes[13], and contribute to improvement of QOL of patients by helping to reduce the hospitalization period and return to work.

Studies using several conventional evaluation methods for disuse muscle atrophy in post-stroke patients have been reported, including methods to estimate the decrease in lower extremity muscle mass based on muscle cross sections using CT[3,9] and ultrasound echo[6,7], and a method to measure muscle mass only on the healthy side using a dynamometer[4]. The DXA method utilized in the present study was originally used to measure bone density. Because the method allows measurement of individual body components (bone, muscle and fat) in the right and left lower extremities[14], and the measurement error is as low as 0.2-2.2%[14,15], it is possible to accurately evaluate the entire muscle mass of left and right lower extremities.

For intervention, exercises were designed to facilitate muscle contraction of flexor and extensor muscles in the lower extremities, and to consist of movements in the daily lives of bedridden patients. By including the series of movements described above, which are associated with movements with bent-knees pointing upwards and kick-up movements, it was expected that isotonic muscle contraction (kick up) and closed kinetic chain (hip raise)[12] would be activated. Although a short period of time, 10 minutes a day, was spent on exercise, the exercise load was not insufficient according to the report by Hettinger, et al.[16], which suggested that performing muscle contraction exercises for 6 seconds a day increased muscle mass, and was equivalent to the level of training reported by Ichihashi, et al.[17].

In the intervention group, changes in muscle mass on the paralyzed and non-paralyzed sides were almost equivalent in both the Brunnstrom stage ≥ Ⅲ subgroup and the Brunnstrom stage ≤ Ⅱ subgroup, and the decrease rate was as low as 2 % and 5 % in the Brunnstrom stage ≥ Ⅲ subgroup and Brunnstrom stage ≤ Ⅱ subgroup, respectively. On the other hand, differences in muscle mass decrease were observed between the paralyzed side, approximately 609 g (9.0%), and non-paralyzed side, approximately 300 g (5.0%), in the Brunnstrom stage ≤ Ⅱ subgroup of the control group. Standard deviations were large in the present study. This was assumed to be because muscle changes were expressed as a difference between the muscle mass in the first measurement and second measurement, and there were some cases in which muscle mass increased. Such cases were particularly observed in the Brunnstrom stage ≥ Ⅲ subgroup of the intervention group, and increase rates were highly diverse. Such issues should be examined in future research.

Having post-stroke patients with hemiplegia perform a series of back-lying exercises, including hip raises with bent knees pointing upwards, in intervention makes them realize that such movements are "preferable movements ; "therefore, it was assumed that the activity level of the lower extremities with bent knees pointing upwards was increased in bedridden patients. Because objective observation of activity levels of the lower extremities with bent knees pointing upwards was not achieved in the present study, further study investigating this issue is needed. The present study revealed that intervention reduced the loss of muscle mass in the lower extremities ; however, it remains unclear which parts exhibited less reduction in muscle mass. This should also be investigated in future research.

It is expected that the series of exercises used in the present study is applicable to not only post-stoke patients but also to bedridden patients with severe diseases. By conducting further studies in which frequency and intensity of the series of back-lying movements are observed in daily life, better movement sup-

port methods could be designed.

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資　料

# 成人２型糖尿病患者の抱く健康観・価値観
## －過去10年間の国内文献の検討－

桑村由美[1)]，矢田眞美子[2)]，石川雄一[2)]，南川貴子[1)]，
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**要　旨**　成人２型糖尿病患者（以下，患者）の抱く健康観・価値観の動向について，健康観・価値観を「その人らしさを大切にした日々の生活の送り方や行動に対する見方・考え方，判断の基盤となる見方・考え方」と定義して，医学中央雑誌を用いて，過去10年間の文献検索を行ったところ，患者は，できるだけ身体に不自由や障害がない状態で，生きることを大切と考え，そのために，糖尿病のもたらす怖さを認識し，自己管理行動が大切であると考えていた．また，自己管理行動以外にも，命をはぐくむ食べ物，その人らしい生き方を支える家族や仕事，趣味や嗜好品なども大切であると考えていた．これらは，長年にわたり培われてきたものであり，患者の個別的な生き方を支え，生活の質を潤すものと捉えていた．しかし，同時に，これらは，糖尿病の自己管理行動を促進する場合だけではなく，阻害する場合もあった．また，患者は自己管理行動を身体・心理・社会面での苦痛や負担をもたらすものであると捉えていた．よって，看護介入を行うにあたっては，患者の抱く健康観・価値観の背景や過程を十分に理解した上で，患者の自己管理行動の遂行を援助する必要がある．そして，健康観・価値観の転換が必要な場合には，患者が納得でき，あるいは折り合いが持てるように段階的に進めていく必要がある．今後，患者の抱く健康観・価値観を尊重しながら，いかにして，自己管理行動を促進させる要因を増強させ，阻害する要因の転換を図っていくかということについて研究する必要があると考えられた．

キーワード：２型糖尿病，健康観，価値観

## はじめに

近年，糖尿病は増加傾向にあり，平成14年の糖尿病実態調査では，現在糖尿病の治療中の人が約740万人，糖尿病の可能性を否定できない人を合わせると約1620万人と推定されている[1)]．糖尿病では，食事や運動など生活習慣に起因する部分が大きく，日々の生活の中での自己管理行動が血糖コントロールに影響する．そのため，糖尿病患者への看護では，患者が自律的に自己管理行動に取り組めるように支援することが大切になる．

患者が行う自己管理行動は，血糖コントロールのための食事療法や運動療法，薬物療法の遂行や生活習慣の是正などである．これらを医師の指示どおりに生涯にわたって実践する必要がある．

これまでの研究で，食事療法の優先性の意識が食事療法実行の大きな要因になる[2)]など，行動には個人の健康に対する意識や考え方が関与していることが報告されている．また，患者の考えや気持ちを聞くことの重要性[3)]が提言され，治療の選択や評価の際に患者自身の主観的な価値を考慮する必要性[4)]や生活の再構築には患者自身の自己の健康についての認知や評価が重要な要因になること[5)]が述べられている．

このように，患者が自己管理行動を実践する際に抱く

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健康に対する考え方や意識，価値基準，すなわち，健康観・価値観に関して研究された文献を体系的に理解することは，糖尿病患者の行動変容を目指した介入への糸口につながる可能性がある．そして，そのことは，糖尿病患者の特殊性を加味した効果的な看護介入へとつながる点において意義がある．

このようなことから，本研究の目的は，糖尿病患者の抱く健康観・価値観に関するこれまでの研究の動向を文献検討により明らかし，患者が自己管理行動を遂行できるための看護介入について示唆を得ることである．

## 方　法

まず，本稿で用いる健康観・価値観の定義を明らかにした.次いで,２型糖尿病患者の自己管理行動と健康観・価値観との関係について関連のある文献を検索した．そして，検索した文献を精読した上で，健康観・価値観と自己管理行動との関係について分析を行った．以下に，詳細を示す．

### １．用語の定義

１）糖尿病患者の抱く健康観・価値観

広辞苑では，「健康」は「病気の有無に関する体の状態[6]」,「価値」は「人間の好悪の対象になる性質[7]」,「観」は「見解，見方[8]」と記されている．

「価値観」について，上野[9]は，「何が望ましく，重要なものであるか」という物事を評価するときの自分の中の基準であると述べている．また，久保田[10]は，「何が望ましく，重要であるのか」を判断する際に，基準としているのが，価値であり，複数の価値を階層的に体系化したものを価値観とよぶと述べている．

「健康」について，看護大辞典[11]によると，個人や集団の望みやニーズの実現のほかに，最近では人間としての尊厳も加えて,「個人個人の健康を重視し，虚弱であってもなんらかの障害をもっていてもその人が生きがいをもって生活できれば健康な生活であると思われるようになってきている」と記述されている．また，大森[12]は「健康とは，その人らしく日々の生活を営むことのできる状態」と述べている．そして，本庄[13]は慢性病者の健康を「慢性病を持ちながらのより良い状態であり，潜在的な力を発揮できている程度である．個人の受けとめという側面から捉えるその人自身の状態をさす.」と述べている．

