Factors related with perception of care by nurse in the medical ward.

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Abstract: This study aimed to clarify to relationship between nurse's Work-Life-Balance (WLB) and their perception of care for patients receiving medical treatment. Subjects of this survey were nurses working at general hospitals and core hospitals at some areas in Japan. Supposed nurses showed satisfaction on their WLB as well as approbatory perception of nursing care for patients, we thought that there was a possible of providing high quality nursing care continually, because early studies reported that nurse's satisfaction of WLB was related to perception of high quality of nursing care. The result of analysis revealed the significant relationship between satisfaction of WLB and approbative perception of nursing care. Consequently, it was suggested that supporting nurses to improve WLB could bring about advancement of the quality of nursing care for patients receiving medical treatment.

INTRODUCTION

For the purpose of making medical system more efficient, it has developed medical policies of shortening number of days spent in hospital and accelerating inpatients' return home as soon as possible in Japan. As for the hospital management, conducting treatment more patients efficiently have required in addition to short term admission.

Hospital nurse must provide nursing care to more patients per year or per month due to shorter length of hospital stay. Therefore, we considered there was a necessity to explicit perception of nurse about their provided care to inpatients, while more efficient and high quality nursing care had been required.

However, we can not observe the quality of care directly. Because early studies reported the quality of nursing care related with job satisfaction among nurses [1][2][3][4], we used the scale on work environment included perception of nurse about their care for the sake of evaluating quality of the care indirectly. The scale had some items which cooperation with medical stuff at their work. We thought that these items could be utilized in this study because such question items were related to quality of nursing care [5].

What kind of factor related with the quality of nursing care do not reveal entirely. While various factors seem to have relationship with the quality, it is thought that one way of directly elevation quality of their care is to work on nurse. Moreover, I think that these ways included an improvement of their Work-Life-Balance (WLB).

Therefore, I wanted to analyze the relationship between evaluation on their WLB and perception of the quality of their nursing care.

This survey implemented at July 2014. Nurses of new school graduates who begin to work from April were to not acquire their work substantially at July 2014. Because I thought so, subjects in this analysis didn't contain novice nurses.

Namely, subjects in this study were nurses except for them with less than one year experiment.

Moreover, due to some differences between medical ward and surgical one, findings in earlier studies on job satisfaction of nurses did not quite agree and differed among various wards[6][7]. Accordingly, it was thought that analyzing about only medical wards allowed us to make clear discussion on analysis results and significances of this study.

This study aimed to explore relationship between the perception of quality of nursing care and some factors of nurse herself. Moreover, I thought that the result of analysis could be applied for making outcome related to patient's health problem better following the improvement of quality of nursing care.

MATERIALS & METHODS

A. Subjects

Non experimental research approach with cross sectional survey research was used. This survey was done at 2 hospitals at Kanto area and Tokai area in Japan. The former (Hospital A) has 572 beds and the latter (Hospital B) has 808 beds, 273 nurses and 726 nurses, respectively.

They were both general hospital and core one at own area. We asked nurses whom worked at medical wards in these hospitals except for nursing assistant, nurse administrator (head of nursing department).

Patients with digestive system diseases and lung diseases, vascular diseases, mental diseases, metabolic disease etc were treated there. The period of survey was from June, 2014 to November, 2014.

B. Ethical considerations

Ethical approvals were obtained from the research ethics committee of Aichi Kiwami College of Nursing（Aichi Kiwami College of Nursing, No7-2014）.

The researcher explained the content of this study in detail to Directors General of the Nursing Department in hospitals and obtained their consent to it. Subjects of this survey were given questionnaires with the printed explanation. Indicated consent to our survey was made if they were willing to complete and return the questionnaire to the researchers.

C. Methods

Analyzed data were a part of one which we had collected in 2014. Subjects of the survey were nurses worked in hospital. The analyzed data in this study were from nurses with more than one year of work experience and worked in medical wards.

