Individual and Organizational Factors Affecting Ethical Behavior among Hospital Nurses

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Original Article

Individual and Organizational Factors Affecting Ethical Behavior among Hospital Nurses

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Abstract

Purpose : The purpose of this study was to clarify the individual and organizational factors that affect the ethical behavior of hospital nurses, as well as the interaction between these factors.

Material and methods : We conducted an anonymous self-administered questionnaire survey on nurses working at 21 hospitals in Japan. The survey was conducted from August to November 2019. We created a conceptual framework for the factors that influence the ethical behavior of nurses based on reference to previous studies, and verified it using structural equation modeling. In addition, multi-group structural equation modeling was performed for each type of organizational climate and compared.

Results : Questionnaires were distributed to 1,048 nurses, out of which 535 responded, and responses from 517 nurses were analyzed (valid response rate 49.3%). The individual factors affecting the ethical behavior of hospital nurses were locus of control and moral sensitivity ; job position affected ethical behavior through locus of control and moral sensitivity. The nurses' age, gender, and experience of ethical learning in basic nursing education did not affect ethical behavior. In terms of organizational factors, the organizational climate affected the ethical behavior of nurses, while the bed size, management base, ethical training in hospitals, and ethical conferences did not affect ethical behavior. No interaction effects were observed between the individual and organizational factors.

A multi-group structural equation model by type of organizational climate showed that moral sensitivity influenced "good care" in all types of organizations. Furthermore, ethical training in the hospital affected moral sensitivity in an organization with low group coercion and imperative atmosphere, and a high group cohesiveness. Both models obtained favorable goodness of fit.

Conclusion : The ethical behavior of nurses is affected by the locus of control, moral sensitivity, and organizational climate, and the job position influences ethical behavior through locus of control and moral sensitivity. It was also found that the factors influencing the ethical behavior of nurses differ with the type of organizational climate.

Key words : hospital nurses, ethical behavior, organizational climate, moral sensitivity, locus of control

Introduction

There are various ethical issues in clinical settings where medical care is becoming more sophisticated and complex. Nurses work in hospitals work every day to provide safe and

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reliable medical care and nursing ; however, they experience various ethical problems in clinical situations, such as physical restraint and sedation to ensure patient safety, lack of nursing staff, end-of-life decision making, and allocation of limited medical resources[1)~3)]. These problems[1)~5)] have been reported both in Japan and overseas, and are common problems in hospitals of various sizes.

A person's ethical behavior is based on a sense of morality and begins with the moral sensitivity needed to be aware of and interpret ethical issues, and follow the process of going through inference and decision making to consider what to do in a situation, based on moral standards and what ethical behavior should be performed[6)]. This ethical behavior is a very important element for nurses who play an important role in respecting and advocating the human rights of patients, ensuring patients' safety, and supporting decision making. Therefore, for the purpose of connecting moral sensitivity to ethical behavior for nurses, efforts are being made to examine various ethical issues through ethics training within the organization and ethics conferences within the ward. However, since individual and circumstantial factors play an important role in the ethical behavior of nurses[7)], it is supposed that various factors including both individual and organizational factors, and external circumstances influence ethical behavior apart from in-house efforts.

Previous studies have revealed that the gender, years of experience, and experience of ethics education for nurses affect ethical behavior, but job position does not[8)9)]. In addition, it has been reported that collaboration with other occupations, which is a factor of the organization, hierarchical relationships in the workplace, ethical behavior of colleagues, and an autonomous organizational climate affect ethical behavior[7)9)]. In addition, the negative impact of deterioration of the practice environment and workplace climate along with a low awareness of issues have caused nurses to suffer moral distress and ethical dilemmas[10)~12)], making them unable to act in the best interests of patients. From these facts, it is considered that the ethical behavior of nurses is affected not only by individual factors such as high moral sensitivity, but also by the efforts and culture of the organization. However, there is no report that comprehensively captures the factors that influence the ethical behavior of nurses in Japan.

Meanwhile, in the field of organizational ethics, Trevino presented an "interaction model for ethical decision making in an organization"[13)]. According to Trevino, in an organization, people's ethical/unethical decision-making behavior is influenced by individual factors such as ego and locus of control (the perception of whether the power to control one's actions and their consequences lies with oneself or with external factors) as well as organizational factors such as the situation and organizational culture. It is reported that individual factors such as locus of control (LOC) and ego, and organizational factors such as the situation and organizational culture are related, and there is an interaction between individual and organizational factors. Yamada et al[14)]. have also conducted a study on employees of a company and found that individual characteristics such as job title and age and organizational climate characteristics influence ethical behavior of employees. However, the interaction between individual and organizational factors has not been clarified, indicating the need for conducting research to explore these relationships.

Therefore, this study aimed to comprehensively clarify the individual and organizational factors that influence the ethical behavior of nurses and the interaction between these factors, referring to the interaction model of ethical decision making in Trevino's organization and Yamada's previous research. The ethical behavior of nurses plays an important role not only in individual but also in contextual elements within the organization[7)], and organizational characteristics affect individual behavior[15)]. Therefore, we examined the

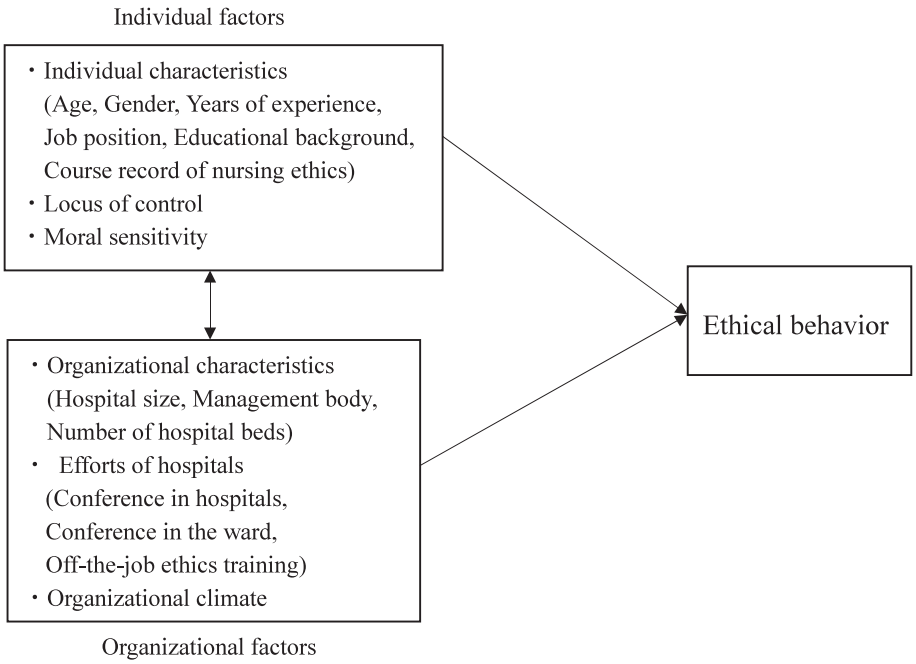


Fig. 1 Conceptual Framework.

