Ethical Sensitivity of PADIS Care Among Critical Care Nurses: A Mixed Methods Study

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ETHICAL SENSITIVITY OF PADIS CARE AMONG CRITICAL CARE NURSES
A MIXED METHODS STUDY

by
Denise Waterfield

A DISSERTATION

Presented to the Faculty of
the University of Nebraska Graduate College
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for the Degree of Doctor of Philosophy
Nursing Graduate Program

Under the Supervision of
Professor Susan Barnason, Ph.D.

University of Nebraska Medical Center
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ABSTRACT

ETHICAL SENSITIVITY OF PADIS CARE AMONG CRITICAL CARE NURSES

Denise Waterfield, Ph.D.
University of Nebraska, 2022

Supervisor: Susan Barnason, Ph.D.

Critically ill patients often experience distressful and impactful symptoms and conditions that include pain, agitation/sedation, delirium, immobility, and sleep disruption (PADIS). The presence of PADIS can affect recovery and long-term patient outcomes. An integral part of critical care nursing is PADIS prevention, assessment, and management. To better understand the complexities of PADIS care, two reviews of the literature were completed. The first is outlined in Chapter 1 and is an integrative review of the use of PADIS assessment tools by critical care nurses. Chapter 2 is a qualitative systematic review of the literature on the integration of care ethics and nursing workload. Chapter 3 is the manuscript of a mixed methods study to explore ethical sensitivity of PADIS care among critical care nurses. Ethical sensitivity of everyday nursing practice related to PADIS is an imperative part of implementing evidence-based care for patients.

The aims of this convergent parallel mixed methods study were:

Aim 1: To determine the measured level of ethical awareness as an attribute of ethical sensitivity among the critical care nurse participants.

Aim 2: To explore the ethical sensitivity of critical care nurses related to implementation of PADIS care.
Aim 3: To examine how the measured level of ethical awareness and ethical sensitivity exploration results converge, diverge, relate to each other and/or produce a more complete understanding of PADIS ethical sensitivity by critical care nurses.

The participants were 19 critical care nurses who were observed during patient care, interviewed individually and in a focus group, and administered the Ethical Awareness Scale. Despite high levels of individual ethical awareness among nurses, themes of ambiguous beneficence, heedless autonomy, and moral distress were found related to PADIS care. More effort is needed to establish moral community, ethical leadership, and individual ethical guidance for nurses to establish patient-centered decision making and implement PADIS care.

Keywords: Nursing Ethics, Ethical Sensitivity, Critical Care Nurses, Practice Guidelines, Pain, Agitation, Sedation, Mobility, Sleep
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LIST OF ABBREVIATIONS

BPS Behavioral Pain Scale
CAM-ICU Confusion Assessment Method for the Intensive Care Unit
CFIR Consolidated Framework for Implementation Research
CINAHL Cumulative Index to Nursing and Allied Health Literature
COVID-19 Coronavirus disease 2019
CPOT Critical-Care Pain Observation Tool
EAS Ethical Awareness Scale
ICDSC Intensive Care Delirium Screening Checklist
ICU Intensive Care Unit
MD Medical Doctor
MEDLINE Medical Literature Analysis and Retrieval System Online
MESH Medical Subject Headings
MMAT Mixed Methods Appraisal Tool
NRS Numerical Rating Scale
PAD Pain, Agitation, and Delirium
PADIS Pain, Agitation, Delirium, Immobility, and Sleep Disruption
PSYCInfo Psychological Information
RASS Richmond Agitation-Sedation Scale
RN Registered Nurse
SAS Sedation-Agitation Scale
SCCM Society of Critical Care Medicine
INTRODUCTION

Advancements in critical care have resulted in higher survivor rates and a broader focus on patients’ quality of life after hospitalization. Unfortunately, after critical illness, patients may suffer from persistent and debilitating consequences that are directly caused by the presence of common conditions in critically ill patients including pain, agitation/sedation, delirium, immobility and sleep disturbances (Krumholz, 2013). This group of symptoms and conditions is often represented with the acronym PADIS. As part of the strategy to improve quality health care, one of the aims is to improve patient-centered care by paying attention to physical comfort and respecting patients’ values, preferences, and expressed needs (Institute of Medicine, Committee on Quality of Health Care in America, 2001). Ethical values provide a practical basis for a nurse’s decision-making about how to provide patient-centered care in the presence of PADIS. Ethical practice is foundational to nursing, and nurses must refrain from maltreatment, minimize harm, and do good for patients. This paper presents a theoretical framework for examining the everyday ethical practice of critical care nurses with a focus on PADIS prevention, assessment, and management. Guided by an established behavioral theory, the purpose of the framework is to gain a better understanding of critical care nurses’ ethical sensitivity to PADIS care.

PADIS in Critical Care

Post-intensive care syndrome is an unfortunate, although it is a common adverse consequence of critical illness characterized by new or worsening impairment in physical, cognitive, or mental health status (Harvey & Davidson, 2016). Some of the conditions that cause the syndrome are due to the presence of PADIS. Risk factors of long-term, physical weakness after illness include immobility, number of days on mechanical ventilation, length of stay in the
intensive care unit, heavy sedation, and delirium. Physical weakness occurs in 25-80% of patients who need mechanical ventilation during their hospital stay (Harvey & Davidson, 2016), and the length of time of mechanical ventilation is often due to over sedation and presence of delirium (O’Connor et al., 2014; Simpson et al., 2013). Up to 56% of survivors of critical illness will experience cognitive impairments for months to years after discharge (Elliott et al., 2018; Wolters et al., 2013). The impairments affect memory, executive function, language, attention, and visual-spatial abilities. Among the risk factors for these cognitive problems are disturbing memories like those of the presence of pain, length of sedation, and the presence of delirium (Clancy et al., 2015).

Unfortunately, PADIS remains prevalent among critical care patients. Nearly 50% of surgical and non-surgical critical care patients recall experiencing moderate to severe pain during their illness (Ethier et al., 2011; Glynn & Ahern, 2000), and undertreated pain puts the patient at risk of agitation, delirium, and post-traumatic stress disorder after discharge (Davidson et al., 2013). Among critically ill patients, the incidence of delirium is reported to be between 45% and 87% (Jackson & Khan, 2015), and over-sedation is potentially present at 40% to 60% of assessments (Jackson et al., 2009). Although bed rest can account for up to 94% of wakeful hours while hospitalized, immobility is known to decrease a patient’s baseline level of function and increase the risk of delirium, falls, and institutionalization after discharge (Young et al., 2020). Finally, sleep for a critical care patient is fragmented and low quality and can cause or worsen delirium (Pisani & D’Ambrosio, 2020). Nurses are in the position to discern PADIS and take appropriate action to improve patient outcomes by using evidence to inform practice.

Evidence-Based PADIS Care
Because the causes and interactions of PADIS are interrelated (Reade & Finfer, 2014),
the care of all the symptoms is often a simultaneous, coordinated effort by critical care nurses.
In 2013, the Society of Critical Care Medicine developed guidelines for symptom management to
improve ICU outcomes (Barr et al., 2013) and recommended initiatives that are well-supported
by randomized controlled trials and are recommended by professional societies and patient
safety organizations. These guidelines were updated in 2018 (Devlin et al., 2018). To implement
the guidelines, a patient care PADIS bundle of interventions and actions was compiled and
recommended (Ely, 2017). Implementation of the bundle has been shown to reduce hospital
death within 7 days, coma, ventilator and hospital days, physical restraint use, delirium and
discharge to a facility other than home (Balas et al., 2018; Barnes-Daly et al., 2017; Pun et al.,
2018). However, implementation of the guidelines is limited. In a worldwide survey of
intensivists, only 56.6% reported implementing the PADIS guidelines (Morandi et al., 2017).
Although PADIS assessment and management are multidisciplinary interventions, the
confounding complexities of the symptoms present challenges for critical care nurses as the
frontline caretakers.

Costa et al. (2017) identified 107 barriers to PADIS bundle delivery. The barriers were
related to the protocol, organizational domains, the patient, and the provider. The clinician-
related barriers were numerous. Some were lack of knowledge and awareness about protocol,
lack of conceptual agreement with guidelines, lack of self-efficacy and confidence in
implementing protocol, and clinical preference for autonomy. A reluctance to follow protocol
and a lack of confidence that that protocol would improve workflow or improve patient
outcomes were also identified. Two, statistically-significant barriers have been identified related
to provider attitudes. These barriers were workload burden and role clarity, and the authors
concluded that further investigation into the relationship between provider attitudes and
evidence-based PADIS care is warranted (Boehm et al., 2017b, 2017a). Provider attitude is defined by Boehm et al. (2017b) at “internal disposition” (e41). Applied ethics in nursing is a practical application of this internal disposition and moral considerations and thereby require deeper inquiry.

**Ethics in Critical Care**

The American Nurses Association’s *Code of Ethics for Nurses with Interpretive Statements* (2015) defines ethics as “a theoretical and reflective domain of human knowledge that addresses issues and questions about morality in human choices, actions, character, and ends” (p. xii). The code specifies *ought* as an indicator of a moral imperative, and the code’s fundamental concern is to provide “normative, applied guidance for nurses in terms of what they ought to do, be, and seek” (American Nurses Association, 2015, p. xii). Some of the provisions of the code include compassionate nursing practice, patient protection, and accountability for moral principles such as justice, beneficence, non-maleficence, and respect for the dignity of the patient.

