



APPLICATION OF INDONESIAN NURSING DIAGNOSIS STANDARDS IN NURSING DIAGNOSIS DOCUMENTATION IN CHILDREN WITH DENGUE HEMORRHAGIC FEVER

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ABSTRACT

Introduction: The Indonesian National Nurses Association has developed nursing language standards adapted to cultural differences and uniqueness of Indonesian nursing services, namely the Indonesian Nursing Diagnostic Standards. Dengue Hemorrhagic Fever cases in Indonesia have experienced a shortening cycle, which has led to a rise in the incidence rate (IR) and a fall in the case facility rate (CFR). This study was to learn how to describe the application of the Indonesian Nursing Diagnosis Standards (SDKI) in documenting nursing diagnoses in children with Dengue Hemorrhagic Fever (DHF). **Methods:** Retrospective descriptive research design with secondary data. The secondary data used in the study, namely sourced from medical records from February 1, 2021 - March 31, 2022. The number of samples is 30 medical records using the total sampling technique. Data collection using observation sheet. Data analysis uses univariate analysis. **Results:** Most of the priority nursing diagnosis labels in DHF pediatric patients are by the Indonesian Nursing Diagnosis Standards, namely hyperthermia. However, all the writing of actual nursing diagnoses does not comply with the Indonesian Nursing Diagnosis Standards, which consists of writing three parts: [problems] related to [cause/related factors] as evidenced by [signs/symptoms], but the writing of nursing diagnoses is only in the form of problems or problems and causes. **Conclusions:** There needs to be a refreshing knowledge about the Indonesian Nursing Diagnosis Standards to improve the knowledge and skills of nurses in documenting nursing diagnoses.

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INTRODUCTION

The *Aedes aegypti* mosquito is the vector of Dengue Hemorrhagic Fever (DHF), a disease common in tropical and subtropical regions (Syamsir & Daramusseng, 2018). An increase in dengue vector activity during the rainy season can lead to the transmission of DHF, and dengue outbreaks typically occur in endemic areas and coincide with the start of the rainy season (Soewarno & Kusumawati, 2015). The shortened cycle of DHF cases in Indonesia has led to a rise in the incidence rate (IR) and a fall in the case facility rate (CFR). Until the 17th week of 2024, there were 88593 cases of Dengue Hemorrhagic Fever with 621 deaths in Indonesia. Based on reports, out of 456 districts/cities in 34 provinces, deaths due to dengue fever occurred in 174 districts/cities in 28 provinces (Kementerian Pendayagunaan Aparatur

Negara dan Reformasi Birokrasi Republik Indonesia, 2024).

Patients require hospitalization to reduce DHF morbidity and mortality (Lum et al., 2014). Nurses care for patients 24 hours a day and more often than other health workers in providing care to patients (Handayani & Kuntarti, 2022). A nurse can make a nursing diagnosis while performing her duties as a nursing care provider (Undang-Undang Republik Indonesia Nomor 38 Tahun 2014 Tentang Keperawatan, 2014).

A nursing diagnosis is a clinical judgment centered on how people, families, and communities react to current or possible health issues as the foundation for choosing nursing interventions to accomplish nursing care objectives in compliance with nurses' authority and accountability (NANDA International, 2021).



To improve nursing care quality, Indonesia already has a guide, the Indonesian Nursing Diagnosis Standards, that nurses can use to construct nursing diagnoses using standard terminology and standards (Tim Pokja SDKI DPP PPNI, 2017).

In Indonesia, DHF cases are quite high, so there is a need for proper and complete documentation of nursing care. The Indonesian Nursing Diagnosis Standard is still not widely utilized as a standard nursing language. A study conducted in the North Buton Hospital inpatient ward revealed that most nurses documenting nursing care were still lacking details of the assessment aspects mostly in the poor category, the diagnosis aspects were mostly in the good category, the planning aspects almost all in the poor category, the action aspects (implementation) mostly in the good category, and the evaluation aspects almost all in the poor category (Jaya et al., 2019). According to the study's findings, which involved 110 nursing care instruments for COPD patients, the majority (64.8%) of the nursing diagnoses were ineffective breathing patterns and were not in accordance with the terminology of the Indonesian Nursing Diagnosis Standard (Sholihin, 2020).