ethical behavior of nurses, assuming that there is an interaction between individual and organizational factors, and that each factor affects ethical behavior. By simultaneously examining the factors that affect the ethical behavior of nurses from the perspectives of individuals and organizations, we can find points that can be strengthened and points that need to be improved from the perspective of both individuals and organizations.

Definition of Terms

- Moral sensitivity : A genuine interest by experiences they provide care and want to live better (welfare)[16].
- Ethical behavior : Moral behavior, actions, and decisions in response to moral standards and norms[17].
- Organizational climate : A measurable characteristic of a set of work environments that people living and working in the workplace may perceive, directly or indirectly, and which may influence their motivation and behavior[15].

Conceptual Framework (Fig. 1)

In this study, the conceptual framework was set up with reference to previous studies by Trevino[13] and Yamada et al[14]. Based on these findings, we created a conceptual framework in which ethical behavior of nurses is affected by individual factors such as moral sensitivity and LOC, organizational factors such as the efforts of hospitals (e.g., ethical education), and organizational climate, and there is an interaction between individual and organizational factors.

Materials and Methods

1. Study design

This study had a cross-sectional research design, using an anonymous self-administered questionnaire.

2. Participants

The participants were 1,048 clinical nurses working at 21 hospitals with different management bases and hospital sizes in Japan, who had the approval of the director of nursing at their respective hospitals to participate. To aim at nurses who provide direct care to patients, the chief nurses and directors of nursing departments were excluded from the study.

3. Data collection

The questionnaires were distributed from August to November 2019. The target hospitals were selected from a list of national health care institutions in the Institute for Health Economics and Policy. We initially found 8,390 hospitals, and selected 300 hospitals from the list assuming that an appropriate sample size could be obtained by the simple random sampling method. We sent a document outlining the research intent, purpose, method, etc., to the directors of nursing at selected hospitals, and commissioned a survey cooperation. To obtain permission for research cooperation, we divided the hospitals into groups of 30. First, permission was requested from 30 hospitals in the first group, and then the next 30 facilities were contacted. In this manner, we contacted a total of 179 hospitals. A self-administered questionnaire was mailed to the hospitals that provided research cooperation, and commissioned to be distributed to the nurses. The questionnaires were collected back by attaching an explanatory document to the survey and an envelope for replying and returning it individually.

4. Questionnaires

1. Individual factors

As individual factors, we investigated age, gender, job position, years of experience, educational background in nursing, experience of nursing ethics in nursing education, LOC, and the moral sensitivity required for ethical behavior[6)18)].

The Japanese version of the Moral Sensitivity Questionnaire 2018 (J-MSQ 2018) developed by Maeda et al[16)19)]. was used for the assessment of moral sensitivity. The J-MSQ2018 is a questionnaire with three factors and 10 items, with 4 items of "moral strength," 3 items of "sense of moral burden," and 3 items of "moral responsibility," and is evaluated on a 6-point Likert scale. The Cronbach's α was .82 for all items, ensuring reliability and validity. The higher the score, the higher the moral sensitivity.

For the measurement of LOC, the new locus of control scale (LOC scale) developed by Kanbara et al[20)21)]. was used. LOC is a psychological characteristic of an individual who recognizes the power to control his or her own behavior and its consequences. It is composed of "internal control" which relates to a sense of control over one's actions and their results, and "external control" which relates to being controlled by external factors like luck and chance ; those with high internal control tend to solve problems on their own, while those with high external control tend to depend on others. The LOC scale is a questionnaire consisting of 18 items with two factors having "internal control" and "external control" as their extreme opposites, and is evaluated on a 4-point Likert scale. The Cronbach's α for this scale was .76 for all items, and its reliability and validity were assured. The higher the score, the higher the internal control, which means believing that one's actions and their results can be controlled by oneself.

2. Organizational factors

As organizational factors, we investigated the number of hospital beds, the management base, status of the clinical ethics committee, ethics conferences and ethics training in the organization, and the status of ethics conferences in the ward. The 12-item Organizational Climate Scale (OCS-12) developed by Fukui et al[22)]. was used to assess the organizational climate to which the nurses belonged.

The OCS-12 is a measure of organizational characteristics developed in the organizational psychology discipline that can classify the organizational culture as perceived by employees of an organization. There are two factors measured by 12 items : 6 items of "traditional scale (TS)" that shows a compulsory, imperative, and sound climate, and 6 items of "organizational environment scale (OES)" where employee morale is high and there is rational organizational management. It is a two-level evaluation scale with a response

format of "yes/no." The Cronbach's α coefficient was .63 and .71 for the two factors TS and OES, respectively, which ensured reliability and validity. In addition, the OCS-12 has four types of organizational climates : "low TS & high OES" (Active), "high TS & high OES" (Governed), "low TS & low OES" (Disorganized), and "high TS & low OES" (Reluctant), from the two axes of "TS" and "OES" based on subscale scores. It is well-known that nursing activities are carried out continuously in cooperation with a team, and generally the nursing unit is the smallest organization. Therefore, the organizational climate to be assessed was assumed to be the organizational climate of the ward in this study.

Since verification of scale items at the time of scale development was targeted at company employees, in this study, the term "employee" was replaced with "staff nurse" and "manager" was replaced with "nurse manager," with the consent of the test developer.

