Remuneration Satisfaction to Improve Work Motivation of Nurses: A Cross-Sectional, Descriptive Analysis Study

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Abstract

Adequate remuneration is an effort to attain nurses' retention and enhance the work motivation, which, in turn, can exert a positive impact on the nurses' performance, enabling them to deliver quality services. This study aims to determine the correlation between the remuneration satisfaction and motivation of nurses in the hospital setting. We conducted a descriptive, quantitative study using the cross-sectional approach on 74 nurses, who were enrolled using the total sampling method, at one hospital in Depok (West Java, Indonesia). Although the remuneration satisfaction was measured using a questionnaire developed by us, the work motivation was measured using the Herzberg questionnaire. A significant correlation was observed between the remuneration satisfaction and work motivation (P=.019; α =0.05). Nurses satisfied with the remuneration had 3 times the chance of displaying high work motivation. This study recommends hospitals to apply the remuneration system based on the Minister of Health Decree Number 652 of 2010.

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Introduction

The remuneration system of healthcare workers positively affects their motivation for performance. In fact, the increased remuneration of healthcare personnel aims to attain the Universal Health Coverage as the strength of the healthcare system. Reportedly, adequate salary can enhance the quality of healthcare services. In addition, the excellent remuneration system for nurses exerts a positive impact on the nurses' retention and increases their satisfaction and motivation. 4,5

The inadequate remuneration system triggers nurses' movement to another hospital and, even, look for jobs overseas in the African and European countries. 6,7 In the United States, for example, low remuneration resulted in several nurses to leave their workplaces and, consequently, recruitment of the foreign nursing staff by the employers. 8 In addition, low

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Krisna Yetti Department of Basic Science & Fundamental of Nursing Faculty of Nursing, Universitas Indonesia Depok 16424, Indonesia E-mail:krisna@ui.ac.id remuneration in Romania resulted in a decline in the nurses' work motivation, eventually triggering them to quit the profession altogether. As the hospital organization is essential to implement the remuneration system, nurses are motivated to provide quality healthcare services to patients.

Previously, a preliminary study conducted in one hospital (bed occupancy rate, 64.86%; average length of stay, 4.38 days) in Depok in October to December 2016 obtained data from 94 nurses (78 government employees and 16 non-government employees); the assessment using questionnaires of 27 nurses at the time of residency revealed information related to remuneration of nurses. Overall, 27% of nurses in the inpatient, perinatology, and emergency rooms were not satisfied with the salary they received, whereas the results of interviews of 4 nurses revealed nurses were less satisfied with the amount of remuneration they received from the hospital.

In Indonesia, a correlation between the remuneration satisfaction and work motivation has rarely been conducted. The phenomenon and data obtained led researchers to validate, complement, and develop prior research. Hence, this study aims to determine the correlation between the remuneration

satisfaction and work motivation of nurses at Depok Hospital. In this study, we hypothesized the presence of a positive correlation between the remuneration satisfaction and work motivation of nurses.

Materials and methods

Study design and participants

This was a descriptive, quantitative study using the cross-sectional approach and descriptive-analytical method. We enrolled nurses from a hospital in Depok city (*N*=74) using the total sampling technique from 5 rooms (Emergency Room, Perinatology, Operating Room, Inpatient Room, and Policlinic) at the hospital.

This study protocol was approved after the ethical review by the Ethics Commission of FIK-UI. The ethical approval for this study was received from the Board of Ethics of the Universitas Indonesia (Depok; 118/UN2.F12.D/HKP.02.04/2017), confirming that the study was ethically acceptable and could be conducted. In addition, we obtained written permission to investigate by the Dean of Nursina Faculty, Universitas Indonesia. Furthermore, we obtained informed consent from all nurses who agreed to participate in this study. In this study, nurses were guaranteed anonymity and confidential processing of their responses by paper per individual. All nurses from the Depok hospital were informed about the research aim, ethics, and research requirements. After obtaining all details, they voluntarily decided whether or not to participate in the study and answered the questionnaire, before returning to the researcher.