以上をふまえた上で，本稿では，「糖尿病患者の抱く健康観・価値観」とは，「２型糖尿病を持つ成人が，糖尿病を持ちながら生活を送る中で，糖尿病という病気やその病気を持つ自分の身体，および治療や自己管理行動について，どのように捉え，どうあるべきだと考え感じているか，すなわち，「その人らしさを大切にした日々の生活の送り方や行動に対する見方・考え方，判断の基盤となる見方・考え方」と定義した．

２）自己管理行動

オレム[14]はセルフケアを「自分自身の生命と健康な機能，持続的な個人的成長，および安寧を維持するために開始し，遂行する諸活動の実践」と述べ，本庄[13]は，セルフケア能力を「個人がより良い状態を得るために自分自身および環境を調整する意図的な行動に従事するための能力」と述べている．これらを参考に，本稿では「自己管理行動」とは，「糖尿病での血糖コントロールのために，患者が自ら行う，食事療法，運動療法，薬物療法，生活習慣の調整などの行動」と定義する．

### ２．文献抽出方法

1996年から2006年３月までの過去10年間を分析期間とした．検索媒体は，医学中央雑誌 Web.Ver.4.0を用いた．キーワードを「２型糖尿病」「健康観」「価値観」「思い」「気持ち」「考え方」とし，論文の種類を原著論文，対象年齢を成人（19歳以上）に限定して検索を行った．検索により該当した文献のアブストラクトを読み，さらに文献を絞り込んだ上で，本文を精読した．そして，病院で加療中の成人２型糖尿病患者（以下，糖尿病患者）を研究対象として，「健康観・価値観」の検討が行われている文献を抽出した．なお，悪性腫瘍や精神疾患や重篤な脳神経系疾患・心疾患を合併している人や妊産褥婦を対象として行われた研究は糖尿病以外の因子の関与が予想されるため除外した．

### ３．分析方法

収集した文献を精読し，タイトル，掲載雑誌，対象，自己管理行動やそれに対する考えや思い，健康観・価値観などの項目ごとに整理して表を作成した．なお，健康観・価値観については，本研究での用語の定義と照らし合わせながら抽出し，考えや思いの抽象化を行った．そして，意味内容が同じものを類型化し，サブカテゴリー，カテゴリーにまとめた．その後，自己管理行動との関係について分析を行った．

## 結　果

今回の分析対象として，選定された文献（以下，資料文献）は24編であった．そのうち，23編が2000年以降に行われた研究であった．

資料文献の詳細は表１に示した．

対象者の加療状況は，外来通院中が14編，外来通院と入院の混在が１編，入院中が５編，入院中から外来通院に及ぶ期間を対象としたものが２編であった．平均年齢は40歳代が２編，50歳代が12編，60歳代が５編あった．１つの資料文献の中で対象を２群にわけて各々の平均年齢を記述しているため全体の平均年齢が特定できないものが２編，平均年齢が記載されていないものが２編あった．

表１　資料文献の詳細

| 文献番号 | 対象者 | | | 自己管理行動 | 健康観・価値観 |
|---|---|---|---|---|---|
| | 外来・入院 | 人数 | 平均年齢 | | |
| 1 | 外来 | 103名(男性49名，女性54名) | 男性63.7±12.2歳，女性65.3±11.9歳 | 食事療法 | （食逸脱行動である過食後）特に何も感じない（女34%，男36%），己の弱さを反省・後悔（女31%，男19%），体重の増減が心配（女17%，男７%），これでよい（女10%，男30%），生まれてはじめて口にして嬉しいなどの幸福感（女７%，男11%）． |
| 2 | 外来 | 64名（男性24名，女性40名） | 57.2±14.8歳 | 薬物療法：インスリン | インスリン注射の道具を持ち歩くことに困難を感じる．心理面の困難．低血糖の心配．注射のときに自分の病気をあれこれ考える．注射がなければどんなにいいかと思う． |
| 3 | 外来 | 84名（男性50名，女性34名） | 64歳以下の成人群は54.7±7.8歳，65歳以上の高齢者群は71.8±5.7歳 | 食事療法 | ①透析に関すること，将来に関することが気がかり．②透析導入後の食事の制限が厳しくなった．③食事療法の実践は健康のため重要．食事療法を実践できている． |
| 4 | 外来 | 84名（男性50名，女性34名） | 64歳以下の成人群は54.7±7.8歳，65歳以上の高齢者群は71.8±5.7歳 | 食事療法 | ①食事制限が厳しくなった．②透析に関すること，将来に関することが気がかり．時間の制約や自覚的身体症状が苦痛．死の恐怖と社会復帰に対する不安． |
| 5 | 入院 | 65名（男性48名，女性17名） | 58.4±9.7歳 | 食事療法 | 食事療法の自己評価はその人の自己価値や自信からも影響を受ける．家族の協力があれば自己管理できそうだ，できそうだと思えると治療に満足できる． |
| 6 | 外来 | 234名（男性157名，女性77名） | 53.7±8.6歳 | 食事療法，薬物療法 | ①糖尿病とともに生きていくことや合併症を起こす不安，手足のしびれ，②糖尿病のために他人から受ける嫌な思い③インスリンを他人に隠すこと，HbA１c値が高いこと，食事療法を負担に感じる． |
| 7 | 入院 | 男性３名 | 50歳代１名，40歳代２名 | 食事療法：飲酒 | ①（飲酒は）大好物，毎日の習慣，有効なストレス解消法，職業上必要なこと，②飲酒習慣変容の意思決定の特徴は，必要性を納得する，飲酒量を決定すること． |
| 8 | 外来 | 19名（男性11名，女性８名） | 記載なし | 食事療法，運動療法，薬物療法，生活 | 仕事のことが心配で積極的に治療に取り組めない． |
| 9 | 外来 | ６名（男性４名，女性２名） | 平均48.3±16.5歳 | 食事療法，運動療法，薬物療法，生活 | ①教育入院で糖尿病や自己管理についての知識を得たことがよかった．②退院後に自分が目標としていたことを実践できたことが心地よかった．運動することにより心地よい．実行できることが増えたことがよかった． |
| 10 | 入院から外来まで | 女性１名 | 50歳代 | 食事療法，運動療法 | ①食事療法をやらされている意識から主体的な意識を持つ．②他者との関係の力を得る③弱さを持つ自己を引き受けて認める意識を持つ．④糖尿病は食べることの制限⑤食事は生きる源，出されたものを全部食べないと損．⑥家庭でも病院のような食事をすべきだ．（いろいろな制限を）守らなければいけないと思う． |
| 11 | 外来 | 記載なし | 記載なし | 食事療法 | ①間食をやめることは自分には無理だ．②（間食を）食べてほっとしている充実感と，お腹がすくのは充実した生活を諦めるようで悲しい．食べていると自分を回復できる安心感と，決めたことがきちんとやれない諦め． |