3. The ethical behavior of nurses

The revised edition of the nurses' ethical behavior scale of Ode[23] was used to assess ethical behavior of nurses. This scale is based on the four principles of bioethics : respect for autonomy, non-maleficence, beneficence, and justice (fairness). The scale is a questionnaire with three factors and 15 items (5 items of each factor) : "risk avoidance," "good care," and "fair care," evaluated on a 6-point Likert scale. The Cronbach's was .84, which ensured reliability and validity. Items on "fair care" are scored in reverse, and higher scores indicate higher ethical behavior.

All scales were used with the consent of the developer.

Ethical considerations

We sent a document stating the purpose, content, and method of the research to the participants and the director of nursing at the hospitals to which the nurses belonged, and obtained their consent. In addition, the participants were informed that participation in the study was voluntary, and that the data obtained would be used only for this study, and no individual or hospital would be identified when the results were published.

The self-administered questionnaire was kept anonymous and collected individually from the nurses by post. We also identified that they consented to participating in this study by returning the completed questionnaire.

This study was conducted with the approval of the Kyushu University Institutional Ethical Review Board for Clinical Research [approval number : 2019－204].

Statistical analysis

For the attributes of the target person and the outline of the facility to which they belonged, simple tabulation and descriptive statistics were performed. In addition, the organizational climate of the institution to which the subjects belonged was categorized by type according to the OCS-12 scale scores ; the Mann-Whitney U test, the multiple comparison test (Bonferroni method), and Spearman's rank correlation analysis were conducted in order to confirm the correlation between moral sensitivity, LOC, and ethical behavior, moral sensitivity and LOC, and ethical behavior and each attribute.

Then, structural equation modeling was performed to verify the causal relationships between the constituents of the conceptual framework set in this study. First of all, as a verification of the measurement model, we carried out a corroborative factor analysis (estimation method : robust weighted least squares method, WLSMV) of each scale used to determine the fitness index, standardized estimated value, and interpretability of factors, and determined the final measurement model while modifying the model for reference. Next, for verification of the structural model, we examined the suitability of the model assuming that individual attributes such as moral sensitivity

Table 1 Nurses' individual characteristics and course record of nursing ethics

n=517

			Mean (SD)
Age(years)	n=514		40.9 (± 10.8)
Years of experience			16.5 (± 10.2)
			n (%)
Gender		Female	439 (85.1)
	n=516	Male	77 (14.9)
Job position		Staff	409 (79.1)
		Assistant nurse manager	93 (18.0)
		Other (Certified Nurse)	15 (2.9)
Education background		Nursing school	452 (87.6)
	n=516	Junior college (3years)	33 (6.4)
		University	29 (5.6)
		Graduate school	2 (0.4)
Department	n=512	Surgeon related ward (including Unit, ER)	77 (15.0)
		Internal medicine related ward (including convalescent, long-term care)	150 (29.3)
		Mixed	65 (12.7)
		Psychiatric	94 (18.4)
		Gynecology, Pediatric	21 (4.1)
		Outpatient department	41 (8.0)
		Operation room	20 (3.9)
		Other	44 (8.6)
Course record of nursing ethics in nursing education			
	n=510	Yes	315 (61.8)
		No	31 (6.1)
		Unclear	164 (32.2)

and LOC, organizational characteristics, and organizational climate interact and affect ethical behavior. Categorical variables such as job position and the status of ethics training were input as dummy variables to calculate standardized estimated values.

The goodness of fit of the measurement model and the structural model was confirmed by the Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI). The robust maximum likelihood method (WLS) was used for parameter estimation of the structural model. The adoption criteria were : RMSEA = 0.05 or less is the best, 0.08 or less is good, 0.1 or less is acceptable, and CFI is preferably 90 or more[24]. IBM SPSS Statistics Ver. 22.0 (IBM Tokyo, Japan) and M-Plus Ver8.4 (Muthen & Muthen, USA) were used for data aggregation and analysis. The statistical significance level was 5%.

Table 2 Organizational characteristics and efforts on ethics

n=517

		n (%)
Number of hospital beds	less than 99	96 (18.7)
n=513	over 100 fewer than 300	270 (52.6)
	over 300	147 (28.7)
Management body	national, prefectural, city governments	67 (13.0)
n=516	public agency	158 (30.6)
	privately owned	288 (55.8)
	unclear	3 (0.6)
Clinical ethics committee		
n=515	yes	327 (63.5)
	no	82 (15.9)
	unclear	106 (20.6)
Ethics conference in the hospital		
n=515	yes	268 (52.0)
	no	126 (24.5)
	unclear	121 (23.5)
Ethics conference in the ward		
n=515	yes	267 (51.8)
	no	171 (33.2)
	unclear	77 (15.0)
Off-the-job ethics training		
n=516	yes	323 (62.6)
	no	104 (20.2)
	unclear	89 (17.2)

Results

1. Attributes of the participants and an overview of the hospitals (Table.1 and 2)

The survey questionnaire was distributed to 1,048 nurses at 21 facilities in 15 prefectures, and 535 questionnaires were collected (collection rate 51.0%). Of these, 517 participants (valid response rate 49.3%) were included in this study, excluding 18 participants who had significant missing data.

The average age of the participants was 40.9 ± 10.8 years ; 439 were women (85.1%) and 77 were men (14.9%). The average years of experience as a nurse were 16.5 ± 10.2, the number of staff nurses was 409 (79.1%), and the number of vice nurse managers was 93 (18.0%). Nursing ethics learning in basic nursing education was reported by 315 participants (61.8%). In addition, 270 participants (52.6%) had more than 100 beds and less than 300 beds, and 288 (55.8%) were under privately owned management bodies. There were 327 participants (63.5%) who had an ethics committee that involved clinical ethics within their hospitals, 268 participants (52.0%) in the hospital for ethics conferences, 267 participants (51.8%) in the ward, and 323 participants (62.6%) for ethics training.

