

Original Research

## Analysis of the Role of Socialization, Experience and Perception of Nurses on the Application of Occupational Safety and Health



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Article Info	Abstract
Article history: Received: 9 March 2023 Accepted: 29 April 2023	<p><b>Introduction:</b> Occupational Health and Safety (OHS) is an effort to ensure the integrity and perfection of physical and spiritual labor, their work, and culture towards a prosperous society. OHS concerns obtaining a high degree of health status, in terms of physical, mental, and social, through myriad efforts for the workforce. This study aimed to investigate the influence of the socialization activity exposure, experience, and perception on the OHS practice in Taman Husada Bontang Hospital.</p> <p><b>Methods:</b> This study employed a quantitative design with an observational analytic method and a cross-sectional approach. All nurses in Taman Husada Bontang Hospital were considered as the study population, with a total of 252 nurses. Using the proportional random sampling technique, 155 eligible nurses were eventually recruited as study participants.</p> <p><b>Results:</b> The linear regression analysis (R Square = 0.058) showed that the socialization activity exposure variable delivered a significant influence on the OHS practice (p= 0.029). However, no statistically significant influence of nursing experience (p = 0.339) and perception (p=0.172) on OHS practice was discovered. Subsequently, the multivariate analysis demonstrated that the socialization activity exposure delivered the most significant influence on OHS practice (p=0.029 and B= 0.240).</p> <p><b>Conclusion:</b> These findings signified that nurses should sustainably update their knowledge and skills in the field of nursing management, especially related to OHS practice. Consistent and timely OHS practices would deliver a higher quality of health care service and protect nurses from occupational hazards.</p>
Keywords: socialization, experience, perception, occupational health and safety, nurse	

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## INTRODUCTION

The quality of health service provision on the other hand, has placed healthcare professionals with various potential hazards in hospitals. These hazards can be originated from myriad factors, namely physical, chemical, biological, ergonomic, psychosocial, mechanical, electrical, and also waste [1]. To manage and control the hazards, the establishment of a healthy, conducive, comfortable, and safe working environment for the human resources, patients, patient companions, and visitors, is undoubtedly essential for healthcare providers. Thus, the enforcement of a Hospital Occupational Health and Safety Management System has been broadly mandated to protect professional caregivers and their clients during healthcare delivery process [2].

Occupational Health and Safety (OHS) is an effort targeting the workforce population, ensuring their integrity and complete embodiment of physical and spiritual elements, work, and culture towards a prosperous society [3]. OHS strives to assist workers in obtaining a higher degree of health status comprehensively, enclosing the physical, mental, and social health through various actions. These efforts incorporate preventive and curative measures against work-related diseases and health issues, also the typical everyday diseases. OHS adoption is one of the service standards that must be considered and integrated into all elements in a hospital management [4].

OHS is a vital issue in various business communities today. Data from the International Labour Organization (ILO)

established that an average of 6,000 individuals/day, or equivalent to 2.2 million individuals/year, had passed away due to work-related accidents and illnesses. One typical issue encountered in the hospital environment is nosocomial infection [5]. Nosocomial infection is a frequent infection that appears among patients who receive care during hospitalization in health facilities and is not present during admission. These infections can occur during the process of acquiring health care delivery or even after discharge. These infections comprise central line infections, urinary tract infections, pneumonia, and infections in the operating area. Nurses as health workers, are vulnerable to nosocomial infections due to exposure to high-risk areas and patients during the nursing care delivery [6].

OHS practices are indeed very crucial to be well executed by hospital workers, including nurses. A study discovered that OHS practices were undoubtedly vital and has been designated as top criteria for Hospital accreditation assessments [7]. The International Labour Organization (ILO) report estimated that approximately 337 million workplace accidents occurred in 2019. Additionally, the 2020 reports regarding OHS practices in all provinces in Indonesia uncovered 428,844 cases of work-related diseases in 2019 [8].

Roughly 234,270 cases of work-related accidents in Indonesian hospitals were reported in 2021. These cases increased by 5.65% from the total case in the previous year of 221,740. Across the country, approximately nine percent of work-related accidents occurred in public places such as hospitals.