Self administered questionnaire was adopted as survey method. The survey items of attribute information on respondent consisted of age, sex, years of nursing experience. Besides them, 15 items of perception of nursing care were included in it. These were picked out among the questionnaires of nurses' work environment comprised 51 items (NWIR)[8][9]. The questionnaire included items about perception of nurse management, employee benefit programs, career advancement, interpersonal relationships in ward/hospital, and so forth. However, we used only the 15 items focused on perception of nursing care.

Each item of the questionnaires had four ordered response levels which showed 1 point: Strongly disagree, 2 point: Disagree, 3 point: Agree, 4 point: Strongly agree. These scores of 15 item were summed up for analysis relationship with other variables (total score range: 15 ～ 40 point).

The scale of NWIR is a questionnaire concerning work environment of nursing and includes some items relating to nurse's perception of care. Therefore，using the questionnaire, I thought that I could explore some factors relating with high quality of nursing care.

D. Statistical Analysis

First, differences in age and sex, years of nursing experience, WLB, total score of 15 items in NWIR questionnaire between targeted hospitals were tested. Then, using univariate analysis with the total score as a dependent variable, relationships with age and sex, years of nursing experience, WLB, hospital were analyzed. Finally, concerning variables relating statistically significant with the total score, Analysis of variance (ANOVA) conducted. The level of significance was set at $p < 0.050$. Data were analyzed using Stata ver 14.

RESULTS

29 nurses in hospital A and 91 ones in hospital B were subjects in this study (total up to 120 nurses). Medians of age were 35 years old in hospital A and 27 years old in hospital B. It found a significant difference between them (Wilcoxon rank-sum test, $p<0.001$).

Medians of years of nursing experience were 9 years in hospital A and 4 years in hospital B. It found a significant difference between them (Wilcoxon rank-sum test, $p<0.008$).

As for medians of the total score of 15 items in NWIR questionnaire, 38 points in hospital A and 41 points in hospital B. It found a significant difference between them (Wilcoxon rank-sum test, $p=0.010$).

Table1: Respondent Characteristics (age, years of nursing experience, the total score)

	Hospital A (n=29)	Hospital B (n=91)
age (years: median)*	35	27
years of nursing experience (years: median)*	9	4
the total score (points: median)*	38	41

* $p<0.050$

26 (89.7%) women in hospital A and 88 (96.7%) ones in hospital B. It exhibited no significant difference between them (Fisher's exact test, $p=0.718$).

Table2: Respondent Characteristics (sex, WLB)

	Hospital A (n=29)	Hospital B (n=91)
sex (women/man)	26/3	88/3
WLB (Satisfied/Dissatisfied/Neither)	11/9/9	27/33/31

* $p<0.05$

Moreover, variable relating statistically significant with the total score was WLB (Kruskal-Wallis test, $p=0.015$). However, age (Spearman rank-order correlation, -0.101, $p=0.271$) and sex (Wilcoxon rank-sum test, $p=0.404$) were

founded no statistically significant relationship with the score.

Because I thought that nurse's age was possible to relate with the quality of nursing care[10], age was adopted as independent variable in succeeding analysis. Furthermore, due to the result of univariate analysis that displayed age had no statistically significant relationship with WLB (Kruskal-Wallis test, p=0.731), I thought that multicollinearity would not arise in ANOVA when age and WLB were using simultaneously.

In the ANOVA, taking the total score of 15 items into a dependent variable and, age and hospital, WLB into independent variables.

Table 3: ANOVA on the total score

	sum of squares	df	Mean Squared Error	F-value	P-value
Model	893.633	31	28.827	1.90	0.011
age	588.212	28	21.008	1.38	0.129
WLB	255.480	2	127.740	8.40	<0.001 *
Hospital	51.614	1	51.614	3.40	0.069
Residual	1337.692	88	15.201		
Total	2231.325	119	18.750		

R-Squared=0.401, Adjusted R-squared=0.189, n=120

* $p < 0.050$

Then, from the result of Bonferroni correction among 3 groups of respondent of WLB (Satisfied/Dissatisfied/Neither) with the total score as a dependent variable, it found that there were two statistically significant differences between "Satisfied" and "Dissatisfied" (p=0.024), "Dissatisfied" and "Neither" (p=0.006).