Data collection

In this study, we collected data using the following 3 instruments: (a) instrument A constitutes respondent data comprising age, sex, education level, total remuneration/income, employment status, and working period and work unit; (b) instrument B, comprises questionnaire measuring the remuneration satisfaction; and (c) instrument C, comprises the evaluation questionnaire of work motivation. the remuneration satisfaction note. instrument was developed by researchers based on theories of the Equity Adam and Ministry of Health Decree Number 625 of 2010

and Ministry of Business Regulation Number 61 of 2007 on Remuneration System. 11-13

The remuneration satisfaction instrument comprised a 27-item Likert scale with option 1 implying strongly disagree to 4 implying strongly agree. On the basis of the scoring results, the remuneration satisfaction is categorized as satisfied (total score, >72) and dissatisfied (total score, ≤72). Notably, this questionnaire was validated (r=0.52-0.65) and reliable (Cronbach α . 0.65). In addition, work instruments motivation usina standard questionnaires were developed according to Herzberg's theory comprising a 41-item Likert scale, with the same answer option as the questionnaire.14 remuneration satisfaction Herein, the work motivation was categorized as high (total score, >119) and low (total score, ≤119). Furthermore, the questionnaire was validated (r=0.82–0.91) and reliable (Cronbach α , 0.91).

We categorized the respondent data into dichotomous data, except room [age 1, ≤40 years and 2 >40 years; sex, 2 males and 2 females; education level 1, diploma and 2, Nursing; income 1, <Rp 5 million and 2, ≥Rp 5 million; employment status 1, government employee and 2, non-government employee; working period 1, ≤5 years and 2, >5 years; work unit 1, regular room (inpatient and policlinic) and 2, special treatment rooms (Emergency Room, Perinatology, and Operating Room)], and then analyzed by logistic regression.

Statistical analysis

Before the logistic regression, we performed the chi-square test for the bivariate selection of all respondents' characteristic variables and remuneration satisfaction variable that qualified for the logistic regression test.

Results

In this study, we enrolled 74 nurses, mostly aged <40 years (91.9%), total remuneration >Rp 5 million (2.7%), females (92.8%), and work experience >5 years (85.1%). In addition, based on the highest level of education, most graduates had Diploma of Nursing (86.5%), with government employee status (83.8%) and worked in the regular room (48.6%).

Remuneration satisfaction and work motivation

We observed that the number of nurses satisfied and dissatisfied with the current remuneration did not exhibit statistical difference [i.e., 38 vs. 36 (51.35% vs. 48.65%)]. Meanwhile, nurses with low and high motivation exhibited a marginal difference [i.e., 40 vs. 34 (54.1% vs. 45.9%)].

Work motivation based on the characteristics and satisfaction of nurses' remuneration

The findings suggested that the nurses' characteristics correlated with remarkable work motivation, which was considered the work unit factor in this study. Table 1 outlines that nurses

working in special care (Emergency Room, Operating Room, and Perinatology) exhibited higher work motivation (79.2%) than those working in regular rooms (30%); in fact, the chi-square test revealed this difference to be statistically significant (P<0.001) and that nurses working in a special ward exhibited an 8.8 times higher chance of working motivation than those working in a regular room (OR, 8.867; 95% CI 2.79, 83.1).

Besides work units, the remuneration satisfaction also correlated with the work motivation. In addition, the data analysis revealed that high work motivation was more prevalent in satisfied nurses (60.5%) than dissatisfied nurses (30.6%) with the current remuneration.