Particularly, 8.3% and 5% of work-related accidents happened in East Kalimantan and Bontang City, respectively.

Taman Husada Bontang Hospital is a fully accredited type B health facility situated in Bontang City. During the pandemic, Taman Husada Bontang Hospital was transformed into a Covid-19 Referral Hospital that had been exposed their workers to extremely high-risk environments and patients. Hospitals are mandated to provide healthcare services by following well-established measures. The highest number of healthcare workers in Taman Husada Bontang Hospital were nurses, with a total of 252. The unprecedented number of Covid-19 cases in Taman Husada Bontang Hospital demanded higher and more intensive care from health professionals, especially nurses. This situation should have been accompanied by adequate OHS practices.

Socialization activities related to OHS practices targeting the nurse population may affect nurse behaviors, in terms of internal factors [10]. Another factor is the availability of supporting facilities following predetermined standards (Notoatmodjo, 2014). An adequate level of understanding will lead to a good perception of OHS practices, which eventually improves the behavior [11]. OHS is a factor that indirectly relates to patient outcomes and also offers an essential role in hospital service quality [12]. The OHS Committee is accountable for the supervision, evaluation, and observation activities of the ongoing OHS programs [13].

Departing from the significance of OHS practices in hospitals, this paper ought to investigate the influence of socialization

activities, experience, and perception on the OHS practices in Taman Husada Bontang Hospital.

## **METHODS**

This study employed a quantitative design with an analytical observational method and a cross-sectional approach. All nurses in Taman Husada Bontang Hospital, with a total of 252, were considered as the study population. A simple random sampling technique was applied to recruit 155 nurses who met the inclusion and exclusion criteria as study participants. These eligible participants were then randomly selected using a lottery method. The inclusion criteria included: 1) active and relatively amicable and were not on their day-offs, 2) working in inpatient units, and 3) working in the morning shift. Busy participants who were not willing to partake were excluded from the study.

The independent variables were the socialization activity, experience, and perception. The OHS practice was studied as the dependent variable. Four questionnaires: socialization activity, experience, perception, and OHS practice organized specifically as the study instruments. Its validity and reliability had been statistically analyzed and confirmed. Study was conducted from September 8th to November 30th, 2022, at Taman Husada Bontang Hospital. A univariate and multivariate analysis using multiple linear regression was subsequently applied to analyze the collected data. Ethical principles of anonymity and confidentiality were strictly followed during the study. All participants had been asked to read and sign the consent

form carefully. The study's ethical approval has been granted by the issuance of a letter Number 3379/KEPK/VIII/2022.

## RESULTS

Taman Husada Bontang Hospital was inaugurated on November 12<sup>th</sup>, 2002, as a health facility situated in Bontang City. This hospital commenced with a status change from the Bontang Baru Inpatient Health Center to a Type C General Hospital, based on the Decree of the Mayor of Bontang Number 519 of 2002. Taman Husada Hospital Bontang City is primarily concentrated on the outpatient and emergency care.

The health services provided through the outpatient, emergency, and inpatient unit from 2018 to 2021 is revealed in Table 1. Table 2 clarifies the service efficiency and hospital management quality from 2016 to 2018 in Taman Husada Hospital. This study enrolled 155 nurses in Taman Husada Bontang Hospital. The distribution of the participants according to their demographic characteristics is described in Table 3. Table 3 shows the participant's characteristics based on their age, gender, and last educational background. Findings discovered that most participants were aged between 31-40 years (64; 41.3%), female (125; 80.6%), and had

associate degrees in nursing (105; 67.7%). Table 4 explains the study variables: socialization activities, experience, perception, and OHS practices. Table 4 reveals that almost half of the respondents were slightly exposed socialization activities/poor (57; 37.8%). In the nursing experience variable, most participants were placed in the moderate category, namely 102 participants (65.8%). Additionally, most participants were identified in the moderate category of perception (100; 64.5%). In the dependent variable of OHS, most participants demonstrated moderate OHS practices (97; 62.6%).

