

Reflective Practice of Occupational Health Nursing During Covid-19 Pandemic: A Document Review

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Abstract

The Delta variant of Covid-19 is not yet completely extinct, the world is again shocked by of the new variant of Omicron, which have impact on the Occupational Health Nursing (OHN) practice. This study aims to analyze the reflection on the practice of OHN during the Covid-19 period and provide solution on the problems. This study used the document review method and PRISMA Analysis, supported by a quantitative descriptive design. The research was conducted through document search, keyword identification and article review from the Google Search Engine (n=169), Google Scholar (n=136), Research Gate (n=5), PubMed (n=10), Semantic Scholar (n= 80) and others (n=23), a total of 423 records. The three key words are reflective practice, occupational health nursing, and Covid-19. The supporting theory is Reflective Practice. The results of this study produced 8 documents that were worthy of review and 100% fulfilled the 6 key elements of OHN reflective practice, namely reflection, clinical situation or experience, promoting factors, hindering factors, and outcomes). This study recommended the need for a review of standard operating procedures of OHN related to continuing education, vaccines, safety, clinical aspects and the threat of shortage of OHNs in the midst of a pandemic.

Keywords— *Reflective Practice, OHN, Covid-19, PRISM Analysis.*

INTRODUCTION

The impact of the Covid-19 pandemic on the practice of Occupational Health Nurses (OHN) is enormous globally [1]. Direct and indirect impacts occur on performance, recruitment system, number of human resources, policy procedures, facilities and infrastructure for practice in the workplace, number of patients, and quality of service [2]. The influences occur because of global appeals, government laws and regulations to workplace policies [3]. Those major changes result in workload, stress, decreased work quality, and even fatal infections among nurses [4]. The series of nursing problems during the pandemic also resulted in a shortage of nurses which reached 20% worldwide [5]. In terms of OHN practice, various global, regional, national and local problems that exist in the field of OHN practice in the future will pose risks if run continuously, and in the long term [6]. Research findings related the pandemic have discussed the impact on the industrial world where work productivity and the quantity and quality of production are shaky [7]–[9]. Other research in nursing analyzes that the spread of the Corona-19 virus that is not controlled properly in the industry can have a negative impact on the economy in particular and welfare, including for nurses [10]. Industrial nurses cannot be

separated from the risk of exposure that results in death [11]. The graph of the number of deaths among nurses due to Covid-19 is increasing as cases worldwide increase [12].

The various problems above need to be handled effectively and efficiently from the point of view of OHNs. Industrial nurses have a very important role as an integral part of professional healthcare in the industry [13]. The World Health Organization (WHO) stated that there are 6 roles for OHNs in the industry, including as clinician, advisor, manager, educator, organizer, researcher, and consultant. Each role has duties and responsibilities in the continuity of health services in the industry [14]. As part of the health team in the industry, the phenomena encountered during the provision of health services for the Covid-19 pandemic in the last two years need review and evaluation [11]. From the side of the nursing profession this term is called reflection [15]. Reflection practice has proven very useful for improving the performance of the nursing profession [16]. The aim is to identify weaknesses, challenges and factors that support services that have been carried out during the pandemic [17]. In addition, as part of research, practical reflection is a lesson in improving nursing services in the future, especially facing the threat of the second wave of pandemics, namely the new variant of Omicron [18]. This study used the Document review method with PRISMA Analysis which is supported by Reflective Practice theory. The approach was taken due to the limitations of time, energy and funds in direct research during the pandemic, for instance in Indonesia which has the fourth largest population in the world, 17,000 islands in 34 provinces, more than 20 million various sizes of industry across the country [19]. The purpose of this research is to analyze the changes in the 5 components of the theory of reflective practice, namely reflection, clinical situation or experience, promoting factors, hindering factors, and outcomes, which affect OHNs' performance during Covid-19 pandemic. The implications of the research is it can be used as reference in the review of OHN policies and procedures during a pandemic, both at the workplace, for the profession, learning theory and as national input for the occupational health nursing practice.

