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Nursing practitioners' perception of inpatients' anxiety, self-esteem, purpose-in-life and health locus of control.

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Abstract

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KEYWORDS: inpatient's mental health, anxiety, self-es-teem, purpose-in-life, health locus of control

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Nursing Practitioners' Perception of Inpatients' Anxiety, Self-Esteem, Purpose-in-Life and Health Locus of Control

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This study explored how nursing practitioners perceived inpatients' anxiety, self-esteem, purpose-in-life and multidimensional health locus of control. Seventy-three nurses, 60 third-year and 70 first-year nursing students, and 61 control students not majoring in nursing science estimated how inpatients rated these four psychological states. Their ratings were compared with those given by 121 inpatients. Findings showed that the nursing practitioners, as well as the control participants, overestimated inpatients' anxiety, while they underestimated their self-esteem and purpose-in-life. The inpatients' scores for internal locus of control were greater than their scores for the two types of external locus of control (powerful others and chance), and were also greater than the scores given by the nursing practitioners in estimating the patients' perception of internal locus of control. The findings indicate that inpatients have a more positive attitude toward themselves and their own lives, and hence much better mental health, than the nursing practitioners estimate they do.

Key words: inpatients' mental health, anxiety, self-esteem, purpose-in-life, health locus of control

Nurses' skills in observing and empathizing with patients are as crucial as their skills in medical technology for holistic patient care (1). Nurses must therefore be aware both of the patients' psychological needs as well as their physical needs (2). Only a few studies, however, have addressed how nurses perceive their patients' psychological states.

Davitz and Davitz (3) studied nurses' beliefs about patients' physical and psychological suffering, both manip-

ulating patients' variables including socioeconomic status, age, ethnic background and nature of their illness or injury, as well as manipulating nurses' variables including years of nursing experience, position, area of greatest nursing experience, ethnic and national background. They did not, however, examine how the patients themselves perceived their own condition, and thus were not able to compare the patients' self-assessment with the nurses' assessments of the patients' mental and emotional states. Muhlenkamp and her colleagues (4-6) compared patients' self-reported level of anxiety, depression and hostility with caregivers' estimation of the patients' level of these three psychological states. Their findings were not always consistent across the three studies, although in one study (5), the caregivers rated the patients as feeling worse than did the patients themselves who participated in the study. Nagata *et al.* (7) also showed that nurses, including nursing students (hereafter both groups are referred to as 'nursing practitioners'), overestimated the inpatients' levels of stress experienced during hospitalization.

Note that the above five studies are each concerned with the negative aspects of patients' psychological states such as distress, anxiety, depression, hostility and stress. Yet the positive aspects should also be given due attention. This is particularly so because positive aspects of patients' psychological states are not properly understood by nursing practitioners. This can be inferred from our finding (7) that nursing practitioners regard hospital events involving threat of severe illness and problems with medication as most stressful, whereas inpatients themselves name events involving deprivation of daily life to be the most stressful. Nursing practitioners are thus more inclined to regard patients as sick persons with negative

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psychological states than to regard patients as having positive psychological states. However, if "holistic nursing care is based on the consideration of all the dimensions affecting human needs in health and illness (8)," nursing practitioners must focus on patients' strengths and possibilities as well as on their problems.

In addition to anxiety, in this study we examined three positive psychological states: self-esteem, meaning and purpose-in-life, and belief in internal locus of control. Self-esteem is the sense of personal worth and competence that is associated with persons' self-concepts, including self-respect and self-acceptance (9). Purpose-in-life derives from Frankl's (10) concept of "the will to meaning." Kotchen (11) has indicated that sense of life meaning is related to good mental health as reflected in self-uniqueness and self-responsibility.

Internal locus of control is the belief that what happens to a person is primarily the result of their actions or abilities (12). It is the opposite belief to external locus of control, the belief that what happens to an individual is primarily due to luck, fate, chance, or powerful others (12). Arakelian (13) argues that persons who perceive their locus of control to be internal as compared to external are motivated and effective in problem solving, more likely to have good social relationships, better able to forego immediate rewards in favor of more valued, long-term goals, and are more self-reliant. These behavioral characteristics exhibited by those who perceive their locus of control to be internal are precisely those which are vital to the mature personality (14) and positive mental health (15).

