

The experience of nurses conducting nursing assessments of occupational diseases in the farm: A phenomenological study

La experiencia de enfermeras realizando evaluaciones de enfermería de enfermedades profesionales en la granja: un estudio fenomenológico

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SUMMARY

Introduction: *The stages of the farming procedure are carried out sequentially. From planting preparation to harvesting, the farmer has a risk of occupational disease. Farmers will come to the first health service center if there is a health problem, and the nurse in charge will conduct nursing assessments. This study was conducted to explore nurses' experiences in conducting nursing assessments of occupational diseases in agriculture.*

Methods: *This study used a phenomenological qualitative study with a descriptive-interpretative approach. The subjects of this study were eight nurses who worked in the first health service in the agricultural area of Lumajang Regency. Data were collected and analyzed using thematic analysis based on the Braun and Clarke approach. The data were validated by triangulation and triangulation methods.*

Results: *The researchers found five major themes, namely, using all senses for assessment, using knowledge about agriculture, asking about work history in the planting process, asking about the history of the first management at the time in the agricultural area, and the perception of illness as a risk of work in agriculture.*

Conclusion: *Nurses have challenges in carrying out nursing care and must be able to adapt to the work area where their health services are located. Agricultural areas require nurses' knowledge to provide nursing care that focuses on problems in the agricultural area. Assessment as an initial action in the nursing care process requires specific knowledge and skills following the work area of health services. It is hoped that in the future, more special nursing care will be developed following the work.*

Keywords: *Agriculture, experience, nurse, nursing care.*

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RESUMEN

Introducción: *Las etapas del procedimiento de cultivo se realizan secuencialmente. Desde la preparación de la siembra hasta la cosecha, el agricultor tiene riesgo de enfermedad profesional. Los agricultores acudirán al primer centro de atención de salud si hay un problema de salud y la enfermera a cargo realizará las evaluaciones de enfermería. Este estudio se realizó para explorar las experiencias de las enfermeras en la realización de evaluaciones de enfermería de enfermedades profesionales en la agricultura.*

Métodos: *Esta investigación utilizó un estudio cualitativo fenomenológico con un enfoque descriptivo-*

interpretativo. Los sujetos de este estudio fueron ocho enfermeras que trabajaban en el primer servicio de salud en el área agrícola de Lumajang Regency. Los datos fueron recolectados y analizados utilizando un análisis temático basado en el enfoque de Braun y Clarke. Los datos fueron validados por métodos de triangulación y triangulación.

Resultados: *Los investigadores encontraron cinco grandes temas, a saber, usar todos los sentidos para la evaluación, usar el conocimiento sobre agricultura, preguntar sobre la historia del trabajo en el proceso de siembra, preguntar sobre la historia del primer manejo en el momento en el área agrícola, la percepción de la enfermedad como un riesgo del trabajo en la agricultura.*

Conclusión: *Las enfermeras tienen desafíos en la realización de los cuidados de enfermería y deben ser capaces de adaptarse al área de trabajo donde se encuentran sus servicios de salud. Las áreas agrícolas requieren del conocimiento del enfermero para brindar cuidados de enfermería enfocados en los problemas del área agrícola. La evaluación como acción inicial en el proceso de atención de enfermería requiere conocimientos y habilidades específicas siguiendo el área de trabajo de los servicios de salud. Se espera que en el futuro se desarrollen más cuidados de enfermería especiales a raíz del trabajo.*

Palabras clave: *Agricultura, experiencia, enfermero, cuidado de enfermería.*

INTRODUCTION

Nursing care is an indicator in determining the quality of health services carried out by nurses as caregivers. The most important aspect of nursing services is nursing documentation (1-3). If the documentation is not carried out properly, it will cause quite a big problem. Therefore, nurses are always required to have expertise and knowledge in carrying out their roles, functions, and responsibilities in providing nursing care. Skills and expertise in nursing are the results of knowledge and clinical experience that have been carried out to make complex decisions and interpret clinical situations in providing professional and quality nursing care due to changes in health needs and community demands as well as government policies related to nursing and health services (4-6).

