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ETHICAL AND CLINICAL CONSIDERATIONS IN THE USE OF RESTRAINTS FOR PATIENT SAFETY IN INTENSIVE CARE UNITS

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ABSTRAK

Penggunaan tindakan *restrain* pada pasien di ruang perawatan intensif merupakan intervensi yang sering dilakukan untuk menjaga keselamatan pasien, terutama dalam mencegah pelepasan alat invasif yang vital. Namun, praktik ini menimbulkan dilema karena melibatkan pertimbangan etik dan klinis yang kompleks. Tujuan penelitian ini adalah untuk mengetahui pertimbangan etik dan klinis dalam penggunaan *restrain* untuk keselamatan pasien di ruang perawatan intensif. Penelitian ini merupakan penelitian kualitatif dengan desain fenomenologi, pengumpulkan data menggunakan *indepth interview* pada delapan partisipan di ruang rawat intensif, analisa data menggunakan metode Collaizi. Hasil penelitian ini didapatkan tiga tema yaitu mempertimbangkan kebutuhan pasien, mencegah terlepasnya alat invasive dan *contradictive feeling*. Diperlukan penyusunan kebijakan yang lebih jelas dan terstandarisasi mengenai penggunaan *restrain* di ruang perawatan intensif yang mengintegrasikan pertimbangan etik dan klinis.

ABSTRACT

The use of physical restraints on patients in intensive care units (ICUs) is a common intervention aimed at ensuring patient safety, particularly in preventing the dislodgement of vital invasive devices. However, this practice raises ethical and clinical dilemmas due to the complex considerations involved. The aim of this study was to explore the ethical and clinical considerations in the use of restraints for patient safety in the intensive care setting. This research employed a qualitative phenomenological design, with data collected through in-depth interviews involving eight participants in the intensive care unit. Data were analyzed using the Colaizzi method. The study identified three major themes: considering the patient's needs, preventing the dislodgement of invasive devices, and experiencing contradictory feelings. The findings highlight the need for clearer, standardized policies on the use of restraints in intensive care units that incorporate both ethical and clinical perspectives.

INTRODUCTION

Restraint is an action or procedure that limits a person's freedom to move, perform physical activity by using physical or mechanical tools and devices attached to the patient's body (Kassew et al., 2020). Restraint is performed to limit the movement of patients with psychomotor agitation and is often performed in the Intensive Care Unit (ICU) and Intensive Coronary Care Unit (ICCU) (Fitri et al, 2022). Psychomotor agitation (PMA) is a state of motor restlessness and mental tension that requires encouragement, recognition, assessment and appropriate management to minimize anxiety for patients (Vieta et al., 2017).

Psychomotor agitation risks disrupting life-sustaining devices and treatments and also disrupts routines and jeopardizes patient safety (Teece et al., 2022).The decision to restrain a patient is to stop or reduce violent and aggressive behavior to protect the safety of the patient, staff, other patients or relatives (Chapman et al., 2016). Health professionals use restraints to prevent interruptions in treatment procedures and protection of patients from harm (Kassew et al., 2020).

The use of restraints poses a dilemma between the principles of non-maleficience and beneficience and the principle of autonomy (Acevedo-Nuevo et al., 2021). The use of restraints is a nursing intervention that causes physical and psychological harm to patients. Such as skin, vascular, and nerve injuries, increased risk of nosocomial infections, agitation, delirium, higher rates of unplanned self-extubation, higher use of psychotropic medications, and increased length of stay. In addition, the use of restraints affects patient autonomy and dignity, in some countries, the use of restraints is considered a deprivation of liberty and a form of imprisonment (Via-Clavero et al., 2020).

Negative physical and mental outcomes from restrain are produced due to nurses' negligence in conducting assessments, restrain is associated with understaffing, heavy workload, time constraints, and emergency situations. This situation requires careful decision-making, increases the risk of error, and harms the patient. All these negative results are contrary to the ethical principles of non-maleficence, thus causing an ethical dilemma for nurses (Salehi et al., 2020).

The prevalence of restraint use in critical care varies widely across the world (Via-Clavero et al., 2020) . The prevalence of restraint use reaches around 0% in the UK and Scandinavian countries, otherwise 23% of ICU admitted patients in the Netherlands, 76% of mechanically ventilated patients in Canada and while the range fluctuates from 13% to

50% in the USA, 45-50% in Switzerland and France, and 48.4% in South Africa, a prevalence of 15% to 43.9% was reported in Spain (Acevedo-Nuevo et al., 2021).