In this study, we asked nursing practitioners and control subjects not majoring in nursing science to estimate how inpatients rated their psychological state regarding anxiety, self-esteem, purpose-in-life and health locus of control. We then compared the estimated scores with the inpatients' own scores.

Subjects and Methods

Subjects

Subjects consisted of 136 inpatients, 131 from the Okayama University Hospital and 5 from the Okayama University Hospital of Dentistry, 80 registered nurses from the Okayama University Hospital, 80 third-year and 80 first-year nursing students from the School of Health Sciences, Okayama University, and 80 sophomores not majoring in nursing science at a private college in Okayama City.

The sophomores served as a control group. The nursing practitioners and the control subjects were all females. The wards in which the inpatients were hospitalized or in which the nurses were working differed greatly, including, for example, internal medicine, surgery, urology, neurological surgery, cardiovascular surgery and ophthalmology.

Testing Instruments

Anxiety Scale. A Japanese version (16) of the State-Trait Anxiety Inventory (STAI) was used. This scale was constructed based on Spielberger's (17, 18) anxiety theory which distinguishes anxiety as a transitory state from anxiety as a personality trait. State anxiety is an emotional state of an individual that varies in intensity and fluctuates over time. This state is characterized by the subjective feeling of tension and apprehension, and activation of the autonomic nervous system. Trait anxiety is present in those individuals who are predisposed to perceive a wide variety of situations as dangerous or threatening. The state anxiety version of the STAI was used in this study, since circumstances such as illness and hospitalization are believed to affect state rather than trait anxiety. This version contained 20 items.

Self-Esteem Scale. A Japanese version (19) of the Rosenberg's Self-Esteem Scale (20) was used. Persons scoring high on this scale are considered to respect themselves and to consider themselves worthy; those scoring low are considered to lack respect for themselves and may feel self-rejection, self-dissatisfaction and self-contempt. The scale contained 10 items.

Purpose-in-Life Test (PIL). This is a scale Crumbaugh (21, 22) constructed to measure the degree to which a person experiences a sense of meaning and purpose in life. The original scale included 20 items, although only 15 were employed because the remaining 5 items which referred to "death" or "suicide" were considered to be inappropriate for inpatients. A Japanese version (23) of this scale was used.

Multidimensional Health Locus of Control (MHLC) Scales. This scale (24) measures the extent to which persons believe that their health is determined a) by internal factors, b) by chance or c) by the actions of powerful others. It consists of three subscales, Internal Health Locus of Control (IHLC), Powerful Others Health Locus of Control (PHLC) and Chance Health Locus of Control (CHLC). IHLC concerns the belief that one remains or becomes healthy or sick as a result of one's own actions; PHLC concerns the belief

that one's health is determined by powerful others such as health care professionals; and CHLC concerns the belief that one's health is determined by such things as luck, fate, or chance. Each subscale included 6 items.

Sample items. Table 1 shows one or more sample items drawn from each scale. The validity and reliability of each scale used in this study have been previously established. See Nakazato and Mizuguchi (16) for Anxiety Scale, Rosenberg (20) for Self-Esteem Scale, Wallston *et al.* (24) for MHLC Scales, and Sato (23) for PIL.

Demographic Variables

The variables of age and sex were present in all groups. The variables for inpatients included: ward in which they were hospitalized, length of hospitalization (one week or less; two weeks or less; one month or less; two months or less; and three months or more), whether or not the patient had been hospitalized before, and surgery (those who had undergone surgery *vs* those who were scheduled to undergo surgery, and days since surgery for the former group). The variables for nurses included: the ward in which they were working, their length of service and whether or not the individual had been hospitalized at some time in the past. The last variable was used also for three groups, the third and first-year nursing students and the control subjects.