（次項に続く）

（表1　続き）

| 文献番号 | 対象者 | | | 自己管理行動 | 健康観・価値観 |
|---|---|---|---|---|---|
| | 外来・入院 | 人数 | 平均年齢 | | |
| 12 | 外来 | 149名(男性52名，女性97名) | 65.1±10.2歳 | 食事療法 | ①食事療法を医師の指示通りに実行する気持ちはある（88.6%）．医師の指示する食事療法の実行可能性(63%),実行できている(72.4%)，医師の指示通りできそうだという思いとどの程度実行できていると思うかは相関．②食糧不足に悩んだ経験や受けてきた教育により食べ物を残すことへの後ろめたさで食べ過ぎてしまう．③仕事や社会に対する責任の多さにより，揚げ物摂取頻度が減る． |
| 13 | 入院中から外来まで | 女性2名 | 63歳 | 食事療法，生活 | ①入院で日常の気遣いや葛藤から解放される．②自己の病気よりも家族の面倒をみることを優先してきた．③死ぬときには，ぱっと死にたいけど，長生きして行きたい見たいところがある． |
| 14 | 外来 | 18名（性別記載なし） | 57.2±8.1歳 | 薬物療法：インスリン | 不安だった．注射に触れること自体が怖いと思った． |
| 15 | 外来 | 男性10名 | 55.6±9.9歳 | 食事療法，運動療法，薬物療法 | ①男性性の喪失感，順調な人生に対する喪失感，仕方がない状況に対するあきらめ，感染しやすい身体への嫌悪感．②症状の進行に対する心配，合併症の出現に対する恐怖感．③症状の改善による開放感，治癒に対する希望，新薬の開発に対する期待，コントロールできた満足感．④子供への影響に対する気がかり．⑤不規則な生活習慣に対する後悔，周囲の目に対する気がかり． |
| 16 | 外来 | 188名（男性118名,女性70名） | 血糖コントロール良好群60.7±10.2歳，不良群62.0±10.2歳） | 食事療法，運動療法，薬物療法 | 糖尿病に関連した日常生活のストレス原因：食事療法，自己管理がうまくいかないこと，体重コントロール，合併症，運動療法，日常生活を変えなければならないこと，インスリン注射． |
| 17 | 外来 | 110名(男性57名，女性53名) | 63.9歳 | 食事療法 | ①食事療法を継続する中で，対人関係の中で感じる孤独感・疎外感，好きなものが好きなだけ食べれない不自由感．②自己価値観を維持することへの脅かし．③生活範囲の縮小に伴う不自由感． |
| 19 | 入院 | 17名（男性11名，女性６名） | 適切群60±11歳，不適切群51±16歳 | 薬物療法：インスリン | ①治療を知られたくない．②（インスリン自己注射の指導は）個別指導を望む．集団指導がよい．男女別がよい．肌を見られたくない． |
| 20 | 入院 | 男性４名 | 55.8±8.8歳 | 食事療法，運動療法，薬物療法 | ①人生80年，退職してからも体が丈夫でないと何にもならない．病気になったら会社も人生も終わり．②（病気は）もう，離れないものだから，いかにコントロールするかだと思う．③糖尿病は食事療法ができるような年でなければ耐えられない病気.（民間療法で）治るのだったら簡単なのに．食べられなくなるのはやっぱり辛い．④糖尿病は自分がつくった病気という認識を持つ．⑤痩せたことを暑さのせいと思いあまり心配していなかった．⑥糖尿病は医者任せです． |
| 21 | 入院 | ４名（男性２名，女性２名） | 58.5±1.7歳 | 食事療法，薬物療法 | ①身体的理由よりも社会的理由で入院時期を決めた．食事療法に優先した状況（育児，仕事，家事，趣味など）があった．治療自体が社会生活に及ぼす（個人の価値尺度に基づく）不利益があった．②今生きる目的の釣りをするために失明予防のために食事療法や運動療法を行う．③医療者の指示に従った治療を継続できなかった． |
| 22 | 外来と入院 | 30名（男性22名，女性８名） | 59.6歳 | 薬物療法：インスリン | インスリン注入器はキャップのはずしやすさ，単位表示の見やすさ，単位を間違えたときの再設定のしやすさ，残量の確認のしやすさ，注射手順の覚えやすさ，携帯のよさ，外観（デザイン）のよさが必要． |
| 23 | 外来 | 女性15名 | 53.4歳 | 食事療法，運動療法，薬物療法，生活 | ①透析したり，失明したりして生きていくのは絶対に嫌．②健康を第一に考える．③糖尿病と家族役割の中で，優先順位の決定を行うことにより，セルフケアを行っていた．④糖尿病の治療の実行を犠牲にして，家族に対する責任を果たすことを優先してきた．⑤糖尿病という病気の合併症に対する恐れ．⑥糖尿病を直視できない．⑦周囲に糖尿病であることを知られるのは辛い．⑧食事・運動療法を実行せず，食べたいものを食べる．⑨飲酒と疾患の関係がわからない．⑩家族は療養生活の支え.⑪糖尿病の重大性の実感,糖尿病を受けいれるしかない. |
| 24 | 外来 | 133名(男性80名，女性53名) | 57.9±13.8歳 | 自己管理行動 | 糖尿病の管理ストレスが低く，自己管理行動がよいと，自尊感情が高く保たれ，治療満足が高い． |

### １．糖尿病患者の抱く健康観・価値観について

糖尿病患者の抱く健康観・価値観の記述を抽象化し，類型化したところ，「身体に支障なく生きていたい」「糖尿病は自己管理行動を工夫して実践することが大切」「糖尿病の自己管理行動は負担」「糖尿病は怖い病気」「自己管理行動以外にも大切なものがある」の５カテゴリーに分類でき（表２），18サブカテゴリーから構成されていた．以下に，カテゴリーごとの詳細を記述した．なお，文中の《》内はカテゴリー，『』内はサブカテゴリー，「」内は資料文献からの引用，（）内は資料文献番号を示した．

１）《身体に支障なく生きていたい》

これは，『生きていたい』『生きている間，ずっと元気でいたい』『健康が一番』から構成されていた．

『生きていたい』は，「死ぬときには，ぱっと死にたいけど，長生きして，行きたい見たいところがある（資料文献13)」と生を尊いものとしている思いが表されていた．『生きている間，ずっと元気でいたい』は，「人生80年，退職してからも体が丈夫でないと何にもならない（資料文献20)」「病気になったら会社も人生も終わり(資料文献20)」「透析したり，失明したりして生きていくのは絶対に嫌（資料文献23)」など，身体に支障なく過ごすことができることが１番だということが示されていた．『健康が一番』は「健康を第一に考える（資料文献23)」など健康を一番大切に考えていることが示されていた．

このカテゴリーでは，生を大切に思い，身体に不自由や支障なく生きていくことの大切さが示されていた．

２）《糖尿病は怖い病気》

このカテゴリーでは，糖尿病の合併症そのものへの怖さと，病気が引き起こす生活への影響の重大さが示されていた．『糖尿病の合併症は恐ろしい』『糖尿病は自覚症状がないから実感を持ちにくい』『糖尿病は人生の楽しみや潤いを奪う』から構成されていた．

『糖尿病の合併症は恐ろしい』では，「透析に関すること，将来に関することが気がかり．死の恐怖と社会復帰に対する不安（資料文献４)」「糖尿病とともに生きていくことや合併症を起こす不安，手足のしびれ（資料文献６)」「症状の進行に対する心配，合併症の出現に対する恐怖感（資料文献15)」などがあった．

『糖尿病は自覚症状がないから実感を持ちにくい』では，「痩せたことを暑さのせいと思いあまり心配していなかった（資料文献20)」など，自覚症状がないために，病気を実感として捉えることができないことの恐ろしさが示されていた．

『糖尿病は人生の楽しみや潤いを奪う』では，「糖尿病は食べることの制限（資料文献10)」「男性性の喪失感，順調な人生に対する喪失感，仕方がない状況に対するあきらめ，感染しやすい身体への嫌悪感(資料文献15)」「食事療法を継続する中で，対人関係の中で感じる孤独感・疎外感，好きなものが好きなだけ食べられない不自由感（資料文献17)」で示されるように，病気やその治療に伴って，これまで楽しみや心の憩いの場としていたことを満喫することができないことが示されていた．

表２　資料文献からみた糖尿病患者の健康観・価値観

| カテゴリー | サブカテゴリー |
|---|---|
| 身体に支障なく生きていたい | 生きていたい<br>生きている間，ずっと元気でいたい<br>健康が一番 |
| 糖尿病は怖い病気 | 糖尿病の合併症は恐ろしい<br>糖尿病は自覚症状がないから実感を持ちにくい<br>糖尿病は人生の楽しみや潤いを奪う |
| 糖尿病は自己管理行動を工夫して実践することが大切 | 病気を受容し主体的に取り組むことが必要<br>行動を変えることができるための知識が必要<br>治療効果を実感することが大切<br>自分でできそうな方法を工夫することが大切<br>教育入院での資源の活用，周囲の協力・支援が大切 |
| 糖尿病の自己管理行動は負担 | 治療の規制を守れないことに自己嫌悪・後悔を感じる<br>食事・運動・薬物療法は煩雑でストレスを感じる |
| 自己管理行動以外にも大切なものがある | 自分らしい生活の楽しみや潤いを持ち続けたい<br>個別性を大切にして欲しい<br>家族や仕事を大切にしたい<br>食べることは尊いと学んできた |

3）《糖尿病は自己管理行動を工夫して実践することが大切》

このカテゴリーは，『病気を受容し主体的に取り組むことが必要』『行動を変えることができるための知識が必要』『治療効果を実感することが大切』『治療と生活を調整することが大切』『自分でできそうな方法を工夫することが大切』『教育入院での資源の活用，周囲の協力・支援が大切』から構成されていた．