Approximately 80% of critically ill patients admitted to the intensive care unit (ICU) may require restraint due to agitation, confusion, sleeplessness, and disruptive behaviors. These behaviors lead to removal of attached medical devices, fall injuries, and harm to the patient themselves or others. Some literature reports that the prevalence of restraint use among critically ill patients ranges from 62% to 79% worldwide (Kassew et al., 2020).

Interviews with several nurses previously said that there were several negative impacts in the use of restrains, such as injured skin due to friction from the patient's movements that could not be controlled. In making the decision to do a restrain, the nurse also feels an ethical dilemma because with the use of the restrain we reduce the patient's freedom to move, but because it is considered that the benefits are greater so they decide to do the restrain. Nurses said another factor in making the decision to restrain was because the number of nurses and patients was not proportional. Based on this phenomenon, it is very important to conduct research on the ethical and clinical considerations in the use of restraints for patient safety in intensive care units.

RESEARCH METHODS

This study is a qualitative study with a phenomenological design. The study was conducted in the ICU and ICCU wards of a Hospital in Aceh. Participants in this study were implementing nurses and team leaders with a total of eight participants with inclusion criteria: (1) implementing nurses and team leaders who work in the ICU and ICCU, (2) have a minimum work period of 1 year, (3) are willing to share their experiences directly, (4) are not currently in self-isolation due to COVID-19 infection, (5) are not on annual leave/maternity leave/study assignments. Data collection was carried out through in-depth interviews with open-ended questions developed by the researcher. Interviews lasted between 20–50 minutes and were recorded and transcribed verbatim. When data saturation was reached after eight interviews, data gathering was stopped.

Data analysis used the collaizi method (1978 in Hobbs, Plessis, & Benadé, 2020) which has been systematically arranged. The seven-step phenomenology approach of Colaizzi was used to examine the data acquired in this study: (1) interview recordings were attentively listened to, and the participants' comments were verbatim captured to reflect the entire content of the interview; (2) organizing critical statements to provide data that is closely relevant to the topic under investigation; (3) extracted meaningful

sentences; (4) the four themes were created by grouping and categorizing; (5) the study themes from phenomenon were utilized to further organize comprehensive general descriptions; (6) detailed descriptions were summarized; and (7) the participants were allowed to look over the analyzed data

RESULTS AND DISCUSSION

The majority of respondents in this study were female with an age range between 30 to 34 years. Most of them worked as Registered Nurse with majoritu the last educational background is diploma nurse. The respondents' employment status was dominated by contract employees, and the most work period was for 6 years.

Table 1. Respondent Characteristics

Respondents	Age	Gender	Job position	Employment status	Last education	Length of Service
P1	29	Female	Registered nurse	PNS	Ners	5 Years
P2	30	Female	Registered nurse	Contract	Ners	6 Years
P3	31	Female	Registered nurse	PNS	Ners	6 Years
P4	30	Female	Registered nurse	Contract	Diploma III	6 Year
P5	38	Male	Registered nurse	Contract	Diploma III	12 Years
P6	34	Female	Katim	PNS	Diploma III	12 Years
P7	33	Male	Registered nurse	Contract	Diploma III	6 Years
P8	34	Female	Katim	Contract	Diploma III	12 Years

Researchers have collected data on eight participants involved in this study. Based on the results of data analysis obtained from interviews, observations and field notes or notes written by researchers describing the situation at the time of the research. 3 themes have been obtained that are related to or lead to participants' answers to questions asked by researchers. The themes obtained namely considering patient needs, preventing the release of invasive devices and contradictive feelings. The themes are described as follows:

a. Considering patient needs

This theme describes how nurses assess the needs of psychomotor agitation patients with the current state of consciousness, and invasive devices attached. Some participants expressed their experiences as follows:

"Before restraining, we usually see whether the patient is suitable for restraining, for example, the patient cannot receive orders"(P1)
"We usually restrain patients who have decreased consciousness, not patients who are compos mentis, but patients who are below compos mentis consciousness, for example stroke patients, some have apathetic consciousness or can be delirium" (P2).
"For example, like an IV, yes, we identify it first. The catheter" (P3)
"Usually we tie up patients who are attached to ventilators, why do we tie them up, because we are afraid of pulling the ETT (Endotracheal Tube), apnue (respiratory arrest)" (P4).
"If the intubation tube is pulled out, there is no breathing because the patient is put to sleep, so breathing is indeed a total machine or NGT, infusion hose, or CVC (Central Venuous catheters) infusion hose in the vein, it is dangerous if it is pulled out, the blood can come out, because the CVC is directly into the heart vein" (P1).