Most of the recent studies related to ethics and critical care nursing focus on life-sustaining interventions (Gül et al., 2020; Safari Malak-Kolaei et al., 2020; Wiegand et al., 2019) or existing ethical conflict that nurses experience and subsequent moral distress and burnout (Arnold, 2020; McAndrew & Hardin, 2020; Rivaz et al., 2020). In their discussion about moral distress, Stutzer and Rodriguez (2020) stressed the importance to “identify that what is perceived to be ethically inappropriate may vary between individuals, and it often is determined by their preconceived ideas, values, and beliefs” (p. 384). Their case studies also contextualized moral injury and moral residue by providing examples of non-evidence-based sedation practices
and inability to perform interventions that would be considered routine care like patient turns and activities of daily living.

In a study of factors affecting nursing error communication in intensive care units, participants referred to conscience, honesty, and accountability as ethical characteristics (Ghezeljeh et al., 2020). They noted that patients’ lives depend on nurses’ practice and, hence, considered honesty and conscience as key prerequisites for patient care. Because of the profound evidence of barriers and facilitators of PADIS care, questions arise surrounding critical care nurses’ ethical sensitivity to diligent and purposeful PADIS care.

Microethics

Microethics is a term for the ethical decisions made in everyday, clinical situations (Worthley, 1998). Milliken and Grace (2017) acknowledged the lack of ethical sensitivity among nurses in seemingly routine, mundane tasks and this absence results in the patient’s needs not guiding care, the nurse not intervening when expected, or the nurse practicing routine- or task-based care as opposed to patient-centered care. Compounded by exposure to unsupportive environments, ethical issues go unaddressed and eventually become status-quo. Nurses are positioned to notice emerging problems, but, without ethical sensitivity, patients may be harmed, and nurses may experience moral distress. Dierckx de Casterlé, Izumi, Godfrey, and Denhaerynck (2008) summarized that nurses are required to possess high levels of professional competence and ethical maturity due to technological and medical advances, the growing complexity of care situations, and the requirement that nurses constantly and critically reflect on how they can contribute to their patient’s well-being. In summarizing her own and other medical ethicists’ experience with illness, Dresser wrote that
Our experiences alerted us to the ethical significance of what some might regard as trivial elements of patient care...doctors and nurses make constant small ethical decisions [in their] everyday clinical work, like whether to make eye contact with a patient or take seriously a patient’s complaints about treatment side effects. Their choices have a major impact on patients and caregivers. Concepts like beneficence and respect for persons are as relevant to these interactions as they are to conventional ethics concerns like decision-making about life-sustaining interventions. (Dresser, 2011, p.15)

**Ethical Awareness and Ethical Sensitivity**

Ethical awareness is defined as an “awareness of the inherently ethical nature of nursing practice and enables nurses to recognize the ethical implications of all [emphasis added] practice actions” (Milliken et al., 2018, p. 2006). Critical care nurses are typically equipped to recognize the ethical implications of higher-risk clinical situations like end-of-life decisions, informed consent, and organ procurement. Ethical awareness is a component of ethical sensitivity. Ethical sensitivity is defined as the “ability to recognize a moral conflict and have insight into the ethical consequences made on behalf of the person” (Milliken et al., 2018, p. 2006). Ethical sensitivity to everyday tasks like mobilizing a patient or medication administration often does not trigger an ethical awareness, as it may not be perceived or recognized in these situations. These and other situations often arise spontaneously at a particular moment in time, and the ethical manifestations are evident in actions as well as verbal and nonverbal communication (Truog et al., 2015).

**Preconditions and Attributes of Ethical Sensitivity**

Weaver, Morse, & Mitcham (2008) identified preconditions of nursing ethical sensitivity
as suffering and vulnerability from the patient perspective and the existence of a nurse-patient relationship with consideration of the nurse perspective. Attributes of ethical sensitivity include moral perception, interpretation, affectivity, and dividing loyalties. Moral perception is described as noticing a need or a problem, and interpretation allows the nurse to compare moral perception with the context of the situation. Affectivity is a form of empathy that occurs before engagement with a patient and is influenced by prior experiences that elicit understanding of similar discomfort and consequences for the patient. Finally, dividing loyalties are influenced by using ethical judgment to compare the situation with the standards of care and can be influenced by work culture, conformity, and personal interests (Narvaez et al., 2010; Weaver et al., 2008).

**Outcomes of Ethical Sensitivity**

The overall outcome of ethical sensitivity as integrity-preserving decision making (Weaver et al., 2008). Possible positive outcomes are person-led care, client and professional comfort, and well-being associated with self-transcendence and practical wisdom. Possible negative outcomes are routine-oriented care, client suffering unrelieved, professional distress, and nurse attrition (Milliken & Grace, 2017).

**Mixed Methods Rationale**

"The complexity of human phenomena mandates more complex research designs to capture them" (Sandelowski, 2000, p. 246-247). With mixed methods studies, researchers can integrate quantitative and qualitative methods of data collection and provide a fuller picture and enhanced understanding of a phenomenon (Johnson et al., 2007). Collecting both quantitative and qualitative data allows for convergence of the two forms of data to bring greater insight into critical care nurses’ ethical sensitivity than would be obtained by either type
of data separately. A more in-depth definition mixed methods depends on the researcher’s paradigm worldview, theoretical lens, methodological approach, and methods of data collection (Creswell & Plano Clark, 2007).

**Paradigm Worldview**

The approach to the research is influenced by the researchers’ personal, interpersonal, and social contexts (Plano Clark & Ivankova, 2016) as well as the researchers' paradigm of inquiry. Some define mixed-method studies not as mixtures of paradigms, but rather a researcher’s paradigm reflected in what, how, and why techniques are chosen to combine (Sandelowski, 2000). This research will approach the phenomenon from a critical realist paradigm.

Critical realism acknowledges an objective approach, but argues that it often fails to demonstrate generalizability because it operates in closed systems (Bhaskar et al., 1998). At the other end of the spectrum, the critical realists view relativism as offering insights into social contexts (Wilson & McCormack, 2006). Critical realism takes the middle ground between post-positivism and interpretivism and acknowledges the “value of multiple data sources relating to the same phenomena as well as a recognition of the need to reconcile these perspectives and any claims made against each other” (Clark et al., 2008, p. E68-E69). Evaluation of research from a critical realism perspective consists of interchanges between institutions and individuals and among micro-processes and macro-processes found in everyday practice of critical care nurses.

**Theoretical Lens**

The Reasoned Action Approach is a behavioral theory that assumes the information or beliefs people possess about a given behavior guide their decision to perform or not perform the behavior (Fishbein & Ajzen, 2015). The beliefs are influenced by a number of background
factors like age, gender, education, personality, values, intelligence, and past experiences. The three kinds of beliefs are behavioral beliefs that determine attitudes about the behavior; normative beliefs that produce a perceived norm about the behavior; and control beliefs that result in high or low self-efficacy related to performing the behavior. Moderating the intentions to perform or not perform a behavior are actual control factors like relevant skills, abilities, and environmental constraints or facilitators.

Figure 1 Theoretical Framework to Examine Ethical Sensitivity Using the Reasoned Action Approach

Figure 1 provides a broad representation of a framework that uses the Reasoned Action Approach behavioral theory to examine critical care nurses’ PADIS care. Background factors determine critical care nurses’ behavioral, normative, and control beliefs about their everyday practice, and those beliefs combine to form intention regarding bedside patient care (Marino et al., 2020; Nibbelink & Carrington, 2019). Depending on actual control by the nurse, that intention determines PADIS care.

When focusing specifically on attitude formed from behavioral beliefs, Fishbein & Ajzen (2015) attest that one must assess the attitude toward the behavior (i.e., PADIS care) that one is trying to predict and understand. Further, people are assumed to have a preexisting evaluation
of an attribute (i.e., ethical implication) that is linked to the behavior and a certain strength of belief that the behavior has that particular attribute (again, ethical implication). For example, a critical care nurse has a preexisting ethical awareness of the principle of non-maleficence. That same nurse also has a certain strength of belief that adequate pain management has an ethical implication regarding non-maleficence. Or, phrased differently, the nurse has ethical sensitivity to pain management. The same approach can be used to examine nurses’ ethical sensitivity to behaviors like the use of sedatives, mobilizing patients, sleep hygiene, or delirium assessment by first determining the nurses’ ethical awareness of everyday, critical care nursing in general and then examining the nurses’ understanding of the link between certain PADIS care practices and their ethical implications.

Implications for Research

Dierckx de Casterle, Izumi, Godfrey, and Denhaerynck (2008) summarized

In general, technological and medical advances, the growing complexity of care situations and the lack of evidence-based interventions require nurses constantly and critically to reflect on how that can contribute to their patients’ well-being, which in turn requires that they possess high-level of professional competence and ethical maturity (p. 540-541).

