

Nurses' Work Safety Culture and Nursing Risk Management During the Covid 19 Pandemic In An Effort To Improve Patient Safety (Qualitative Study at Hospital X South Jakarta)

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ABSTRACT

Since the government established the Covid 19 Pandemic in April 2020, all health services are required to be able to provide services to Covid 19 patients. Nurses are at the forefront of dealing with Covid 19 patients. During the pandemic, Hospital X has a nursing risk management mitigation strategy to prevent risks. that can occur in the work safety of nurses. However, until the end of 2021 there was an increase in the incidence of nurses exposed to Covid 19 by 8% - 14%. Hospital X must continue to provide quality health services and focus on patient safety during the pandemic. This study aims to explore the pattern of the relationship between nurse work safety and nursing risk management with patient safety in the nursing analysis unit at Hospital X during the Covid-19 pandemic. Descriptive phenomenology qualitative research design. The number of participants involved in in-depth interviews was 17 nurses in the Covid 19 and non-Covid 19 zones. Data analysis used qualitative content analysis techniques with NVivo 12 plus software. The results of the study obtained that the actualization of the work safety culture of nurses during the covid 19 pandemic was running with the support of the leadership, hospital support, compliance with work safety culture, and understanding of nurses. The implementation of nursing risk management also goes with the compliance in work, the involvement of nurses and the prevention of the risk of health problems. The relationship pattern of nurse safety culture has a mutually influencing relationship with nursing risk management and directly affects patient safety. Thus, the hospital management and nursing leadership can continue to provide support that has an impact on the safety of nurses. IPCN and implementing nurses can maintain their role in increasing the knowledge and work compliance of nurses in patient safety efforts.



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1. Introduction

Patient safety is a basic principle in health services, where safety is a right that every patient has as a recipient in health services. (Ministry of Health RI, 2011) According to WHO (2017) in the United States and in the UK, the average incidence of harm is reported every 35 seconds. In general, it is reported that about 1 in 10 patients hospitalized is in danger, of which 50% of these incidents can be prevented. Specifically during the Covid 19 pandemic, safety reports by category showed 22.6% related to the potential for exposure to employees or patients who were positive for Covid 19, 22.3% related to personal protective equipment (PPE) and 20.0% related to screening procedures [2].

In an effort to ensure that all hospitals in Indonesia are able to provide quality health services during the COVID-19 pandemic and focus on patient safety, standardization of the quality of hospital services is required. Hospitals that have been assessed for quality through the accreditation process are expected to have a maturity of safety culture in their organization. Safety culture is talking about what and how the organization focuses on safety [3]. The outcome of a Maturity of Safety Culture in an organization is Quality, Patient Safety and Worker Health Safety [4].

The implementation of a hospital service quality standard has proven to be able to improve the work safety culture of nurses in hospitals. The results of the study prove that the safety culture of clinical staff at hospitals accredited by the Hospital Accreditation Commission (KARS) which is the reference for Covid-19 is in the good category. Where safety culture is influenced by safety climate, situational and behavioral variables. However, of the three variables, situational variables consisting of indicators of risk management, regulation and leadership have the greatest influence on safety culture. Meanwhile, risk management indicators have a greater effect on patient safety and worker health safety [5]. Risk management is a proactive and continuous process. The process of risk management includes identifying, analyzing, evaluating, implementing controls, communicating information, monitoring, and reporting risks, including various strategies that are carried out in managing risk and the potential for failure of a risk [6].

Nurses are one of the largest health workers and the frontline in treating Covid-19 patients who have a very high risk of work accidents. A research result states that the factors that influence nurses' work accidents include attitudes, training and promotions. Therefore, an effort is needed to prevent the risk of work accidents through the work safety of nurses during the Covid 19 pandemic through a nursing risk management strategy [7]. Implementation of clinical risk management plays an important role in supporting hospitals in improving patient safety [8].

Hospital X as one of the referral hospitals for Covid 19 patients, has carried out a nursing risk management process starting from identification to risk evaluation in nursing services. However, the problem is that the incidence of nurses exposed to Covid 19 from 2020 to the end of 2021 is 8% - 14% and the highest patient safety incident until the end of 2020 is KNC 32.3% while serving Covid 19 patients. The application of risk management is expected to not happen to nurses. Where a previous study said that risk management indicators have a greater effect on patient safety, worker safety and health than regulatory and leadership indicators [9].