	Work Motivation								
Variable	Low		Tinggi		Frequency		OR (95% CI)	χ^2	Р
	Ν	%	n	%	Ν	%	(93 /6 CI)		
Age									
≤40 years	33	55	27	45	60	100	1.222	0.114	0.96
>40 years	7	50	7	50	14	100	(0.38, 3.9)		
Sex									
Female	33	55.9	26	44.1	59	100	1.451	0.413	0.724
Male	7	46.7	8	53.3	15	100	(0.47, 4.5)		
Experience									
≤5 years	8	72.7	3	27.3	11	100	2.583	1.814	0.308
>5 years	32	50.8	31	49.2	63	100	(0.63, 10.6)		
Employment status									
Public servant	33	53.2	29	46.8	62	100	0.813	0.106	1.00
Contracting	7	58.3	5	41.7	12	100	(0.23, 2.84)		
Salary									
<rp 5="" million^<="" td=""><td>19</td><td>54.3</td><td>16</td><td>45.7</td><td>35</td><td>100</td><td>1.018</td><td>0.001</td><td>1.00</td></rp>	19	54.3	16	45.7	35	100	1.018	0.001	1.00
≥Rp 5 million	21	53.8	18	46.2	39	100	(0.41, 2.54)		
Room									
Regular room	35	70	15	30	50	100	8.867	15.78	<.001*
Special care room	5	20.8	19	79.2	24	100	(2.79, 28.1)		
Educational status									
Diploma	34	53.1	30	64	64	100	0.68	0.252	0.9
Bachelor	5	62.5	3	8	8	100	(0.15, 3.08)		
Salary									
satisfaction's	25	69.4	11	30.6	36	100	3.485	0.01	0.019*
Not satisfy	15	39.5	23	60.5	38	100	(1.3, 9.1)		
Satisfy									

Table 1. The distribution of the work motivation based on the characteristic and the nurses' remuneration satisfaction in hospital X, Depok (N=74). Figures in parentheses show average 2017 Indonesian Rupiah equivalent. This table has significant P<0.05 (χ^2). CI = confidence interval; OR = odds ratio.

In fact, the hypothesis test revealed this difference to be significant (P=0.019) and that nurses satisfied with remuneration exhibited 3.48 higher more job motivation than dissatisfied nurses (OR, 3.48; 95% CI 1.3, 9.1; Table 1).

The results of the bivariate selection on factors associated with work motivation revealed that the qualified variables for the logistic regression test (P<0.25) were income, working period, work unit, employment status, and remuneration satisfaction (Table 2). In addition, the logistic regression test revealed a significant interaction between the remuneration satisfaction with work unit (P=0.03) with no interaction between the remuneration satisfaction and income/remuneration (P=0.33). Furthermore, we observed an OR change of >10% when the unit variable (13.2%) and income (25%) were excluded, suggesting that both variables were confounding variables, accounting for their incorporation into the modeling.

Table 3 summarizes the final modeling results. The results of the final modeling of the logistic regression of factors associated with work motivation revealed that nurses satisfied with work motivation experienced remuneration satisfaction as an independent variable and work unit and income as confounding variables. Nurses satisfied with the remuneration were 3.4 times more likely to display high work motivation compared with nurses dissatisfied

with their remuneration after controlled by the room and income (P=0.035; OR, 3.43; 95% CI, 1.09, 10.81). In addition, nurses who worked in the special care room had 13.538 more job opportunities with high work motivation than nurses who worked in the regular room after controlled by the satisfaction of remuneration and income (P<0.001; OR, 13.53; 95% CI, 3.29, 55.58). Furthermore, nurses who had more than Rp 5 million salary were 4 times more likely to exhibit higher work motivation than those with less than Rp 5 million salary after controlled by remuneration and room satisfaction (P=0.043; OR, 3.95; 95% CI, 1.04, 14.98).

Variable	Р
Age	0.57
Sex	0.33
Educational status	0.68
Salary	0.09*
Experience	0.17*
Room	0.00*
Employment status	0.18*
Remuneration	0.06*
satisfaction	

Table 2. Results of the bivariate and logistic regression test through independent and confounding variable with the nurses work motivation in X hospital, Depok, in June 2017 (n=74). *Variable with α <0.25 (candidates were accompanied by multivariate analyses).

