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The Implementation of Occupational Health Nursing Practice in Indonesia-Papua New Guinea Borders: Present and Future Challenges

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Occupational Health Nursing (OHN) is a well-established nursing practice known in many western and developed nations around the world. However, it is still considered as a new field in the less industrialised countries, including Indonesia. This research study the implementation of occupational health nursing practice, with the comparison of international recommendations from WHO, AAOHN and OSHA, in four centres of borders (Jayapura, Merauke, Boven Digul and Keerom) between Indonesia and Papua New Guinea (PNG). This study aims to measure the level of nurses' awareness of occupational health nursing services and to stimulate new thinking, linkages and collaboration among occupational health nurses, in public health centres, hospitals, nursing colleges and industrial settings. This study is conducted to measure the roles and responsibilities of 150 nurses in Papua New Guinea from different areas. A Qualitative method through a cross-sectional survey was conducted in the border between Indonesia and Papua New Guinea, in January and February 2020. The qualifications of nurses practising at the border are 74.6% Diploma of Nursing holders, 20.6% are Bachelor Degree holders, 2.66% Post Graduate holders and 2% doctorate level. In the view of OH training, 17% have attended OH-related training, and 83% never attended it. Only 37% knew the tasks of OHN. The averages of OHN activities across the border is 15%, with the least involvement is on Health Promotion (35%), Case Management (29%), Health Surveillance program (31%), and Fitness to Work (15%). The number of nurses working in a pure industrial setting is only 6%. Meanwhile, the averages of nurses aware and practice OHN activities are 27.6%.

Key words: *Occupational health nursing, OHN, nurses, Papua, Papua New Guinea, training*

Introduction

According to the Occupational Safety & Health Administration (OSHA, 2012), Occupational Health Nurses (OHNs) are registered nurses who independently observe and assess the worker's health status concerning job tasks and hazards. OHNs, using their specialised experience and education, recognise and prevent health effects from hazardous exposures and treat workers' injuries/illnesses. OHN specialisation is also similarly mentioned by ILO and WHO in which the OHN activities focus on 'the promotion and maintenance of workers' health in all occupations. Occupational Health Nurses in Indonesia are working in various industries, mostly in mining, particularly in oil and gas, gold, nickel and coal mining. To implement the activities in those industries, the International Association of Oil and Gas Producers (OGP)-IPIECA Health Committee recommends a systematic approach to protecting workers' health (Manjula, 2018). They have developed an assessment process designed to help employers identify, measure and deal with health risks. IPIECA has also produced a set of performance indicators which include Fitness to work, Management of Ill health, Health Surveillance and Health Promotion. The American Association of Occupational & Environmental Health (AAOHN) also developed standards of OHN activities. Therefore, OHN practices use this standard as a reference in their professional activities. Besides, the international body's recommendations and health performance indicators are significant tools for Occupational Health Nurses (OHN) as a guide to practice, including for the OHNs practising in Papua borders with PNG. It is suggested that OHNs shall meet their requirement as per standards practice.

However, in Indonesia, the knowledge and skills of nurses working in Industry are given through a training called 'HIPERKES' an Indonesian language term translated to English means' Health and Industrial Hygiene'. The training provider is under the sole management of the Ministry of Manpower of Indonesia. The training focuses on general health and safety rather than OHN (Sathiya, 2018). Meanwhile, nurses working in the borders are facing people at risk from a health point of views, including in Indonesia-PNG Borders. Therefore, regardless of their workplace setting, the nurses' understanding of occupational health is paramount. This is the reason why to measure their awareness and implementation of OHN activities in their workplace will be beneficial. However, it was found, only 27% out of 150 participants of the study as nurses working in the border, are aware of this. They are not in full capacity of their occupational health nursing competencies.

