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## Model of Implementing Patient Safety Based on Strengthening Motivation and Work Satisfaction of Nurses in Sembiring General Hospital in Deli Serdang District

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### Abstract

*Patient safety is the foundation of good healthcare, and patient satisfaction is influenced by the nurse's attitude and care. In this situation, the nurse's activity is one of the six patient safety standards. This study created a paradigm to increase patient safety at Sembiring General Hospital in Deli Serdang Regency by motivating and gratifying nurses. Explanatory quantitative research was conducted with the aid of questionnaires. This study recruited 175 participants based on inclusion and exclusion criteria. Questionnaires are used. SEM-PLS was used to examine the study data. According to the findings, motivation has a favourable and significant impact on job satisfaction and patient safety. The indirect effect of motivation on patient safety via satisfaction is neither beneficial nor significant. This study discovered an essential relationship between motivation, nurse job satisfaction, and patient safety implementation. Motivation does not influence patient safety indirectly through satisfaction. Suggestions for health workers, particularly nurses, to increase their sense of responsibility and knowledge about implementing patient safety goals on an ongoing basis by attending series of trainings, seminars, or workshops so that patient safety can be applied more optimally and services that are safe and meet patient safety target standards are created.*

**Keywords:** *Motivation, nurse job satisfaction, patient safety implementation model*

### Introduction

Patient safety is one of the many universal challenges in health care today. According to the World Health Organization (WHO) (WHO, 2016), there are millions of people worldwide who are in danger of being hurt or even dying as a result of medical errors. In hospitals, patient safety is comprised of several complex systems and aspects that interact with one another to achieve goals. Medical errors or neglect in hospital services can tarnish the hospital's image and reputation, cause friction between hospital staff and patients, spark medical disputes, and even lead to lawsuits. By providing safe and high-quality services, we can avoid all difficulties at the hospital (Departemen Kesehatan Republik Indonesia, 2015). Nurses make up the majority of healthcare workers and are in frequent contact with patients; therefore, their service quality must be increased to prevent the occurrence of adverse events.

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According to Tarigan et al. (2019), motivation has a very strong tie in boosting the performance of nurses at a hospital. A nurse's high motivation will improve the quality of her work in carrying out and preserving patient safety at her facility. According to a study conducted by Honestly (Morika et al., 2018), there is a link between nurses' motivation and their performance in practicing patient safety at Dr.Rasidin Hospital, Padang's Inpatient Unit. One of the issues with hospital nursing services is motivation, which is closely tied to nurse performance (Fitria, 2023).

Nurse work satisfaction is a condition that can impact an organization's effectiveness in meeting its objectives (Rosnah et al., 2023). The benefits of job satisfaction as a result of performance appraisals will have a positive impact on the nurse's service output. This is because; nurses will feel satisfied if their service is appreciated, and they will be motivated to render quality healthcare for progress and development.

The preliminary survey conducted on motivation at Sembiring General Hospital revealed that the motivation of nurses to work was low by 57.5 percent, with the main reasons being achievement and salary factors. In addition, the preliminary survey conducted on the application of patient safety for nurses at Sembiring Hospital revealed that the motivation of nurses was still low at 63.5 percent, with the main reasons being psychological factors specifically, the motivation of nurses. This demonstrates that the nurses continue to provide low-quality service; therefore, one of the measures to enhance the quality of service by nurses is to apply patient safety behaviour in the Sembiring General Hospital nursing unit as an effort to minimize adverse events and improve the quality of health services provided by the nurses.

Based on the foreground, the researcher wishes to conduct research on the Patient Safety Implementation Model based on Strengthening Nurse Motivation and Job Satisfaction at Sembiring General Hospital, Deli Serdang Regency.

### **AHRQ-based patient safety application**

According to the Agency for Healthcare Research and Quality (AHRG), there are 12 components to implementing patient safety, which are as follows: (a) Open Communication. There should be forms of freedom for nurses to speak up when they witness something that has a detrimental influence on patients, and nurses should feel free and not be scared to request decisions or actions from their superiors. Furthermore, there should be communication and feedback against errors, notice should be given to nurses regarding their violations of patient safety standards, and discussions should be conducted to determine how to prevent these errors in the future. (b) Report frequency.