The results of linear regression analysis showed an Adjusted R Square number of 0.058, which indicated that this study explained 5.8% of the influence of study variables (socialization activity exposure, experience, and perception) on OHS practices. The results of the p-value demonstrated the effect of socialization activity exposure on OHS practices ( $p = 0.029$ ). However, there was no influence between nursing experience ( $p = 0.339$ ) and perception ( $p = 0.172$ ) on the OHS practices. The multivariate analysis then indicated that the socialization activity exposure delivered the most significant influence on OHS practices, with a significance level of  $p = 0.029$  and  $B=0.240$ .

**Table 1**

Number of Patient Visits in Taman Husada Hospital from 2018 to 2021

Unit	2018	2019	2020	2021 (January-August)	Average Trend Before the Covid-19 Pandemic
Outpatient	65,641	68,390	64,782	26,911	4%
Emergency	16,568	20,736	11,002	6,383	25%
Inpatient	7,227	9,026	6,302	3,600	25%

**Table 2**

Data on Health Service Efficiency and Management Quality in Taman Husada Hospital from 2016 to August 2018

No	KPI	2016	2017	2018
1	BOR	57	50	48
2	BTO	53	49	48
3	TOI	3	4	4
4	ALOS	4	4	4
5	GDR	32	29	29
6	NDR	19	17	16

**Table 3**

Participant's Demography Characteristics based on the Age, Gender and Educational Background

Characteristic	n	%
<b>Age (Years)</b>		
20-30	30	19.4
31-40	64	41.3
41-50	60	38.7
51-60	1	0.6
<b>Gender</b>		
Male	30	19.4
Female	125	80.6
<b>Educational Background (Academic Degree)</b>		
Associate	105	67.7
Applied Bachelor	1	0.6
Bachelor	48	31.0
Master	1	0.6

**Table 4**

The Variable of Socialization Activities, Experience, Perception, and OHS Practice among the Participants

Variable	n	%
<b>Socialization Activity Exposure</b>		
Poor (<56%)	57	37.8
Moderate (56-75%)	43	27.7
Good (76-100%)	55	35.5
<b>Experience</b>		
Poor (<56%)	35	22.6
Moderate (56-75%)	102	65.8
Good (76-100%)	18	11.6
<b>Perception</b>		
Poor (<56%)	0	0
Moderate (56-75%)	100	64.5
Good (76-100%)	55	35.5
<b>OHS Practice</b>		
Poor (<56%)	6	3.9
Moderate (56-75%)	97	62.6
Good (76-100%)	52	33.5

**Table 5**

Statistical Analysis of the Effect of the Socialization Activity Exposure, Experience, and Perception on OHS Practice at Taman Husada Bontang Hospital

Variable	Unstandardized Coefficient		Standardized Coefficient	Sig.
	B	Std.Error	Beta	
Socialization Activity	0.240	0.109	0.188	0.029
Experience	0.603	0.629	0.076	0.339
Nurse perception	0.205	0.149	0.115	0.172
Adjusted R Square = 0.058				
R Square = 0.076				

## DISCUSSION

### *The Effect of Socialization Activity Exposure on OHS Practices*

Safety has become a global issue, unexceptionally for health-related works [14]. Patient Safety Goal is a primary standard

indicator designated for Hospital Accreditation assessments. Further, patient safety is also a substantial part of nursing care practice because it measures and evaluates the quality of nursing care, which contribute a major portion in the quality of overall health service [15].

The OHS management system in hospitals should be established as an integral part of the comprehensive hospital service management system to construct risk control efforts in creating a safe, comfortable, and productive workplace. Hospital OHS is systematically organized from the planning, organizing, implementing, and controlling stages aiming to incorporate the OHS practices as a working culture in the hospitals, not just merely hospital programs [16][17]. Four major elements of the OHS practices are required to be considered to foster a safe and healthy occupational environment development efforts: commitment and policy, planning, and organizing [18]. In line with [19], poor OHS practices may originate from the lack of its integration as a culture in the workplace. OHS practices need to be well established in day-to-day works, not simply a pointless verbal commitment, thus could constantly improve the OHS practices, from poor practices to good or even outstanding ones.