Methodology

The method used in this research is Qualitative Explorative by using the cross-sectional study to explore the activities of nurses working in the border in a particular period (Notoadmojo, 2010). It is conducted during the research in Papua of Indonesia, from 1 January to 5 February 2020. The populations are general nurses with specific characteristic and quality, as suggested by Setiadi (2013). Target populations are all nurses working at Hospitals 96 nurses (64%), Public Health Centers 39 nurses (26%), nursing colleges six nurses (4%) and at industries nine nurses (6%), all belong to Government as well as private companies in different locations (Jayapura, Merauke, Boven Digul, Keerom) across the border of Indonesia and PNG. It involved 150 participants taken as samples in which 95% (142 nurses) are Registered Nurses and 5% (eight nurses) not yet registered, with Random Sampling. To collect the data first is about the nurses' general information such as age, education, place of work, years of experience, place of origin and the status of registration. The second data is about Occupational Health-related training, and the third one is about Occupational Health-related competencies. The researcher used a questionnaire, distributed to 150nurses; all participated (100%). The instrument used is the Guttman Scale, with ten questions that include four general (training-related questions) and six professional-related (OHN competency) questions. The data is then analysed by Budiarto's method (2002), using the following formula:

$$p = \frac{\text{fi}}{\text{n}} \times 100\%$$

Notes:
p: Percentage
fi: Observed Frequency
n: Total Respondent

Results

There is no proper record on how many nurses correctly working in the Indonesia-PNG borders. This is due to their location, limited access, lack of communication, nurses do not report to the nursing association and poor record. However, the nurses participating in this research are working in the area or near the border, mostly in Jayapura as the biggest border (105 nurses or 70%) with the biggest number of border commuters, 15% (23 nurses) in from Merauke, 9% (14 nurses) from Boven Digul and 5% from Keerom (eight nurses). Their nursing education is mostly Diploma of Nursing (112 or 74.6 %), Bachelor of Nursing Degree holders 31 nurses (20.6 %), postgraduate level 4 nurses (2.6 %), and doctorate level 3 nurses (2 %). Like other healthcare professionals, nurses need to grow professionally. The continuing professional development program in the borders has varying types and numbers

of occupational health programs, through external and internal training. Their training for occupational health nurses, however, is not yet sufficient, in which 124 nurses (83 %) never received any OHN training. Only 26 nurses (17 %) have attended Health and Safety-related training.

Most nurses gain their OHN knowledge through self-learning. To reduce the gap, under the Ministry of Health of Indonesia has developed internal training conducted by the Local Department of Health in collaboration with local Corporate Training Department, involving Occupational Health Physician, Specialist, General Practitioners and another nursing specialist as the trainers. In-house training is provided by Public Health Center where the nurses work, include Health Promotion, Health Event Plan, communication and presentation skills, etc., besides, mandatory training BTCLS conducted by local hospitals or other external training providers. In 2019, the Department of Health in the borders had conducted two Nursing Seminar and workshop for nurses. These are the evidence that nurses in the border are concerned about their professional development. However, they are still lack of professional OHN certifications or recognition as a nursing specialist. This is due, not only to the unavailability of the OHN formal continuing education in the country, but also the national regulation on OHN standard requirements which are not yet established.

During the study, it was found that most nurses are not aware of OHN duties (63 %). In Health Promotion program, only 35 % have experience of doing it. In Case Management, only 29% was involved, but 71 % never known. In health surveillance, 69 % did not have an idea of it, and in Fitness to Work, 85 % never did it. The averages of nurses having knowledge and skills of occupational health-related activities are only 27.6 % (41 nurses) out of 150 nurses.

Table 1: Nurses with OHN Activities

Experience Possession	OHN Activities				Total	
	Health Promotion	Health Surveillance	Case Management	Fitness to Work	Averages	%
Yes	53/150	46/150	44/150	23/150	41.5/150	27.6
No	97/150	104/150	106/150	127/150	108.5/150	72.4
Total	150/150	150/150	150/150	150/150	150/150	100

Notes: The percentage of the above table is the result after using Budiarto's Formula, in which based on all percentages as the result of Frequency Observed divided by Total Respondent in each location.