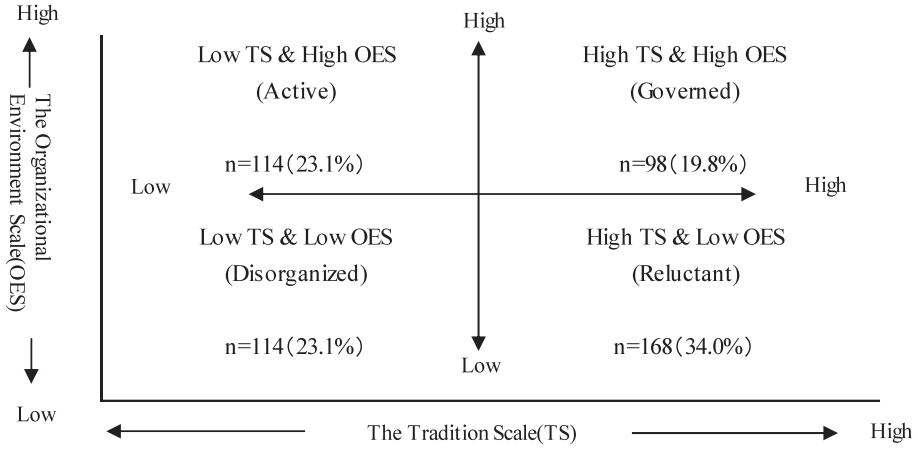


Fig. 2 Categorization of organization climate based on the scores of the two subscales of the OCS-12 (n=494)

Table 3 Differences in moral sensitivity, locus of control and ethical behavior between the organizational types

n=517

Organization type	Moral Sensitivity	Locus of Control	Ethical Behavior
Active	38.8 (± 5.4)	48.5 (± 6.0)	64.4 (± 8.1)
Governed	39.5 (± 5.4)	47.4 (± 6.4)	64.0 (± 7.5)
Disorganized	38.4 (± 5.6)	47.4 (± 5.8)	63.1 (± 7.1)
Reluctant	39.1 (± 5.4)	44.5 (± 6.1)	61.2 (± 8.1)
mean (SD)	39.1 (± 5.4)	46.7 (± 6.3)	63.1 (± 7.9)

Scores are presented as mean (± standard deviation)

*** $p < .001$, ** $p < .01$: at post hoc Bonferroni test.

2. Organizational climate of the hospitals to which the participants belonged (Fig. 2)

In order to classify the organizational climate of the institution to which the participants belonged, the average score of TS and the OES among the OCS-12 scores was set as a split value, and classified into four types depending on the combination of high and low value of each factor score. As a result, the following classification was achieved : active = 114 (23.1%), governed = 98 (19.8%), disorganized = 114 (23.1%), and reluctant = 168 (34.0%).

3. Correlation and differences in scores of moral sensitivity, LOC, and ethical behavior by organizational climate type (Table. 3)

Moral sensitivity, LOC, and ethical behavior were scored, and the scores were compared by type of organizational climate. The participants had an average moral sensitivity score of 39.1 ± 5.4, an average LOC score of 46.7 ± 6.3, and an average ethical behavior score of 63.1 ± 7.9. Moral sensitivity did not differ depending on organizational climate, but LOC showed the lowest score in subjects belonging to a reluctant climate type, and a significant difference in scores was also observed in other organizational climates (active : $p < .000$, governed : $p < .005$, and disorganized : $p < .001$). Regarding ethical behavior, participants who belonged to the reluctant climate type had the lowest scores, and their scores were significantly different from those who belonged to active and disorganized types (active : $p < .004$, disorganized : $p < .004$). Regarding the correlation between scales, there was almost no

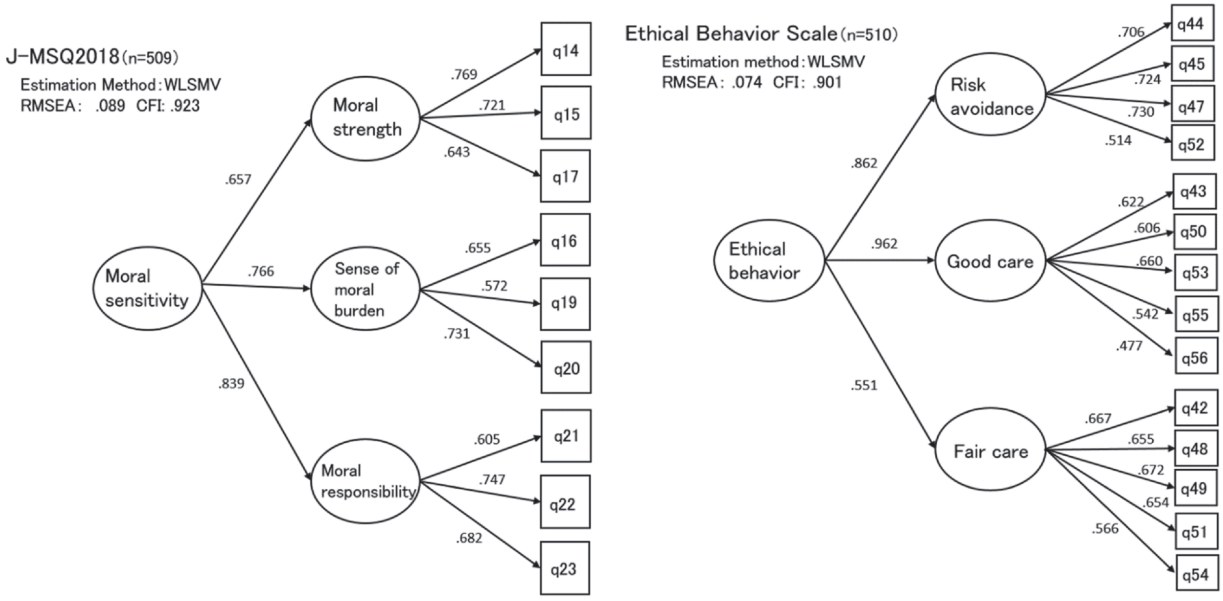
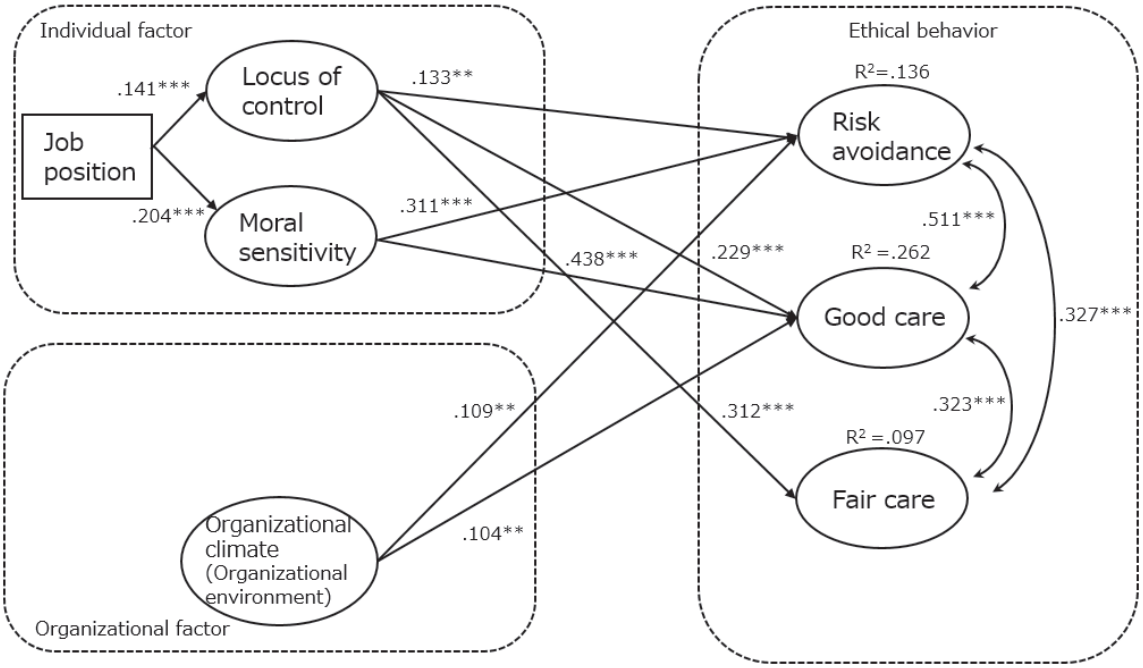