The number of incidents reported by nurses, including both errors that did not affect or injure the patient. (c) Transfer and handoff of patients. The practice of transferring vital patient information between nurses during shift changes. (d) Support from management for patient safety. A management strategy that prioritises patient safety always cultivates a patient safety

culture and does not act only when patient safety cases or errors occur. (e) The response to errors is not recrimination. Nurses believe that the medical errors they make and the reports they provide are not used to hold them accountable in their respective work divisions, and there is no fear associated with reporting errors. (f) Continuous education for businesses. According to the nurses, there is a learning process in which errors result in positive changes and are utilised as evaluation and learning materials for continuous improvement. (g) Perception of patient safety . Nurses believe that there are effective procedures and systems for averting errors and reducing challenges related to patient safety, and that patient safety is never compromised in the course of rendering a service. (h) Patient safety expectations and actions of managers. When nurses perform their duties in accordance with patient safety standards, their managers or superiors are pleased, and they always consider nurses' suggestions for enhancing patient safety and do not disregard patient safety issues. (i) Cooperation between all divisions. All hospital units collaborate and coordinate with one another to provide the highest quality patient care. (j) Collaboration amongst components. Nurses support and respect one another and collaborate as a team. When there is urgent work to be completed, the nurses collaborate to complete it. (k) Staff. The number of registered nurses is sufficient and in accordance with industry standards to manage existing workloads and adhere to legal work hours.

## METHODS

This is quantitative research employing the explanatory research technique, which is conducted to explain the position of the studied variables and the influence of one variable on another. This study seeks to determine the effect of the independent variables on the dependent variable, the strength of the influence between these variables, the relationship between variables such as the application of patient safety, the effect of motivation on job satisfaction, the effect of nurse motivation on implementing patient safety, and the effect of nurse work satisfaction on the application of patient safety.

The research was conducted at the Sembiring Deli Tua General Hospital in the Deli Serdang District of the province of North Sumatra. In this survey, the population consisted of all 237 nurses from all inpatient units at Sembiring Deli Tua Hospital in Deli Serdang Regency, North Sumatra Province.

The sampling technique utilised the total sampling technique with the Slovin formula and an  $e$  value of 0.05, and 175 respondents were sampled. The research concept framework above is derived from Herzberg's motivation theory and Maslow's theory of motivation. Exogenous latent variables ( $X$ ) in the patient safety implementation model for nurses consist of Motivation ( $X_1$ ) and Satisfaction ( $X_2$ ).

The endogenous latent variable ( $Y_1$ ) in this model of implementing nurse patient safety consists of implementing nurse patient safety. Table 1 presents the variables and subvariables/indicators for each variable in greater detail.

**Table 1. List of Variables and Indicators of Research Variables**

Variables			
<b>(X1)</b>	Motivation	X1.1	Responsible
		X1.2	Achievement
		X1.3	Performance
		X1.4	Development Possibility
		X1.5	Self-actualization
		X1.6	Wages
		X1.7	Working Conditions
		X1.8	Working Relationship
		X1.9	Working Procedures
		X1.10	Supervision
		X1.11	Social Security
<b>(X2)</b>	Satisfaction	X2.1	Salary Satisfaction
		X2.2	Satisfaction with Promotions
		X2.3	Satisfaction with Co-workers
		X2.4	Satisfaction with Supervisors
		X2.5	Satisfaction with the Work itself
<b>(Y1)</b>	<i>Patient safety implementation</i>	Y1.1	Open Communication
		Y1.2	Feedback and Communication against Errors
		Y1.3	Report Frequency
		Y1.4	Handover and Transfer of Patients
		Y1.5	Management Support for Patient Safety
		Y1.6	Non-blaming Response to Mistakes
		Y1.7	Continuous Learning for Organizations
		Y1.8	Overall Perception of Patient Safety
		Y1.9	Staff
		Y1.10	Managers' Expectations and Actions for Patient Safety
		Y1.11	Collaboration of All Units
		Y1.12	Collaboration within units
		Y1.13	Correct Patient Identification
		Y1.14	Effective Communication
		Y1.15	Vigilance for Drugs High Alert
		Y1.16	Accuracy of Operational/Invasive Procedures and Measures
		Y1.17	Reduction of Cross Infection Risk
		Y1.18	Reducing the Risk of Patient Falls