As is well known, assessment in nursing is the initial stage of the nursing process. It is a

systematic process of collecting data from various sources to identify and evaluate the client's health status. In addition, the assessment is a rationale for providing nursing care in accordance with patient needs. There are three critical points in this study. The first is the stage of collecting data obtained for primary data, focus data, subjective data, and objective data. The second is in the form of nursing data sources, where you get the data sources such as primary and secondary data sources and other data sources such as medical records, disease history, and so on. Third, carrying out the assessment requires appropriate nursing data collection techniques by taking anamnesis, observation, and physical examination of the patient (4,7,8).

The role of nurses is critical in providing health services for patients (9,10). Several studies have explained that nurses' professional behaviour is related to the patient's recovery rate (11-13). In the agricultural sphere, it is the management of care and nursing services in the agricultural sphere that focuses on individuals, families, groups, and even communities that are holistic and comprehensive. Agronursing aims as a forum to meet the health needs of the community in the agricultural environment.

Indonesia is an agricultural country, so most Indonesian workers, especially in rural areas, work in the agricultural sector as farmers with many health risks. For this reason, nurses need to carry out data collection actions correctly for farmers in carrying out nursing care actions in accordance with the diagnoses experienced by farmers. If the nursing management is in accordance with the diagnosis, nursing services to farmers are maximized, and farmers' health level also increases (12).

Agriculture is broadly divided into several sectors, namely food crops consisting of secondary crops, horticulture, and rice, forestry, plantation, fisheries, and livestock sectors. In each sector, each farmer sometimes experiences various nursing problems. For this reason, it is necessary to study the nursing process in the agricultural area. With the assessment carried out completely and systematically following the field, the conditions of farmers are essential for formulating a nursing diagnosis and providing nursing care following farmers' responses as

individuals. However, materials regarding nursing assessment in agricultural areas are still few and rarely found. For this reason, “Guidelines for Agronursing-based nursing assessment” were formed with the hope of being one of the references or considerations in the implementation of nursing documentation of nurses in nursing actions in the scope of agriculture.

Working as a farmer has procedural stages in farming. The stages of the farming procedure are carried out sequentially, from planting preparation to harvesting. At each procedural stage, there is a risk of occupational disease for farmers. Farmers will come to the health care center first if there has been a health problem, and then the nurse on duty will conduct a nursing assessment. Nurses’ experience in conducting nursing assessments on occupational diseases in agriculture has not been widely explored. This study explores nurses’ experience conducting nursing assessments on occupational diseases in agriculture.

METHODS

This type of research was a phenomenological qualitative study with a descriptive-interpretative approach. The informants were based on the saturated sampling technique, eight nurses who worked in the first health service in the agricultural area of Lumajang district. The variables included knowledge, work history, first management, and perception in nursing

assessment. The instruments used in this study were interview guidelines and a checklist. We collected data by conducting in-depth interviews with informants and observations. Each variable was asked of informants using a checklist and interview guidelines. When conducting research, the researcher directly observed using a checklist. Data were collected and analyzed using thematic analysis based on the Braun and Clarke approach (14). Triangulation was carried out using a source to maintain the validation of the data collected. This research has received ethical approval from the Health Research Ethics Commission, Faculty of Dentistry, Universitas Jember, with an ethical approval number No.982/UN.25.8/KEPK/DL/2020 dated August 26, 2020.

RESULTS

The final sample consisted of 8 participants. Demographic information is summarised in Table 1. Eight nurses who worked in the first health service in the agricultural area participated. Most participants have more than four years of working experience in emergency units.

Researchers produced five significant themes: using all the senses for assessment, using knowledge about agriculture, asking for work history in the planting process, asking for the history of the first management in the agricultural area, and the perception of illness as a risk of work in agriculture.