The Head of Training and Education stated that the hospital had established nursing diagnoses using the Indonesian Nursing Diagnosis Standards and that a book review had been carried out based on the findings of an initial study at Ngimbang Lamongan Regional Hospital. According to the findings of an interview with the pediatric room head, the Indonesian Nursing Diagnosis Standards have been in use since 2021. Two diagnoses—hyperthermia and acute pain—that were based on the Indonesian Nursing Diagnosis Standards diagnosis label were found in the observations of five medical records. Conversely, three—thermoregulation disorders, increased body temperature, and deficient fluid volume—did not fit the diagnosis classification. Diversity is still found in formulating nursing diagnoses due to the diversity of nursing education, nurse knowledge, and even differences in the reference standards used.

Making a clinical judgment regarding the existence of a human response that necessitates nursing intervention is the second phase in the nursing process, known as nursing diagnosis. Determining the course of treatment and anticipated results requires a solid diagnosis.

Based on nursing notes in 256 patients' ICU medical records, 52 different diagnostic labels have been identified (Ferreira et al., 2016). In the absence of a suitable nursing diagnosis, nursing actions may not benefit the patient's healing process and may even produce complications for the patient (Berman et al., 2022). Training is needed in providing nursing care. Training by knowledge, assistance, and evaluation so that nurses' knowledge and skills in the Indonesian Nursing Diagnosis Standard can increase (Sukes, 2021). This study was to learn how to describe the application of the Indonesian Nursing Diagnosis Standards (SDKI) in documenting nursing diagnoses in children with Dengue Hemorrhagic Fever (DHF).

MATERIALS AND METHODS

This study uses quantitative observational research with a retrospective descriptive research design and secondary data. By going back into the past, retrospective descriptive research aims to provide an objective picture or explanation of a state (Notoatmodjo, 2018). The secondary data used in this investigation came from medical records between February 1, 2021, and March 31, 2022. In 2022, the study was carried out in the pediatric room of Ngimbang Hospital. The study's population consisted of all pediatric DHF patients' medical records from February 1, 2021, to March 31, 2022, in the pediatric room at Ngimbang Hospital. The sample consisted of 30 medical records using the total sampling technique. The variables of this study are documentation of nursing diagnoses in pediatric patients with Dengue Hemorrhagic Fever (DHF). Data collection using observation sheet instruments was compiled based on the documentation study instrument for the implementation of nursing care standards in hospitals from the Ministry of Health in 1995 and the Indonesian Nursing Diagnosis Standards which have been developed and modified by researchers by the research objectives. Categorical univariate data analysis is to find frequency distribution and percentage, while numeric is to find mean and minimum-maximum. This research has been ethically approved by the Health Research Ethics Committee - Faculty of Nursing, University of Jember: 054 / UN25.1.14 / KEPK / 2022.

RESULTS

The characteristics of respondents in this study consisted of gender, degree of DHF, phase of DHF, and age of respondents (table 1).

Table 1. Respondent Characteristics (n = 30)

Sub Variables	Frequency	Percentage	Mean	Min - Max
Gender				
Man	16	53.33		
Woman	14	46.67		
Total	30	100		
Grade DHF				
Grade I	26	86.67		
Grade II	2	6.67		
Degree III	2	6.67		
Degree IV	0	0		
Total	30	100		
DHF Phase				
Critical (4 – 5 days)	8	26.67		
Healing (6 – 7 days)	17	56.67		
High fever (1-3 days)	5	16.67		
Total	30	100		
Age			7 years	6 months – 14 years

Table 1 indicates most (53.33%) of the respondents are male, 16 respondents. Almost all (86.67%) have DHF degree 1, namely 26 respondents. Most (56.67%) of the DHF phase is the critical phase (4-5 days), namely 17 respondents. The average age of respondents is 7 years. A minimum age of 6 months and a maximum of 14 years.