Discussion

Occupational Health Nursing Today

The 1995 Labour Force Survey of work-related health problems (OHR, 1998) estimated that more than two million people in Great Britain perceived that illness was caused or exacerbated by work. Thousands of accidents occur, and several hundred people die at work each year according to Health & Safety Executive statistics (Oakley, 2002). WHO mentions, there is new demands and expectations from employers, employees and their representative bodies. Due to these new demands, OHNs role in the workplace and many situations have changed. They emerged as the central key figure involved in delivering high-quality occupational health services to the working populations. OHNs are at the frontline in helping to protect and promote the health of working populations. These are the new challenges that OHNs have to face. Besides, there are changes in the patterns of works, legislation and education. In the workplace, like the borders of the two countries are a unique place. There are changes where occupational health nurses need to be responsive to and able to manage them.

Although occupational nurses may be the single largest healthcare specialist working in occupational health settings, their role may be limited and stifled for a variety of reasons, not the least role identity within these settings. In two countries borders, most occupational health nurses reflect a multi-faceted role, which may include clinical activities such as health screening and health surveillance, managing and coordinating occupational health services, promoting health education activities and being involved with research and survey on behalf of the company. They are also responsible for other duties such as mentioned by Bagley that include identifying trends in sickness and accident statistics, auditing health programs and conducting environmental surveys (2002).

Very few organisations have on-site services which are nurse-led. The Royal College of Nursing's Society of Occupational Health Nursing in the UK estimated that 7500 nurses were working in the UK in occupational health settings in 1996 (Bagley, 2002). The role of OHN as a specialist practitioner with appropriate post-registration qualifications and experience is an important development. Philosophically, the basic tenets of OH nursing practice remain unaltered; that is to promote health at work and to protect the health of the workers. In-country borders, nurses are usually appointed as general nurses with minimum training in OHN after their registration. This is one of the biggest challenges. However, they are required to perform their duties that cover primary care, emergency and OHN activities.

Dorward (1993), identifies 12 main functions specific to OHN: health supervision of workers, health surveillance of the work environment; accident prevention; prevention of occupational

ill-health; treatment of illness and injury at work; first aid organisation; promotion of health and prevention of ill health; counselling, rehabilitation and resettlement into work, records and reports; liaison and cooperation (internally and externally); administration of the health unit; and research including survey. Nurses working in health care facilities in the borders of two countries are expected to be involved in the above functions. Yet, with their minimum training of OHN, can be the drawbacks of their professional performance.

Any occupational health service must be focused on the business needs to add value by contributing to the maintenance and promotion of the health of employees. This must be the basis on which the service business plans and service-level agreements are written. OSHA identifies eight typical common OHN activities: Observation and assessment of both the worker and the work environment, interpretation and evaluation of the worker's medical and occupational history, subjective complaints, and physical examination, along with any laboratory values or other diagnostic screening tests, industrial hygiene and personal exposure monitoring values, Interpretation of medical diagnosis to workers and their employers, appraisal of the work environment for potential exposures, identification of abnormalities, description of the worker's response to the exposures, management of occupational and non-occupational illness and injury, documentation of the injury or illness. Meanwhile, AAOHN which specialises on occupational health nursing focuses on assessment, analysis assessment to formulate diagnoses, outcome identification, planning, implementation, evaluation, resource management, professional development, collaboration, research and ethics. IPIECA, on the other hand, concentrates on the key areas of health risk assessment and planning; industrial hygiene and control of workplace exposures; medical emergency management; management of ill-health in the workplace; fitness for task assessment and health surveillance; health impact assessment (HIA); health reporting and record management; and public health interface and promotion of good health. In summary, the OHN standard activities cover the area of primary care nursing services including initial emergency management which is under Frontline clinic services, and Fitness to Work, Health Surveillance, Management of Ill Health and Health Promotion which are under Occupational health services.