Other barriers to ethical practice of heavy workloads, insufficient time, organizational and financial constraints and staffing problems that closely parallel the barriers mentioned earlier regarding implementation of PADIS practice guidelines (Dierckx de Casterlé et al., 2008). Often nursing ethics literature focuses on external and contextual barriers, but the individual nurse’s ethical sensitivity needs further study. “Conformist practice excludes a critical and creative search for best caring answer” (Dierckx de Casterlé et al., 2008, p. 547). Conventions such as
practice guidelines, protocols, and care bundles should provide a framework for daily practice but should never be considered as an end. PADIS care of critically ill patients demands complex decision making by critical care nurses. The ethical sensitivity of those nurses has a direct impact on that decision making to implement PADIS sensitive nursing care and subsequently the quality of patient outcomes.
References for Introduction


CHAPTER 1: USE OF PADIS ASSESSMENT TOOLS BY CRITICAL CARE NURSES: AN INTEGRATIVE REVIEW

Critical care patients’ experience significantly improved mortality (e.g., survival), morbidity (e.g., decreased readmissions and ventilator days) and symptom management (e.g., pain, agitation) associated with nurses’ use of professional guidelines for assessment and management of pain, agitation, sedations and delirium. The most current practice guidelines are the Society of Critical Care Medicine’s (SCCM) Pain, Agitation/sedation, Delirium, Immobility, and Sleep Disruption guidelines (PADIS) (Devlin et al., 2018). Although the guidelines include initiatives that are well-supported by randomized control trials and are considered to be best practice, the multifaceted and interprofessional assessment and management of these symptoms in tandem is complex and challenging to implement in the critical care setting (Morandi et al., 2017).

Over 107 barriers to the delivery of these practice guidelines were identified when implementing these recommendations as a care bundle (Costa et al., 2017). One of the classification of types of barriers was related to clinicians (e.g., preference for autonomy, lack of knowledge, workload). Boehm et al. (2017a) found a statistically significant decrease in care bundle adherence by nurses associated with increased workload burden and perceived difficulty of carrying out the bundle components. In another study, provider attitudes about the care bundle were significantly associated with each of the organizational domains of role clarity, training and understanding, unit milieu, and peer advocates (Boehm et al., 2017b).

Pain, Agitation, Sedation, and Delirium Assessment

Accurate assessment of specific symptoms by critical care nurses can be difficult because pain, agitation and delirium (PAD) symptoms have overlapping characteristics that

1 Used with permission from Western Journal of Nursing Research
often occur simultaneously (Reade & Finfer, 2014; Sousa et al., 2011). Self-report is the gold-standard for pain assessment; however, self-assessment is not feasible for patients with deep sedation, decreased level of consciousness and/or confusion, or difficulty distinguishing pain from agitation. Assessment is further confounded when patients receive analgesic and sedative medications (Bourbonnais, Malone-Tucker, & Dalton-Kischel, 2010). Symptoms of pain, agitation, and delirium often occur in tandem as a syndrome in older adults, and assessment is confounded by age-related co-morbidities (Hartjes et al., 2016). Furthermore, anxiety and agitation are difficult to differentiate from pain and delirium (Stites, 2013; Vasilevskis et al., 2010) as they have similar symptom profiles (Tate et al., 2012; Stites, 2013). The SCCM recommendations include routine use of valid and reliable assessment tools to monitor the symptoms of pain, agitation/sedation, and delirium (PAD; Devlin et al., 2018). These tools are listed in the note for Table 1.

**Purpose**

Recognizing the multifaceted challenges of PADIS guideline implementation and the role of the bedside nurse as the key player in consistent and accurate assessment of patient symptoms, an in-depth examination of the nurses’ perspective was warranted as a critical step in choosing and sustaining implementation strategies (Cullen et al., 2019; Cullen & Adams, 2012). This review provides a narrow focus on the multiple PADIS assessment tools. The specific purpose of this integrative review was to evaluate the literature from January 2013 to April 2020 and to explore critical care nurses’ perspectives of and intent to use recommended PADIS patient assessment tools in adult critical care units. The original PAD guidelines (Barr et al., 2013) were released in 2013; therefore, the literature since its release was reviewed. The current guidelines (Devlin et al., 2018) also include immobility and sleep recommendations. In this review, these conditions were not included as no assessment tools are currently
recommended for immobility, and the recommended tool for sleep requires the patient to be alert and oriented.

**Methods**

Whittemore and Knafl’s (2005) methodology guided this integrative review. The stages of the integrative review included problem identification, literature search, data evaluation, data analysis, and presentation. A literature search was conducted examining the nurses’ perspective related to assessment tools for pain, sedation, agitation, and delirium and their intent to use in adult critical care units from January 2013 to April 2020 (Figure 2). Integrative reviews are intentionally broad by design, include experimental and non-experimental research, and combine theoretical and empirical data (Whittemore & Knafl, 2005).

**Inclusion Criteria**

Inclusion criteria were studies of only critical care nurses and those that addressed feasibility, accuracy, compliance, nurse satisfaction, and/or interventions related to one or more of the specific, guideline-recommended tools. Exclusion criteria are indicated in Figure 2. Reliability and validity studies were excluded because the practice guidelines were based on previous research related to psychometric properties. Also, the PADIS guidelines make exceptions for tool use with patients with traumatic brain injury; therefore, these studies were also excluded. End of life care studies were excluded because of unique goals of care for the dying patient population.
Search Strategies

The following key words were included in the search: "intensive care OR critical care" AND "assessment OR nursing assessment OR pain measurement" AND "pain OR agitation OR sedation OR delirium" AND "nursing OR nurses".

Data Management

Both empirical and theoretical data were extracted from primary sources. The data analyzed were not limited to only the research study results. Anecdotal and other information was sometimes extracted from the methods and discussion sections of the articles (Table 1).
Since the integrative review used an inclusive approach, the findings were not ranked in any way. Consideration of the quality of the primary sources was addressed and reported in Table 1.
Table 1 *Studies Included, Country/Region, Symptom(s) and Tool(s) Studied, Study Designs, Critical Appraisal, Sources of Data Analyzed*

<table>
<thead>
<tr>
<th>Study</th>
<th>Country/Region</th>
<th>Tool(s)</th>
<th>Study Design</th>
<th>Critical Appraisal</th>
<th>Source of Data Analyzed (Paper Section)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alikiaie et al. (2020)</td>
<td>Iran</td>
<td>BPS, RASS</td>
<td>Descriptive</td>
<td>Fair</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Andrews et al. (2015)</td>
<td>United States</td>
<td>RASS, CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Results, Discussion, Implications</td>
</tr>
<tr>
<td>Asman et al. (2019)</td>
<td>Israel</td>
<td>CPOT</td>
<td>Correlational</td>
<td>Fair</td>
<td>Results</td>
</tr>
<tr>
<td>Balas et al. (2013)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Mixed Methods</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>Blevins &amp; DeGennaro (2018)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Bourbonnais et al. (2016)</td>
<td>Canada</td>
<td>CPOT</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Christensen (2014)</td>
<td>Southeast Asia</td>
<td>CAM-ICU</td>
<td>Descriptive</td>
<td>Good</td>
<td>Discussion</td>
</tr>
<tr>
<td>DeForge et al. (2020)</td>
<td>United States</td>
<td>CAM-ICU, RASS</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Discussion</td>
</tr>
<tr>
<td>Deldar et al. (2018)</td>
<td>Iran</td>
<td>BPS, CPOT, others</td>
<td>Qualitative</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>DiLibero et al. (2016)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Discussion</td>
</tr>
<tr>
<td>Egerod et al. (2013)</td>
<td>32 European Countries</td>
<td>RASS, CAM-ICU, ICDSC, others</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Gélinas et al. (2014)</td>
<td>Canada</td>
<td>CPOT</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Gerber et al. (2015)</td>
<td>Switzerland</td>
<td>CPOT</td>
<td>Mixed Methods</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Gloger et al. (2019)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Gregory (2016)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Fair</td>
<td>Results</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Country</td>
<td>Intervention(s)</td>
<td>Study Type</td>
<td>Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
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<td></td>
</tr>
<tr>
<td>Hamdan et al. (2019)</td>
<td>Jordan</td>
<td>BPS, CPOT, others</td>
<td>Correlational</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Hetland et al. (2018)</td>
<td>United States</td>
<td>RASS</td>
<td>Qualitative</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Hickin et al. (2017)</td>
<td>Canada</td>
<td>ICDSC</td>
<td>Quasi-Experimental</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Jung et al. (2013)</td>
<td>Korea</td>
<td>RASS, CAM-ICU</td>
<td>Qualitative</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>LeBlanc et al. (2018)</td>
<td>Canada</td>
<td>CAM-ICU</td>
<td>Qualitative</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Maatouk et al. (2019)</td>
<td>Lebanon</td>
<td>CPOT</td>
<td>Descriptive</td>
<td>Fair Results</td>
<td></td>
</tr>
<tr>
<td>Mascarenhas et al. (2018)</td>
<td>United Kingdom</td>
<td>CPOT</td>
<td>Quality Improvement</td>
<td>Good Results, Lessons and Limitations</td>
<td></td>
</tr>
<tr>
<td>Maximous et al. (2018)</td>
<td>Canada</td>
<td>RASS, CAM-ICU</td>
<td>Descriptive</td>
<td>Poor Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Olsen et al. (2015)</td>
<td>Norway</td>
<td>BPS</td>
<td>Descriptive</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Oosterhouse et al. (2016)</td>
<td>United States</td>
<td>CAM-ICU, ICDSC</td>
<td>Qualitative</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Oxenbøll-Collet et al. (2016)</td>
<td>Denmark</td>
<td>CAM-ICU</td>
<td>Qualitative</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Özsaban &amp; Acarozlu (2015)</td>
<td>Turkey</td>
<td>CAM-ICU, ICDSC, others</td>
<td>Correlational</td>
<td>Poor Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Phillips et al. (2019)</td>
<td>Australia</td>
<td>CPOT</td>
<td>Quasi-Experimental</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Pinto &amp; Biancofiore (2016)</td>
<td>Italy</td>
<td>RASS, CAM-ICU</td>
<td>Descriptive</td>
<td>Poor Results</td>
<td></td>
</tr>
<tr>
<td>Powell et al. (2019)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Ramoo et al. (2015)</td>
<td>Malaysia</td>
<td>RASS</td>
<td>Quasi-Experimental</td>
<td>Good Results, Discussion</td>
<td></td>
</tr>
<tr>
<td>Rowley-Conwy (2017)</td>
<td>United Kingdom</td>
<td>CAM-ICU</td>
<td>Correlational</td>
<td>Fair Results</td>
<td></td>
</tr>
<tr>
<td>Author et al. (Year)</td>
<td>Country</td>
<td>CAM-ICU or RASS, CAM-ICU</td>
<td>Pain Assessment Tool</td>
<td>Sedation Assessment Tool</td>
<td>Delirium Assessment Tool</td>
</tr>
<tr>
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</tr>
<tr>
<td>Schaef (2019)</td>
<td>New Zealand</td>
<td>CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>Scott et al. (2013)</td>
<td>United Kingdom</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Fair</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Sinvani (2018)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>Smith et al. (2017)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Sneyers et al. (2014)</td>
<td>Belgium</td>
<td>CPOT, RASS, SAS, others</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Spiegelberg et al. (2020)</td>
<td>United States</td>
<td>CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Steinseth et al. (2018)</td>
<td>Norway</td>
<td>CAM-ICU</td>
<td>Mixed Methods</td>
<td>Fair</td>
<td>Findings, Discussion</td>
</tr>
<tr>
<td>Stewart &amp; Bench (2018)</td>
<td>United Kingdom</td>
<td>CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Methods, Discussion</td>
</tr>
<tr>
<td>Su et al. (2019)</td>
<td>Taiwan</td>
<td>RASS</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Swan (2014)</td>
<td>United States</td>
<td>RASS, CAM-ICU</td>
<td>Quasi-Experimental</td>
<td>Good</td>
<td>Discussion</td>
</tr>
<tr>
<td>Tan et al. (2019)</td>
<td>United States</td>
<td>NRS, RASS, CAM-ICU</td>
<td>Quality Improvement</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>van den Boogaard et al. (2020)</td>
<td>Multinational</td>
<td>RASS, CAM-ICU</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results</td>
</tr>
<tr>
<td>van der Woude et al. (2016)</td>
<td>Netherlands</td>
<td>BPS, CPOT</td>
<td>Descriptive</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Wøien &amp; Bjørk (2013)</td>
<td>Norway</td>
<td>NRS, RASS, CAM-ICU, others</td>
<td>Qualitative</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
<tr>
<td>Zamoscik et al. (2017)</td>
<td>United Kingdom</td>
<td>CAM-ICU</td>
<td>Qualitative</td>
<td>Good</td>
<td>Results, Discussion</td>
</tr>
</tbody>
</table>