Table 2. Variations in Writing First and Second Priority Nursing Diagnosis Labels in Pediatric Patients with DHF (n = 30)

Nursing Diagnosis Labels Based on Indonesian Nursing Diagnosis Standards	Variations in Writing Nursing Diagnosis Labels	Frequency	Percentage
First Priority	First Priority		
Hyperthermia	a. Hyperthermia	27	90.0
	b. Thermoregulation disorders	1	3.33
	c. Increased body temperature	2	6.67
Total		30	100
Second Priority	Second Priority		
Acute Pain	Acute Pain	8	26.67
Nutritional deficit	Nutritional deficit	1	3.33
Ineffective breathing pattern	a. Ineffective breathing pattern	1	3.33
	b. Breathing pattern disorders	2	6.67
	Impaired airway clearance	2	6.67
	Deficient fluid volume	2	6.67
No second-priority nursing diagnosis was formulated		14	46.67
Total		30	100

Based on Table 2, there are variations in writing nursing diagnosis labels, namely almost all (90%) of the priority nursing diagnosis labels are by the Indonesian Nursing Diagnosis Standards, hyperthermia, a small portion (3.33%) of nurses wrote variations in the labels, thermoregulation disorders and a small portion (6.67%) increased body temperature. In the second priority nursing diagnosis, almost half (26.67%) of nursing diagnosis labels were found to be by the Indonesian Nursing Diagnosis Standards, namely acute pain.

Table 3. Nursing Diagnosis Documentation based on Indonesian Nursing Diagnosis Standards: [problems] related to [cause/related factors] as evidenced by [signs/symptoms] in Pediatric Patients with DHF (n=30)

Nursing Diagnosis	Frequency	Percentage
Actual Nursing Diagnosis:		
a. It is not by	30	100
b. In accordance	0	0

Total	30	100
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Table 3 shows that all (100%) of the actual writing of nursing diagnoses does not comply with the Indonesian Nursing Diagnosis Standards, consisting of writing three parts: [problems] related to [cause/related factors] as evidenced by [signs/symptoms] (problems related to causes proven by signs/symptoms). The writing of nursing diagnoses only consists of nursing problems or problems and causes.

DISCUSSION

Variations in Writing First and Second Priority Nursing Diagnosis Labels in Pediatric Patients with DHF

Based on Table 2, there are variations in writing nursing diagnosis labels, namely almost all of the first priority nursing diagnosis labels are under the Indonesian Nursing Diagnosis Standards, hyperthermia. In the second priority nursing diagnosis, almost half (26.67%) of the nursing diagnosis labels follow the Indonesian Nursing Diagnosis Standards, namely acute pain. Nursing diagnoses that often appear in DHF cases are hyperthermia, acute pain, nutritional deficits, hypovolemia, risk of bleeding, ineffective breathing patterns, risk of shock, and ineffective peripheral perfusion (Nurarif & Kusuma, 2015). In the Indonesian Nursing Diagnosis Standards, hyperthermia (D.0130) is included in the environmental category, while acute pain (D.0077) is in the psychological category (Tim Pokja SDKI DPP PPNI, 2017).

One of the main issues with DHF patients is hyperthermia (Mulyani & Lestari, 2020). A rise in body temperature over the normal range is known as hyperthermia (Tim Pokja SDKI DPP PPNI, 2017). Clients suffering from DHF will experience dengue virus infection resulting in an inflammatory process, which causes activation of interleukin 1 in the hypothalamus to stimulate the release of prostaglandins, resulting in increased thermostat activity, causing an increase in body temperature (Mulyani & Lestari, 2020). Common symptoms of dengue fever are fever and headache. The formulation of nursing diagnoses with symptoms that appear in patients consistently occurs around 45.4%, namely hyperthermia, acute pain, nausea, risk for ineffective gastrointestinal perfusion, and risk for bleeding. The formulation of inconsistent nursing diagnoses is 27.3%, namely anxiety, deficient fluid volume, and risk for falls. The level of undiagnosed symptoms was found to be 27.3%, including diarrhea, risk for infection, and impaired oral mucous membrane integrity (Shang et al., 2021).