Procedure

An inventory consisting of Set A and Set B was constructed, with Set A including a total of 48 items, 20 for Anxiety Scale, 10 for Self-Esteem Scale, and 18 for MHLC Scales, and Set B including 15 items for PIL. The 48 items for Set A were ordered randomly, regardless of the three scales. Items were revised to begin with "I" or "My". Set B was prepared specifically for PIL, since a rating format for this scale differed from the remaining three scales (Table 1).

The participants rated each item on a 7-point Likert scale (1-7), both for Set A and Set B. Thus, the greater the score, the higher the respective psychological state. Inpatients rated each item, depending on the degree to which they felt each item. Nursing practitioners and control subjects rated the item, estimating how inpatients felt about each item. Specifically, they were asked to put themselves in the place of the inpatients and to rate the items accordingly.

The inpatients completed the rating in December, 1996; the nurses from February to March, 1997; the third-year nursing students from December, 1996 to January, 1997; the first-year nursing students in April, 1997; and the control subjects in May, 1997.

Table 1 Sample items for the assessments used

Anxiety Scale

- 1) I feel calm.
- 2) I feel nervous.

Self-Esteem Scale

- 1) I feel that I am a person of worth, at least on an equal plane with others.
- 2) I feel that I have a number of good qualities.

Multidimensional Health Locus of Control Scales

- IHLC: If I get sick, it is my own behavior which determines how soon I get well again.
 PHLC: Having regular contact with my physicians is the best way for me to avoid illness.
 CHLC: No matter what I do, if I am going to get sick, I will get sick.

Purpose-in-Life Test

- 1) I am usually (1) completely bored.
- (2)
- (3)
- (4) neutral.
- (5)
- (6)
- (7) exuberant, enthusiastic.

IHLC: Internal Health Locus of Control; PHLC: Powerful Others Health Locus of Control; CHLC: Chance Health Locus of Control.

Results

The number (percentage) of participants who returned a completed inventory was 121 (89.0 %), 73 (91.3 %), 60 (75.0 %), 70 (87.5 %), and 61 (76.3 %), respectively, for the inpatients, nurses, third-year nursing students, first-year nursing students, and control subjects. Analyses were made only for these participants.

Demographic Data

Five of the inpatients had been hospitalized for one week or less; 14 for two weeks or less; 35 for one month or less; 33 for two months or less; and 32 for three months or more. The mean of length of nurses' service was 7.8 years ($SD = 7.5$). The demographic data for the remaining variables are given in Table 2.

Anxiety

Table 3 presents the mean and SD of ratings in each group. A one-way analysis of variance (ANOVA) showed the effect of group, $F(4,380) = 35.20$, $P < 0.001$. Subsequent Tukey analyses ($P < 0.05$) showed that the inpatients' score was less than the scores given by the remaining four groups. The scores given by the third-year and the first-year nursing students were each greater than the score given by the control subjects.

Self-Esteem

Table 3 presents the means and SD s of ratings. The ANOVA showed the effect of group, $F(4,380) = 6.96$, $P < 0.001$, with the inpatients' score being higher than the scores for the third-year nursing students, the first-year nursing students and the control subjects.

Purpose-in-Life

Table 3 gives the means and SD s of ratings. The ANOVA showed the effect of group, $F(4,380) = 19.07$, $P < 0.001$, with the inpatients' score being greater than any score for the remaining four groups.

Multidimensional Health Locus of Control

Table 4 shows the means and SD s of the ratings. A $5(\text{group}) \times 3(\text{locus of control: IHLC, PHLC and CHLC})$ ANOVA, with the second variable treated as a repeated measure, showed the main effects of group, $F(4,380) = 3.41$, $P < 0.01$, and locus of control, $F(2,760) = 45.40$, $P < 0.001$, as well as an interaction between the two variables, $F(8,760) = 3.89$, $P < 0.001$.

Tukey analyses showed that the inpatients' IHLC score was greater than the IHLC scores obtained by the nurses and the third-year nursing students. The nurses' PHLC score was lower than the inpatients' PHLC score

and than the PHLC scores of both the first-year and the control subjects. However, no difference was found in CHLC scores among the groups, except that the control subjects gave higher ratings than did the first-year nursing students.