b. Prevent removal of invasive devices

In addition to considering the patient's level of consciousness, nurses also consider patient safety such as preventing invasive devices from slipping out, and preventing falls and injuries. Invasive devices installed, such as Intravenous Fluid Drops (IVFD), Nasogastric Tube (NGT), Endotracheal Tube (ETT), syring pump. These invasive devices are often installed by patients who are in delirum conditions such as patients who experience psychomotor agitation, so the use of restraints is needed to maintain patient safety. The following is the participant's statement:

"Because it is for the patient too and we are also easy ee we don't repeatedly install NGTs, for example, unplugging, installing IVs or others, sometimes patients who we install ventilators, they use intubation, using intubation, we are afraid that if for example we don't restrain them, they will pull out the intubation tube, then it will endanger the patient because he is wearing a ventilator breathing apparatus" (P1).
"For the comfort (safety) of patients as well, for the nurses as well, meaning that they are afraid of injuring the patient, right, pulling the IV can bleed, blood can be spilled on the patient's bad, after that, for example, there is a very necessary drug while the IV has been removed, the patient can drop and also have to wait to install the IV again while the medicine must continue to enter" (P4).
....we don't want to take the risk of patients falling, then we use all sophisticated equipment if the patient is nervous he is afraid of falling the equipment besides the risk of falling the patient's equipment is damaged such as infusions, NGT, drains if patients who have surgery, catheters can be pulled out the risk (P5)

c. Contradictive feeling

In this condition nurses also experience contradictory feelings where on the one hand nurses want to maintain patient safety by considering several patient needs,

but on the other hand nurses also feel heartless, a feeling of pity arises when they have to restrain the patient, following the participant's statement:

"We feel good or bad when we restrain him, sometimes he wants to move, while when he has to stay there it affects his muscles too. The feeling is affectionate, but considering the things mentioned earlier (not removing the attached equipment) we finally tied him up" (P3).
"It's a shame, but it's for his safety too, if we don't tie him up, he's afraid of falling, especially if the patient is rich with a venti, if we don't tie him up, he's afraid of pulling out the ETT" (P3)
"Actually, we can't bear it either, if I personally yes, we tie it up, but yes for the patient too, actually not for us too, he is not controlled, what is the term, he can injure himself because he is not controlled" (P5).

Discussion

Patients with psychomotor agitation have needs in supporting the healing process such as the installation of monitors, ventilators, administration of fluids and drugs through IVFD and syring pumps, elimination needs with the installation of urine catheters and nutritional needs through the installation of NGT. Taking into account some of these needs is one of the factors that trigger nurses to restrain.

Before restraining the nurse ensures the need for restraint installation, one of which is by conducting an assessment. Assessment is part of the collection of information needed in decision making, such as ensuring the patient's level of consciousness and the need for restraint, as well as the use of invasive tools. Obtaining accurate information will help produce the right decision making.

Nurse decision-making is an independent process that requires nurses to get a good picture of the patient by performing assessments to get a wise decision (Riahi, 2016). Relying on one's experience is not enough for high-quality clinical decisions especially for non-expert nurses. Nurses as direct care providers must not only pay attention to the quantity of nursing tasks they complete, but must pay attention to the quality of judgments and decisions that significantly affect patients (Li & Fawcett, 2014). The results of interviews conducted by Goethals et al (2013) revealed that nurses try to understand the whole situation by observing the patient and getting information.

The state of the level of consciousness in patients with psychomotor agitation is a consideration for the patient's need for restraint. Assessing the patient's level of consciousness carried out by the nurse is by assessing the GCS and the patient's general condition. Patients who are restrained are usually patients with a level of consciousness below compos mentis, such as delirium. These agitated patients usually have the potential to interfere with invasive devices attached to the patient.

Before restraining the nurse also identifies medical devices attached to the patient, to determine the need for restraint installation. Patients with psychomotor agitation have the potential to pull invasive devices attached due to uncontrolled movement, so one of the things nurses do is to first make sure that the patient is attached to invasive devices that if released can endanger the patient. In the ICU, equipment that is often attached to patients such as IVFD, NGT, ETT, syring pump, urine catheter and others.