Poor OHS practices in the hospital could be enhanced by reinforcing the managerial commitments and policies, modifying planning, assessing the organization, evaluating implementation, and revising policies [11]. These occupational safety and health socialization activities are delivered as a means to minimize work-related work accidents (Susanto et al., 2020). Researchers assume that adequate OHS socialization activity exposure among the nurses could improve their compliance with standard operational procedures of healthcare service.

### ***The Effect of Nursing Experience on OHS Practices***

A younger person is perceived as an individual with radical thoughts, while an older one may have more sensible beliefs. Thus, an older individual is commonly considered to have a more mature thinking process [20]. According to Suhenda (2018), the age of nurses was closely related to their performance in delivering nursing care that complied with the OHS system. This situation may happen because the older nurse had more experience than the younger one. Contrary to this finding, Rinawati et al. (2016) found that experience for accident awareness would increase according to age, working duration in a company, and working duration in the concerned workplace.

These current findings were similar to a study by Lucky Afri Senjani et al. (2021) that found no significant correlation between OHS practices and educational background. In addition, Rosmawar et al. (2022) also found that the level of education did not affect OHS practices. According to Calundu (2018), work proficiency depended on the level of education, knowledge, and experience. Most nurses in this study graduated with associate degrees in nursing. According to this educational background, all nurses were qualified health professionals. However, the educational background did not correlate with the nursing professionalism.

Researchers assume that nursing experience in OHS practices can be seen from myriad aspects, especially age, gender, and educational background. The greater experience gained from socialization or

training activities related to OHS in the hospital will affect the hospital service quality, with the indicators of decreasing the number of unwanted events. However, the OHS practices cannot simply be linked only to the nursing experience. A deeper scientific investigation is required to explore several factors that may influence OHS practices among nurses.

### ***The Influence of Nursing Perception on OHS Practices***

Labor protection covers a fairly broad aspect, comprising the protection of safety, health, maintenance of work morals, and treatment in accordance with human dignity and religious norms [25]. OHS practices in hospitals are undoubtedly necessary and are considered as the primary criteria in Hospital Accreditation's assessments [8][26]. This understanding will lead to a proper OHS perception among the nurses to improve their behavior in protecting themselves and their patients [27][28].

This finding was in line with a study by Halawa et al. (2021), which discovered a significant correlation between the nursing perception of their role and the OHS management system. A similar study by Laranova et al. (2018) conducted among the nurse subjects, stated that perception factors affected compliance with OHS SOPs. Nurses with adequate perception are more likely to perform adequate behavior that aligned with SOPs, compared to nurses with poor perception. This finding was also supported by Rosmawar et al. (2022), that mentioned OHS practices among nurses were dominated

by perception factors. Reymond & Pangihutan (2019) stated that an individual's perception was strongly influenced by their level of knowledge. The findings of this study were also in line with a study conducted by Muin and Alkam (2020) that discovered a fairly strong correlation between the level of knowledge of the workforce and their perception about OHS programs.

Notoatmodjo (2015) added that various methods can be delivered to improve the perceptions, knowledge, and attitudes of nurses in performing adequate care to protect their health and safety, particularly by providing health promotion and training sessions about OHS. In accordance with a theory from Wirawan in Hasibuan et al. (2020), an individual perception does not arise out of thin air. Perception can be used to perceive or judge an object. Individual perception of an object will be influenced by how far they gain understanding about that object.

Researchers assume that the importance of using personal protective equipment as one of the OHS practices was related to the perception of health workers that has an impact on the occurrence of a work-related safety mistake that causes occupational accidents and infectious disease transmission.

### **LIMITATION**

The study instruments used, in fact, have proposed a significant hindrance in conducting the study. We used four questionnaires that may overburden the participants. Most of the time, participants seemed bored in answering the questions.

Further, nurses tend to be very busy on each shift. Due to the disproportionate number of question items, they had to dedicate a certain amount of time to answering the questionnaires.

## CONCLUSION

Several factors delivered a vital role on OHS practice. OHS practice aims to protect nurses and their patients during the health service delivery process. Thus, findings suggested integrating OHS practice as a work culture among the nurses as an element of professional caregivers in the hospital.

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## CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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