Tukey analyses also showed that the inpatients' IHLC score was greater than their PHLC score and CHLC score. The nurses' PHLC score was less than their IHLC score and CHLC score. The third-year nursing students and the first-year nursing students gave similar ratings: they both gave a greater score to IHLC than to PHLC and CHLC. The first-year nursing students gave higher scores to PHLC than to CHLC, while the control subjects gave a higher score to IHLC rather than to PHLC.

Psychological Measures Related to the Demographic Variables

Sex differences. The female inpatients gave CHLC a higher score than the male inpatients [female: mean = 4.43, $SD = 0.88$; male: mean = 3.83, $SD = 1.15$; $t(119) = 3.26$, $P < 0.01$].

Hospitalization experience. The first-year nursing students who had experienced hospitalization (mean = 3.42, $SD = 0.91$) gave a lower score to self-esteem than those without such an experience (mean = 4.07, $SD = 0.65$) [$t(68) = 3.23$, $P < 0.01$]. The control subjects who had experienced hospitalization (mean = 4.53, $SD = 0.76$) gave a higher score to purpose-in-life than those without such an experience (mean = 3.94, $SD = 0.85$) [$t(57) = 2.39$, $P < 0.05$].

Inpatients who had undergone surgery vs those who were scheduled to undergo surgery.

The numbers of inpatients who had undergone surgery and those who were scheduled to undergo surgery were 58 and 18, respectively. (There were 45 inpatients who did not respond to this question and thus did not factor into the relevant calculations.) As for those inpatients who had undergone surgery, their times since surgery ranged from one day to 6 years and 8 months, with a median of 15 days. Table 5 shows the means and SD s for the two categories of inpatients. The inpatients' anxiety scores were lower for those who had undergone surgery than for those who were scheduled to undergo surgery [$t(74) = 2.50$, $P < 0.05$]. No difference was found between the two groups either for self-esteem or for purpose-in-life.

A $2(\text{group: inpatients who had undergone surgery vs. those who were scheduled to undergo surgery}) \times 3(\text{locus of control: IHLC, PHLC and CHLC})$ ANOVA, with the second variable treated as a repeated measure, showed the main effects of group, $F(1,38) = 1.15$, $P > 0.05$, and locus of control, $F(2,76) = 1.15$, $P > 0.05$, as well as an interaction between the two variables, $F(2,76) = 1.15$, $P > 0.05$.

Table 2 Demographic characteristics for each group

	Inpatients	Nurses	3rd-year nursing students	1st-year nursing students	Controls
Sex					
Male (<i>n</i>)	53				
Female (<i>n</i>)	68	73	60	70	61
Age					
Mean $\pm$ SD (years)	46.6 $\pm$ 16.0	29.2 $\pm$ 8.3	20.8 $\pm$ 1.6	18.4 $\pm$ 2.0	19.2 $\pm$ 1.0
Prior hospitalization experience					
Yes (<i>n</i>)		26	16	18	16
No (<i>n</i>)		47	43	52	43

n: Number of cases.

Table 3 Mean scores ($\pm$ SD) for anxiety, self-esteem and purpose-in-life

	Inpatients	Nurses	3rd-year nursing students	1st-year nursing students	Controls
Number of cases	121	73	60	70	61
Anxiety	3.56 $\pm$ 0.98	4.66 $\pm$ 0.86	4.68 $\pm$ 0.73	4.88 $\pm$ 0.85	4.28 $\pm$ 0.82
Self-esteem	4.50 $\pm$ 0.98	4.14 $\pm$ 0.74	4.10 $\pm$ 0.88	3.90 $\pm$ 0.78	4.01 $\pm$ 0.73
Purpose-in-life	5.10 $\pm$ 0.87	4.34 $\pm$ 0.77	4.31 $\pm$ 0.85	4.35 $\pm$ 0.98	4.11 $\pm$ 0.86

Significant difference ($P < 0.05$) by Tukey test:

Anxiety: Inpatients $<$ Nurses, 3rd-year nursing students, 1st-year nursing students, Controls; Controls $<$ 3rd-year nursing students, 1st-year nursing students.

Self-esteem: Inpatients $>$ 3rd-year nursing students, 1st-year nursing students, Controls.