DISCUSSION

This analysis in this study explored that the perception concerning quality of nursing care was related with Work-Life Balance of nurse, and that the total score of NWIR

questionnaire responded nurse who satisfied WLB of herself was a statistically significant higher than one dissatisfied it. Consequently, for the purpose of elevating quality of nursing care, this result suggested that it was a necessary to improve nurse's WLB.

The univariate analysis in this study showed age and the total score had statistically significant differences between two hospitals. Moreover, as for the age, median of age of nurses working hospital A were higher than hospital B. Accordingly, it seemed which hospital that nurses worked in might affect how many the total score of 15 items.

In other words, nurse's age had a possibility of affecting the quality of nursing care. Moreover, there was a possible that years of nursing experience also affected the quality.

As showing high correlation between the year of experience and age in this study (Spearman rank-order correlation, 0.9677, p<0.001), only age was used in this analysis.

Therefore, in order to refine the quality of nursing care, it appeared to need to rise her years of it. Nevertheless, the result of ANOVA in this study disclosed that age was not a factor related with the score.

In a result of ANOVA analysis adjusting confounding factors indicated the significant relationship between WLB and the total score, it suggested that age and hospital did not relate to the score.

Moreover, due to have no connection between WLB and age significantly, for improvement the quality of nursing care, I concluded that important matter was to improve the balance between nursing work and her private life rather than to just add some years of experience.

As exposing a significant relationship between WLB satisfied by nurse and perceived high quality of nursing care, I believed that making WLB better could have a good influence on nursing.

CONCLUSION

Concerning nurses working at medical ward, it was found that there was a statistically significant relationship between approbatory perception of her nursing care and nurse's satisfaction on the WLB.

REFERENCES

[1] Kramer M, Hafner LP. Shared values. Impact on staff nurse job satisfaction and perceived productivity. Nurs Res. 1989; 38(3):172-177.

[2] Mueller, C. W. and McClosky, J. C. Nurses' job satisfaction: A proposed measure, Nursing Research. 1990; 39 (2):113-117.

[3] American Nurses Association. Nursing Care Report Card for Acute Care, Amer Nurses Assn.1995.

[4] Jeong SY, Higgins I, McMillan M. The essentials of Advance Care Planning for end-of-life care for older people.J Clin Nurs. 2010;19(3-4): 389-397.

[5] Lake ET, Friese CR. Variations in nursing practice environments: relation to staffing and hospital characteristics. Nurs Res. 2006; 55(1):1-9.

[6] Takada K, Kusakari J, Kawaguchi T. A Study of Job Satisfaction of Nurses in S University Hospital. Journal of Japanese Society of Nursing Research. 1995;18(1): 53-62.

[7] Makiko Muya, Kimiko Katsuyama,Kyoko Shida. The relations between job satisfaction, burnout, and self-esteem in nurses working in general hospitals. Japanese society for social medicine. 2015;32(2):143-150.

[8] Aiken LH, Patrician PA. Measuring organizational traits of hospitals: the Revised Nursing Work Index. Nurs Res. 2000;49(3):146-153.

[9] Kanai-Pak, Masako. A factor analysis of nursing work index-revised. The Japanese Journal of Nursing Research. 2007;40(7):23-33.

[10] Yasuko Ogata, Midori Nagano, Takashi Fukuda, et al. Job retention and nursing practice environment of hospital nurses in Japan Applying the Japanese version of the Practice Environment Scale of the Nursing Work Index (PES–NWI). Nihon Koshu Eisei Zasshi(JAPANESE JOURNAL OF PUBLIC HEALTH). 2011;58 (6): 409-419.