This study's data collection instruments for each variable consisted of questionnaires and assessment sheets: Nurse-patient safety implementation questionnaire based on the Agency for Healthcare Research and Quality (AHRQ) and International Patient Safety Goals (IPSG) to examine conditions containing one hundred and eight (108) item statements and a nurse job satisfaction questionnaire based on Robbins' theory containing forty-four (44) statement items

using a Likert scale. This research procedure includes sequentially collecting data on nurse motivation, data on the application of nurse-patient safety, processing and analysing research data, discussing models for implementing nurse-patient safety by raising strategic issues derived from the results of data analysis, and preparing models for implementing nurse-patient safety to reduce adverse events.

This descriptive analysis was conducted to gain a general understanding of motivation, patient safety implementation, and job satisfaction. The purpose of descriptive analysis is also to describe respondents' perceptions of the indicators of each research variable.

The research data were analysed using the *Partial Least Squares (PLS)* method, which is an analysis of variance-based structural equations. This method can assess both the measurement model and the structural model simultaneously.

Measurement models are used to test validity and reliability, whereas structural models are used to test causality (using predictive models to test hypotheses). This analysis seeks to comprehend the relationship between intrinsic motivation (X1), extrinsic motivation (X2), job satisfaction (Y1), and nurses' performance in implementing patient safety (Y2). Using Smart PLS version 3.0 software, the processing and analysis of data were performed.

Considering the fact that research conducting in nursing involves direct contact with humans; the ethical aspects of research must be taken into account. In the form of a written consent form for research participation, all research subjects were requested to give their permission to be included in research activities. Prior to granting assent, prospective research participants were informed of the objectives, benefits, and procedures of the study. In this instance, the identity of the research subject will be kept confidential and will not be disclosed without the subject's permission.

This research follows other research ethical principles: (a) *Informed Consent*. Researchers provide consent forms for informed consent. Respondents signed consent forms to give informed consent before the research. Informed consent helps subjects comprehend research goals and effects. If the respondent refuses, the researcher must respect patient rights. (b) *Anonymity*. The nursing ethics dilemma guarantees the use of research subjects by not including the respondent's name on the measuring instrument sheet and just writing the code or initials on the data collection sheet or research results to be displayed. (c) *Confidentiality*. Providing confidentiality of research results, information, and other issues is an ethical issue. The researchers will only report on particular data groupings, but all acquired data is secret.

## RESULTS

On the advice of the primary data collected from a sample of nurses at Sembiring Deli Tua Public Hospital, the distribution of the respondents' characteristics, including their gender, age, level of education, length of service, and marital status, as summarized in Table 2, was determined.

**Table 2. Distribution of Respondent Characteristics**

No	Characteristics	N	Percentage (%)
<b>1.</b>	<b>Gender</b>		
	Male	77	44,0
	Female	99	66,0
	Total	175	100,0
<b>2.</b>	<b>Age</b>		
	22-26 years old	66	37,7
	27-31 years old	30	17,1
	32-37 years old	79	45,2
	Total	175	100,0
<b>3.</b>	<b>Education</b>		
	D-III Nursery	10	5,7
	S-1 Nursery	46	26,3
	Nurse Profession	119	68,0
	Total	175	100,0
<b>4.</b>	<b>Years of Service (years)</b>		
	2-3	59	33,7
	4-5	65	37,2
	6-7	51	29,1
	Total	175	100,0
<b>5.</b>	<b>Marital Status</b>		
	Single	54	30,9
	Married	121	69,1
	Total	175	100,0
<b>6</b>	<b>Respondence</b>		
	Head of Room	15	8,5
	Executive Nurse	160	91,5
	Total	175	100,0

The result showed that the motivation variable on the highest responsibility indicator was 93 respondents, or nurses (53.1%), who said they were very motivated, while those who stated they were motivated were 82 respondents (46.9%). For the highest achievement, 95 respondents (54.3%) stated that they were highly motivated, and 80 respondents (45.7%) stated that they were motivated. For the highest work results, 100 respondents (57.1%) stated that they were highly motivated and 75 respondents (42.9%) stated that they were motivated. For the highest self-development, 143 respondents (81.7%) said they were motivated, and 32 respondents (18.3%) said they were highly motivated. For the highest level of self-actualization, 143 respondents (81.7%) said they were motivated, 29 respondents said they were very motivated (16.6%), and 3 respondents (1.7%) said they were not motivated.