METHODS

This study used the document review method, with the PRISMA Analyss design, and supported by practice reflection theory. The four stages of PRISMA analysis consist of the identification, screening and included stages. Many nursing research used similar methods [20]–[22]. At the initial stage, the search for documents was adjusted to the title, namely Reflective Practice of Occupational Health Nursing During the Covid-19 Pandemic. The identification step began by searching for documents according to keywords in the title of reflective practice, occupational health nursing, and Covid-19 from Google engine, Google Scholar, Research Gate, PubMed, Semantic Scholar and other sources, such as from WHO, Ministry of Health, ILO and Occupational Safety and Health Administration (OSHA). Inappropriate, irrelevant or duplicate documents if found, were discarded. The second stage was a screening in which more narrow restrictions were made according to the recommendations of the reflective practice theory with the keywords of reflection, clinical situation or experience, promoting factors, hindering factors, and outcomes. The results of screening were entered into the sought for retrieval stage. All documents that did not meet the retrieval criteria were categorized as records not retrieved. The third stage was eligibility where the keywords in the title were combined with the theory of reflection practice. The measuring instrument used at this stage was the PICOT selection, namely population (occupational health nurses), intervention (reflection, clinical situation, experience, hindering factors, and research methods), comparison (OHN nurses before Covid-19 era), outcomes (research results and quality of OH nursing services) and time (during Covid-19 pandemic, 2020-2021). The final stage was the selected documents eligible for review for the study. The results were used to describe an objective empirical state of phenomena or problems in OHN practice during the pandemic.

RESULTS AND DISCUSSION

Results

1. PRISMA Analysis

The results of the research conducted through document search obtained 423 documents identified from the Google search engine (n=169), Google Scholar (n=136), Research Gate (n=5), PubMed (n=10), Semantic Scholar (n=80) and others (n=23), a total of 423 records. Documents that were discarded because they were irrelevant, duplicated or for other reasons were 169. Documents included in the record screened category were 136. Records sought for retrieval were obtained 73 documents and 63 documents were not taken. Documents that are eligible for review n = 10 and which are not eligible 52 documents.

More details are in the following diagram:

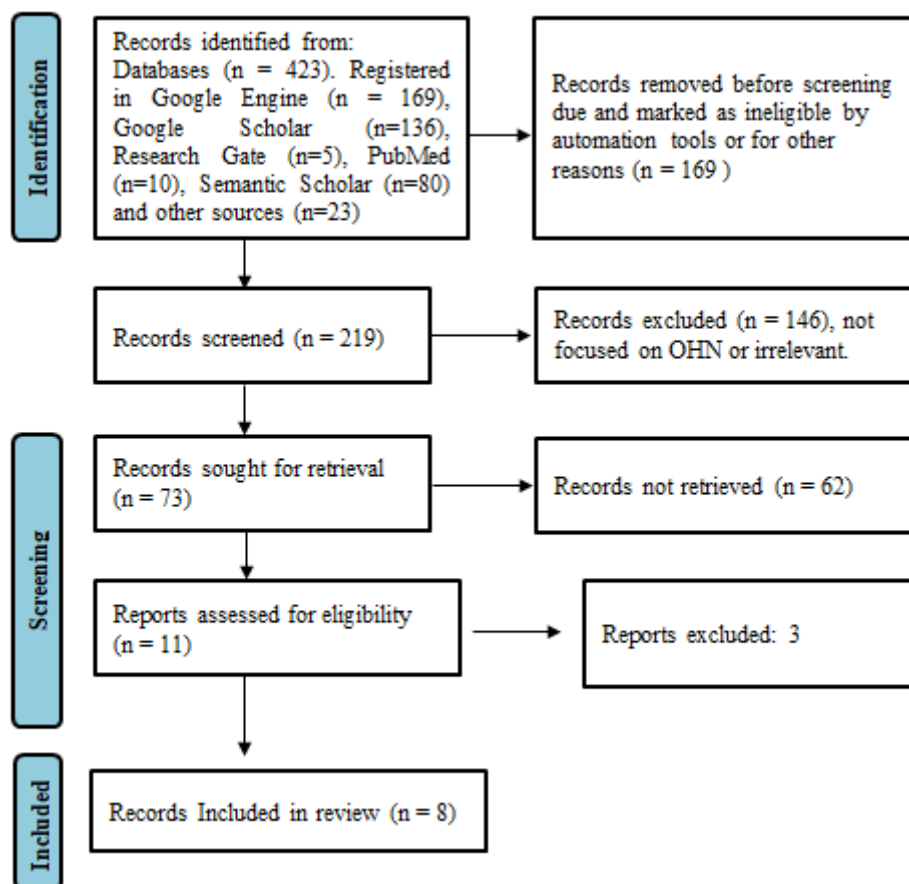


Figure 1: PRISMA Analysis Results

2. PICOT Selection

The table below contains the number of journals eligible for review according to PRISMA Analysis measured according to the PICOT criteria (population, intervention, comparison, outcomes, time) then combined with the source of reference acquisition (Google Scholar, Semantic Scholar, PubMed, and Research Gate). PICOT selection is one of the assessment tools in the document analysis process used by nursing researchers [23].