Therefore, it is necessary to conduct a study to explore the pattern of the relationship between nurse work safety and nursing risk management with patient safety in the nursing analysis unit at Hospital X during the Covid-19 pandemic.

2. Method

The method used is a qualitative research with a descriptive phenomenological design. Qualitative research is used to explore the perceptions of nurses based on their experiences to explore the pattern of the relationship between nurse work safety and nursing risk management and patient safety during the Covid 19 pandemic.

The research was conducted after obtaining Ethical Clearance from the Research and Development Ethics Committee of the Sint Carolus School of Health, Jakarta No. 052/KEPPKSTIKSC/III/2022 on March 29, 2022 and a permit to conduct research from the Director of the Hospital where the research is located.

This research took place from April 06 to June 05, 2022, at RS X South Jakarta which is one of the referral hospitals for Covid 19 cases with 17 participants from the Covid 19 and no Covid 19 zones. The selection of participants used inclusion and exclusion criteria. The inclusion criteria were nurses with permanent employee status in Hospital X and experienced the implementation of nursing risk management program policies; Education level D3 Nursing or S1 Nurse with different roles as head of room, implementer and infection control; variations in the level of analysis units, namely inpatient, outpatient, and special units. The exclusion criteria in this study were: being on leave, being treated for illness, giving birth and not being willing to be an informant when the research took place.

Data collection is carried out by observing and implementing health protocols. The number of participants corresponds to the level of data saturation obtained through in-depth interviews with each participant. Researchers conducted in-depth interviews using an in-depth interview question guide, through zooming one by one and recording through an audio tape recorder.

The results of in-depth interviews were then compiled in the form of transcripts and further data analysis was carried out using qualitative content analysis techniques with NVivo 12 plus software. Next, the researcher interprets and draws conclusions.

3. Research Results

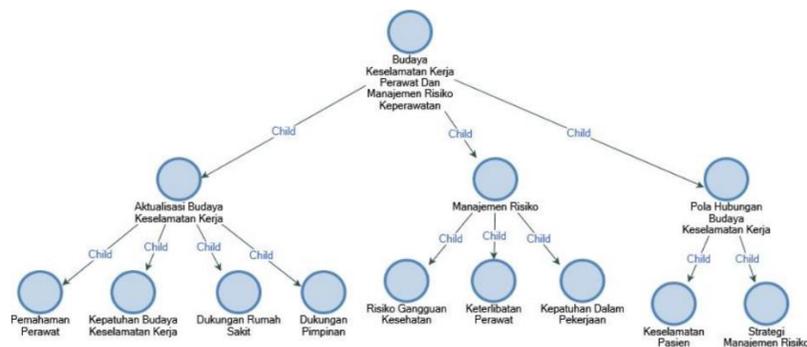
Table 1 describes 17 participants by gender, age, education and years of service. The most gender is female, the most age is 36 years, the most education is S1 Nurse, and the most working period is 21-25 years.

Table 1. Distribution of Participants by Gender, Age and Years of Work (n = 17)

Participant Characteristics	Frequency (f)	Percent (%)
Gender		
Male	5	29,41
Female	12	70,59
Age		
22 - 25	1	5,88
26 - 35	6	35,30
36 - 45	10	58,82
Education		
Diploma Nursing	8	47,06
Graduate Ners	9	52,94
Years of service		
< 6	1	5,88
6 - 10	6	35,30

11 - 15	5	29,41
16 – 20	5	29,41
Total	17	100

The results of the interviews were made verbatim and then entered into NVivo 12 plus to analyze the main research themes. Then the sub-themes in Scheme 1 are obtained below:

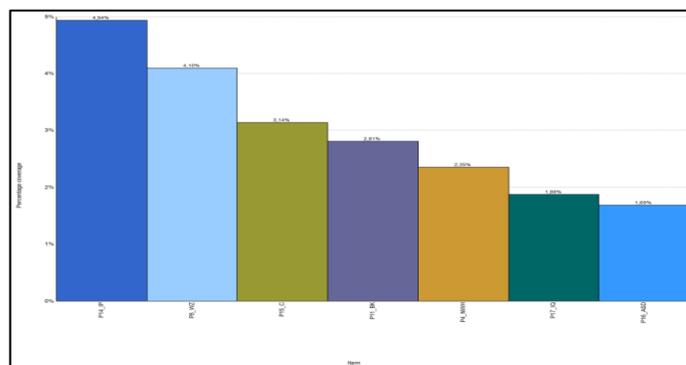


Schematic 1. Analysis of Main Research Themes

The results of the study for the theme of the actualization of nurse safety culture have several sub-theme categories, namely leadership support, hospital support, nurses' understanding, and occupational safety culture compliance. Below are the results of research from each of these sub-themes:

The statement of participant 14 (P14) shows the highest percentage of expressions in stating the existence of leadership support of 4.94%, this is also reinforced by the following participant's opinion and can be seen in graph 1 below:

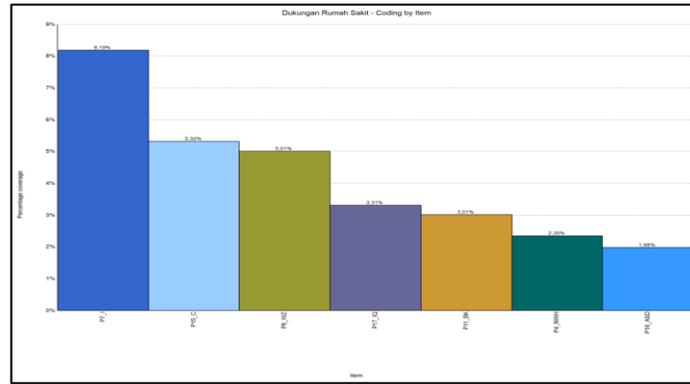
“.....So far there have been many things that support.... especially from leaders like us being included in seminars on the correct use of PPE...”(P14).



Graph 1. Percentage of Participant Expressions regarding the Actualization of Nurse Work Safety Culture (Leadership Support)

The statement of participant 7 (P7) shows the highest percentage of expressions in stating the existence of support from the hospital at 8.19%, this is also reinforced by the opinions of several participants and can be seen in graph 2 below:

".....Working in a special room such as the Covid IGD or the Covid concurrent room, we have been facilitated by using and given complete PPE starting from hasmat or it's a dress or a mask then gloves..... basically from the end our feet to the ends of our hair is enough....”(P7).

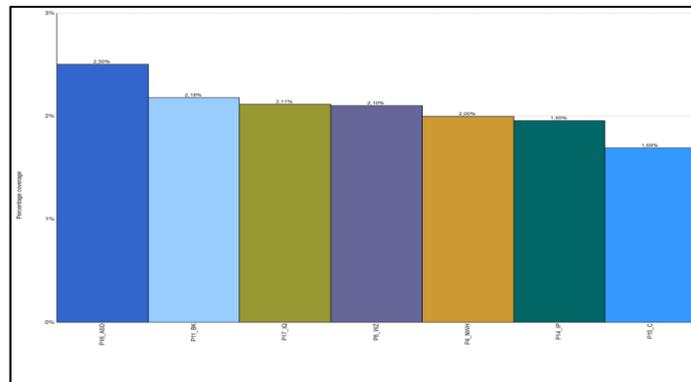


Graph 2. Percentage of Participants' Expressions regarding the Actualization of Nurse Work Safety Culture (Hospital Support)

The statement of participant 16 (P16) shows the highest percentage of expressions in stating the existence of a work safety culture compliance of 2.50%, this is also reinforced by the opinions of several participants and can be seen in graph 3 below:

“We have all complied with wearing masks and washing hands...but the problem is that patients don't even use masks when they are being treated...” (P16).

“.....Compliance with the use of PPE.... Such as masks, nurse cups, hazmats, especially those in tower 2 who handle covid patients...” (P11).