**Note.** Pain assessment tools include the Numerical Rating Scale (NRS), the Behavioral Pain Scale (BPS), and the Critical-Care Pain Observation Tool (CPOT). Sedation/agitation assessment tools include the Richmond Agitation-Sedation Scale (RASS) or the Sedation-Agitation Scale (SAS). Delirium assessment tools are the Confusion Assessment Method for the Intensive Care Unit.
(CAM-ICU) or the Intensive Care Delirium Screening Checklist (ICDSC). Overall quality ratings were incorporated in the data evaluation stage of the review. Different review criteria sets were used due to the diverse study methodologies, and the reviewers scored each study as “good”, “fair”, or “poor” based on the criteria sets. Quality or process improvement projects were appraised based on The Minimum Quality Criteria Set (Rubenstein et al., 2015). The critical appraisals of the descriptive, quasi-experimental, and qualitative studies were based on Joanna Briggs Institute Criteria (2016, 2017a, 2017b). Cicolini, Comparcini, & Simonetti (2014) provided criteria for the correlational studies. The Mixed Methods Appraisal Tool (MMAT) was used for the mixed methods studies (Hong et al., 2018).
### Table 2 CFIR Domain: Perception of Tool Characteristics

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ PERCEPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) objective, precise, and uniform (Gélinas et al., 2014); clinically useful (Phillips et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>(-) no correlation between pain level and tool total score (Gélinas et al., 2014; Phillips et al., 2019)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) unbiased and reliable (Steinseth et al., 2018); 80% understood tool was valid with ventilated patients (Swan, 2014)</td>
</tr>
<tr>
<td></td>
<td>(-) “busy work” (DiLibero et al., 2016); imperfect tool but adequate (Jung et al., 2013); tool unreliable/not trusted (Steinseth et al., 2018; Zamoscik et al., 2017); tool inaccurate (Gloger et al., 2019); potentially harmful to patients (Oxenbøll-Collet et al., 2018); questions are too random, questionable reliability and consistency of users (Powell et al., 2019)</td>
</tr>
<tr>
<td>Pain, Agitation/ Delirium</td>
<td>(+) increases quality, continuity, and consistency (Wøien &amp; Bjørk, 2013)</td>
</tr>
</tbody>
</table>

### CONSTRUCT: Relative Advantage - Nurses’ perceptions of the advantage of using the tool(s) versus an alternative solution.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ PERCEPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) tool justified intervention; tool helpful/useful (Bourbonnais et al., 2016; Gélinas et al., 2014); tool not needed (Gélinas et al., 2014)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(+) tool considered useful by 80% (Pinto &amp; Biancofiore, 2016)</td>
</tr>
<tr>
<td></td>
<td>(-) more MDs than RNs agreed that tool use influenced management of care (Sneyers et al., 2014)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) tool useful and perception of utility increased with time (Hickin et al., 2017); able to recognize hypoactive delirium with tool (Jung et al., 2013; Schaeff, 2019); improved patient outcomes (Oosterhouse et al., 2016); tool considered useful by 80% (Pinto &amp; Biancofiore, 2016); improved organization of assessments (Scott et al., 2013); distinguish between other causes of restlessness (Zamoscik et al., 2017); helpful to new nurses (Stewart &amp; Bench, 2018); appropriately identified patients at risk for delirium (Spiegelberg et al., 2020); assess “moment by moment” instead of tool use (LeBlanc et al., 2018)</td>
</tr>
<tr>
<td></td>
<td>(-) tool use is futile (Oosterhouse et al., 2016); tool not valuable (Gloger et al., 2019); need follow up after assessment (Balas et al., 2013)</td>
</tr>
<tr>
<td>Pain, Agitation/ Delirium</td>
<td>(+) benefit of early identification, more precise documentation, more decisive in differentiating between pain, sedation and confusion, improves patient care (Wøien &amp; Bjørk, 2013); specific RASS score and choice of CAM-ICU or ICDSC by the nurse determines likelihood of delirium positive diagnosis (Van Der Woude et al., 2016)</td>
</tr>
</tbody>
</table>
**CONSTRUCT: Complexity** - Perceived difficulty of using the tool(s), reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) quick to use (Bourbonnais et al., 2016; Gélinas et al., 2014; Maatouk et al., 2019); easy to use (Gélinas et al., 2014; Maatouk et al., 2019; Phillips et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>(-) difficult to use at first then easy (Jung et al., 2013); difficult/complex tool (Maximous et al., 2018; Oxenbøll-Collet et al., 2018; Özsaban &amp; Acaroglu, 2016; Steinseth et al., 2018)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) ease of use (Andrews et al., 2015; Scott et al., 2013)</td>
</tr>
</tbody>
</table>

Note. Data analysis was guided by Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009). A positive evaluation is indicated by (+), and a negative evaluation is indicated by (-).