『病気を受容し主体的に取り組むことが必要』は，「食事療法の実践は健康のため重要（資料文献３）」「家庭でも病院のような食事をすべきだ．（いろいろな制限を）守らなければいけないと思う（資料文献10)」などから構成されていた．

『行動を変えることができるための知識が必要』は，「教育入院で糖尿病や自己管理についての知識を得たことがよかった（資料文献９）」「飲酒と疾患の関係がわからない（資料文献23)」などで構成され，知識の必要性が示されていた．

『治療効果を実感することが大切』は，「症状の改善による開放感，治癒に対する希望，新薬の開発に対する期待，コントロールできた満足感（資料文献15)」などで構成され，努力したことの効果を実感することの大切さが示されていた．

『自分でできそうな方法を工夫することが大切』では，「（病気は）もう，離れないものだから，いかにコントロールするかだと思う（資料文献20)」「糖尿病と家族役割の中で，優先順位の決定を行うことにより，セルフケアを行っていた（資料文献23)」など，個別の事情に合わせた工夫の大切さが示されていた．

『教育入院での資源の活用，周囲の協力・支援が大切』では，「教育入院で日常の気遣いや葛藤から解放される（資料文献13)」「家族は療養生活の支え（資料文献23)」など，自己管理行動の遂行を支えてくれる人の存在の大切さが示されていた．

4）《糖尿病の自己管理行動は負担》

これは『治療の規制を守れないことに自己嫌悪・後悔を感じる』『食事・運動・薬物療法は煩雑でストレスを感じる』から構成され，血糖コントロールのための自己管理行動を実行しようとする気持ちはあっても実行できないことへの罪悪感や実行に伴う困難・負担感が示されていた．

『治療の規制を守れないことに自己嫌悪・後悔を感じる』では，「（間食を）食べてほっとしている充実感と，お腹がすくのは充実した生活を諦めるようで悲しい．食べていると自分を回復できる安心感と，決めたことがきちんとやれない諦め（資料文献11)」「医療者の指示に従った治療を継続できなかった（資料文献21)」などがあった．

『食事・運動・薬物療法は煩雑でストレスを感じる』では，「インスリン注射の道具を持ち歩くことに困難を感じる（資料文献２）」「食事療法を負担に感じる（資料文献６）」「生活範囲の縮小に伴う不自由感（資料文献17)」などがあった．

5）《自己管理行動以外にも大切なものがある》

これは，『自分らしい生活の楽しみや潤いを持ち続けたい』『個別性を大切にして欲しい』『家族や仕事を大切にしたい』『食べることは尊いと学んできた』から構成され，これまでの学習の中で身に付けてきた考え方や趣味，自分の周囲の人々との関係や社会的役割など，自己管理行動以外に自分が大切にしてきているものがあることを示していた．

『自分らしい生活の楽しみや潤いを持ち続けたい』では，「（飲酒は）大好物，毎日の習慣，有効なストレス解消法，職業上必要なこと（資料文献７）」のように，お酒が自分にとってはかけがえのない大切なものということが示されていた．そして，「今生きる目的の釣りをするため，失明予防のために食事療法や運動療法を行う（資料文献21)」では，趣味の釣りを行い続けたいために，自己管理行動を実践するという，行動の自分にとっての意義が示されていた．一方で，「食事・運動療法を実行せず，食べたいものを食べる（資料文献23)」では，とにかく，自分にとってやりたいように，満足できるようにやりたいのだということが示されていた．また，「インスリン注入器はキャップのはずしやすさ，単位表示の見やすさ，単位を間違えたときの再設定のしやすさ，残量の確認のしやすさ，注射手順の覚えやすさ，携帯のよさ，外観（デザイン）のよさが必要（資料文献22)」では，単なる与薬の道具としてのインスリン注射器の役割以外にも，機器のデザインなどゆとりとしての楽しみの部分が必要であることが示されていた．

『個別性を大切にして欲しい』では，「（インスリン自己注射の指導は）個別指導を望む．集団指導がよい．男女別がよい．肌を見られたくない（資料文献19)」など個別の考えがあり，個別の考えに応じた対応をしてほしいことが示されていた．また，「（食逸脱行動である過食後）特に何も感じない（女34％，男36％），己の弱さを

反省・後悔（女31%，男19%），体重の増減が心配（女17%，男７%），これでよい（女10%，男30%），生まれてはじめて口にして嬉しいなどの幸福感（女７%，男11%）（資料文献１）」などで示されているのは，過食行動自体の捉え方が個人によって異なることである．罪悪感を感じる人もいれば，美味しいものを味わえて嬉しい，満足であると感じる人もおり，個人によって考えが異なることが示されていた．

『家族や仕事を大切にしたい』は，「仕事や社会に対する責任の多さにより，揚げ物摂取頻度が減る（資料文献12)」「身体的理由よりも社会的理由で入院時期を決めた．食事療法に優先した状況（育児，仕事，家事，趣味など）があった（資料文献21)」「糖尿病の治療の実行を犠牲にして，家族に対する責任を果たすことを優先してきた（資料文献23)」のように，自分のおかれた社会的環境，仕事や家族を大切に思い，大切にしたいという気持ちが示されていた．

『食べることは尊いと学んできた』では，「食事は生きる源，出されたものを全部食べないと損(資料文献10)」「食糧不足に悩んだ経験や受けてきた教育により食べ物を残すことへの後ろめたさで食べ過ぎてしまう（資料文献12)」で示されるように，これまでの時代背景や社会情勢の中で，生きるために食べるものが大切であること，食べることは命をつなぐことであり，大切であると学んできたことが示されていた．

### ２．糖尿病患者の抱く健康観・価値観と自己管理行動との関係について

糖尿病患者は，命を大切に思い，できるだけ生活に支障がないように，身体の障害がない状態で生きることが大切であると考えていた．そして，糖尿病では，その大事なものが奪われてしまう可能性があることを認めていた．これは「透析に関すること，将来に関することが気がかり（資料文献４)」「死の恐怖と社会復帰に対する不安（資料文献４)」などに現れていた．そのため，不安や恐れをいだき，自己管理行動を実践することが大切であると認識し，「今生きる目的の釣りをするために失明予防のために食事療法や運動療法を行う(資料文献21)」などで示されているような自己管理行動に取り組んでいた．一方で「仕事や社会に対する責任の多さにより，揚げ物摂取頻度が減る（資料文献12)」にも示されているように，大切なもののために自己管理が促進されていた．しかし，自分が大切だと思う家族や仕事のために，自己管理行動の遂行が阻まれることもあった．「自己の病気よりも家族の面倒をみることを優先してきた（資料文献13)」に示されていた．また，「注射がなければどんなにいいかと思う（資料文献２)」にみられるように，自己管理行動の実施にともなう，負担感や苦痛により，実践の難しさ，負担感を感じていた．さらに，これまでの生活の中で大切だと思ってきたことが，糖尿病での自己管理行動の実践に伴い覆されてしまっていた．「食事は生きる源（資料文献10)」や「食糧不足に悩んだ経験や受けてきた教育により食べ物を残すことへの後ろめたさで食べ過ぎてしまう（資料文献12)」などに示されていた．

このように，糖尿病患者の抱く健康観・価値観と自己管理行動の関係は，健康観・価値観が自己管理行動の促進要因となるときと，阻害要因となるときがあった．促進要因は，『身体に支障なく生きていたい』『糖尿病は怖い病気』『糖尿病は自己管理行動を工夫して実践することが大切』で，阻害要因は『糖尿病の自己管理行動は負担』であった．『自己管理行動以外にも大切なものがある』は，促進要因にも阻害要因にもなっていた．

## 考　察

糖尿病の治療の基本は，食事療法，運動療法，薬物療法である．日々の生活の中で，これらの行動を患者個人が血糖コントロールに向けて実践する必要がある．糖尿病では自己管理行動の占める割合が非常に大きい．そのため，個々の患者の行動を支配している個人の自己の健康に対する考え方，健康観や価値観を理解することが大切になる．