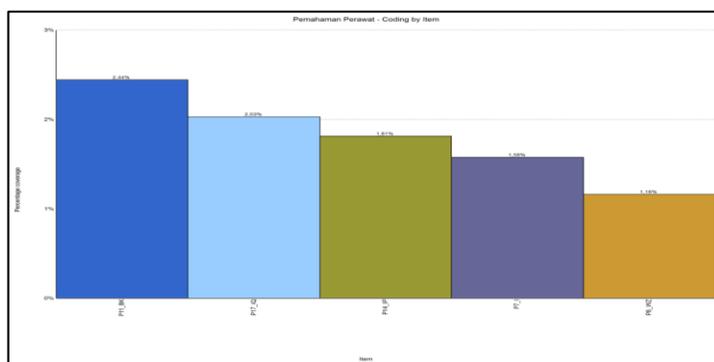


Graph 3. Percentage of Participant Expressions regarding Actualization Nurse Work Safety Culture (Occupational Safety Culture Compliance)

The statement of participant 11 (P11) shows the highest percentage of expressions in stating the nurse's understanding of 2.44%, this is reinforced by the opinions of several participants and can be seen in graph 4 below:

"The work safety culture of nurses during the COVID-19 pandemic has gone quite well....The nurses here, I can see, have begun to understand the importance of work safety...." (P11).

"Currently, my fellow nurses have much more knowledge of how to work for their own safety, starting from the correct use of PPE while providing care, and so on..." (P17).



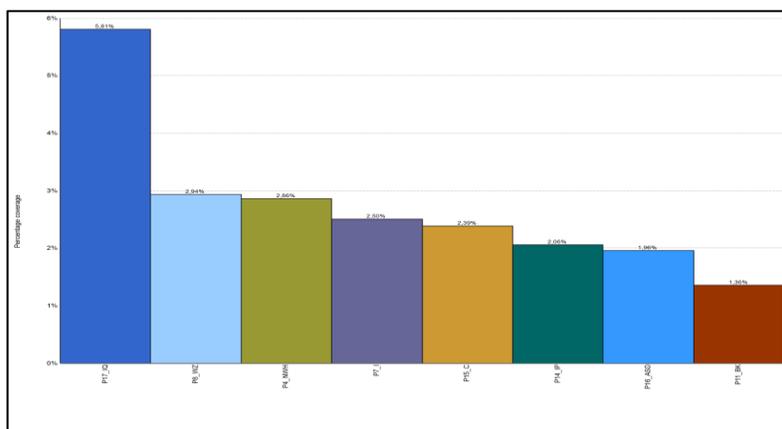
Graph 4. Percentage of Participant Expressions regarding the Actualization of Nurse Work Safety Culture (Nurse Understanding)

The results of the research on the theme of nursing risk management have several sub-theme categories, namely compliance at work, risk of health problems and nurse involvement. Below are the results of research from each of these sub-themes:

Participant 17's statement (P17) shows the highest percentage of expressions in stating the existence of compliance at work of 5.81%, this is also reinforced by the opinion of participants and can be seen in graph 5 below:

"Besides I have to comply with policies during the covid pandemic.... I also have to be able to remind each other if someone is negligent in providing care to patients who are not in accordance with infection control prevention during this covid pandemic, ma'am..... ."(P17).

".....Comply with the policy provisions regarding the use of PPE while providing care at the hospital, continue to wash hands properly... and maintain a distance between officers or not crowd..." (P16).

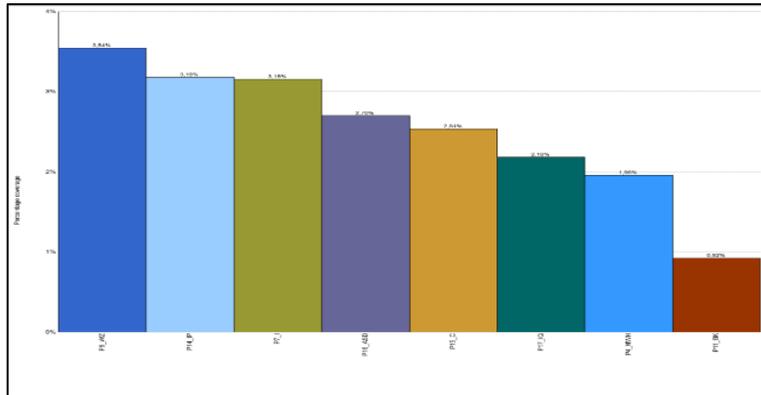


Graph 5. Percentage of Participant Expressions regarding Nursing Risk Management (Compliance at Work)