Table 1: PICOT Selection against Sources of Records

	Population	Intervention	Comparison	Outcomes	Time
Sources	Occupational Health Nurses	Reflection, Situation, Review, or qualitative methods.	Clinical Experience, Quantitative or qualitative methods.	OHN practice before Covid-19 pandemic	Recommendation on OHN services. During 19 pandemic, 2020-2021.
Google Scholar (n=8)	5 out of 5 (100%)	5 out of 5 (100%)	5 out of 5 (100%)	5 out of 5 (100%)	5 out of 5 (100%)
Semantic Scholar (n=2)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)
PubMed (n=2)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)	2 out of 2 (100%)
Research Gate (n=1)	1 out of 1 (100%)	1 out of 1 (100%)	1 out of 1 (100%)	1 out of 1 (100%)	1 out of 1 (100%)

The table above shows 8 documents that are worthy of review according to PRISMA Analysis 100% from 4 credible sources that meet the criteria as set out in the PICOT selection.

1. Reviewed Document

Table 2: List of Reviewed Documents

No	Authors, year of publication, titles	Country	Research Methods	Results
1	Nissinen et al., 2020, Workload in Occupational Health Nursing: A study among Occupational Health Nurses in Finland	Finland	Quantitative and Qualitative	The results highlighted factors to improve OH nurses' well-being at work and provided useful information for the development of OH nurses' working conditions [24].
2	Kumari et al., 2021, Occupational Health and Safety of Health Care Professionals During Pandemic COVID-19	India	Quantitative, Literature Review	It is significantly proved that by following the safety or precautionary measures the staff members are safe though they performed the screening for Covid-19 [25]
3	Nukpezah et al., 2020, Reflective Practice: Its Knowledge, Practice And Perception During Covid-19 Among Pediatric Nursing Students	Ghana	Quantitative	Reflection is a very useful professional and personal development tool that yields positive care and learning outcomes when effectively practiced [16]
4	Carlsten et al., 2020,	USA,	Quantitative,	They addressed respiratory

	COVID-19 as an occupational disease.	Canada, Sweden	Document Review	disease as a primary concern, while recognizing the multisystem spectrum of COVID-19-related disease and how clinical aspects are interwoven with broader socioeconomic forces [26]
5	Cheng et al., 2020, Experiential Learning Program to Strengthen Self-Reflection and Critical Thinking in Freshmen Nursing Students during COVID-19: A Quasi-Experimental Study	Taiwan	Quantitative	Experience Learning Program (ELP) has a significant impact on the self-reflection and critical thinking can be used as a reference for the education. During turbulent times, it is vital for faculties to provide experiential learning [27]
6	Lin et al., 2021, The Impact of the COVID-19 Pandemic on Future Nursing Career Turnover Intention Among Nursing Students	China	Quantitative	Factors influencing turnover intention and suggestions to reduce students' apprehension towards joining the nursing profession found in this study should be seriously taken into consideration in initiatives to address the nurse shortages [28]
7	Gur-Arie, et al., 2021, COVID-19 Vaccine Uptake Through the Lived Experiences of Health Care Personnel: Policy and Legal Considerations	USA	Literature Review	The findings suggest that health care systems minimize inequity inherent in existing vaccination campaigns by providing financial and social support to HCP to raise HCP COVID-19 vaccine uptake [29]
8	Mustafa et al., 2020, Universal COVID-19 screening of 4040 health care workers in a resource-limited setting: an Egyptian pilot model in a university with 12 public hospitals and medical centers.	Egypt	Quantitative	The high rate of asymptomatic infections among HCWs reinforces the need for expanding universal regular testing [30].

The table above shows a summary of 8 documents that are worthy of review. The documents were published journals during the years 2020-2021, with research conducted in 9 countries using quantitative, qualitative and review methods. Of the 8 documents we reviewed, two journals underlined the importance of the vaccine, two were about reflection and the other 6 journals was about the shortage of nurses and turnover, clinical aspects, safety in the workplace and factors to improve occupational health services.

3. Limitations

This review study was conducted due to limited time, energy, distance and funding constraints if direct research was carried out. In addition, the study did not focus on certain OHNs communities in certain industrial areas such as mining or oil and gas industries, so that it cannot help in determining causal relationships and conclusions between reflection during pandemic and the OHN practice. Finally, although research on reflective practice on OHN practices provides great benefits during a pandemic, the findings in study ii cannot be generalized because they did not involve a larger population with a proportional study sample size.