Present Nursing Practice in Indonesia: PNG Borders

In recent years, organisational efforts to improve occupational health services have emerged. The services improvement shall be supported by organisational policies and practices to promote workers' health as well as increased access to occupational health training and education. There are many nurses in Indonesia-PNG Borders. However, there is no proper record due to locations, limited access, poor network, various health care providers in rural places and their employment status. The largest areas of nurses working in the borders are in Jayapura, Merauke, Boven Digul and Keerom. From north to south (Jayapura to Merauke)

the distance is about 1.098 kilometres (Okezone, 2020). Together with other healthcare professionals, the nursesare at times required to provide occupational health services to more than 5000 commuters every week in the borders, including workers and the general public, in their different locations (Jayapura, Merauke, Boven Digul & Keerom YEAR?). The commuters and public of the two countries are prone to various health problems; this raises risks.

The IPIECA's health performance indicators are used as tools for the nurses, which are in the frontline clinic, including initial emergency management, and OH Services (management of ill health, fitness to work, health surveillance and health promotion). The nurses are also required to develop the Occupational Health Nursing Protocols, to help OHN practise and meet the standards that reflect the professional and end-users expectation of practice. Indonesian nurses in the border to some extent, have implemented OHN practices regardless of their OHN competency.

Nurses in the borders are the front liners in the health services. Indonesian nurses in the PNG borders are part of the healthcare professionals, besides Physician, Psychologist, Occupational Physiotherapist, admin and other Health, Safety & Environment and HR professionals. The OH nurses strengthen the professional relationship with others by doing regular meetings, case management, presentations, event celebration, health promotion campaigns, site visits, a tour of duty, collaboration with HSE professionals and many other activities required to support the business continuation. The OH nurses collaborate not only with other employees of the Immigration Department and the Department of Communication and Transport but also with private organisation and other government officers, Joint Venture Companies, allied healthcare professionals, researchers and academicians from outside the two countries. Regardless of their strengths and weaknesses, Indonesian nurses in the PNG borders, by collaborating with other professionals, they manage to develop and advance their professional activities.

Future Challenges

In Indonesia, OHN education is not yet established. It is assumed under the subject of Community of nursing. Therefore only a few nurses are aware of the term 'Occupational Health'. Rather, they are more familiar with the word 'Industrial Nurse'. The OHN training of Indonesian nurses is usually handled by the Government, through the Ministry of Manpower or private training provider that focuses on Health and Safety rather than occupational health nursing, which is not sufficient. The private training provider, though an international organisation is a private institution that helps nurses gain employment of industrial opportunities. So, at the moment, the professional development of Indonesia nurses concerning occupational health nursing gained through informal training or individual

learning, not in formal education. So far, there are only six departments of specialisation of nursing education in the country (Universitas Indonesia, 2020).

Conclusion

The concept of OHNs' competencies in Indonesia: PNG Borders is fundamental to the autonomy and accountability of the individual nurses working in the different healthcare setting. The degree of competence will vary according to tasks and procedures. Therefore, OHNs need to have the characteristics of a professional. Rogers (1994) suggests that OHN professionals should possess the expertise, formal education or special technical competence, unique degree of autonomy that entitle him/her to exercise judgment, consciously conforms to a code or standard, feels a sense of service to humanity, acknowledges a higher responsibility for more than making a living and instils public trust. The Indonesian nurses in the borders in the future will need to develop a portfolio of skills that OHN professional body will value, as competent people are now required to undertake a wide range of the task, some technical.

None of the nurses in Indonesia: PNG borders are registered as OHN. This is because Indonesia's regulations do not yet recognise OHN as a specialist. Regardless of the shortcoming of their professional competencies, Indonesian nurses working in the borders are advised to adopt the standards as per the recommendations. The nurses should also need to continue developing their competencies, particularly the OHN certification and licensing as an OHN specialist. The biggest challenge of the Indonesian nurses working in today's industrial settings is OHN shall prepare to develop roles to extend beyond conventional nursing, exercising autonomy in the diagnosis and treatment of certain conditions. The survival of occupational health nursing lies in the ability of practitioners to diversity and be responsive to change.

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