**Table 3 CFIR Domain: Characteristics of Nurses**

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) clarity of instructions (Bourbonnais et al., 2016); positive correlation between perceived importance and use (Hamdan, 2019)</td>
</tr>
<tr>
<td></td>
<td>(-) physiological parameters interpreted as pain episode (Alikiaie et al., 2019; Gerber et al., 2015); prefers own clinical judgement (Deldar et al., 2018; Mascarenhas et al., 2018); does not believe result; belief that tool is not necessary if sedated/given analgesics; belief that unconscious patients feel no pain; unfamiliar with tool (Deldar et al., 2018); consider nurses’ opinion as gold standard (Van Der Woude et al., 2016); used tool more in patients able to report than unable to report (Hamdan, 2019); knowledge of behaviors indicating pain was negatively; correlated with perceived adequacy of departmental pain treatment ($r = -0.19, p &lt; 0.05$) (Asman et al., 2019)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(+) awareness of paradigm shift to “awake and comfortable” (Egerod et al., 2013); tool use balanced with other assessments (Hetland et al., 2018)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) tool use increased awareness of delirium (Jung et al., 2013); tool use supplemented other assessments (LeBlanc et al., 2018); patient-centered care; perception of delirium as a problem (Özsaban &amp; Acaroglu, 2016); retained knowledge after education intervention (Smith et al., 2017); understood how to use (Swan, 2014); belief that delirium is important to assess (Powell et al., 2019)</td>
</tr>
</tbody>
</table>
|         | (-) mechanically ventilated patients (Andrews et al., 2015; Özsaban & Acaroglu, 2016; Rowley-Conwy, 2017; Scott et al., 2013); prefers own
clinical judgement (Christensen, 2014; Steinseth et al., 2018; Zamoscik et al., 2017); question accuracy of tool with some patients (Jung et al., 2013); tool use may lead to overmedication or misdiagnosis (Oosterhouse et al., 2016); task-centered care (Özsaban & Acaroglu, 2016); lack of knowledge (Rowley-Conwy, 2017); could not identify subtypes (Scott et al., 2013); contradicts clinical judgement, does not believe results (Oxenbøll-Collet et al., 2018); believed it was difficult to use tool with patient who is inattentive, distracted, hard of hearing (DeForge et al., 2020; Powell et al., 2019); 54.6% disagreement between tool documentation and cognition documentation (Sinvani et al., 2018)

| Pain, Agitation/ Delirium | (-) early in learning curve, have to put aside feelings (Wøien & Bjørk, 2013) |

**CONSTRUCT: Other Personal Attributes**- A broad construct to include other personal traits such as tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, and learning style.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) increased autonomy and accountability (Mascarenhas et al., 2018)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(+) &gt;90% used tool without protocol in place (Egerod et al., 2013); 68% agreed tool use increased autonomy and enhanced role (Sneyers et al., 2014)</td>
</tr>
<tr>
<td></td>
<td>(-) more MDs than RNs agreed that tool use increased RN autonomy and enhanced roles (Sneyers et al., 2014)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) ownership/engagement/empowerment; meaning and value to work (DiLibero et al., 2016)</td>
</tr>
<tr>
<td></td>
<td>(-) considered to be “tick-box”/ “cookie-cutter” nursing (Christensen, 2014; LeBlanc et al., 2018); limits autonomy (LeBlanc et al., 2018); incompatible roles of caregiver vs. interrogator; threatens professional integrity (Oxenbøll-Collet et al., 2018); “unable to assess” option as work-around to opt out of documentation (Spiegelberg et al., 2020)</td>
</tr>
<tr>
<td>Pain, Agitation/ Sedation, Delirium</td>
<td>(-) own experience and judgement are being challenged (Wøien &amp; Bjørk, 2013)</td>
</tr>
</tbody>
</table>

**Note.** Data analysis was guided by Consolidated Framework for Implementation Research (CFIR; Damshroder et al, 2009). A positive evaluation is indicated by (+), and a negative evaluation is indicated by (-).

**Table 4 CFIR Domain: Perception of Critical Care Unit**

**CONSTRUCT: Compatibility** - The degree of tangible fit between meaning and values attached to the use of the tool(s) by nurses, how those align with nurses’ own norms, values, and perceived risks and needs, and how the use of the tool(s) fits with existing workflows and systems.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
</table>
### Pain

(+ tool can be used in all cases (Gélinas et al., 2014); reminder sticker placed on tracking sheet (Mascarenhas et al., 2018); female patients (-) assessed more than male patients (Olsen et al., 2015); staff without training on tool (Bourbonnais et al., 2016; Gélinas et al., 2014); tool not on flowsheet (Bourbonnais et al., 2016; Deldar et al., 2018); similarity to symptom of anxiety (Bourbonnais et al., 2016); workload/time constraint (Deldar et al., 2018; Mascarenhas et al., 2018); unstable or sedated patients and inability to self-report (Van Der Woude et al., 2016); intubated patients (Olsen et al., 2015)

### Agitation

(+ greater nurse presence increased tool use (Egerod et al., 2013) tool added to information system (Su et al., 2019)

(-) need to assess anxiety (Hetland et al., 2018); patient condition; workload (Ramoo et al., 2015)

### Delirium

(+ tool on flowsheet; easy to use; notecards available (Andrews et al., 2015); checklist (Oosterhouse et al., 2016); patient needs introduction to tool (Steinseth et al., 2018); found that just adding tool to flowcharts increased use with no education (Phillips et al., 2019); patients with respiratory diseases were assessed significantly more frequently than patients with other types of diseases (Olsen et al., 2015)

(-) workload/time constraint (Christensen, 2014; Jung et al., 2013; Oosterhouse et al., 2016; Oxenbøll-Collet et al., 2018; Özsaban & Acaroglu, 2016; Rowley-Conwy, 2017; Sneyers et al., 2014); difficult to use in everyday practice (LeBlanc et al., 2018); tool is burden on patients / “labels” or is offensive to patient (Jung et al., 2013; Oosterhouse et al., 2016; Steinseth et al., 2018); families disapprove (Oosterhouse et al., 2016); sedated patients (Özsaban & Acaroglu, 2016; Powell et al., 2019; Scott et al., 2013); patient behavior (Steinseth et al., 2018); complexity of burn patients (Gloger et al., 2016); embarrasses patients, families, and professionals (Oxenbøll-Collet et al., 2016); intubated patients (Powell et al., 2019); patients with a lower severity of disease were assessed significantly less frequently than patients with a higher severity (Olsen et al., 2015)

### Pain, Agitation/ Sedation, Delirium

(-) need baseline, sedated patients (Wøien & Bjørk, 2013); intubated patients; “care gap...11% of patients without delirium assessment were oversedated” (Maximous et al., 2018)

### CONSTRUCT: Relative Priority - Nurses’ shared perception of the importance of the implementation within the unit.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(-) new employees focused on other skills (Deldar et al., 2018)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(-) leadership involvement (Su et al., 2019)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) adherence significantly more on day shift more than evening or night shift (Olsen et al., 2015)</td>
</tr>
<tr>
<td></td>
<td>(-) priority less than other tasks (Jung et al., 2013); lack of support (Oosterhouse et al., 2016); not valued (Rowley-Conwy, 2017); not</td>
</tr>
</tbody>
</table>
always reported (Zamoscik et al., 2017); adherence significantly less on evening and night shift than day shift (Olsen et al., 2015)

**CONSTRUCT: Organizational Incentives & Rewards** - Extrinsic incentives such as goal-sharing awards and performance reviews and less tangible incentives such as increased stature or respect.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agitation</td>
<td>(+) intervention strategies were motivating (Su et al., 2019)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) accountability with corrective emails (Gloger et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>(-) unmotivated (Steinseth et al., 2018)</td>
</tr>
</tbody>
</table>

**CONSTRUCT: Goals and Feedback** - The degree to which goals are clearly communicated, acted upon, and fed back to staff, and alignment of that feedback with goals.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(-) need for ongoing clinical support (Gélinas et al., 2014)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(+) monitoring, reminder cards, sharing baseline (Su et al., 2019)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) feedback on tool use useful (Steinseth et al., 2018); corrective feedback (Gloger et al., 2019); friendly competition (Gregory, 2016)</td>
</tr>
<tr>
<td></td>
<td>(-) need for real time surveillance by experts (Andrews et al., 2015); just having the tool did not warrant its use (Oosterhouse et al., 2016)</td>
</tr>
<tr>
<td>Pain, Agitation/Sedation, Delirium</td>
<td>(+) decisive work toward realistic goals (Wøien &amp; Bjork, 2013)</td>
</tr>
</tbody>
</table>

**CONSTRUCT: Learning Climate** - A climate in which: a) leaders express their own fallibility and need for team members’ assistance and input; b) team members feel that they are essential, valued, and knowledgeable partners in the change process; c) individuals feel psychologically safe to try new methods; and d) there is sufficient time and space for reflective thinking and evaluation.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>(+) enthusiastic staff (van der Woude et al., 2016)</td>
</tr>
<tr>
<td>Agitation</td>
<td>(+) bottom up approach, co-development with leadership (Su et al., 2019)</td>
</tr>
<tr>
<td>Delirium</td>
<td>(+) leaders evaluated previous intervention and found it ineffective and changed strategy (Smith et al., 2017); promoted sharing experiences (Steinseth et al., 2018)</td>
</tr>
</tbody>
</table>

**CONSTRUCT: Access to Knowledge & Information** - Ease of access to digestible information and knowledge about the tool and how to incorporate it into work tasks.
<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NURSES’ EVALUATION OF TOOL USE</th>
</tr>
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</table>
| Pain    | (+) sufficient training (Gélinas et al., 2014)  
          | (-) insufficient training; no relevant policy or protocol in place (Deldar et al., 2018); 0% knew about tool yet 90% had education (Maatouk et al., 2019) |
| Agitation | (+) integration of education throughout intervention (Su et al., 2019)  
            | (-) insufficient training; request for training to assess sedation in relation to pain and delirium (Hetland et al., 2018) |
| Delirium | (+) 70% of nurses had skills (Oosterhouse et al., 2016); adequate training/education (Scott et al., 2013; Steinseth et al., 2018); repeated education (Gregory, 2016); bedside training (DeForge et al., 2020)  
            | (-) staff without training on tool/turnover (Andrews et al., 2015; Gregory, 2016; Hickin et al., 2017; Oosterhouse et al., 2016); need continuing education (Hickin et al., 2017); no protocol/policy (Oosterhouse et al., 2016; Rowley-Conwy, 2017); no continuum of care (Oosterhouse et al., 2016); need more knowledge (Steinseth et al., 2018); no change in knowledge after intervention (Blevins & DeGennaro, 2018); education not beneficial (Powell et al., 2019) |
| Pain, Agitation/ Sedation, Delirium | (-) may lead inexperienced nurses to only use tools and not judgement (Wøien & Bjørk, 2013) |

*Note.* Data analysis was guided by CFIR (Damschroder et al., 2009). A positive evaluation is indicated by (+), and a negative evaluation is indicated by (-).