The statement of participant 8 (P8) shows the highest percentage of expressions in stating the risk of health problems with a percentage of 3.54%, this is also reinforced by the opinion of participants and can be seen in graph 6 below:

"Such conditions will definitely cause work pressure stress where we have to try to treat patients with infectious diseases and we try so that patients don't complain with us trying to make the service satisfactory...". (P8).

“.....In doing the inhalation action, they should use N95 masks but there are still nurse friends who only use surgical masks... so there is a high risk that nurses who work in non-covid zones can be exposed to covid..... (P14).



Graph 6. Percentage of Participant Expressions regarding Nursing Risk Management (Risk of Health Problems)

The statement of participant 7 (P7) shows the highest percentage of expressions in stating the involvement of nurses with a percentage of 3.98%, this is also reinforced by the opinions of several participants and can be seen in graph 7 below:

“I was also one of those who were exposed to Covid in the early days of the pandemic....2020. At that time, the PPE facilities were not maximized where we still only used masks.... not complete PPE. It was enough that I felt that maybe my work safety culture as a nurse was still wrong.... after dinespun don't take a shower first.... even when I get home, sometimes I take a shower and sometimes I don't.... While in the hospital, sometimes there is a way I work in providing care to patients who are still lacking...” (P7).

".....The point is, it can serve as a role model for other nurses to comply with hospital procedures...". (P14).

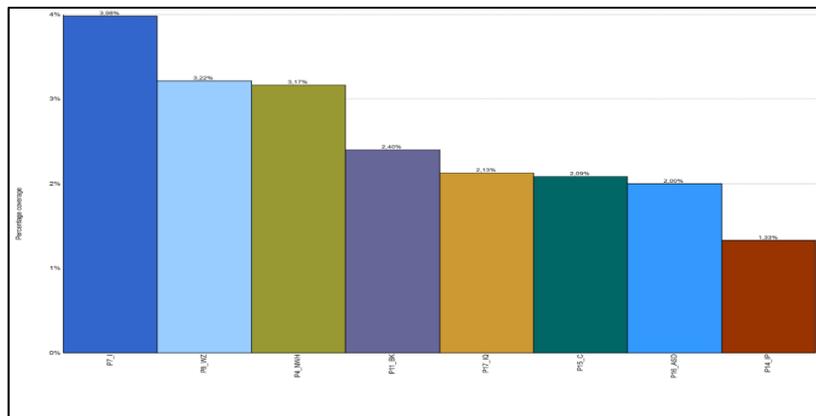


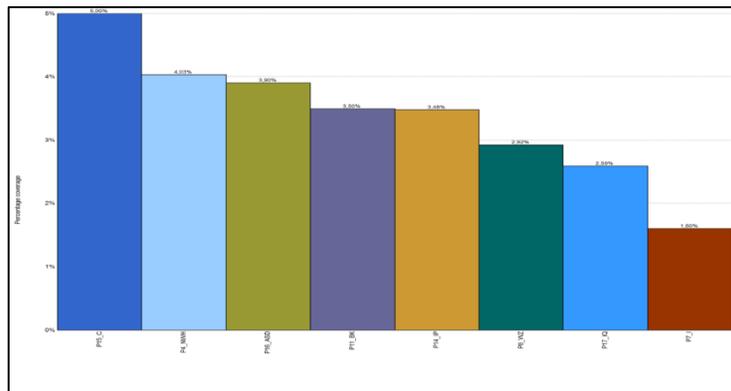
Figure 7. Percentage of Participant Expressions regarding Nursing Risk Management (Nurse Engagement)

For the results of the research, the theme of the relationship pattern of nurses' work safety culture has sub-themes namely patient safety and risk management strategies. Below are the results of research from each of these sub-themes:

The statement of participant 15 (P15) shows the highest percentage of expressions in stating the relationship between nurse work safety and patient safety by 5.00%, this is also reinforced by the opinion of participants

and can be seen in graph 8 below::

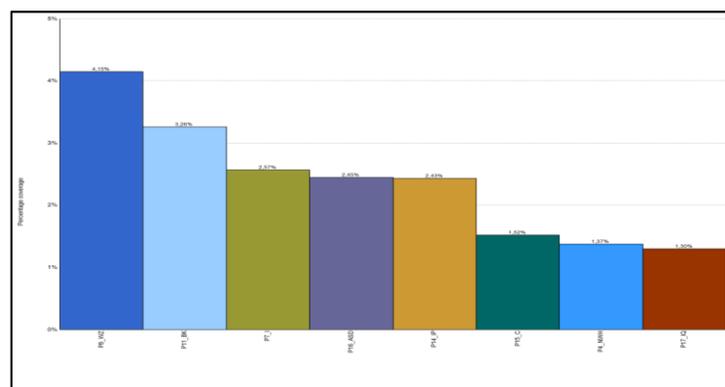
“There is a direct connection.... because we in caring for providing care to patients must still have a good work safety culture.... so that in the end our patients must also be safe..... If nurses do not use the right PPE in their work, there is a risk of getting covid.... .If the nurse falls ill, then the patient is at risk of contracting it from the nurse....So in my opinion, what is more related is the nurse's work safety culture with patient safety....”(P15).



Graph 8. Percentage of Nurses' Work Safety Culture Relationship Pattern Against Patient Safety

Participant 8's statement (P8) shows the highest percentage of expressions in stating the existence of a nurse's work safety relationship with a nursing risk management strategy of 4.15%, this is reinforced by the opinion of participants and can be seen in the following graph 9::

“.....The close relationship ma'am....with a nursing risk management strategy such as providing PPE, hand washing facilities, teaching how to put on and take off PPE, etc....then the nursing strategy for us becomes a reference or ways to prevent risks faced by all nurses during this pandemic. So in my opinion, what has a more mutually influencing relationship between nurses' work safety culture is the implementation of nursing risk management strategies....”(P8)



Graph 9. Percentage of the Pattern of Relationship between Nurses' Occupational Safety Culture and Nursing Risk Management Strategy

4. Discussion

The actualization of work safety culture at X Hospital takes place with the support of the leadership, hospital support, compliance with work safety culture and understanding of nurses. This has similarities with the theory which states that there are 7 critical success factors of work safety culture, including

management commitment, rules and procedures, communication, worker involvement, social environment, work safety behavior and leadership [10]. A study states that situational variables have the greatest influence on safety culture compared to other variables, where leadership is one of the situational variables [11]. Forms of support it can be interpreted that there is a commitment from the highest management as leaders and hospitals to support nursing staff as the front line in dealing with covid 19 patients. One form of support is the provision of complete PPE and in accordance with the recommendations for health workers [12]. Leadership commitment and dedication in implementing a safety culture will inspire workers [13]. Nursing leadership support is given to nurses in the form of providing education, training related to PPE during the covid 19 pandemic. This is supported by research results which state that staff who do not use personal protective equipment (PPE) correctly or incorrectly, it will significantly increase the chance of transmission, resulting in a reduction in the number of health workers and the possibility of an increase in staff mortality [14]. In addition, other studies also state that there is a significant positive relationship reported between leadership factors, practice culture and nurse compliance with standard precautions [15]. Thus, increasing nurses' knowledge of the use of PPE, it is hoped that nurses can use PPE appropriately and prevent the risk of transmission that occurs. A research result also strengthens this matter which states that there is a relationship or influence of the supervisory function carried out by the supervisor or head of the room on nurse compliance in the use / use of PPE [16], [17]. Thus the nurse's understanding will not occur if there is no support from the nursing leadership and support from the hospital, where hospital support can instill a safety culture for nurses so that nurses have a work safety culture compliance. In addition to the use of PPE, hand washing is also important for nurses. In order to help increase nurses' understanding of the increased need for hand hygiene when carrying out nursing care during the COVID-19 pandemic, supervision support is needed apart from the relevant leadership, which can also involve PPI nurses. This is supported by a study which states that there is an influence from the implementation of supervision or supervision carried out by PPI nurses on increasing the need for hand hygiene of nurses when carrying out nursing care [18]. Indicators of safety culture were also found in the statements by the participants of this study, namely indicators of policy, risk management, communication, training, recording and reporting, work environment, organizational learning and leadership, compliance, participation and teamwork. (Ministry of Health, RI., 2016). One of the most important things during the COVID-19 pandemic is the implementation of nursing risk management.