糖尿病患者の健康観については，1995年に馬場口ら[15,16]が，K.A.Wallston ら[17]による Multidimensional Health Locus of Contorol Scale（MHLC）を用いて検討を行っている．今回の検索期間の範囲（1996年～2006年）以前に行われたものであるが，その結果は，糖尿病患者の健康に対する思いは重要な他者のコントロール下にあると考える人が多いことが報告されている．この研究でも，患者の健康に対する認識を把握することは，セルフケア援助の指針になり，大切であると述べられている[15,16]．

このようなことから，今回，健康観・価値観をその人らしさを大切にした日々の生活の送り方や行動に対する見方・考え方，判断の基盤となる見方・考え方と定義して過去10年間の文献検討を行ったところ，糖尿病患者の抱く健康観・価値観は,《身体に支障なく生きていたい》

《糖尿病は自己管理行動を工夫して実践することが大切》《糖尿病の自己管理行動は負担》《糖尿病は怖い病気》《自己管理行動以外にも大切なものがある》の５カテゴリーで示すことができた．そして，健康観・価値観と自己管理行動との関係は，健康観・価値観が，自己管理行動を促進する要因，あるいは阻害する要因になっていた．

資料文献では，自己管理行動の中でも，食事療法に関することが多く示されていた．食べることは，日常生活の中で，毎日繰り返されることであり，生活への密着度が高い．中島[18]は食行動への影響要因を生理的要因，認知的要因，物理的・化学的要因，文化的・社会的要因の４要因であると述べている．《自己管理行動以外にも大切なものがある》の中の『食べることは尊いと学んできた』などは，中島[18]の分類では，文化的・社会的要因に分類される内容である．患者は，《身体に支障なく生きていたい》に示されているように，生きていくことを大切なことだと位置づけている．これは，多くの人の抱く恒久の普遍的な希望である．そして，生きるためには食べることが大切であり，食べることは大事な行動であると考えてきた．むろん，食べ物の存在も貴重であると考えてきた．しかし，糖尿病に罹患したことにより，この考えが覆される．糖尿病での自己管理行動では，必要エネルギーを超えて食事を摂取する過食は，血糖コントロールを乱す行為である．そして，合併症の発症や悪化に結びつくと医療者から指導を受ける．食に関する自己管理行動の遂行の中では，必要量以上の食べ物は残さなくてはいけない，捨てなくてはいけないと言われる．そのため，患者はこれまでの価値基準からの転換が求められることになる．「食べ物を残すことへの後ろめたさで食べ過ぎてしまう（資料文献12)」という言葉に表れているように，患者にとっては，糖尿病に罹患したことで要求される考え方の転換，価値基準の転換は容易ではなく，戸惑いや困難があると考えられる．看護者は，このような背景を十分理解した上で，段階的な支援方法を工夫する必要があると考える．

また，《自己管理行動以外にも大切なものがある》の中では，家族や仕事，趣味や嗜好品なども大切なものであることが示されていた．生きることの質，QOL に関与する事柄である．これらの中にも，糖尿病での血糖コントロールに支障をきたす要因となるものがあった．患者にとって大切なものが，自己管理行動の励みとなり，促進要因となることもあれば，阻害要因となることもあるということである．阻害要因となっている場合に，いかに患者に介入していくかということが問題となる．患者の大切に捉えている事象を否定するのではなく，その大切に思っているエネルギーを認めながら，糖尿病のコントロールとの間で，納得のいく折り合いが持てる必要がある．大沢ら[19]は，健康状態に対する主観的な価値観を示す指標である効用（utility）の測定を行い，糖尿病状態の QOL（quality of life）の評価を行っている．これは，測定したい健康状態が t 年続くと仮定した場合，もし障害のない健康な生活と交換（trade-off）できるとすれば最低何年となら交換できるかを尋ねたものである．その結果，非糖尿病者は，短くてもよいから健康な状態で生きることを望むのに対し，糖尿病患者は，糖尿病状態のままでも長く生き続けたいと臨むなど，糖尿病者と非糖尿病者では同じ糖尿病状態に対して主観的な価値評価が違う可能性が報告されている．この結果は，看護者の考える基盤と糖尿病患者の考え方の基盤に相違がある可能性を示している．看護者はこのことを十分に理解して，個別の価値観に対応しながら，看護に臨む必要がある．なお，その際，病期の進行や加齢に伴う価値観の変化の確認や十分なインフォームド・コンセントがなされた上での決断であるかの確認など細かい配慮が大切になってくる．

さらに，《糖尿病の自己管理行動は負担》で示されているように，病気やその治療，自己管理行動によってもたらされる，身体的，心理的な苦痛や苦悩を患者が感じていることを看護者は十分に理解する必要がある．

糖尿病患者の健康観・価値観を把握することは，個人を尊重した効果的な看護実践へとつながり，意義がある．

今回，成人２型糖尿病患者の抱く健康観・価値観の動向について，健康観・価値観を「その人らしさを大切にした日々の生活の送り方や行動に対する見方・考え方，判断の基盤となる見方・考え方」と定義して，医学中央雑誌を用いて，過去10年間の文献検索を行ったところ，糖尿病患者の抱く健康観・価値観は，《身体に支障なく生きていたい》《糖尿病は自己管理行動を工夫して実践することが大切》《糖尿病の自己管理行動は負担》《糖尿病は怖い病気》《自己管理行動以外にも大切なものがある》の５つのカテゴリーに分類できた．患者は，できるだけ身体に不自由や障害がない状態で，生きることを大切と考え，そのために，糖尿病のもたらす怖さを認識し，自己管理行動が大切であると考えていた．また，自己管理行動以外にも，命をはぐくむ食べ物，その人らしい生き方を支える家族や仕事，趣味や嗜好品なども大切であ

ると考えていた．これらは，長年にわたり培われてきたものであり，患者の個別的な生き方を支え，生活の質を潤すものと捉えていた．しかし，同時に，これらは，糖尿病の自己管理行動を促進する場合だけではなく，阻害する場合もあった．また，患者は自己管理行動を身体・心理・社会面での苦痛や負担をもたらすものであると捉えていた.このようなことから,看護介入を行うにあたっては，患者の抱く健康観・価値観の背景や過程を十分に理解する必要がある．そして，健康観・価値観の転換が必要な場合には，患者が納得でき，あるいは折り合いが持てるように段階的に進めていく必要がある．

以上のような研究の動向を踏まえて，今後，患者の抱く価値観・健康観を尊重しながら，いかにして，自己管理行動を促進させる要因を増強させ，阻害する要因の転換を図っていくか，ということについて研究する必要があると考えられた．

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# *Literature review regarding the sense of health and values among adults with type 2 diabetes in Japan*

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Abstract :

Objectives : The purpose of this study was to review literature published over a 10-year period focusing on the sense of health and values among adults with type 2 diabetes in Japan.

Methods : We used Ichushi-Web (Ver.4) to identify literature published from 1996 to 2006. Operationally, we defined the sense of health and values as "the basic way of thinking and understanding one's own life and the behaviors that adults with type 2 diabetes value highly in their individual lives".

Results :

1. A total of 23 primary studies were selected.

2. Adults with type 2 diabetes thought a great deal about living their lives with minimal disorder and inconvenience. Furthermore, they consider self-control to be important for facilitating their understand of the difficulty of managing diabetes and the possible complications.

3. Other important items for adults with type 2 diabetes were diet, family members who tried to support the patients' individuality, hobbies, and their favorite food. These items had developed over a long period of time and are thought to facilitate the individuality of the patients and enrich their lives. However, these items not only helped the patients to perform self-care behaviors (SCB), but also prevented SCB. The patients considered SCB were their responsibility, but felt they were physically, mentally, and socially painful.

Conclusion : Before helping with SCB through nursing interventions, nurses must recognize the sense of health and values among adults with type 2 diabetes in addition to their backgrounds and self-control processes. If changes to the patients' sense of health and values are required, nurses should take the necessary steps to ensure that the patient agrees with and accepts the changes. Further research should attempt to identify methods for facilitating SCB. In addition, nursing interventions should also attempt to identify methods of changing the factors that negatively affect SCB while maintaining respect for the patients' sense of health and values.