A two-step approach to data analysis was used. Data from the articles were organized by a framework adapted from the domains and constructs of the Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009). The CFIR domains terminology was adapted to fit the research topic as intended by the CFIR designers to evaluate interventions or to be used to plan interventions. All of the constructs included had data related to the nurses’ perspective or personal experiences.

The second step of the analysis focused on nurses’ perspectives related to use of the assessment tools. Data were further reduced and conceptualized at higher levels of abstraction, and patterns of beliefs were identified associated with using or not using the assessment tools. The Reasoned Action Approach (Fishbein & Ajzen, 2015) was the
behavioral theory used to analyze the data. This approach assumes the information or beliefs people possess about a given behavior guide their decision to perform or not perform the behavior. The three kinds of beliefs are behavioral beliefs that determine attitudes, normative beliefs that produce a perceived norm, and control beliefs that result in high or low self-efficacy. An adaption of The Reasoned Action Approach is depicted in Figure 1 showing beliefs as the determinants of intention to use the tool.

**Results**

All studies in this integrative review focused on critical care nurses’ perspectives and use of one or more of the SCCM PADIS guideline recommended tools for assessment of patients unable to self-report their symptoms. A total of 47 articles were include in further analysis for this integrative review (Figure 2). Accuracy and compliance data were collected, but comparisons were not feasible, as measurement tools varied. Study designs, study sites, PADIS guideline symptoms assessed and recommended tools studied, critical appraisal, and sources of data analyzed are delineated in Table 1. Data pertaining to nurses’ perspectives associated with the use of recommended assessment tools were extracted and systematically compared to each of the CFIR domains and constructs. The data were then reduced and evaluated by each construct and reported (Tables 2-4).
Perception of Tool Characteristics

Perceived Evidence of Strength and Quality

Overall, nurses considered pain, anxiety and depression tools increased quality, continuity, and consistency of work (Wøien & Bjørk, 2013). Nurses perceived using the Critical-Care Pain Observation tool (CPOT) was objective, precise, and uniform (Gélinas et al., 2014) and clinically useful for pain assessment (Phillips et al., 2019). Similarly, some nurses (Steinseth et al., 2018) reported the Confusion Assessment Method for the ICU (CAM-ICU) for delirium assessment as unbiased and reliable. Barriers associated with use of the tool included perceptions of use as busy work (DiLibero et al., 2016), imperfect but adequate (Jung et al., 2013), unreliable and not trusted (Steinseth et al., 2018; Zamoscik et al., 2017), inaccurate (Gloger et al., 2019), and were potentially harmful to patients (Oxenbøll-Collet et al., 2018). Others perceived the questions were too random and questioned the reliability and consistency of assessment by users (Powell et al., 2019).

Perceived Relative Advantage

Nurses’ perception of assessment tools as being adventitious can increase integration of assessments into care for critical care patients. Tools were considered helpful and useful for pain (Bourbonnais et al., 2016; Gélinas et al., 2014), agitation/sedation (Pinto & Biancofiore, 2016), and delirium (Balas et al., 2013; Hickin et al., 2017; Pinto & Biancofiore, 2016; Spiegelberg et al., 2020) assessment. Use of the CPOT justified nurses’ interventions (Bourbonnais et al., 2016; Gélinas et al., 2014). Nurses use of the CAM-ICU improved organization of assessment (Scott et al., 2013) and improved patient outcomes (Oosterhouse et al., 2016). Use of the CAM-ICU also facilitated recognition of hypoactive delirium (Jung et al., 2013; Schaef, 2019) and distinguished between other causes of restlessness (Zamoscik et al., 2017). Use of PAD tools differentiated between pain, sedation, and confusion. Assessments supported early identification, more precise documentation,
improved patient care, and determined treatment or care effectiveness (Bourbonnais et al., 2016; Wøien & Bjørk, 2013).

Conversely, some nurses did not believe the CPOT was needed in practice (Gélinas et al., 2014). Both the CAM-ICU and Intensive Care Delirium Screening Checklist were identified as futile (Oosterhouse et al., 2016) and of no value to patient care (Gloger et al., 2019). Nurses preferred to assess moment by moment instead of using the CAM-ICU (LeBlanc et al., 2018). Nurses’ use of delirium assessment tools varied based on a patient’s specific RASS score and the choice of using the CAM-ICU or Intensive Care Delirium Screening Checklist to determine delirium. For example, when the RASS was “0”, patients assessed with the Intensive Care Delirium Screening Checklist were nearly twice as likely to be screened positive for delirium than when CAM-ICU was used (van den Boogaard et al., 2020).

**Complexity**

Nurses report having difficulty becoming proficient in use of and completing CAM-ICU assessments every eight to 12 hours (Jung et al., 2013). Other studies reported nurses perceived using delirium tools as complex (Özsaban & Acaroglu, 2016; Rowley-Conwy, 2017), associated with difficulty learning how to use (Jung et al., 2013; Steinseth et al., 2018), and difficulty using to make assessment (Gélinas et al., 2014; Jung et al., 2013; Steinseth et al., 2018). However, other studies differed and reported ease of using these tools (Andrews et al., 2015; Bourbonnais et al., 2016; Scott et al., 2013).

**Characteristics of Nurses**

**Knowledge and beliefs**

Attitudes, values, and familiarity with the assessment tools influence the perceptions and use of assessment tools. A commonly reported barrier to using delirium assessment tools for the mechanically ventilated critical care patient was mechanical
ventilation itself (Andrews et al., 2015; Özsaban & Acaroglu, 2016; Rlsoowley-Conwy, 2017; Scott et al., 2013). Nurses found it difficult to use the tools with patients who are inattentive and distracted, albeit these are common delirium symptoms (Powell et al., 2019). Similarly, the patient’s inability to self-report pain was considered a barrier, although the Behavioral Pain Scale and CPOT are designed for that type of patient (van der Woude et al., 2016). Swan (2014) used an intervention for nurses to reduce inappropriate CAM-ICU ratings by clarifying RASS scoring.

Several studies highlighted how false beliefs about pain assessment that prevented tool use (Alikiaie et al., 2019; Deldar et al., 2018; Gerber et al., 2015; Hamdan, 2019). Nurses did not believe the results of the tool and preferred their own clinical judgement over the tools to assess the patients for both delirium and pain (Christensen, 2014; Deldar et al., 2018; Mascarenhas et al., 2018; Steinseth et al., 2018; Van Der Woude et al., 2016; Zamoscik et al., 2017). However, Sinvani et al. (2018) found 54.6% disagreement between nursing documentation of the CAM-ICU and RASS tools and medical record documentation of delirium and level of consciousness. Nurses also believed that delirium tool use may lead to overmedication or misdiagnosis regardless of the validity of the tool (Oosterhouse et al., 2016).

Perceived importance of pain assessment and frequency for patients unable to self-report (Hamdan, 2019) was significantly correlated ($r_2 (298) = 0.42, p < 0.01$). Nurses also believed use of the RASS tool balanced well with conducting other assessments (Hetland et al., 2018). Awareness of the paradigm shift to critical care patients less sedated and who are awake and comfortable also facilitate use of tools (Egerod et al., 2013) and reinforced patient-centered care philosophy (Özsaban & Acaroglu, 2016).

**Self-Efficacy**
Nurses reported perceived confidence in using assessment tools across all of the tools evaluated in this study (Egerod et al., 2013; Gregory, 2016; Maximous et al., 2018; Phillips et al., 2019; Schaef, 2019; Scott et al., 2013; Smith et al., 2017; Zamoscik et al., 2017). Nurses had increased confidence using the CAM-ICU (p<0.001) after online education and simulation (Smith et al., 2017), and its use elicited a sense of knowing (Gregory, 2016; Zamoscik et al., 2017). However, although nurses had an overall reported increase in self-confidence, they had less accuracy in using RAAS (Ramoo et al., 2015). Nurses also showed overconfidence by preferring to use intuition to assess delirium and yet were unable to differentiate between delirium and other disorders (Zamoscik et al., 2017).

High rates of “unable to assess” documentation were associated with nurses’ lack of confidence (Andrews et al., 2015). When first using the CAM-ICU assessment tool, nurses had low self-efficacy with scoring a patient as positive associated with the inattention questions (Steinseth et al., 2018; Swan, 2014). Some nurses were reluctant to use the CAM-ICU because it was “semi-diagnostic” (Oxenboll-Collet et al., 2018, p. 19).