Variable	В	SE	Wald	Р	Exp (B)/OR	95% CI
Salary satisfaction						_
Not satisfied	-1.23	0.585	4.45	0.035	3.435	1.092, 10.809
Satisfied						
Room						
Regular room	2.605	0.721	13.07	0.00	13.538	3.297, 55.58
Special care room						
Salary						
< Rp 5 million^	1.373	0.68	4.076	0.043	3.95	1.041, 14.98
Pp 5 million						
Constant	-2.32	0.709	10.733	0.001	0.098	

Table 3. Results of the end model about priority and confounding variable with the nurses work motivation in X hospital, Depok, in June 2017 (n=74). Figures in parentheses show average 2017 Indonesian Rupiah equivalent. CI = confidence interval; OR = odds ratio.

Discussion

This study established a correlation between the remuneration satisfaction with nurse work motivation. The findings of this study are supported by a study conducted on nurses in Saudi Arabia, in which 52% were not motivated to work because of the dissatisfaction factor, with one of the factors being a below-average remuneration compared with other healthcare professionals in as many as 91% of respondents. Likewise, this study was also supported by the work motivation of nurses that was affected by the variable of remuneration, salary, and reward. 16

Remuneration is an external factor affecting the motivation of nurses in the workplace. In this study, nurses who had income/remuneration over Rp 5 million reported high work motivation. In addition, most nurses were government employees with work experience of >5 years; perhaps, it could be the reason for the nurse satisfaction because of the remuneration received. In addition, this study is supported by research that revealed that nurses perceive and believe factors that contribute to the survival in the nursing profession such as the adequate financial remuneration.⁴

In this study, participants aged 20-40 years, and most nurses were young and productive, indicating that the younger the nurses, the higher the number of nurses working in hospitals and spending hours working for direct patient care. In contrast, nurses aged >40 years and working in policlinics are waiting for retirement and not willing to continue their education; however, undeniably, nurses in this age group constitute the most skilled and productive workforce in the workplace. The nursing management has taken the right decision by placing older nurses in policlinics in accordance with the strategy to retain older nurses who work by adjusting the work environment to the needs of the old nurse.17

Our findings revealed that female nurses dominated the proportion of total workers (79.7%), reflecting the stereotype that nursing is a profession of women capable of caring more than men; this finding related to the nurse gender proportion corroborates a study reporting that 81% of the respondents were

female nurses.¹⁸ In addition, this study established a correlation between age and sex with the work motivation of nurses (P=0.96 and P=0.74), which is consistent with a study reporting that the intrinsic work motivation of nurses is not affected by age and gender.¹⁹

In this study, nurses with experience >5 years were 85.1% (Table 1), illustrating that most nurses who provided nursing care to patients were experienced; these findings are consistent with a study reporting that most nurses working in hospitals had >10 years of experience (65.96%).²⁰ In addition, the data analysis revealed that the working period correlated with the work motivation of nurses (P=0.308), which was consistent with a study that nurses' working was not associated with the nursina productivity in work (P>0.001).²¹

Regarding the level of education, the proportion of respondents revealed that most were diploma graduates (86.5%) and those with bachelors were only 10.8%; this condition is similar to a previous study reporting that most nursing resources in 6 hospitals of Namibia were only diploma graduates (71.4%).²² Hence, the findings established no correlation between the educational level and income with work motivation of nurses (P=0.9) and P=1.00). Likewise, a study reported no correlation between the monthly income and education status with the employee job satisfaction in a hospital (P=0.007 and P=0.341).²³ However, this finding is in contrast with another study revealing that statistically the average monthly income of nurses markedly affected the remuneration satisfaction.24

The proportion of respondents in this study based on the employment status indicates that most respondents enjoyed the government employee status (83.8%) and only some non-government emplovees were (16.2%); this difference could be attributed to the lower remuneration and private sector employees not receiving the monthly spouse, children, and rice allowance and only getting the disbursement of retirement, as they were contract employees who could leave anytime and find a better job. Hence, nurses preferred being government nurses with various benefits; this finding corroborates a prior study reporting that most nurse respondents were state government employees (69.67%) and some were contract employees (30.3%).²⁵