Discussion

The results of this review study show: first, how important the role of reflective practice is for OHNs in the workplace. Specifically related to reflection Table 2, No.3 and 5 discussed about it [16], [27]. Of the 8 documents that are worthy of review (Table 2), all (100%) researchers focused their research objects on reflective practice which elaborated details about the role, benefits, influencing factors and scope of OHNs during the Covid-19 pandemic. Broadly speaking, there are six problems faced by OHNs that need to be underlined and need to find solution according to the selected documents, namely vaccines, reflection, shortage of nurses and turnover, clinical aspects, safety in the workplace and factors to improve occupational health services. Those finding shows that reflective practice is a part of OHN professional life that needs to get a share in OH practice in industry

Second, the findings presented by Nissinen (Table 2, No.1) regarding nurses' workload reflection during a pandemic. According to various studies, the two main factors that influence the workload of OH services are internal factors and external factors [4], [31]. Internal factors are the OH staff, for example their competence which consists of education, work experience, knowledge and skills as well as the OH training they have attended. All of those components greatly affect the workload in OHN services. While external factors such as management support, type of production, number of employees, environmental conditions, industrial facilities and infrastructure, government regulations and laws to pandemics, all of which also greatly affect the workload of OHNs. More intensive studies are needed regarding the workload of OHNs during the pandemic, because they have major impact on the production and work productivity of all company employees.

Third, reflection on safety precautions. During this pandemic the whole world is focused on the issue of safety precautions [32]. In the industrial world, the safety issues always get priority because safety concerns the safety of humans, workers, production and productivity, welfare and has a major impact on the economy [33]. The government of many countries are so concerned with safety issues during the Covid-19 pandemic that it has become a regulation from the central level to remote areas from all government sectors [34], not only health where the WHO is the reference and the ILO is in charge of the labor sector.

Fourth, reflection about Covid-19. Research by Carlsten et al. in Canada and the USA on Covid-19 as an occupational disease is very interesting to study [26]. According to OSHA, occupational disease is a chronic disease caused by work-related factors, it can be in the form of repetitive work or pollutants around the workspace [35]. Occupational diseases can be divided based on the cause: chemical substances, can be due to exposure to chemicals such as mercury and manganese; physical agents; in the form of loud noise, impact, radiation, exposure to extreme temperatures; biological agents; bacteria, parasites or viruses [36]. Organs that often experience problems related to this chronic disease include the respiratory system, such as lungs disorders due to working with polluted air. Covid-19 that attacks the lungs in their journal was used as a discussion material to determine whether it was included in the category of occupational disease. The most important thing to highlight is the involvement of all parties in the prevention and control of Covid-19 in the industry

Fifth, reflection on vaccine. Three of the 8 reviewed journals discussed details about vaccines in OHN services (Table 2, No. 2, 7 and 8). The World Health Organization (WHO)

reports that there are still many countries that have not met the vaccine target [37]. In the industry, the issue needs serious attention from all existing personnel. The application and acquisition of vaccines in the industry is not only about the responsibility of health workers, especially OHN in the industry. but also requires the support of management, and all employees [38]. Because health is a shared responsibility in the industry. The roles of OHN related to vaccine is to ensure that the existing policies and procedures are updated, applied and evaluated regularly, so that everyone in OHNs can monitor their vaccination status.

Sixth, reflection on clinical aspects, education, OHN shortage and turnover. These four issues are discussed in Table 2, No.3, 5, 6 and 8. During the pandemic, there were many studies explored the impact of Covid-19 on increasing workload, stress, its effect on education, manpower shortage in this case a shortage of nurses and turnover [39]. All of them are interrelated and have a very big influence in the industrial world. Therefore, in dealing with those problems, integrated collaboration between OHNs and other health teams is needed, besides a crucial management involvement. Even in educational sector, OHNs are required to provide input, for example to clinical supervisory or lecturers and the nursing students. During the Covid-19 pandemic era, many nursing students were involved in volunteer services in the field. Reflection on this practice proves the importance of re-identifying the list of competencies of OHNs in industry [40].

CONCLUSION

This study aims to analyze the changes in the 5 components that exist in the theory of practical reflection, namely reflection, clinical situation or experience, promoting factors, hindering factors, and outcomes, which affect the performance of OHNs through a document review approach. The results obtained 8 journals that deserve to be reviewed according to PRISMA Analysis with the support of PICOT selection and Reflective Practice theory from the OHN side. Our findings include six issues as the focus of reflection faced by OHNs, namely the importance of reflective practice, workload, safety in the workplace, vaccines, shortage and turnover, and clinical practice including education from the OHN's point of view. The limitation of this research is that direct research was not conducted. In addition, this study did not focus on certain OHNs communities in certain industrial areas so that it cannot help in determining causal relationships and conclusions between reflection during pandemic and the OHN practice. However, our findings recommend the need for continuous reflective practice, identifying OH problems during a more intensive pandemic and the cooperation of all parties in handling the pandemic. It is hoped that these weaknesses and findings can be developed and used as research material in the future.

Source of Funding:

Self-funding.

Ethical Clearance:

This research is not institutional-based study and does not belongs or represents to any particular institute. So, the ethical clearance is not applicable in our study.

Conflict of Interest:

No one of the authors in the study has conflict of interest.

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