The purpose of using restraints is problematic if the nurse cannot ascertain whether the use of restraints is a real need of the patient. Maintaining patient technological devices such as mechanical ventilation is the nurse's responsibility to monitor the use of such devices and to prevent life-threatening accidents such as unplanned extubation (Li & Fawcett, 2014). In some literature, there are many factors of restraint use. Agitation and attempted self-discharge of artificial airways, patients with artificial airways and ETT (Acevedo-Nuevo et al, 2021). Used among patients receiving mechanical ventilation (Unoki, 2018). Continuous use of IVs is also one of the factors in the use of restraints (Luk et al., 2014).

Patient safety is a very important thing that must be done by nurses. Based on the results of research to nurses that restraints are carried out so that patients become safer, avoiding patients from various things that interfere with patient safety such as the risk of falls and injuries, invasive tools are pulled out. For example, in a patient attached to an ETT if the ETT tube is pulled out, it will have an impact on the patient's breathing. Based on these considerations, the nurse decided to restrain the patient. This is in line with a study conducted by Kandeel & Attia (2013) that the most important reason for applying restraints in the ICU is to ensure patient safety (96.1%).

Patients with psychomotor agitation experience decreased awareness and restlessness so that they tend to pull invasive devices installed such as IVFD, NGT, ETT and syring pump due to uncontrolled patient movement. If the device is detached, it can endanger the patient, besides that if the invasive device is detached, it requires reinstallation which can make the patient feel pain and cause discomfort, so based on consideration of the patient's needs, the nurse restrains the patient.

This is in line with the results of Bassi's research (2011), the main reason for using restraints in the ICU is to protect patients from the release of therapeutic devices (endotracheal tubes, intra-aortic balloon pumps, lung drainage, central venous catheters, arterial catheters, bladder catheters, feeding tubes, etc.) can result in serious harm, injury or death. Removal of patients from devices other than endotracheal tubes (e.g. intra aortic

balloon pumps) poses a life-threatening hazard. In addition, peripheral intravenous catheter devices may cause minor to no harm to the patient but can consume significant staff time.

The demand to maintain patient safety, particularly in terms of protecting the patient's airways as an aspect of nursing care is so embedded in ICU culture, nurses described maintaining patient safety to be the most significant driving force in decision-making regarding the application of physical restraint even at the expense of providing holistic care (Perez et al., 2021).

Another factor that becomes the reason for nurses to restrain psychomotor agitation patients is to avoid falling and injury. Agitated patients sometimes try to get out of bed, it is feared that this will pose a risk of falling on the patient and causing injury so that one of the ways that nurses do to keep patients safe from the risk of falling is to restrain them. In a study by Salehi et al (2020) from the results of nurse interviews it was found that not using restraints could be associated with risks such as delays in care, falls, tissue trauma, withdrawal or disconnection, heavy care costs, and even death. Therefore, they chose to use restraints to prevent these problems.

In addition, nurses also experience contradictive feelings in carrying out restraints. Contradictive feeling is a difference in behavior and perception (Fithria et al., 2021). In this situation, nurses are faced with a situation where on the one hand nurses face feelings of heartlessness when restraining patients, but on the other hand nurses face a situation that requires them to restrain to maintain patient safety. Nurses consider that patients have a need for comfort, have safety needs, need to be free from injury, and other needs such as fulfillment of nutritional needs, drugs and others. To meet these needs, it is necessary to install a device to avoid disruption of the fulfillment of these needs so that nurses decide to restrain.

Nurses face uncertainty in making the decision to use restraint. While ensuring patient safety is an important factor behind the decision to use restraint, nurses also need to consider ethical principles such as beneficence, autonomy and patient dignity when making decisions regarding restraint. They face uncertainty and conflict in choosing between patient safety and autonomy. Nurses also experience negative feelings about restraint such as discomfort, guilt, conflict, and pity. However, they feel compelled to use restraints to protect patient health and ensure patient safety. The use of restraints is in line with the ethical principles of beneficience and non-malefecience but contradicts the principle of autonomy (Salehi et al., 2020).

The use of restraints often results in nurses feeling a conflict in their values and attitudes. The nurses revealed that they highly value and respect the patient's autonomy and dignity, but at the same time they feel the need to restrain for patient safety (Guenna Holmgren et al., 2021).

CONCLUSIONS AND SUGGESTIONS

This study shows that the use of restraints in the intensive care unit is not only based on clinical considerations to prevent the removal of invasive devices, but is also influenced by complex ethical considerations. The three main themes found considered patient needs, preventing invasive device removal, and contradictory feelings. This illustrates the dilemma that healthcare workers face in daily practice. While restraint can improve aspects of patient safety, it also has potential psychological and ethical repercussions that need to be addressed carefully.

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