Fig. 3 The quadric factor model of the J-MSQ2018 and the ethical behavior scale



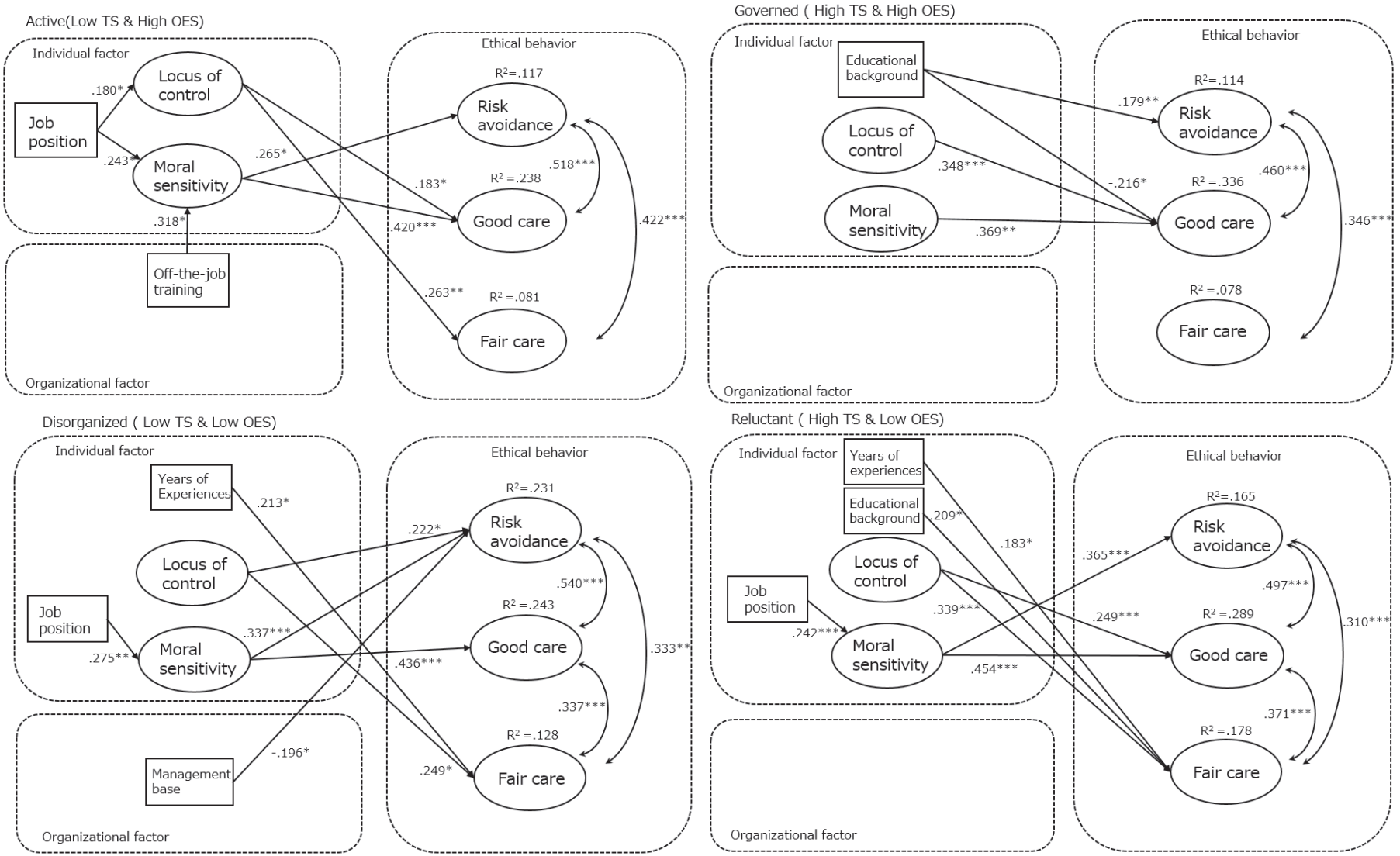
n=492, Estimation method : MLR, RMSEA : 0.080 CFI : 0.891
***$p < .001$, **$p < .01$
Job position 0 : Staff nurse, 1 : Chief nurse manager

Fig. 4 The model of the factors affecting ethical behavior among hospital nurses

correlation between moral sensitivity and LOC ($\rho = .125$, $p < .01$), moral sensitivity and ethical behavior ($\rho = .252$, $p < .01$), and a weak positive correlation was found between LOC and ethical behavior ($\rho = .233$, $p < .01$).

