

The concept of health among Japanese nursing students: comparisons between 1st-year and 4th-year students among nursing and non-nursing undergraduates

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Abstract: This study aimed to compare the concept of health between nursing and non-nursing students. We used a questionnaire method that included selection problems and healthy opinion poll for 1st- and 4th-year nursing and non-nursing students. There was a tendency for 4th-year nursing students to perceive health from three aspects, but not to perceive health optimistically compared with other groups, as they were anxious about their lifestyle and showed high levels of concern. Since 4th-year nursing students had many opportunities to experience both health and illness during training, they considered their own health deeply and simultaneously were concerned about a healthy lifestyle, and desired information about health. Deepening their own concept of health in connection with their actual life is required for people who wish to enter the nursing profession.

Keywords: concept of health, nursing school student.

INTRODUCTION

The promotion of health is considered one of the basic concepts in nursing. Several concepts of health have been presented in nursing science, such as the health-illness continuum theory [1], illness continuum and health continuum theory [2], subconcepts of health [3], and the four-quadrant theory [4]. Hishinuma [5] proposed that health is formed by three subcategorized concepts: the illness continuum, the disease continuum, and satisfaction with life. However, the single most quoted definition of health is that of the World Health Organization (WHO) [6], which states that "Health is the complete state of mental, physical, and social well-being and not just the absence of disease or infirmity". One widely held health concept is that a nurse's own view of health influences his or her own nursing standards [7]. Moreover, a nurse's role is to offer care and maintain continuous interaction with a patient, and by its nature the content of nursing is influenced by the patient and the situation. From the aforementioned concept, it follows that the nursing content also changes in relation to a nurse's own view of health.

Henderson [8] stated that "The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that the person would perform unaided given the necessary strength, will or knowledge. And to do this in such a way as to help the

individual gain independence as rapidly as possible". A nurse is assumed to understand what a healthy patient is like, and the actions that will contribute to recovery of the patient's health.

It is important for students to develop a concept of health. Despite several previous analyses, there are no recent reports concerning concepts of health among nursing students, according to grade, in comparison with non-nursing students. This study first aimed to examine views regarding health among 1st- and 4th-year students studying the science of nursing and those of 1st- and 4th-year non-nursing students, and to clarify the differences. We then analyzed the collected views on health, and clarified the factors and tendencies relevant to such viewpoints.

METHODS

Design and Participants

This study was a cross-sectional survey using a self-completed questionnaire. The subjects were 100 1st- and 4th-year nursing students at Kyoto Prefectural University of Medicine, and 100 1st- and 4th-year non-nursing students at the Faculty of Regional Promotion, N Prefectural University. The nursing students comprised 96 females (100%), and the non-nursing students comprised 23 males (25.8%) and 66 females (74.2%). The investigation was carried out between 1 September and 30 November, 2013.

Data collection

Among subjects who were surveyed by Central Location Test, 92.5% completed and returned their questionnaire. The questionnaire consisted of a Healthy Opinion Poll, candidate background data, and consideration of health from three aspects. Regarding the three aspects, the definition of health from the WHO [6] was used, i.e., with physical (P), mental (M), and social (S) dimensions. We asked subjects about their thoughts on health when each facet was being disturbed. The response consisted of three possible options: "I am healthy if one aspect is healthy", "I am healthy if two aspects are healthy", and "I cannot be said to be healthy even if two aspects are healthy". The healthy opinion poll was developed by Orihara and Meguro [9].

Data analyses

The frequency tables of the responses to the questionnaire items were analyzed for the health survey. We classified the items into four factors based on the preceding research of Orihara and Meguro [9]. In brief, the reply "yes" scored 1 point, "not clear" 2 points, and "no" 3 points, against which the average values according to the specialty were compared. The first factor was a "healthy future view factor" of aspiring to remain healthy for the future. A lower score indicated a more positive response regarding a healthy future. The second factor was a "healthy optimism factor" of not thinking about becoming seriously ill. A lower score indicated a more optimistic response about health. The third factor, a "lifestyle anxiety factor", concerned anxiety about various issues related to not practicing a healthy lifestyle. A lower score indicated a more anxious state. The fourth factor was a "health information desire factor" regarding the intake of health information in general. A lower score indicated that the respondent more actively pursued information on health. A difference between two groups of less than 5% was defined as statistically significant.

Ethical considerations

This study received ethical approval from the Institutional Review Board of Kyoto Prefectural University of Medicine (notice number of determination: ERB-E-30). The students received an information sheet that explained the study's purpose and methods, were given oral assurances that participation was voluntary, and their personal

information was kept confidential during and after the study.