The implementation of nursing risk management during the COVID-19 pandemic, the results of research at Hospital X were running due to compliance in work, nurse involvement and prevention of the risk of health problems for nurses. Thus, nursing services as an integral part in hospitals with the most nursing human resources as the front line during the COVID-19 pandemic, it is necessary to place nursing risk management as a priority by making policies that support its implementation. the assessment of the risk of transmission at work considers, among other things, the possibility of contracting an infectious disease, namely the characteristics of an infectious disease and the possibility that the worker may encounter an infectious person or may be exposed to a contaminated environment or material in carrying out his duties; and the severity of the resulting health outcomes taking into account the influence of individual factors (including age, underlying disease and health conditions), as well as available measures to control the effects of infection [20]. This is consistent with the results of the study which stated that the worst risks related to the exposure of health workers to COVID-19 underscore the need for strong policies, risk assessments, and occupational health safety practices in health care institutions. Health care institutions really must immediately identify the dangers of covid 19 and gaps in current occupational health safety practices, evaluate risks, and take appropriate prevention and control measures. Where reports of exposure due to PPE are 22.3% and screening procedures are related to skinning procedures [21], [22]. Mitigation of nursing risk management in Hospital X has been planned and implemented, such as applying the standard level of PPE

used to conducting education to improve nurses' understanding. A good understanding of nurses in using PPE is expected to provide safety for nurses. A study stated that the risk management assessment of nurses as the front line during the COVID-19 period obtained a risk of exposure to 8.8% due to failure to remove and replace PPE, 6.3% did not perform hand hygiene, 5% did not follow the guidelines [23]. However, other studies say that the main source of risk of exposure to SARS Cov-2 for workers is that workers also travel to work using public transportation which is also a source of risk, besides the extreme fatigue experienced by health workers during the pandemic can make them more vulnerable. against viruses [24], [25]. Thus, the factors that influence nurses' work accidents are attitudes, training and promotions [26].

Nurse safety culture has a pattern of relationship between nursing risk management and patient safety. Safety culture is risk and safety management, where safety culture is talking about what and how the organization focuses on safety [27], [28]. A study states that safety culture is influenced by safety climate, situational and behavioral variables. However, of the three variables, situational variables consisting of indicators of risk management, regulation and leadership have the greatest influence on safety culture. Meanwhile, risk management indicators have a greater effect on patient safety and worker health safety. Staff safety compliance has a 3.4 times chance to improve patient safety and risk management has a 5.6 times chance to improve the safety and health of staff or workers [29]. From the results of research at X Hospital, it has shown the results of conformity that the work safety culture of nurses has a direct relationship with patient safety and has a reciprocal relationship with the nurse's work safety culture with the implementation of nursing risk management strategies. America recommends that hospitals need to implement equipment and procedures to create a prevention-based safety culture [30].

5. Conclusion

The actualization of the work safety culture of nurses during the COVID-19 pandemic can take place with the understanding of nurses, work safety compliance, leadership support and hospital support. Where the implementation of nursing risk management can support a nurse's work safety culture with the presence of compliance in the work, nurse involvement and prevention of the risk of health problems. Meanwhile, the pattern of the relationship between nurses' safety culture is a mutually influencing relationship with nursing risk management. Nurse safety culture and nursing risk management have a direct relationship to affect patient safety. Thus, it can be suggested to the hospital management and nursing leaders to continue to provide support that has an impact on the safety of nurses' work. PPI nurses and implementing nurses can maintain their role in increasing the knowledge and work compliance of nurses in patient safety efforts.

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