4. Individual and organizational factors that affect the ethical behavior of hospital nurses (Fig. 3 and 4)

First, as verification of the measurement model, confirmatory factor analysis of the J-MSQ2018,



Estimation method : MLR　RMSEA : 0.057　CFI : 0.922　SRMR : 0.074　$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$

Job position 0 : Staff nurse, 1 : Chief nurse manager

Education background 0 : Nursing school, Junior college (3years), 1 : University

Management base 0 : proprietary, 1 : National, public　Off-the-job training 0 : yes, 1 : no

Fig. 5　The factors model on ethical behavior among hospital nurses by organizational climate types

the LOC scale, the ethical behavior scale, and the OCS-12 was performed. We repeated the examination of the goodness of fit and the pass coefficient, taking into account the construct of the scale, and deleted one item from the J-MSQ2018, the ethical behavior scale, and the OCS-12, and five items from the LOC scale. The quadratic factor model of the J-MSQ2018 and the ethical behavior scale is shown in Fig. 3.

The J-MSQ2018 fitness index was RMSEA = .089, CFI = .923 ; the ethical behavior scale was RMSEA = .074, CFI = .901 ; the LOC scale was RMSEA = .065, CFI = .931 ; and the OCS-12 was RMSEA = .066, CFI = .936, and the conformity was within the allowable range.

Next, as verification of the structural model, we examined the suitability of the overall model assuming that the organizational and individual attributes such as moral sensitivity, LOC, ethics training, and organizational climate influence ethical behavior. The dependent variable, ethical behavior, was verified using quadratic factors in order to confirm the effects of individuals and organizations in detail. The model showed paths with a path coefficient of .05 or more. The model goodness of fit was RMSEA = .080, CFI = .891, which was within the allowable range. The coefficient of determination (R2) of each latent variable of ethical behavior ranged from .097 to .262.

Regarding the relationship between individual factors and ethical behavior, LOC showed a significant path for each factor of ethical behavior (risk avoidance : β = .133, p < .01 ; good care : β = .229, p < .001 ; fair care : β = .312, p < .001). The path from moral sensitivity to "risk avoidance" (β = .311, p < .001) and "good care" (β = .438, p < .001) was significant, but there was no path to "fair care." The job position as an individual factor, showed a significant path to LOC and moral sensitivity, but not ethical behavior (LOC β = .141, p < .001 ; moral sensitivity β = .204, p < .001). Regarding the relationship between organizational factors and ethical behavior, "risk avoidance" (β = .109, p < .01) and "good care" (β = .104, p < .01) were significant ; no path was found to "fair care." In addition, there was no significant path for ethical behavior or moral sensitivity from the ethics conference or training, which is an organization's initiative, regarding the number of the beds in a hospital, and the status of clinical ethics committees. Furthermore, no significant path was found between individual and organizational factors.

5. Factors affecting ethical behavior of nurses by type of organizational climate (Fig. 5)

A multi-group structural equation modeling was performed for each type of organizational climate based on the overall model obtained from the results of all participants. The model goodness of fit was RMSEA = .057, CFI = .922, which was good. The coefficient of determination (R2) of each model ranged from .078 to .336.

The path coefficient from moral sensitivity to "good care" was significant in all organizational types (active : β = .420, p < .001 ; governed : β = .369, p < .01 ; disorganized : β = .436, p < .001 ; and reluctant : β = .454, p < .001). A significant path was recognized from active, disorganized, and reluctant types in "risk avoidance" (active : β = .265, p < .05 ; disorganized : β = .337, p < .001 ; and reluctant : β = .365, p < .001), but no path to "fair care" was found.

The path coefficients from LOC to "good care" were significant for active, governed, and reluctant types (active : β = .183, p < .05 ; governed : β = .348, p < .001 ; reluctant : β = .249, p < .001), and the path coefficients for "fair care" were significant for active, disorganized, and reluctant types (active : β=.263, p < .001 ; disorganized : β=.249, p < .05 ; reluctant : β=.339, p < .05). Only disorganized type had a significant path coefficient to "risk avoidance" (β = .222, p < .05).

Furthermore, comparing models by climate type, active, disorganized, and reluctant types showed a significant path from job position to moral sensitivity (active : β = .243, p < .05 ;

disorganized : β =.275, p < .01 ; reluctant : β = .242, p < .001). Active type only had a significant path from job position to LOC and moral sensitivity (LOC β = .180, p < .05 ; moral sensitivity β = .243, p < .05). In active climate, the path from off-the-job ethics training to moral sensitivity was significant (β=.318, p < .05), and in governed climate, the path from educational background to "risk avoidance" and "good care" was significant (risk avoidance : β= -.179, p < .01 ; good care : β = -.216, p < .05).

Additionally, in disorganized type, a significant path from "years of experience" to "fair care" (β = .213, p < .05) and from the management body to "risk avoidance" (β = -.196, p < .05) was found. In reluctant climate, a significant path was seen from years of experience to "fair care" (β =.183, p < .05) and from educational background to "fair care" (β = .209, p < .05).

Discussion

1. Characteristics of the participants of this study

According to the summary of the 2018 case report by the Ministry of Health, Labor and Welfare[25], the percentage of nurses of men and women was 92.2% for women and 7.8% for men. Among the participants in this study, male nurses had a high ratio of 14.9%. In the Ministry's report, based on age group, the ratio of nurses aged 40 to 44 was the highest at 15.1%, and those aged 30 to 55 comprised 63.5% of the total. In the present study, the number of participants was the highest in the age group of 40 to 44 at 19.7%, and those in the age group of 30 to 55 accounted for 69% of the total. Therefore, the participants of this study had an age composition similar to that of general nurses, but the ratio of male nurses was higher, and therefore, the results may be influenced by factors that especially affect the ethical behavior of male nurses.

The participants' average moral sensitivity score in this study was 39.1 ± 5.4. No previous studies using the revised scale[16] were found, but when compared with previous studies[19] which included the subfactors "moral strength" and "sense of moral burden," that have the same content as the scale before revision, no significant difference was found. The LOC scale score was 46.7 ± 6.3 points, which was slightly lower than the previous studies[26]~[28] (48.24 ± 5.96, 48.7 ± 6.3, and 50.1 ± 6.7 points), but this score was still significantly different. The score for ethical behavior was 63.1 ± 7.9, and no significant difference was found for this score when compared with a previous study[23]. Since there are very few previous studies to compare with, it is necessary to continue to study the characteristics and differences in moral sensitivity and ethical behavior of nurses in the future.