On the highest salary indicator, 125 respondents (71.4%) said they were motivated, 40 respondents (22.9%) said they were very motivated, and 10 respondents (5.7%) said they were not motivated. For the highest working conditions, 115 respondents (65.7%) said they were motivated, and 60 respondents (34.3%) said they were highly motivated. For the highest employment relationship, 133 respondents (76.0%) stated that they agreed, and 42 respondents (24.0%) stated that they strongly agreed. For the highest work procedures, 122 respondents (69.7%) agreed, and 53 respondents (30.3%) stated strongly agreed. For the highest supervision, 115 respondents (65.7%) stated that they agreed, and 60 respondents (34.3%) stated that they strongly agreed. For the highest social security, 114 respondents (65.1%) stated that they agreed, and 61 respondents (34.9%) stated that they strongly agreed.

The results of the nurse satisfaction variable for satisfaction with the highest salary were 135 respondents (77.1%) who stated they were satisfied, and 40 respondents (22.9%) expressed very high satisfaction. For satisfaction with the highest promotion as many as 119 respondents (68.0%) said they were satisfied, and 56 respondents (32.0%) said, they were very satisfied. For the highest satisfaction with co-workers, 103 respondents (58.9%) said they were satisfied, and 72 respondents (41.1%) said they were very satisfied. For satisfaction with the highest supervisor, 115 respondents (65.7%) said they were satisfied, and 60 respondents (34.3%) said they were very satisfied. As for satisfaction with the work itself, 128 respondents (73.1%) said they were satisfied, and 47 respondents (26.9%) said they were very satisfied.

## DISCUSSION

The statistical p-value for Smart-PLS analysis of the effect of motivation on nurse job satisfaction at Sembiring General Hospital was 0.045, and the statistical t-value was 1.727. Because the p-value is less than 0.05 or the t-statistic is greater than 1.96, it can be concluded that there is a significant motivational effect on nurses' job satisfaction at Sembiring General Hospital. Aji. A. Purnomo's research demonstrates that motivation has a positive and statistically significant effect on the job satisfaction of nurses at the Perawang Type-D Hospital.

The influence of motivation on the implementation of patient safety at Sembiring General Hospital determined that motivation has a significant impact on the implementation of patient safety at Sembiring Public Hospital. Permana (2017) found that responsibility improves patient safety at RSUD 45 Kuningan. Another study (Sari, 2018) found an effect of responsibility on nurses' patient safety performance at the Faisal Islamic Hospital in Makassar. This study found that nurses are in charge of their actions, tasks, and job descriptions to improve patient safety.

Analysis of job satisfaction and patient safety at Sembiring General Hospital indicates that satisfaction affects patient safety. Ariani (2009) used inferential analysis to test the empirical model and hypotheses. She found that job satisfaction positively affects nurses' work outcomes in patient safety, and that a compensation system, a good career, a conducive work environment,

and good relationships with colleagues and superiors will trigger nurse job satisfaction. Technical and social skills improve. Work production increased.

Motivation does not affect patient safety through satisfaction at Sembiring General Hospital. According to the indirect impact hypothesis test, job satisfaction does not affect nurses' patient safety motivation. This study developed a patient safety implementation paradigm that improves patient safety and health services by motivating and satisfying nurses. Based on the factor measurement model that influences patient safety implementation by Delima et al. (2020) and the patient safety implementation model to increase family independence in caring for the elderly by Januarti (2018), the researchers developed a model framework for patient safety implementation. In this study, there are indicators in the motivational variable that do not directly affect patient safety, so future research using nurses as respondents and indicators in the motivational variable needs to go deeper.

## CONCLUSION

There is a significant relationship between motivation and job satisfaction among nurses. There is a significant correlation between motivation and patient safety implementation. Job satisfaction has a significant impact on the implementation of patient safety. Satisfaction has no indirect effect on the implementation of patient safety motivation.

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