RESULTS

Health viewed from the three aspects

Table 1 shows the results of the views on health when considering the relative effects of one of the three aspects P, M, and S. There was a significant difference between 1st- and 4th-year nursing students for "I am healthy if the mental aspect is healthy at the time of a physical disturbance" ($p < 0.01$) and "I am healthy if the mental aspect is healthy at the time of a social disturbance" ($p < 0.05$), showing that the tendency for 1st-year nursing students was to think that mental health was important when a physical or social aspect was disturbed. In addition, there was a significant difference between 1st-year nursing and non-nursing students for "I am healthy if the physical aspect is healthy at the time of the social aspect being disturbed" ($p < 0.05$), indicating a tendency for 1st-year non-nursing students to attach importance to physical health. There was significant difference between 4th-year nursing and non-nursing students for "I am healthy if the mental aspect is healthy at the time of social disturbance" ($p < 0.05$) and "I am healthy if the mental and social aspects are healthy at the time of physical disturbance" ($p < 0.05$). There was a tendency for 4th-year nursing students to think that mental and social health was important when the physical aspect was disturbed. On the other hand, the 4th-year non-nursing students tended to think that mental health was important when the social aspect was disturbed.

Healthy opinion poll

The result of healthy opinion poll is shown in Table 2. Regarding the difference according to specific value for every factor, a significant difference was seen for "healthy optimism factor" ($p < 0.01$) and "lifestyle anxiety factor" ($p < 0.05$) between 1st- and 4th-year nursing students. A significant difference was seen for "lifestyle anxiety factor" between 1st-year nursing and non-nursing students ($p < 0.05$), and for "healthy optimism factor" ($p < 0.01$), "lifestyle anxiety factor" ($p < 0.01$), and "health information desire factor" ($p < 0.05$) between 4th-year nursing and non-nursing students. Moreover, between 4th-year nursing and non-nursing students, there was a trend toward a difference in the "healthy future view factor" ($p = 0.051$).

Table-1: About the Health at the time of a certain One Side being Disturbed (Number of Persons (%))

Item	Answer	Nursing 4th-year n=50	Nursing 1st-year n=46	Non-nursing 4th-year n=45	Non-nursing 1st-year n=44	X ² testing result Nursing 1st- 4th year / Nursing -nursing 1st year / Nursing-nonnursing 4th year
At the time of a physical disturbance.	I am healthy if the mental aspect is healthy	5 (10.0)	15 (32.6)	9 (20.0)	11 (25.0)	**/n.s./n.s.
	I am healthy if the social aspect is healthy	0 (0)	0 (0)	1 (2.2)	0 (0)	n.s./n.s./n.s.
	I am healthy if the mental and social aspect is healthy	18 (36.0)	12 (26.1)	8 (17.8)	6 (13.6)	n.s./n.s./*
	I am not healthy if the mental and social aspect is healthy	27 (54.0)	19 (41.3)	27 (60.0)	27 (61.4)	n.s./n.s./n.s.
At the time of a mental disturbance.	I am healthy if the physical aspect is healthy	5 (10.0)	6 (13.0)	1 (2.2)	8 (18.2)	n.s./n.s./n.s.
	I am healthy if the social aspect is healthy	1 (2.0)	0 (0)	3 (6.7)	2 (4.5)	n.s./n.s./n.s.
	I am healthy if the physical and social aspect is healthy	10 (20.0)	8 (17.4)	10 (22.2)	5 (11.4)	n.s./n.s./n.s.
	I am not healthy if the physical and social aspect is healthy	34 (68.0)	32 (69.6)	31 (68.9)	29 (65.9)	n.s./n.s./n.s.
At the time of a social disturbance.	I am healthy if the physical aspect is healthy	2 (4.0)	0 (0)	2 (4.4)	4 (9.1)	n.s./*/n.s.
	I am healthy if the mental aspect is healthy	1 (2.0)	8 (17.4)	6 (13.3)	4 (9.1)	*/n.s./*
	I am healthy if the physical and mental aspect is healthy	21 (42.0)	21 (45.7)	21 (46.7)	22 (50.0)	n.s./n.s./n.s.
	I am not healthy if the physical and mental aspect is healthy	26 (52.0)	17 (37.0)	16 (35.6)	14 (31.8)	n.s./n.s./n.s.