2. Individual factors affecting ethical behavior of hospital nurses

With reference to previous studies by Trevino and Yamada et al., we established a conceptual framework in which the ethical behavior of nurses was affected by individual and organizational factors, as well as the interaction between these factors and verified it using structural equation modeling. As a result, it was shown that LOC of nurses, which is an individual factor, had a causal relationship with "risk avoidance," "good care," and "fair care," and moral sensitivity had a causal relationship with "risk avoidance" and "good care." The job position showed a causal relationship with LOC and moral sensitivity ; however, neither ethics training nor ethical conference show a relationship with moral sensitivity or ethical behavior.

It is difficult to compare and examine these results because there is no previous research that examined the relationship between nurses' LOC and ethical behavior. The higher the LOC score, the higher is the internal control. It is said that those who have a locus of internal control tend to feel responsible for the results of their actions[13], and tend to take actions that positively lead toward their goals[21]. Since a weak positive correlation was found between LOC and ethical

behavior in the participants of this study, it was suggested that nurses with high LOC take responsibility for caring for patients and actively practice ethical behavior. Nurses face various ethical issues related to treatment and nursing in clinical settings and experience various conflicts of values and distress. Among them, they always have the responsibility to provide care according to ethical standards and principles[29]. They are also active in supporting and protecting the dignity, privacy, and choice of the patient as a human being[30]. Since this attitude in nurses is similar to the tendency seen in those with high internal control, it can be considered that there is a relationship between LOC and ethical behavior of nurses.

In addition, from the results of the structural equation modeling, a causal relationship was found between the LOC of nurses and the subfactors of ethical behavior. Especially for "fair care," no path from moral sensitivity or organizational climate was recognized, and the path coefficient from LOC was the highest among the three subfactors. "Fair Care," which is one of the ethical behaviors, means to treat and care for the patient in a fair manner, regardless of whether the patient likes or dislikes the manner of care. LOC has been revealed to be related to the personality traits of objectivity and cooperation[31], and it was inferred that, apart from subjective likes and dislikes, the attitude of responding to things objectively and a high degree of cooperation with various people influenced fair care.

Next, it was shown that there was a causal relationship between the moral sensitivity of nurses and "risk avoidance" and "good care," but not "fair care." Rest is a factor that influences the process from moral sensitivity to action, "atmosphere that influences individual decision-making" and "preemption of fairness due to some assumptions being a constraint," "affecting costs and profits"[32]. Nurses have to think about the allocation of time and energy to patients with different conditions, according to institutional rules and principles that they did not create[33]. In addition, the J-MSQ2018 used in this study is a revision of the moral sensitivity questionnaire developed by Lützén et al. to a Japanese version, the basis of which was to focus on the interaction between a caregiver and the receiver. It is the ethics of caring (caring)[34], and the questionnaire also contains a lot of content that inquires the thoughts of each individual patient. Whereas, the basis of the ethical behavior scale is the four principles of medical ethics, which are shown as the criteria for judging medical practice. Especially, in the question of "fair care," to assess ethical behavior, multiple patients are assumed. It may have been a factor that could not be achieved. The fact that there are some factors that influence the process from moral sensitivity to ethical behavior and that the way of thinking of ethics, which is the origin of scale development, is different, also shows the causal relationship between moral sensitivity and "fair care."

Furthermore, it was shown that the job position did not have a direct causal relationship to ethical behavior, although it contributes to moral sensitivity and internal control. The higher moral sensitivity of nursing managers than that of nursing staff was consistent with previous studies, but no previous studies examined the relationship between job position or LOC and ethical behavior[19]. Staff nurses focus on the care of patients and their families, but when they become managers, they also play a role in labor management, staff education, and evaluation. As their roles change, they are required to exhibit moral leadership based on an ethical perspective, such as being moral, becoming a role model through their actions, and conducting ethical training[35][36], and the opportunities for learning increase. In addition, it is thought that moral sensitivity and internal control may be increased because responsibility and positivity for their actions are also needed. According to the results of this study, becoming a nursing manager increases moral sensitivity and internal control

and enhances ethical behavior, but nurses have individual differences in their awareness and interest in ethical issues[37] ; therefore, it is possible that this is why no direct causal relationship between job title, LOC, and ethical behavior was found.

3. Organizational factors affecting ethical behavior of hospital nurses

As factors affecting the ethical behavior of nurses, the size of the hospitals, the management body, and the existence of an ethics committee were assumed, but there was no relationship between these attributes and ethical behavior. This may indicate that clinical ethical issues faced by nurses are universal issues found in all institutions.

Nurses need knowledge to recognize an event as an ethical problem and the skills to consider the problem and take appropriate action that conforms to ethical behavior[38]. For this purpose, it is considered necessary to continue ethical education in basic nursing education, postgraduate education, and conferences for discussion as an organizational initiative, and it is practiced in many hospitals. So far, it has been reported that an experience of ethical education in basic nursing education and moral sensitivity are not linked[39], but postgraduate ethical education is effective[40], and if ethical education is insufficient, it would be difficult to identify and analyze ethical problems and the decisions may lack individual confidence[41]. In addition, it was reported that one can analyze the characteristics of ethical issues through case studies at ethics conferences, distinguish between moral and amoral values[42], act consciously by trying to get involved in the feelings of patients, and have positive consciousness such as experiencing the growth of individuals and groups[43]. However, no causal relationship between clinical ethics committees, ethics training, and ethics conferences was found with moral sensitivity and ethical behavior.

In this study, the results may reflect the fact that we asked only whether or not ethics training and ethics conferences were conducted, but did not ask about the frequency or content of the training or conferences. About 20% of the respondents reported the existence of an ethics committee that handles clinical ethics, but the implementation of in-hospital conferences and ethics training are unknown. In addition, if the ongoing ethics training and ethics conferences do not lead to individual moral sensitivity and ethical behavior, we suggest the need for the content and method of the efforts to be evaluated and re-examined, as well as the activities of the committee dealing with clinical ethics.

The ethical training currently conducted is generally considered to be a lecture-style training once a year or a short-term case study, but in recent years, the effects of debate-style education and narrative-based education have also been reported[44][45]. Therefore, it is believed that ethical behavior of nurses may be enhanced by revising the content of training and continuing education. In this study, we could not clarify the interaction of individual and organizational factors because no significant path was observed between them. It is possible that differences in organizational characteristics between the company and the hospital also affect these factors, and different factors such as the setting (in the previous study), ego strength, reward, and penalties also exist as factors influencing ethical behavior. It is necessary to continue to study the factors that influence the ethical behavior of nurses, since it can be safely assumed that these factors are numerous.