Almost all respondents have grade 1 DHF. Signs and symptoms of grade 1 are fever and bleeding symptoms (positive tourniquet test), thrombocytopenia < 100000 cells/mm³, and an increase in hematocrit $\geq 20\%$ (World Health

Organization, 2011). The major sign of hyperthermia is a body temperature above normal values (Tim Pokja SDKI DPP PPNI, 2017) so nurses establish a priority nursing diagnosis in patients, namely hyperthermia. Good and appropriate handling by nurses so as not to cause patients to experience worse conditions. The results of the study mostly experienced a critical phase (day 4-5). The patient was taken to the hospital because the patient still had a fever (body temperature above normal values) so the priority nursing diagnosis of DHF was hyperthermia, this was intended so that the patient did not experience severe dehydration and could damage other parts of the body and could even go into shock. In the critical phase (days 4-5) the patient also experienced a decrease in fever, and body temperature 37°C. The patient seemed to recover, but there was bleeding and blood plasma leakage (Kementerian Koordinator Bidang Pembangunan Manusia dan Kebudayaan, 2023).

Based on Table 2, there are variations in writing nursing diagnosis labels, namely almost all (90%) of the priority nursing diagnosis labels are by the Indonesian Nursing Diagnosis Standards, hyperthermia, a small portion (3.33%) of nurses wrote variations in the labels, thermoregulation disorders and a small portion (6.67%) increased body temperature. In the second priority nursing diagnosis, almost half (26.67%) of the nursing diagnosis labels were found to be by the standards, namely acute pain.

The results of the study (table 2) obtained nursing diagnosis labels in pediatric patients with DHF that are by the Indonesian Nursing Diagnosis Standards, namely hyperthermia, acute pain, nutritional deficits, and ineffective breathing patterns, while variations in writing nursing diagnosis labels that are not by the Indonesian Nursing Diagnosis Standards are thermoregulation disorders, increased body temperature, breathing pattern disorders, impaired airway clearance, and deficient fluid volume. This previous research, from 110 nursing care instruments for COPD patients showed that the majority (64.8%) of the most common nursing diagnoses were ineffective breathing patterns and were not by the terminology of the Indonesian Nursing Diagnosis Standards (Sholihin, 2020).

A clinical judgment based on the patient's reaction is called a nursing diagnosis. Collecting information from people, families, and communities regarding current or possible health issues as a foundation for choosing nursing interventions to accomplish nursing care objectives through nurses' power and accountability (NANDA International, 2021). Nursing intervention plans will be impacted by inconsistent nursing diagnosis writing. Several internationally accepted nursing diagnosis standards exist. However, because these criteria were not created with cultural differences and the distinctiveness of nursing services in Indonesia in mind, they are deemed inappropriate for implementation in that country. The Indonesian Nursing Diagnosis Standards are nursing language standards created by the Indonesian National Nurses Association that are adapted to cultural variations and the distinctiveness of Indonesian nursing services (Tim Pokja SDKI DPP PPNI, 2017).

There are still many variations in writing nursing diagnosis labels, this occurs because nurses' knowledge is lacking regarding the compliance of nursing diagnoses by the Indonesian Nursing Diagnosis Standards and still using previous nursing language standards, namely NANDA, and NIC-NOC. The previous studies at Dr. J. Leimena Ambon General Hospital said that the use of the 3 standards (Indonesian Nursing Diagnosis Standards, Indonesian Nursing Intervention Standards, Indonesian Nursing Outcome Standards) book is still relatively new so some still use NANDA, NIC-NOC references, and even how to use 3S itself is still difficult for some nurses. There is a relationship between nurses' knowledge and the application of 3S in nursing care with the use of 3S (Herwawan et al., 2023).