**Nurses’ Individual Stage of Change**

There were no studies related to stage of change for either the agitation or sedation tools, and no facilitators were discussed related to use of delirium tools. Negative perspectives for use of delirium tools related to stage of change were found. For example, nurses forgot to use tool because they did not consider it a part of their daily routine, and CAM-ICU was considered a low priority (Oosterhouse et al., 2016; Steinseth et al., 2018; Zamoscik et al., 2017). Stewart and Bench (2018) acknowledge this may be an issue of covert resistance and speculated that a quality improvement model addressing potential barriers before implementation may improve results to mitigate this barrier. Scott et al. (2013) reported a few nurses (31%) thought CAM-ICU tool use should be integrated into routine nursing care, yet it can be considered a breach of professional ethics to deprioritize these assessments.
(Steinseth et al., 2018). Overall, Wöien & Bjørk (2013) found assessment tool users were able to analyze more deeply, and non-users of tools had not integrated their use into their thinking and prior experiences dominated their judgement.

**Nurses’ Identification with the Unit**

Use of the delirium assessment tools was associated with nurses’ perceptions of feeling engaged (Su et al., 2019). Unit culture influenced nurses’ perceptions of delirium as a low priority, and nurses felt judged by other staff when providing delirium-focused care for patients (Zamoscik et al., 2017). Asman et al. (2019) found a negative correlation between nurses’ knowledge of behaviors indicating pain and perceived adequacy of departmental pain treatment ($r = -0.19$, $p < 0.05$). A subgroup of non-committal nurses did not use the CAM-ICU tool if it had not been previously used by colleagues, and they perceived use of this tool as offensive, preferring to use their own judgment related to delirium assessment (Steinseth et al., 2018).

**Other Personal Attributes**

Reported barriers were associated with personal attributes were threats to autonomy, critical thinking, and personal clinical judgment (Christensen, 2014; LeBlanc et al., 2018; Wøien & Bjørk, 2013). Some nurses referred to assessment tool use as “cookie-cutter nursing” (LeBlanc et al., 2017, p. 95) or “tick-box nursing” (Christensen, 2014, p. 59), and perceived the use of tools as a restriction of thinking. Other personal attributes associated with use of assessment tools were feeling judged by others or guilty for focusing on psychological care (Zamoscik et al., 2017); offensive to patients and nurses by appearing “stupid” when the CAM-ICU was administered (Steinseth et al., 2018, p. 26); and use was viewed as threatening to professional integrity by requiring incompatible roles of caregiver and interrogator (Oxenbøll-Collet et al., 2018). Some nurses found the delirium tools disruptive, as use of tool may agitate, annoy, or offense patients and families (Oosterhouse
et al., 2016) and increased patient burden (Jung et al., 2013). Zamoscik et al. (2017) described a nurse who falsely reported a patient’s data with the intent to disqualify him from needing use of the CAM-ICU tool.

Nurses experienced autonomy and accountability with the use of CPOT and sedation assessment tools (Mascarenhas et al., 2018; Sneyers et al., 2014). Other attributes of empowerment, meaning, and value of work are associated with use of CAM-ICU (DiLibmero et al., 2016). Some nurses felt more credible when using the CAM-ICU tool (Zamoscik et al., 2017) and employed use of CAM-ICU to be believed by others (LeBlanc et al., 2018). Overall, use of assessment tools improved personal organization (Scott et al., 2013), a sense of urgency (Christensen, 2014), a sense of knowing the patient (Zamoscik et al., 2017), and patient-centered care focus by nurses (Frances et al., 2010; Jung et al., 2013; Özsaban & Acaroglu, 2016).

**Perception of the Critical Care Unit**

**Networks and Communications**

Some nurses were not motivated to use pain and delirium assessment tools because of inadequate interaction, involvement, direction, or response from the medical staff (Andrews et al., 2015; Christensen, 2014; Deldar et al., 2018; Gélinas et al., 2014; Jung et al., 2013; Oosterhouse et al., 2016; Scott et al., 2013; Zamoscik et al., 2017). Nurses using the tools had more precise documentation (Wøien & Bjørk, 2013), and use of the tools facilitated communication and collaboration with nurses, families, patients, and other members of the care team (Bourbonnais et al., 2016; Jung et al., 2013; Mascarenhas et al., 2018; Oosterhouse et al., 2016; Spiegelberg et al., 2020; Wøien & Bjørk, 2013). Improved documentation and goal achievement are also associated with use of tools (Wøien & Bjørk, 2013). Use of assessment tools was associated with significantly more collaborative-led decisions versus physician-led patient care decisions (Egerod et al., 2013). Using a nurse
engagement intervention evaluation resulted in an improved rates of target sedation scores of critical care patients (Tan et al., 2019). Furthermore, nurses’ perceived collaboration between nurses and physicians and adequacy of departmental pain assessment was significantly correlated ($r=0.40$, $p<0.01$) (Asman et al., 2019).

**Culture**

Unit culture supporting use of assessment tools includes factors such as interprofessional collaboration, adequate staffing, and established policy and protocols for critical care patient assessment and management (Oosterhouse et al., 2016). Progressive minded staff with targeted engagement, empowerment, and accountability facilitated use of delirium tools (DiLibero et al., 2016; Oosterhouse et al., 2016), while a filial piety culture inhibited its use due to its hierarchical nature and medical staff dominance (Christensen, 2014).

**Compatibility**

Compatibility relates to the tangible fit between meanings and values associated with use of the tools by nurses and alignment within workload frame compatibility. Jung et al. (2013) found that nurses believed the agitation/sedation and delirium assessment could be completed in five minutes, although these assessments were perceived as workload burden by some nurses. Workload concerns and time constraints were specified as barriers to assessment tool use (Christensen, 2014; Deldar et al., 2018; Jung et al., 2013; LeBlanc et al., 2018; Mascarenhas et al., 2018; Oosterhouse et al., 2016; Oxenbøll-Collet et al., 2018; Özsaban & Acaroglu, 2016; Ramoo et al., 2015; Rowley-Conwy, 2017; Zamoscik et al., 2017). One-to-one staffing ratio enabled increased frequency of tool use (Egerod et al., 2013); likewise, nurses stated lower patient ratios allowed more time for use of assessment tools (Olsen et al., 2015). One study objectively measured workload and found workload was not
associated with adherence rates with the use of the Behavioral Pain Scale and pain management algorithm (Olsen et al., 2015).

Nurses found it easier to distinguish between pain and sedation when using assessment tools (Wøien & Bjørk, 2013). Some nurses reported difficulty distinguishing anxiety from pain symptoms (Hetland et al., 2018), while others reported underestimating pain before using the tools and having more distinct assessments of pain, agitation and delirium when using tools (Wøien & Bjørk, 2013). Nurses also realized use of tools led to unbiased assessment and revealed more delirium, particularly hypoactive delirium (Steinseth et al., 2018). Gélinas et al. (2014) recommended use of combined pain and agitation/sedation management for optimal patient outcomes. Over-sedation was identified as a barrier by nurses for use of assessment tools (Olsen et al., 2015; Özsaban & Acaroglu, 2016; Powell et al., 2019; Ramoo et al., 2015; Rowley-Conwy, 2017; Scott et al., 2013; Van Der Woude et al., 2016; Wøien & Bjørk, 2013).

Workflow aids facilitated nurses’ use of all assessment tools. Reminder stickers on tracking sheets for the CPOT (Mascarenhas et al., 2018), a line added to the flowsheet for RASS and CAM-ICU (Andrews et al., 2015; Su et al., 2019), and delirium checklists (Oosterhouse et al., 2016) are exemplars used for improved workflow. In fact, just adding the CPOT to the critical care flowcharts increased use with no educational intervention (Phillips et al., 2019). When nurses view delirium as a serious problem, they conducted significantly ($X^2=8.61$, $p<0.005$) more assessments (Özsaban & Acaroglu, 2016).

**Relative Priority**

Lack of support and perceived value inhibited use of delirium tools (Oosterhouse et al., 2016; Rowley-Conwy, 2017). In another study, perceptions of cognitive assessments as a secondary matter was associated with not always reporting CAM-ICU results (Zamoscik et al., 2017) and only using the CAM-ICU tool if it had been used on a prior shift (Steinseth et
Adherence to Behavioral Pain Scale was used significantly less frequently on evening and night shift compared to the day shift (Olsen et al., 2015).

**Organizational Incentives and Rewards / Goals and Feedback**

Although nurses felt unmotivated by their organization to use the CAM-ICU (Steinseth et al., 2018), use of strategies like accountability with corrective emails facilitated use of RASS and CAM-ICU (Gloger et al., 2019; Su et al., 2019). Use of real time chart reviews, continued surveillance (Stewart & Bench, 2018), one-to-one coaching (Andrews et al., 2015), spot checks (Ramoo et al., 2015) and having resources available (Hetland et al., 2018; Olsen et al., 2015; Steinseth et al., 2018) were all facilitators associated with use of assessment tools. Goals for use of assessment tools should be clearly communicated by leaders and administrators, acted upon decisively, and feedback given to nurses (Gloger et al., 2019; Steinseth et al., 2018; Su et al., 2019; Wøien & Bjørk, 2013). Swan (2014) demonstrated that a re-evaluation of nurses after an intervention showed a lack of understanding in assessing mechanically ventilated patients, and a subsequent re-education increased appropriate assessment ratings for those patients.