4. Factors affecting the ethical behavior of nurses by the type of organizational climate

In this study, it was shown that the organizational climate significantly affects "risk avoidance" and "fair care" in an organization with rational management and high staff morale. Therefore, we confirmed the factors that influence the ethical behavior of nurses according to the type of organizational climate. It was found that, in all organizational climates, there was a

causal relationship between moral sensitivity and "good care."

Nursing essentially contains moral elements such as interest and care for the patients, has an ethical code as a profession, and always plays a role in contributing to people's health and well-being. In addition, nurses receive a long-term education on morals and ethics in basic education and continuing education. Therefore, even if the organizational climate is different, the thoughts and interests for patients' well-being are common, and it is considered that this leads to "good care."

The difference in the type of organizational climate was that there were few compulsory and imperative atmospheres, the staff with the highest morale was active, and there was a causal relationship between job position, LOC, in-hospital training, and moral sensitivity of nurses.

Disorganized and reluctant climates with low cohesiveness as a group showed years of experience and educational background of nurses, learning experience of nursing ethics, and causal relationship between management mother and ethical behavior, but no certain tendency was shown.

The characteristics of active climate are that there is little compulsory and imperative atmosphere, lean organizational management is performed, the group is well-organized, and the morale of the staff is high. As a result, the staff's opinions are respected, the degree of participation in various initiatives increases, and the motivation of the organization or group to achieve the goals is increased. According to Mullen et al., the effect of group cohesion, on business performance is largely due to commitment to the task[46]. This also suggests that organizations with less coercion and high group cohesion may share the purpose of in-hospital training and increase their participation which may lead to a common goal of increasing moral sensitivity.

In addition, although there are differences in forced and imperative cultures, there is a causal relationship between ethical behavior and management body, years of experience, nursing ethics learning experience, and educational background, in organizations where staff morale and group cohesion are low. However, there was no consistent tendency. Moreover, the length of experience of nurses and the experience of learning nursing ethics, both good and bad, influenced ethical behavior. It is speculated that this result was influenced by low group cohesion. It has also been reported that nursing managers have low ethical attitudes and awareness in organizations with low group cohesion, and that the organization's efforts toward ethics are also inadequate[47]. This also may not encourage nurses' ethical behavior due to low cohesiveness, absence of ethical leadership, and the lack of efforts toward common goals in these organizations.

Yamada et al[14] found that there is a tendency to promote ethical behavior of individuals that requires group cohesion where "teamwork," "safety" to prevent risks, and "efforts to improve services" act as factors. It has also been shown that the ethical behavior of colleagues encourages individual ethical behavior[48]. Therefore, we suggest that it is necessary for nursing managers to consciously improve the organization so that they can encourage ethical behavior, while strengthening moral sensitivity toward "good care" that is common to all organizational characteristics ; in organizations with low group cohesiveness, nurses who have a positive effect on ethical behavior should work to increase group cohesion. It has been suggested that it is useful to strengthen the ethical behavior of nurses by cultivating a culture in which staff can freely work on issues with a common awareness and thinking (like in active climate type) and by utilizing human resources who possess ethical leadership.

Limitations

The participants of this study were not representative of the entire nursing population in

Japan because the sample was biased in terms of gender and organization. Moreover, the results obtained are based on an arbitrary self-administered questionnaire, and it cannot be predicted that they accurately measured actual moral sensitivity, ethical behavior, and organizational efforts, which poses a limit to generalization of the results. Another limitation of this study is that we have not examined other influential factors such as the nurses' ego and organizational climate ; interaction of individual and organizational factors could not be measured in this study, as well as the processes leading to the ethical behavior of nurses.

However, it was possible to clarify some of the effects of organizational climate on ethical behavior by examining the relationship between LOC and ethical behavior, which had not been examined so far. In the future, it is necessary to focus on and examine the processes leading to ethical behavior of nurses, after further considering the specific details of organizational efforts that lead to ethical behavior of nurses.

Conflicts of interest

The authors have no conflicts of interest directly relevant to the contents of this article.

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（和文抄録）

病院看護師の倫理的行動に影響する個人・組織要因

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【目的】本研究の目的は，病院看護師の個人要因，組織要因の相互作用およびこれら各要因の倫理的行動への影響を明らかにすることである．

【方法】本研究では，全国の 21 病院に勤務する看護師を対象に，無記名の自記式質問紙調査を行った．調査期間は 2019 年 8 月から 11 月である．先行研究を参考に，看護師の倫理的行動に影響する要因に関する概念枠組みを作成し，構造方程式モデリングを用いて検証した．また組織風土のタイプ別に多母集団同時分析を行い，比較を行った．

【結果】1,048 名の対象者に質問紙を配布し，535 名から回答を得，517 名を分析対象とした（有効回答率 49.3%）．病院看護師の倫理的行動に影響している個人要因は，Locus of Control と道徳的感受性であり，職位は Locus of Control と道徳的感受性を介して影響していた．年齢や性別，看護基礎教育における倫理学習経験は影響していなかった．組織要因では，組織環境のよい風土が看護師の倫理的行動に影響しており，病床規模や経営母体，病院内の倫理研修や倫理カンファレンスは倫理的行動に影響していなかった．また個人要因と組織要因間の相互の影響も認められなかった．

組織風土のタイプ別に多母集団同時分析を実施したところ，全てのタイプの組織で，道徳的感受性は「善いケア」に影響していることが示された．さらに強制・命令的な雰囲気が少なく集団凝集性の高い組織では，院内の倫理研修が道徳的感受性に影響していること，集団凝集性の低い組織風土では，職位や経験年数，経営母体などが倫理的行動に影響することが認められた．いずれのモデルも良好な適合度を得た．

【結論】看護師の倫理的行動には，Locus of Control と道徳的感受性，組織環境のよい風土が影響しており，職位は Locus of Control と道徳的感受性を介して倫理的行動に影響していることが示された．また看護師の倫理的行動に影響する要因には組織風土のタイプごとに違いがあることが明らかになった．

Key words：病院看護師，倫理的行動，組織風土，道徳的感受性，Locus of Control