The diagnostic terminology used in the NANDA and Indonesian Nursing Diagnosis Standards is very similar. This influences the clinical judgment of the nurse while evaluating patient cases to make a diagnosis. Because they have been studying since college, nurses are more familiar with NANDA; yet, when they choose a diagnosis using Indonesian Nursing Diagnosis Standards, the diagnosis is nearly identical to the NANDA-based diagnosis. Numerous research has been carried out globally, and NANDA is a diagnostic standard with a high degree of scientific evidence. Although more research is required, the Indonesian Nursing Diagnosis Standards have the potential to become a standard nursing language (Nurhesti et al., 2020). Nurses must receive training on the Indonesian Nursing Diagnosis Standards to apply nursing diagnoses using the standards' terminology.

Documentation of Actual Nursing Diagnosis based on Indonesian Nursing Diagnosis Standards: [problems] related to [cause/related factors] as evidenced by [signs/symptoms] in Pediatric Patients with DHF

Table 3 shows that all (100%) of the actual nursing diagnosis writing is not by the Indonesian Nursing Diagnosis Standards, which consists of writing three parts: [problems] related to [cause/related factors] as evidenced by [signs/symptoms], but rather the writing of nursing diagnoses is only in the form of nursing problems or problems and causes. A nursing diagnosis is a clinical assessment of the patient's response to health issues or life processes that the patient has experienced, both actual and potential, aimed at identifying individual, family, and community reactions to health-related situations. The Indonesian Nursing Diagnosis Standards state that documentation of actual nursing diagnoses consists of three parts consisting of [problems] related to [cause/related factors] as evidenced by [signs/symptoms]. In contrast, risk and health promotion nursing diagnoses consist of [problems] as evidenced by [signs/symptoms]. The requirement for establishing a nursing diagnosis is a major sign of 80-100%. An example of correct writing is hyperthermia associated with an infection process evidenced by a body temperature above normal, red skin, warm skin, tachycardia, and tachypnea (Tim Pokja SDKI DPP PPNI, 2017).

Common issues with documentation implementation include noncompliance with nursing language standards, particularly regarding consistency in the use of nursing diagnosis and intervention language (Sholihin, 2020). The implementation of documentation of the Indonesian Nursing Diagnosis Standard still requires improvement, such as writing actual nursing diagnoses that must be followed by major and minor signs/symptoms. This can also happen because this process can be carried out simultaneously by experienced nurses. However, for nurses who are not yet experienced, training and habituation are needed to establish nursing diagnoses systematically (Tim Pokja SDKI DPP PPNI, 2017). The results of a study in the North Buton Hospital Inpatient ward showed that most nurses in documenting nursing care were still lacking details of the assessment aspects mostly in the poor category, the diagnosis aspects mostly in the good category, the planning aspects almost all in the poor category, the action aspects (implementation) mostly in the good category,

and the evaluation aspects almost all in the poor category (Jaya et al., 2019).

The inconsistency of the writing of nursing care documentation in the nursing diagnosis aspect is possibly due to the lack of nurses' knowledge about writing nursing diagnosis documentation based on the Indonesian Nursing Diagnosis Standard, so there needs to be a refreshing of knowledge about the Indonesian Nursing Diagnosis Standards for nurses. The results of previous studies in the inpatient ward of Surabaya Hospital showed that there was a relationship. The results of previous research in the Surabaya Hospital showed a relationship between nursing education, team competence, and clinical practice with the accuracy of nursing diagnosis formulation according to the Indonesian Nursing Documentation Standards. As diagnosis enforcers, nurses need good diagnostic competence to be the basis for formulating nursing interventions to increase, prevent, heal, recover, and rehabilitate patients' health (Hasina et al., 2023).

CONCLUSIONS

Almost all of the priority nursing diagnosis labels in DHF pediatric patients are by the Indonesian Nursing Diagnosis Standards, namely hyperthermia. However, all of the actual nursing diagnosis writing is not by the standards, consisting of three parts: [problems] related to [cause/related factors] as evidenced by [signs/symptoms], the writing of nursing diagnoses is only in the form of nursing problems or problems and causes.

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