Purpose-in-life: Inpatients $>$ Nurses, 3rd-year nursing students, 1st-year nursing students, Controls.

Table 4 Mean scores ($\pm$ SD) for Multidimensional health locus of control

	Inpatients	Nurses	3rd-year nursing students	1st-year nursing students	Controls
Number of cases	121	73	60	70	61
IHLC	4.98 $\pm$ 1.08	4.38 $\pm$ 0.72	4.53 $\pm$ 0.77	4.75 $\pm$ 0.84	4.67 $\pm$ 0.83
PHLC	4.28 $\pm$ 1.08	3.80 $\pm$ 0.80	4.06 $\pm$ 0.85	4.27 $\pm$ 0.81	4.25 $\pm$ 0.96
CHLC	4.17 $\pm$ 1.05	4.27 $\pm$ 0.81	4.14 $\pm$ 0.90	3.85 $\pm$ 0.93	4.35 $\pm$ 0.86

Significant difference ($P < 0.05$) by Tukey test:

IHLC: Inpatients $>$ Nurses, 3rd-year nursing students; PHLC: Nurses $<$ Inpatients, 1st-year nursing students, Controls; CHLC: 1st-year nursing students $<$ Controls.

Inpatients: IHLC $>$ PHLC, CHLC; Nurses: PHLC $<$ IHLC, CHLC; 3rd-year nursing students: IHLC $>$ PHLC, CHLC; 1st-year nursing students: IHLC $>$ PHLC $>$ CHLC; Controls: IHLC $>$ PHLC.

IHLC; PHLC; CHLC: See legend to Table 1.

Table 5 Mean scores ($\pm$ SD) for inpatients who had undergone surgery and those who were scheduled to undergo surgery

Surgery	<i>n</i>	Anxiety	Self-esteem	Purpose-in-life	IHLC	PHLC	CHLC
Scheduled to undergo	18	4.11 $\pm$ 0.86	4.20 $\pm$ 1.01	4.83 $\pm$ 0.76	4.84 $\pm$ 1.10	4.24 $\pm$ 1.15	4.59 $\pm$ 0.69
Undergone	58	3.41 $\pm$ 1.07	4.48 $\pm$ 0.94	5.16 $\pm$ 0.86	5.10 $\pm$ 1.08	4.43 $\pm$ 1.10	4.14 $\pm$ 1.04

Significant difference ($P < 0.05$) by *t*-test:

Anxiety: Scheduled to undergo $>$ Undergone.

Undergone: IHLC $>$ PHLC, CHLC.

IHLC; PHLC; CHLC: See legend to Table 1.

n: See legend to Table 2.

of control) ANOVA, with the second variable being a repeated measure, showed the effect of locus of control, $F(2,148) = 8.19$, $P < 0.001$. Subsequent comparisons among the means showed that the inpatients who had undergone surgery gave a higher score to IHLC than to PHLC and to CHLC, while there was no difference among the three mean scores for those who were scheduled to undergo surgery.

For each of the six measures, the inpatients who were scheduled to undergo surgery were compared with the remaining four groups of participants. The score of the inpatients' anxiety was lower than any of the three groups [nurses: $t(89) = 2.40$, $P < 0.05$; third-year nursing students: $t(76) = 2.75$, $P < 0.01$; first-year nursing students, $t(86) = 3.38$, $P < 0.01$]. However, the score of the inpatients' purpose-in-life was higher than any of the three groups [nurses: $t(89) = 2.40$, $P < 0.05$; third-year nursing students: $t(76) = 2.30$, $P < 0.05$; control subjects: $t(77) = 3.16$, $P < 0.01$]. The CHLC score was lower for the first-year nursing students than for the inpatients who were scheduled to undergo surgery, $t(86) = 3.12$, $P < 0.01$.