*Key words* : type 2 diabetes, sense of values, sense of health

MATERIAL

# The life satisfaction, and relating factors, of elderly residents of a remote island in Saga Prefecture

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**Abstract** The purpose of this investigation is to examine life satisfaction and relating factors of elderly residents of a remote island in Saga prefecture after entering long-term care insurance. 120 residents of Island A aged 65 or over consented to take part in the investigation. The investigation was conducted from June to December 2005, and conducted in the form of an interview, using a semi-questionnaire instrument. Koyano's Life Satisfaction Index-K (LSI-K : 9 items, possible range 0 - 9) was adopted as a measure of life satisfaction. The median score of life satisfaction was 4.0 with an interquartile range from 3.0 to 6.0. Upon dividing the respondents into two groups based on their median score of life satisfaction, and examining the relating factors using a $\chi^2$ test. Furthermore, examining the related factors to a high level life satisfaction using multivariate logistic regression analysis, a marked male, satisfaction with their income, and low level of loneliness. It is the reason for males' high life satisfactions, as island A's main industry is fishing, males work for a long time, and therefore tend to evaluate their health status higher than females do. Results showed that it is very important for the elderly to they have various sorts of incomes in order to have enough to live on. Good health status, independence in terms of ADL, having a job they can do, economic satisfaction, family and relations, contact with neighbors and the resulting lack of loneliness, and social support both physically and spiritually, are shown to increase life satisfaction among elderly people on Island A.

*Key words* : island, elderly, life satisfaction, relating factors,

## Introduction

In Island A elderly people make up 28.8% of the population, far more than the national average of 19.5%[1], and a further increase is predicted. Island A is located in the north seas of Saga Prefecture about 30 minutes from land by boats and its history dates back to the ancient times. The island A is 14 km round in circumference. A characteristic of this island is that the religions practiced are Buddhism and Christianity. Their ancestors were secret Christians. Buddhists lived on the sea side closely, and Christians lived on the mountain area that is interspersed with houses. Members of each group are generally blood relatives especially among Christians, as this was very important for them to protect their secret religion. There were no marriage between different religious group until 30 years ago. And group members helped each other in daily living. There is an informal support system including exchange of vegetables and fishes and help for ceremonial occasions in both religions. Usually, the elderly people grow vegetables around their house, and are given fishes by relatives and neighbors. The

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elderly Buddhists visit a family tomb almost 2 to 3 times a week, and speak together as friends. The elderly Christians go Mass almost every week. Boats are the only mode of transport to the city, and 4 return trips per day. There are many steep roads in Island A, and boat fee is expensive ; 840 yen one way, so it is difficult for elderly people to go to the city. After retirement, elderly people's incomes come only from pensions.

It is important to consider how elderly resident maintain quality of life (QOL) and how best to build a support system in their areas to ensure satisfaction in their day-to-day lives. The author used life satisfaction index of QOL to study elderly residents. There are studies on life satisfaction, for the subjects living in the city[2-4], for the elderly woman living alone[5], for the subjects living in the mountain[6], and for the subjects living in Tokyo[7]. But there are few studies for the subjects living in a island[8,9].

From many investigations, there were many factors relating to level of life satisfaction : gender[8,10,11], health status[3,5-7,12,13], independence in terms of activity of daily living (ADL)[4,13], family and relatives, whether they had friends and contact with other people[4,13-15], spiritual wellbeing[2,6,16], satisfaction with their income[5,12,13], transportation methods[6], whether they had people they could depend on[6,12], academic records[8], jobs[8], fullness of leisure time[12,15], whether or not they had things that worried them[12], physical environment and the amount of support in their lives[14], and their purpose in life[15].

In 1999, Hamano, et al.[8] investigated the elderly's life style on the Island A using almost same questionnaire. The factors relating to life satisfaction on the same island were composition of household, academic record, and whether residents had a job. In 2000, long-term care insurance system was begun by the government.
It was hypothesized that: 1) males were more likely to have a high level of life satisfaction than females; 2) Buddhists were more likely to have a high level of life satisfaction than Christians; 3) residents with high satisfaction with their income were more likely to have a high level of life satisfaction than those with low satisfaction with their income; 4) residents with high health status were more likely to have a high level of life satisfaction than those with low health status; 5) residents with high level of ADL were more likely to have a high level of life satisfaction than those with low level of ADL; 6) residents having friends were more likely to have a high level of life satisfaction than those not having friends.

The objective of this investigation was to determine the factors associated with life satisfaction of elderly people living on Island A after entering the long-term care insurance system.

## Methods

Of the 154 residents of Island A aged 65 or over, 120 consented to take part in the investigation. 34 residents had dementia or rejected the interview. For ethical considerations, the author had a private consent from the headmen of Island A before the investigation. The author explained to the subjects in writing the objective of this investigation, methods, consideration for privacy. Written consent was obtained from all subjects. This investigation was recognized by ethical committee of Nagasaki University Graduate School of Biomedical Sciences.

The investigation was conducted from June to December 2005. It was conducted in the form of an interview, using a semi-questionnaire instrument. The content included their basic profiles, health status, whether they had been ill within the past 5 years, ADL, friends, whether they qualified for or were certified for long-term care insurance needs, whether they were receiving welfare service, life satisfaction, their level of psychological support, changes in emotional support among residents, whether they had emotional support and somebody they could rely on, their level of physical support, and the degree of loneliness they felt. Koyano's Life Satisfaction Index-K (LSI-K : 9 items, possible range 0 - 9)[17,18] was adopted as a measure of life satisfaction. Scaling of health status involved the use of a five-point Likert-type scale. Responses of 'Extremely good health' was weighted 4, and 'Extremely poor health' was weighted 0. Koyano's Index of Competence[19] was used as a measure of ADL in a modified

form. Scaling of ADL involved the sum of 14 items (range 0-14). Noguchi's Index of social supports[20] was used as measure of psychological support and physical support in a modified form. Scaling of psychological support involved the use of a four-point Likert-type scale. Responses of 'Always' was weighted 3, and 'No' was weighted 0. Scores were the sum of 5 items (range 0-15). Scaling of physical support involved the use of a four-point Likert-type scale. Responses of 'Always' was weighted 3, and 'No' was weighted 0. Scores were the sum of 6 items (range 0-18). Russell D's UCLA loneliness scale short form (4 items, possible range 4-16)[21] was adopted as measure of loneliness. Scaling of satisfaction with their income involved the use of a four-point Likert-type scale. Responses of 'Enough to live on' was weighted 3, and 'Experienced hardship' was weighted 0.

In this investigation, the dependent variable was life satisfaction. Independent variables were gender, age, family component, religion, prayed every day, job, source of income, satisfaction with their income, health status, illness within the past 5 years, certification of long-term care insurance need, welfare service, ADL, friends, psychological support, mutual emotional support among residents, emotional support and somebody they could rely on, physical support, and loneliness.

The median scale scores of independent variables were used instead of the mean values because these data were not normally distributed. The scores were categorized as high or low levels. A high level included scores above the median and median score. A low level included scores below the median. The dependent variable was classified into two categories for analysis : high level and low level with life satisfaction.

Nineteen factors were analyzed for life satisfaction using a $\chi^2$ test. Differences with a p value of less than 0.05 were regarded as significant. Crude odds ratio (COR) and 95% confidence interval (CI) showed the magnitude of the associations between the independent and the dependent variables. Furthermore, multivariate logistic regression analysis showed that variables were associated with life satisfaction by adjusted odds ratio (AOR). On independent variables, the raw data were used except for gender.