*:p<0.05, **:p<0.01, n.s.:not significant

Table -2: The Score for every Health Opinion Poll Factor (Average ± standard deviation)

	Nursing 4th-year n=50	Nursing 1st-year n=46	Non-nursing 4th-year n=45	Non-nursing 1st-year n=44	Wilcoxon testing result Nursing 1st-4th year / Nursing -non nursing 1st year / Nursing -non nursing 4th year
Healthy future view factor	1.58±0.23	1.62±0.22	1.68±0.23	1.65±0.22	n.s./n.s./n.s.
Healthy optimism factor	2.28±0.36	2.07±0.42	2.04±0.43	2.25±0.48	**/n.s./**
Lifestyle anxiety factor	1.76±0.44	1.92±0.36	2.05±0.51	1.77±0.45	*/**/**
Health information desire factor	1.83±0.53	1.81±0.51	2.11±0.51	1.96±0.49	n.s./n.s./*

*:p<0.05, **:p<0.01, n.s.:not significant

DISCUSSION

There are several reports about concepts of health among nursing students. Matubara and Horii [10] suggested low awareness of health in nursing students, and proposed a need to educate these students to pay

attention to their own health. Ozawa *et al.* [11] investigated the health concepts of 1st-year nursing students according to the health definition of the WHO and descriptive expressions. They found that 70% of students grasped the concept of health from the

combined viewpoints of the physical and mental. Some students applied a disease model, considering that health is an opposite of illness and disability, while others applied a life model. Many students whose concepts of health were related to daily life were satisfied with their lives and had a positive self-perception. Saitou *et al.* [12] investigated the differences in views on health of nursing students among. Overall 60% of students were interested in health, but there was no difference among the grades. Adachi *et al.* [7] reported three aspects of compound health views from attachment of rank to the three sides, and underlined the concept of nursing students' own health being related to student grades.

Views on health are generally accepted to change with individual views on life and senses of values, but to greatly change with cultural and historical backgrounds [5,13]. When one of physical, mental, or social aspects was disturbed, we examined all possible choices regarding how students would define health. Over 50% of 4th-year nursing students answered that health cannot be said to be present without all three aspects, and it was also said that at least two aspects were necessary for health in many replies. To a significant degree, 1st-year nursing students consider the mental aspect to be more important for health than do 4th-year nursing students, and 4th-year non-nursing students consider the mental aspect to be more important for health than 4th-year nursing students. Therefore, 4th-year nursing students can be said to consider their health not only from one, but from three sides. This may be because there are many opportunities to learn the concept of health and to study various health theories during the curriculum of nursing, and consequently there is ample opportunity to recognize one's own health.

The "healthy future view factor" of wishing to stay healthy for the future showed an almost significant difference ($p=0.051$) between 4th-year nursing and non-nursing students. Because 4th-year nursing students had a lower score than their non-nursing counterparts, we can say that 4th-year nursing students think of their future health. The reason for this may be the many opportunities to study health and become involved for 4th-year nursing students. For the "healthy optimism factor" of not thinking about becoming ill, a significant difference was seen between 1st- and 4th-year nursing students, and 4th-year non-nursing and nursing students. We propose that 4th-year nursing students do not consider their health optimistically, partly because there are many opportunities to study illness and to meet patients who actually have an illness.

A significant difference was seen in the "lifestyle anxiety factor" between 1st- and 4th-year nursing students, between 1st-year non-nursing and nursing students, and between 4th-year nursing and non-nursing

students. In other words, we can say that 4th-year nursing students are anxious about their lifestyle in comparison with other students. This is because the possibility of becoming ill was also taken into account from the score of the healthy optimism factor for 4th-year nursing students. Although a significant difference was not seen for a healthy optimism factor between 1st-year nursing and non-nursing students, the trend for non-nursing 1st-year students was toward a high score, and the average value indicates the same outcome. Although this represents a time when students begin university life and part-time jobs, and lifestyle becomes irregular in many cases, there is also much physical reserve for living. Though not immediately reflected in the health of such individuals, it is clear that there are more than a few persons who are either unconcerned or uninterested. In the "health information desire factor" of being actively aware of health information, a significant difference was seen between 4th-year nursing and non-nursing students, and 4th-year non-nursing students had a higher score. Therefore, concern about health is high for 4th-year nursing students, who take positive action in many cases.

CONCLUSION

There was a tendency for 4th-year nursing students to perceive health from three aspects, but not to perceive health optimistically compared with other groups, as they were anxious about their lifestyle and showed high levels of concern. Since 4th-year nursing students had many opportunities to experience both health and illness during training, they considered their own health deeply and simultaneously were concerned about a healthy lifestyle, and desired information about health. Deepening their own concept of health in connection with their actual life is required for people who wish to enter the nursing profession.

ACKNOWLEDGEMENTS

We express our sincere gratitude to the participants in the study, who generously provided their time and trust. There are no conflicts of interest.

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