Table 1
Participant Demographic Characteristics

Participant	Gender	Age	Length of work (years)	Workplace Experience
1	Male	25	4	Emergency Unit
2	Male	30	9	Emergency Unit
3	Female	24	4	Emergency Unit
4	Male	35	14	Emergency Unit
5	Female	27	6	Emergency Unit
6	Female	28	7	Emergency Unit
7	Male	26	5	Emergency Unit
8	Male	33	13	Emergency Unit

Using all senses for assessment

Using the senses here means that nurses use their sensors to carry out nursing assessments quickly. The participant's statement can be seen below:

"...when the patient comes must be able to see from his appearance a farmer or not" (P1)

".... There are patients who come with the smell of pesticides, so you have to be careful" (P3)

Using knowledge about agriculture

The use of knowledge about agricultural science here means that in carrying out nursing assessments, nurses need to know agricultural science to understand the causes of problems due to work in agriculture. The following is a participant's statement that fits the theme:

".....Farmers often come to health services because they run out of pesticide spray. Usually, they feel nauseous" (P2)

".....when the planting season must come because of trauma from a sharp object, usually it gets hit by plant residues" (P4)

Asking for work history in the planting process

Agriculture is a stage of the farming process. Nurses need information on the work carried out at the stages of the planting process. Each stage in the planting process has its type of work. Participants' statements can be seen below:

".....During the planting season, farmers' health problems that arise also vary depending on what they are working on" (P4)

".....As usual, we ask for the history of the disease, but the difference is, ask what are you doing in the planting season" (P5)

Asking for the history of the first management in the agricultural area

Farmers' first aid when health problems occur is adjusting to the surrounding environment. The

first management is something that the nurse needs to review once brought to the health service. Participants' statements can be seen below:

"... because usually if you get hit by a hoe, you are given pain, so you have to ask first what to do" (P1)

".....should be asked what treatment has been given, usually various" (P6)

The perception of illness as a risk of working in agriculture

Sickness as a job risk in agriculture means that farmers understand the risks of their work but consider the risks normal. Participants' statements can be seen below:

"..... It's considered a backache after a dig is normal, even though it can be dangerous, if you're not strong, just come here (Emergency Department)" (P3)

"..... Farmers come here (ED) after they can't stand the pain, they are considered normal" (P5)

DISCUSSION

Mortality and morbidity due to exposure to sustainable agricultural pesticides are global problems. Food and Agriculture Organization (FAO) estimates indicate that approximately 2.7, 6.5, 240, 11.3, and 4.5 million kg of obsolete pesticides are available in Africa, Asia, Eastern Europe, Latin America, and the Middle East. Organochlorides, organophosphates, inorganic pesticides, and certain biopesticides are some of the most commonly used pesticide classes (15)

Pesticides have led to an increase in agricultural production worldwide. However, when not applied safely, they can cause environmental pollution and adverse health effects, sometimes irreversible (16). Using all the senses for assessment exposure to organophosphate pesticides can occur through various pathways, including food contamination, environmental and household contamination, proximity to agricultural fields, and agricultural work (17). However, pesticide exposure by skin has been

identified as the main route that contributes the most among workers, particularly pesticide handlers who mix, load, and apply pesticides (18). Exposures are generally assessed with questionnaire data on self-reported exposures. Estimates of the prevalence of occupational exposure to ergonomic risk factors are provided for the five included studies, disaggregated by country, sex, 5-year age group, industrial sector, or occupational group where applicable. The combined prevalence of each exposure to ergonomic risk factors was 0.76 (95 % confidence interval 0.69-0.84, 3 studies, 148,433 participants, 35 countries in the World Health Organization (WHO) European region, 12 100 %, low quality of evidence). Subgroup analysis found no statistically significant differences in exposure by sex but differences by age group, occupation, and country. No evidence was found for publication bias. We judged this evidence to be of low quality based on serious concerns about the risk of bias. Exposure assessments are only self-reported and indirectly due to evidence from two WHO regions.