## Results

### 1. Subjects' profiles (Table 1)

Table 1 Subjects' profiles

| | Total n=120 | | Male n=50 | | Female n=70 | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Age | | | | | | |
| 65-69 | 21 | 17.5 | 8 | 16.0 | 13 | 18.6 |
| 70-79 | 62 | 51.7 | 28 | 56.0 | 34 | 48.6 |
| 80-89 | 31 | 25.8 | 10 | 20.0 | 21 | 30.0 |
| 90- | 6 | 5.0 | 4 | 8.0 | 2 | 2.9 |
| Family component | | | | | | |
| With their spouse | 38 | 31.7 | 19 | 38.0 | 19 | 27.1 |
| With their spouse and children | 32 | 26.7 | 16 | 32.0 | 16 | 22.9 |
| With their children | 28 | 23.3 | 10 | 20.0 | 18 | 25.7 |
| Alone | 22 | 18.3 | 5 | 10.0 | 17 | 24.3 |
| Academic record | | | | | | |
| Pre-war elementary school | 48 | 40.0 | 17 | 34.0 | 31 | 44.3 |
| Pre-war junior high school | 25 | 20.8 | 15 | 30.0 | 10 | 14.3 |
| Pre-war high school | 4 | 3.3 | 1 | 2.0 | 3 | 4.3 |
| Post-war elementary school | 3 | 2.5 | 0 | 0.0 | 3 | 4.3 |
| Post-war junior high school | 32 | 26.7 | 12 | 24.0 | 20 | 28.6 |
| Post-war high school | 4 | 3.3 | 3 | 6.0 | 1 | 1.4 |
| Did not attend school | 4 | 3.3 | 2 | 4.0 | 2 | 2.8 |
| Religion | | | | | | |
| Buddhist | 58 | 48.3 | 25 | 50.0 | 33 | 47.1 |
| Christian | 61 | 50.8 | 25 | 50.0 | 36 | 51.4 |
| Shinto | 1 | 0.8 | 0 | 0.0 | 1 | 1.4 |
| Job | | | | | | |
| Yes | 34 | 28.3 | 21 | 42.0 | 13 | 18.6 |
| Fisherman | 18 | 52.9 | 18 | 85.7 | 0 | 0.0 |
| Store | 3 | 8.8 | 1 | 4.8 | 2 | 15.4 |
| Food processor [a] | 3 | 8.8 | 0 | 0.0 | 3 | 23.1 |
| Stockbreeding | 2 | 5.9 | 1 | 4.8 | 1 | 7.7 |
| Tourist home | 2 | 5.9 | 0 | 0.0 | 2 | 15.4 |
| Board [a] | 2 | 5.9 | 0 | 0.0 | 2 | 15.4 |
| Agriculture | 2 | 5.9 | 0 | 0.0 | 2 | 15.4 |
| Father | 1 | 2.9 | 1 | 4.8 | 0 | 0.0 |
| Clerk [a] | 1 | 2.9 | 0 | 0.0 | 1 | 7.7 |
| No | 86 | 71.7 | 29 | 58.0 | 57 | 81.4 |
| Source of income | | | | | | |
| Job and pension | 65 | 54.2 | 28 | 56.0 | 37 | 52.9 |
| Pension | 42 | 35.0 | 18 | 36.0 | 24 | 34.3 |
| Pension and remittance | 6 | 5.0 | 2 | 4.0 | 4 | 5.7 |
| Pension and saving | 5 | 4.2 | 1 | 2.0 | 4 | 5.7 |
| Job | 1 | 0.8 | 1 | 2.0 | 0 | 0.0 |
| A livelihood protection allowance | 1 | 0.8 | 0 | 0.0 | 1 | 1.4 |

[a] part time

Age ranged from 65 to 97 years, 51.7% were 70-79. 50 of the respondents were male, and 70 were female. In terms of family component, 31.7% lived with their spouse, 26.7% lived with their spouse and children, 23.3% lived with their children, and 18.3% lived alone. 89.9% said that they had contact with children outside the island. In terms of academic record, 40.0% graduated from pre-war elementary schools, 26.7% graduated from post-war junior high schools, 20.8% graduated from pre-war junior high schools, and 3.3% graduated from pre-war high schools and post-war high schools, while 3.3% did not attend school at all. In terms of religion, 48.3% were Buddhist, 50.8% were Christian, and 0.8% were Shinto, and 84.2% prayed every day. 54.2% had emotional support and somebody they could rely on, and 56.9% said that were religious. In regard to livelihoods, 71.7% did not have a job, 28.3% did have a job. The main occupation was fishing. 85.7% of male were fishermen. 23.1% of females were food processors and many females did part time work. 54.2% cited a job and a pension as their source of income, 35.0% received their incomes from pension only, 5.0% received pension and remittance, and 4.2% had a pension and savings. 56.0% of male and 38.6% of female said they were in extremely good health or good health. 8.3% of respondents had certification of long-term care insurance need, 91.7% did not have. 18.3% of respondents received welfare service, 81.7% did not receive any. 49.2% of respondents said that one of the influences of long-term care insurance was the deduction of insurance premium from their pension.

About 70% of the elderly people receive fish from relatives and neighbors. There is an informal support system including exchange of vegetables, fish, and other kinds of help during ceremonial occasions in both religions and among blood relations.

### 2. Median and interquartile range of subjects' profiles (Table 2)

The median age of 120 residents was 75.0 years (range 65-97). The median score of health status was 2.0 with an interquartite range from 1.0 to 3.0. The median score of ADL was 11.0 with an interquartite range from 8.0 to 12.0. The median score of satisfaction with their income was 2.0 with an interquartite range from 0.0 to 2.0. The median score of life satisfaction was 4.0 with an interquartite range from 3.0 to 6.0. The median score of psychological support was 15.0 with an interquartite range from 12.0 to 15.0. The median score of physical support was 16.0 with an interquartite range from 15.0 to 18.0. The median score of loneliness was 4.0 with an interquartite range from 4.0 to 6.0.

Table 2 Median and interquartile range of subjects' profiles

| Variables | Median | interquartile range |
|---|---|---|
| Life satisfaction | 4.0 | 3.0- 6.0 |
| Age (years) | 75.0 | 71.0-81.0 |
| Health status | 2.0 | 1.0- 3.0 |
| Activity of daily living (ADL) | 11.0 | 8.0-12.0 |
| Satisfaction with their income | 2.0 | 0.0- 2.0 |
| Psychological support | 15.0 | 12.0-15.0 |
| Physical support | 16.0 | 15.0-18.0 |
| Loneliness | 4.0 | 4.0- 6.0 |

### 3. Crude odds ratio for life satisfaction (Table 3)

Subjects with a high level life satisfaction were significantly more likely to be male than female (COR 2.76, 95% CI 1.31-5.84). Subjects with a high level of satisfaction with their income were significantly more likely to have a high level of life satisfaction than those with a low level of satisfaction with their income (COR 2.63, 95% CI 1.26-5.52). Subjects with a low level of loneliness were significantly more likely to have a high level of life satisfaction than those with a high level of loneliness (COR 0.31, 95% CI 0.14-0.67). However, religion was not related to a high level life satisfaction (COR 0.77, 95% CI 0.37-1.57). Health status was not related to a high level life satisfaction (COR 1.29, 95% CI 0.63-2.65). ADL was not related to a high level life satisfaction (COR 1.75, 95% CI 0.85-3.62). Friends were not related to a high level life satisfaction (COR 1.64, 95% CI 0.70-3.85). Age, family component, prayed every day, job, source of income, illness within the past 5 years, certification of long-term care insurance need, welfare service, psychological support, mutual emotional support among residents, emotional sup-