Discussion

In light of prior findings (5, 7), we predicted that nursing practitioners and control subjects would overestimate inpatients' anxiety. In contrast, they were expected to underestimate inpatients' self-esteem and purpose-in-life, since these two states correlate negatively with anxiety (25). Our findings support these predictions. The nursing practitioners and control subjects overestimated the inpatients' anxiety, with the nursing practitioners estimating more highly than the control subjects. Further, the nursing practitioners' estimation of the inpatients' anxiety was greater even than the heightened levels of anxiety reported by those inpatients prior to undergoing surgery. In contrast to anxiety, the nursing practitioners and control subjects underestimated the inpatients' self-esteem and purpose-in-life. Thus, the inpatients not only experienced a sense of personal worth and faith in themselves, but also ascribed meaning to their lives and their own existence, all to a degree higher than nursing practitioners estimated they did. Furthermore, in terms of self-esteem and purpose-in-life, no difference was found between the inpatients who had undergone surgery and those who were scheduled to undergo surgery. These two psychological states were not influenced by whether or not

an inpatient had undergone surgery. It is often emphasized that anxiety is the patients' primary symptom and is widespread among the whole range of patients that nurses interact with (1). It has also been pointed out that self-esteem declines when a person is hospitalized (26). Our findings show that information of this sort is incorporated into people's minds, leading them to adopt an exaggerated perception of inpatients' psychological states.

Inpatients rated IHLC higher than PHLC and CHLC. Hence, they attributed more weight, as a determinant of their health, to their own actions as opposed to the actions of powerful others or chance. This style of perception, if it can be posited that inpatients actually do consider their state of illness as being a sort of failure, is contrary to the self-defensive attribution style found in previous studies (27-29). The inpatients' perceived level of internal control was greater than that estimated by the nurses and the third-year nursing students. It is indeed the case that for the inpatients who were scheduled to undergo surgery the IHLC score did not differ from either the PHLC score or the CHLC score. However, the inpatients who had undergone surgery rated IHLC higher than PHLC and CHLC. Thus, the lowered IHLC score in the inpatients who are scheduled to undergo surgery appears to be a temporary affective reaction to surgery they expect to have; temporary in the sense that they regain a strong sense of internal control soon after undergoing the surgery.

The nurses perceived that the inpatients attached less weight to PHLC than to IHLC or to CHLC. Hence, they perceived the inpatients as attributing their health problems less to the actions of powerful others, including themselves, than to the operations of chance and their own actions. Moreover, the weight the nursing practitioners attached to powerful others declined as nursing experience increased. This style of perception may indicate a lowered evaluation which the nursing practitioners, encountering a variety of difficulties and experiencing inefficacy of their own nursing care, have developed in themselves and which they have projected onto the inpatients. These findings should be noted, although further research is needed to find out why nursing practitioners attach a decreased weight to the effect of powerful others as a determinant of patients' health as their work experience increases, *i.e.*, is this a process in which nursing practitioners internalize a mental set shared by organization members?

We emphasized previously (7) that it would be better

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if patients were regarded as individuals leading an ordinary daily life than as persons having illness. The present study indicates that such patients must further be characterized as having a strong sense of self-esteem, purpose-in-life and self-responsibility. It also shows that inpatients with these positive characteristics are not properly appreciated by nursing practitioners. In this respect, we must argue that patients' mental health is usually much better than that perceived by nursing practitioners. Nurses, on entering the work world of an hospital organization, are assimilated gradually into the rules and regulation of this organization (30-32). In this assimilation process, they are made to perceive patients as persons having illness or dysfunction instead of as individuals aiming at self-actualization. Taylor *et al.* (8) argued that patients feel nothing is more discomforting than to be treated as an object of care. The disparity between how the patients actually feel and how nursing practitioners imagine them to feel quite likely leads to affective discrepancies when they interact. The present findings, we believe, will provide nursing practitioners with important guidelines for they planing and delivering effective and sensitive patient care.

A final remark must be made as to the external validity of the present findings: The inpatients in this study were receiving different sorts of medical treatment depending on the ward in which they were hospitalized. Likewise, the nurses themselves and their work environments differed from ward to ward. In order to minimize the effects of these two variables, we devoted considerable effort to drawing both inpatients and nurses from as many wards as possible. Nonetheless, further studies must be done to explore the effects of these variables on inpatients' self-assessed psychological states and nurses' perception of these states.

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