The various health problems were 28.5 % underweight, 10.6 % overweight, 62.6 % anaemia, and 50.3 % joint and bone pain. Using knowledge about agriculture in these results suggests that getting older and drinking coffee increases the likelihood of being thin while having less than 30 minutes of rest per work period and working more than five days per week decreases the likelihood of being overweight. Meanwhile, being a younger man and working for less than five days per week lowered the risk of anaemia. Furthermore, age and less than 30 minutes of rest per work period were associated with increased joint and bone pain (19). Skin protection behaviour of men and women in agriculture remains low. Differences in study design and investigated behaviour make it difficult to draw conclusions or detect trends. Nevertheless, skin cancer is on the rise and is now the most expensive cancer in Australia (20).

Asking for work history in the planting process is the fact that plant protection drugs have been applied not according to the instructions and do not guarantee safety can cause poisoning, and shock seriously affects the health of farmers and even lead to death. The results showed that there are still many problems regarding farmers' awareness and habit of using pesticides in Tu Ky district, Hai Duong province (21). Furthermore,

the mediated model shows that working hours increase unsafe behaviour, whereas work experience decreases it. Unsafe behaviour, in turn, shows a positive relationship with accidents through near-miss mediation (22). Among all injuries, injuries such as skin injuries, skin friction, superficial vein injuries, injuries to the toes or fingers, and muscle tension were recorded as the severity of AIS 1. In contrast, injuries to limbs, deep vein injuries, permanent loss of any body part, and infection of the injured limb were considered to be between the severity of AIS 2 and AIS 3 injuries (23).

Occupational health nurses are familiar with the environmental exposures workers face in their workplaces. Asking for the history of the first management in the agricultural area, for example, employees only "work" about a third of each workday, with many potential exposures to other environments that could affect their health. This article discusses some of the main exposures employees face outside the workplace — air, water, soil pollution, and hazardous waste — including a discussion of well-known national and international environmental incidents. The primary sources of these pollutants and how they pollute the environment are investigated. Lastly, risk assessment, communication, and effective strategies for educating employees and the public are presented (24).

Nurses are regularly asked to care for employees from various cultural backgrounds in an increasingly multicultural society. The perception of illness as a risk of working in agriculture because of awareness of cultural differences focuses occupational health nurses on these differences and improves employee care. This article discusses caring for culturally competent employees, non-verbal communication cues among cultural groups, models associated with completing cultural assessments, and how health disparities in the workplace can affect employee care delivery. Self-evaluation of occupational health nurses for personal preferences and biases is also discussed. The development of cultural competence is a process, and occupational health nurses must develop these skills. By developing cultural competence, occupational health nurses can perform a complete cultural assessment, facilitate better communication with employees from different cultural backgrounds, and improve

employee health and adherence to treatment regimens. Tips and guidelines to facilitate communication between occupational health nurses and employees are also provided (25).

Occupational health care promotes and restores health, preventing illness and injury, protecting occupational and environmental hazards, and company profitability. Quality education about the relationship between work and health is critical to nurses' success, regardless of the work setting (26). It is consistent with goals but lacking or limited in some programs. This report introduces an innovative occupational health nursing curriculum for students in the baccalaureate nursing program. The process of designing and piloting this new curriculum, its alignment with nursing competencies, and the format and learning activities are explained (27).

Shoulder pain is a common complaint in the workplace. Shoulder conditions may arise from acute trauma or non-traumatic work-related activities. Shoulder pain falls into three categories: acute pain, chronic pain, and referral pain. The occupational health nurse can document a detailed medical history and physical examination based on focused complaints. The nurse's expert assessment can guide injured workers to needed care, case management, and return to full employment (28).

CONCLUSION

Nurses who have challenges in carrying out nursing care must be able to adjust to the work area where the health service is located. Agricultural areas require nurses' knowledge in providing nursing care that focuses on problems in the agricultural area. As an initial action in the nursing care process, assessment requires special knowledge and skills from the health service work area. It is hoped that in the future, there will be a lot of special nursing care developed following the work.

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