Table 3 Crude odds ratio for life satisfaction

| Variables | | Life satisfaction | | | | | |
|---|---|---|---|---|---|---|---|
| | | Low level (0 - 4) | | High level (5 - 9) | | | |
| | | n | % | n | % | COR[a] (95%CI[b]) | P Value |
| Gender | | | | | | | |
| | Male | 19 | 38.0 | 31 | 62.0 | 2.76(1.31-5.84) | 0.012 |
| | Female | 44 | 62.9 | 26 | 37.1 | | |
| Age | | | | | | | |
| | High[c] | 32 | 55.2 | 26 | 44.8 | 0.81(0.40-1.67) | 0.701 |
| | Low[d] | 31 | 50.0 | 31 | 50.0 | | |
| Family component | | | | | | | |
| | With their family | 51 | 52.0 | 47 | 48.0 | 1.11(0.44-2.80) | 1.000 |
| | Alone | 12 | 54.5 | 10 | 45.5 | | |
| Religion | | | | | | | |
| | Buddhist | 29 | 49.2 | 30 | 50.8 | 0.77(0.37-1.57) | 0.590 |
| | Catholic | 34 | 55.7 | 27 | 44.3 | | |
| Prayed every day | | | | | | | |
| | Yes | 54 | 53.5 | 47 | 46.5 | 1.28(0.48-3.41) | 0.812 |
| | No | 9 | 47.4 | 10 | 52.6 | | |
| Job | | | | | | | |
| | Yes | 16 | 47.1 | 18 | 52.9 | 0.74(0.33-1.64) | 0.584 |
| | No | 47 | 54.7 | 39 | 45.3 | | |
| Source of income | | | | | | | |
| | Pension only | 20 | 50.0 | 20 | 50.0 | 0.86(0.40-1.84) | 0.846 |
| | Pension and other | 43 | 53.8 | 37 | 46.3 | | |
| Satisfaction with their income | | | | | | | |
| | High[c] | 26 | 41.3 | 37 | 58.7 | 2.63(1.26-5.52) | 0.016 |
| | Low[d] | 37 | 64.9 | 20 | 35.1 | | |
| Health status | | | | | | | |
| | High[c] | 27 | 49.1 | 28 | 50.9 | 1.29(0.63-2.65) | 0.614 |
| | Low[d] | 36 | 55.4 | 29 | 44.6 | | |
| Illness within the past 5 years | | | | | | | |
| | Severe illness | 35 | 55.6 | 28 | 44.4 | 1.30(0.63-2.66) | 0.602 |
| | No illness | 28 | 49.1 | 29 | 50.9 | | |
| Certification of long-term care insurance need | | | | | | | |
| | Yes | 7 | 70.0 | 3 | 30.0 | 2.25(0.55-9.15) | 0.408 |
| | No | 56 | 50.9 | 54 | 49.1 | | |
| Welfare service | | | | | | | |
| | Yes | 13 | 59.1 | 9 | 40.9 | 1.39(0.54-3.54) | 0.654 |
| | No | 50 | 51.0 | 48 | 49.0 | | |
| Activity of daily living (ADL) | | | | | | | |
| | High[c] | 30 | 46.2 | 35 | 53.8 | 1.75(0.85-3.62) | 0.184 |
| | Low[d] | 33 | 60.0 | 22 | 40.0 | | |
| Friends | | | | | | | |
| | Yes | 45 | 50.0 | 45 | 50.0 | 1.64(0.70-3.85) | 0.358 |
| | No | 18 | 62.1 | 11 | 37.9 | | |
| Psychological support | | | | | | | |
| | High[c] | 29 | 47.5 | 32 | 52.5 | 1.50(0.73-3.09) | 0.356 |
| | Low[d] | 34 | 57.6 | 25 | 42.4 | | |
| Mutual emotional support among residents | | | | | | | |
| | Grown stronger | 11 | 52.4 | 10 | 47.6 | 1.01(0.39-2.58) | 1.000 |
| | Weakened | 52 | 52.5 | 47 | 47.5 | | |
| Emotional support and somebody they could rely on | | | | | | | |
| | Yes | 37 | 56.9 | 28 | 43.1 | 1.47(0.72-3.03) | 0.384 |
| | No | 26 | 47.3 | 29 | 52.7 | | |
| Physical support | | | | | | | |
| | High[c] | 34 | 55.7 | 27 | 44.3 | 1.30(0.64-2.67) | 0.590 |
| | Low[d] | 29 | 49.2 | 30 | 50.8 | | |
| Loneliness | | | | | | | |
| | High[c] | 31 | 70.5 | 13 | 29.5 | 0.31(0.14-0.67) | 0.005 |
| | Low[d] | 32 | 42.1 | 44 | 57.9 | | |

[a] Crude odds ratio.
[b] Confidence interval
[c] Median and above madian
[d] Below median

port and somebody they could rely on, and physical support were not related to a high level life satisfaction. The COR of each association revealed a similar value.

### 4. Multivariate logistic regression analysis for variables associated with life satisfaction (Table 4)

Males were more likely to have a high level of life satisfaction than females (AOR 3.38, 95% CI 1.44-7.93). Subjects with high levels of satisfaction with their income were significantly more likely to have a high level life satisfaction than those with low levels of satisfaction with their income (AOR 1.75, 95% CI 1.14-2.69). Subjects with low levels of loneliness were significantly more likely to have a high level of life satisfaction than those with high levels of loneliness (AOR 0.63, 95% CI 0.48-0.83).

Table 4 Multivariate logistic regression analysis for variables associated with life satisfaction (n=120)

| Variables | B | AOR[a](95%CI[b]) | P Value |
|---|---|---|---|
| Male (ref[c]: female) | 1.218 | 3.38(1.44−7.93) | 0.005 |
| Age | -0.023 | 0.98(0.92−1.04) | 0.491 |
| Satisfaction with their income | 0.558 | 1.75(1.14−2.69) | 0.011 |
| Activity of daily living (ADL) | 0.049 | 1.05(0.92−1.20) | 0.473 |
| Loneliness | -0.462 | 0.63(0.48−0.83) | 0.001 |

[a] Adjusted odds ratio.
[b] Confidence interval
[c] reference

## Discussion

Hamano, et al's[8,9] 1999 investigation of the same island revealed that 36.5% of respondents had a low level of satisfaction, 52.9% had an average level and 10.6% had a high level. It is clear that, for the most part, those figures have not changed over the past six years. However, on comparing the figures in Hamano, et al's[12,13] investigation and Tada, et al's[14] investigation, the ratio of respondents with a high level of satisfaction is low. It is thought that this may be related to the inconvenience of living on a remote island with boats as the only mode of transport because it restricts elderly people's sphere of activity. Sakurai, et al.[6] said that the transportation method is important for the elderly people. After retirement, elderly people's incomes come mainly from pensions. A deduction of the insurance premium from their pension will influence the elderly more and more. Because the boat fee is expensive, it is difficult for elderly people to leave Island A, and to enjoy visiting their children's homes, shopping etc.

In this investigation, many of the respondents in the high-satisfaction group were males, with a high level of satisfaction with their income, and a low level of loneliness.

The results of this study supported two hypotheses; males were more likely to have a high level of life satisfaction than females, and residents with high satisfaction with their income were more likely to have a high level of life satisfaction than those with low satisfaction with their income. The other four hypotheses were not supported.

Regarding gender, Hamano, et al's[8] investigation on the same island revealed that high life satisfaction was a trend towards women, because Sister Groups were included in the high-satisfaction group. But during this investigation, a sister was not in the subjects. Yasuhuku, et al.[10] and Yamazaki,[11] report that the level of life satisfaction among males is high, because males tend to evaluate health status higher than females, and females must do housekeeping work even if they are in bad health. This investigation has produced similar results as previous investigations. As island A's main industry is fishing, males work for a long time, and therefore tend to evaluate their health status higher than females do.

Concerning satisfaction with income, this investigation has produced similar results as previous investigations[5,12,13]. Also this investigation showed that job and source of income were not related to a high level life satisfaction. Results showed that it is very important for the elderly to they have various sorts of income in order to have enough to live on. In island A the occupations were limited. The main occupation was fishing. 85.7% of male were fishermen, but many females worked part time. It was assumed that males had satisfaction with their income. Males and females should have jobs that they can do in accordance with

their abilities. In the future, retired males and elderly people living on island A will have a small pension. Results showed that it is very important for the elderly to maintain an informal support system such as being able to exchange vegetables and fish on the island.

A new result was that the high-satisfaction group had a low level of loneliness. Family and relations, contact with neighbors and contact with children outside the island resulted in a lack of loneliness.

This investigation showed that religion was not related to a high level life satisfaction. The hypotheses that Buddhists were more likely to have a high level of life satisfaction than Christians was not supported. 84.2% prayed every day. 54.2% had emotional support and someone they could rely on, and 56.9% of them said that they were religious. This result showed that a specific religion was not an influence on the level of life satisfaction. But for the residents of Island A religion was very important in their life style.

Also, investigations cite the importance of social support[6, 22-24] for elderly people. This investigation showed high level of psychological support and high level of physical support. In island A, long-term care insurance had no influence on the informal support system; psychological support, physical support, and exchange of vegetables and fish in both religious groups and among blood relations. Rather, the informal support system complemented welfare services. It is especially important for elderly people on islands to maintain both formal and informal support systems.

On island A where elderly people's activities are restricted, good health status, independence in terms of ADL, having a job, economic satisfaction, family and relations, contact with neighbors and the resulting lack of loneliness, and social support both physically and spiritually, are associated with levels of life satisfaction.

## Conclusion

By examining associated factors using Logistic Regression Analysis, a marked gender, satisfaction with income, and perceptions of loneliness emerged as important variables in life satisfaction. It is especially important for elderly people on Island A where their activities are restricted, to have a support system with religion at the centre and blood relations as a foundation.

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