In this study, most nurses worked in the inpatient room (48.6%) and fewer in the OR (9.5%). Likewise, a study reported that most nurses worked in the inpatient room (66.4%) compared with those in the operating room (34.8%).²⁶ In addition, the characteristic depiction of nurses' income was almost comparable above Rp 5 million (52.7%) and below Rp 5 million (47.3%), demonstrating that the amount of remuneration received by nurses is almost comparable between the high (55.32%) and low (44.68%) income group.²⁰

In addition, the findings revealed that the low number of the nurses' working motivation (54.1%) was almost equal to the high work motivation (45.9%). Moreover, the hospital room allocation for nurses markedly correlated with the work motivation of nurses, indicating a remarkable correlation between working in a particular room with high work motivation. Furthermore, the results revealed that nurses working in a special room have 13.54 times more chances to be highly motivated, although working in a special room accounted for nurses' stress to increase physically, psychologically, and emotionally. Next, the nurses' motivation to work in the special room includes clear division of patient, that is, one nurse for one patient, sophisticated equipment, and the amount of remuneration provided which is different from the regular room and the role of manager that can motivate staff to work.27 This study indicated that the factor that prompted nurses to work the most is supervision, which is similar to a study reporting that supervision is the second factor affecting the working nurse (83.5%).²²

Another finding of the study revealed that leadership (leading by example, communication, thinking skills, knowing the staff, and support in times of crisis) is necessary for the intensive care room, as it is positively related to the increased recruitment and retention of specialized nurses. ²⁸ In this study, the intensive care unit nurses described that the leadership style affected their confidence in work. Reportedly, nurses exhibited the positive effect of work motivation and head nurse leadership in intensive care, ²⁹ which could be attributed to the conducive environment created by head nurses for all nurses. In addition, head nurses

realized that nurses work with varying healthcare professions in the special room. This finding is similar to this study, which revealed that head nurses in the operating room form part of the quality of healthcare services.30 Moreover, improving conditions and concerns is necessary for head nurses with the leadership training and role clarity; the impact of this increment resulted in excellent work performance, work relationships, and staff motivation, as well as positive organizational outcomes.

Finally, this study aimed to assess the nurses' satisfaction, revealing an increment in the patient outcome. Of note, managers have the opportunity to motivate their nursing staff and can create an environment that optimizes motivation. In addition, managers should be able to understand that the nurses' motivation in working might vary. The work motivation can derived from the high amount of remuneration, recognition, appreciation, and additional holiday. Thus, managers should use the techniques, skills, and knowledge of motivational theory to motivate nurses.31 In addition, the data analysis revealed that nurses who had more than Rp 5 million in income were 4 times more likely to exhibit high work motivation. This finding corroborates the results of this study, which reveals that the higher the nurses' income in healthcare centers in India, the higher the impact on the nurses' motivation to work in rural areas (61%), indicating the higher acceptance of nurses to be placed in remote areas. One strategy to motivate nurses to work is to provide high income.³² Another study revealed that good income is related to the positive work motivation (P=0.00).33 Meanwhile. nursing managers must maintain nursing resources as a valuable asset in organization because, based on the results of a survey in a special ward, the cost of replacing the resigned nurses' position is equal or double the salary spent for nurses in a month.34

This study revealed that nurses satisfied with the remuneration had 3.4 times high motivation in working; the findings are supported by a study reporting that remuneration is considered as a factor associated with nurses' motivation.³⁵ In addition, the findings are consistent with a study reporting that the

reward satisfaction obtained by nurses associated with optimism, hope, confidence, and stay at work.³⁶ Furthermore, it is similar to research that rewards relate positively to the dedication of female nurses in work and closeness to the work itself and that rewards can increase work commitment.³⁷

Conclusions

This study recommends hospitals to arrange the nursing remuneration system based on the Minister of Health Decree Number 625 of 2010 concerning Guideline of Remuneration System of General Hospital Service and Minister of Internal Affairs Decree Number 61 of 2007 about Technical Guidance of Financial Management Regional Public Service Agency to enhance the work motivation and nurses' performance. Furthermore, an effort to implement fair and appropriate remuneration warrants further quidance.

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Declaration of Interest

The authors report no conflict of interest.

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