**Learning Climate / Access to Knowledge and Information**

Skill development, learning, and growth are critical components of a learning environment. The lack of organizational policy or protocol was a barrier for pain and delirium tool use (Deldar et al., 2018; Oosterhouse et al., 2016; Rowley-Conwy, 2017). Many nurses cited insufficient training as a barrier (Deldar et al., 2018; Hetland et al., 2018; Hickin et al., 2017; Oosterhouse et al., 2016; Steinseth et al., 2018), specifically, a lack of training due to staff turnover (Andrews et al., 2015; Gregory, 2016; Hickin et al., 2017; Oosterhouse et al., 2016). Education itself was sometimes a barrier if it was not useful or beneficial (Maatouk et al., 2019; Powell et al., 2019) and if it did not result in a change in knowledge (Blevins & DeGennaro, 2018). Another barrier was nurses’ belief that use of assessment
tools may lead inexperienced nurses to rely only on use of tools, and not their clinical judgement (Wøien & Bjørk, 2013).

Nurses were more likely to use the tool among enthusiastic staff (Van Der Woude et al., 2016), when leaders evaluated ineffective interventions and changed strategies (Su et al., 2019), and when interventions were co-developed with leadership and staff. Assessments and tool use were improved with knowledge enhancement from theoretical learning and practical experience (Ramoo et al., 2015). Nurses value learning concepts related to assessment tools (Egerod et al., 2013), and Stewart and Bench (2018) acknowledged the need to consider the complexity of critical care when choosing an implementation model. Hetland et al. (2018) noted requests for training to assess sedation in relation to pain and delirium highlighting the challenges of assessing PADIS symptoms.

The Reasoned Action Approach

The final CFIR data displays were evaluated and patterns and themes were identified based on the Reasoned Action Approach. The central construct of the theory is intention which reflects the extent to which a nurse plans to use the tool. Intention is conceptualized as a function of behavioral, normative, and control beliefs (Fishbein & Ajzen, 2015).

Behavioral Beliefs: Patient-Centered Care and Critical Thinking

Although many barriers and facilitators related to nurses’ behavioral beliefs (or attitudes) were determined in this review, the majority can be grouped thematically. Facilitators of tool use related to patient-centered care (Frances et al., 2010; Jung et al., 2013; Özsaban & Acaroglu, 2016) and included improving patient outcomes (Oosterhouse et al., 2016), urgency of use (M. Christensen, 2014) and knowing the patient (Zamoscik et al., 2017). In the only correlational study in the review, Özsaban and Acaroglu (2016) found a statistically significant correlation ($X^2 11.788, p<0.001$) between nurses who have a patient-centered, care delivery system and compliance with assessing patients for delirium
symptoms. Barriers of tool use related to attitude including perceptions of tool futility (Oosterhouse et al., 2016), imperfection (Jung et al., 2013), complexity and unreliability (Steinseth et al., 2018; Zamoscik et al., 2017). These patterns comprise a theme of restrictive thinking by some critical care nurses.

**Normative Beliefs: Communication and Prioritization**

The supportive role of tool use in communication among critical care team members was conceptualized as a facilitator related to perceived norms. Considering the supervisory or resource role, nurses responded positively to coaching (Andrews et al., 2015) and to availability of resources (Hetland et al., 2018; Olsen et al., 2015; Steinseth et al., 2018). From a team perspective, nurses reported value of the assessment tool facilitating communication with other nurses (Frances et al., 2010; Gélinas et al., 2014), patients (Jung et al., 2013; LeBlanc et al., 2018), providers (Bourbonnais et al., 2016; Jung et al., 2013; LeBlanc et al., 2017; Özsaban & Acaroglu, 2016; Swan, 2014; Van Der Woude et al., 2016), and the care team (Jung et al., 2013; Mascarenhas et al., 2018; Wöien & Bjørk, 2013).

The theme of low prioritization encompasses reported barriers related to normative beliefs about peers, physicians, patients, families, and critical care team members (Andrews et al., 2015; Christensen, 2014; Jung et al., 2013; Oosterhouse et al., 2016; Oxenbøll-Collet et al., 2018; Scott et al., 2013; Steinseth et al., 2018; Zamoscik et al., 2017). Negative beliefs that the assessment tool use agitates, annoys, and offends (Oosterhouse et al., 2016) were part of the supporting data. When nurses perceived that physicians and other care team members did not consider assessment scoring to be important, nurses were not motivated to use assessment tools (Andrews et al., 2015; Christensen, 2014; Deldar et al., 2018; Gélinas et al., 2014; Jung et al., 2013; Oosterhouse et al., 2016; Scott et al., 2013; Zamoscik et al., 2017). Nurses relied heavily on information from nurse-to-nurse reports and medical notes to anticipate pain (Gerber et al., 2015), and some nurses reporting only using the tool
if the prior shift used the tool (Steinseth et al., 2018). These are further evidence of patterns of low prioritization of the PAD tools.

**Control Beliefs: Autonomy and Confidence**

Lack of autonomy was the overall theme of barriers to PADIS assessment tool use involving perceived control. Threats to critical thinking, professional integrity, and personal clinical judgment (Christensen, 2014; LeBlanc et al., 2018; Oxenbøll-Collet et al., 2018; Wøien & Bjørk, 2013) were documented in the studies reviewed. Some nurses even preferred their own clinical judgement over the use of the valid and reliable assessment tools (Christensen, 2014; Deldar et al., 2018; Mascarenhas et al., 2018; Steinseth et al., 2018; Zamoscik et al., 2017). Patterns related to facilitators of tool use related to perceived control, an increase in confidence (Smith et al., 2017), high self-efficacy with repeated use (Ramoo et al., 2015), and acknowledgment of the benefits of unbiased assessment of symptoms (Steinseth et al., 2018).

**Discussion**

Contextualizing the international phenomenon of variation in PADIS assessment tool use by critical care nurses provides a deeper understanding of its complexity for use in the clinical setting. The literature is clear that critical care nurses’ intention to use or not use PADIS assessment tools is influenced by their behavioral, normative, and control beliefs regarding the tools, themselves, and their unit. This integrative review provides a compilation of those beliefs as they relate to critical care nurses’ evaluation of tool use for PADIS assessment.

Behavioral beliefs of critical care nurses about the use of PADIS tools are beliefs about the outcome expectancies if the tool is used and determine the nurses’ attitude regarding the tool use. The appraised studies describe inconsistencies of nurses’ beliefs. Some nurses perceived the tool use provided patient-centered care, while others believed it
was not sufficient to address the complexity of critical care. Using a grounded-theory approach, Cheraghi, Esmaeili, and Salsali (2017) determined purposeful patient assessment and identification as one of the phases experienced by critical care nurses experienced when providing patient-centered care. Paying meticulous attention to patients and individualizing care resulted in greater satisfaction for both patients and nurses. However, given that critical care nurses make between 2 and 3.3 decisions every minute (Gerber et al., 2015), and those decisions are influenced by many factors other than pain, agitation/sedation, and delirium. Nurses may question the reliability of seemingly simple tools used to assess the complex and critical nature of patient situations.

Examples of barriers to tool use and perceived norms found in the reviewed studies were low prioritization by colleagues and perceptions that the tool use annoyed others. However, motivators for use entailed coaching and communication with others. Normative beliefs about the PADIS tool use are beliefs that individuals or groups would approve or disapprove of the nurse using the tools or whether these referents themselves use the tools. Critical care nurses specifically have been shown to be significantly influenced by referents, or individuals or groups who approve or disapprove (Glynn & Ahern, 2000). Referents can include patients, family members, other nurses, physicians, educators, and other members of the care team. Because of the hierarchy of roles that often exists in critical care (Glynn & Ahern, 2000), inexperienced nurses may be less likely to use the PADIS tools if a high priority is not placed on their use by the nursing hierarchy. Kizza and Mulira (2015) showed low unit priority for pain assessment as a significant predictor of acute pain assessment practices (OR = 0.246, CI 0.089-0.678). Educational interventions to improve recognition of delirium that included buy-in from leadership led to greater successful implementation and sustainment (Yanamadala et al., 2013).

Nursing autonomy refers to the freedom to assess and provide appropriate patient care. Critical care nurses highly value autonomous decision making in the day-to-day care of
patients and describe confidence in the repeated opportunities and expectations to make those decisions (Evans et al., 2010). Also, nurses with more experience preferred their intuition in the field more than those with little or no clinical experience (Pretz & Folse, 2011). It is possible that tool use is a threat to autonomous decision making and use of intuition. Nurses may prefer to rely on personal judgment and previous experiences over using an assessment tool. However, some lack acknowledgment of their own limitations, and sometimes personal judgment is not an accurate assessment (Guenther et al., 2012; Mistarz et al., 2011).

When measuring patient outcomes, Mehta et al. (2012) recognized the potential benefit of nurse autonomy by using a nurse-directed sedation protocol. In addition to positive patient and unit outcomes, use of the nurse-driven protocol increased nurse satisfaction (Sacco & LaRiccia, 2016). The opportunity to exercise nursing autonomy is a combination of individuals’ knowledge and expertise and organizations’ implementation of empowerment strategies and initiation of unit-level care programs (Sue, 2007).

**Limitations**

The limitation of this review includes the considerations associated with using the design of an integrative review that allows for inclusion of diverse methodologies, as this broad inclusion approach can contribute to a lack of rigor, inaccuracy, and bias (Whittemore & Knafl, 2005). Reporting bias was minimized by strictly following the integrative review framework chosen. Using the CFIR to guide data analysis and reporting of findings also minimized reporting bias while supporting a systematic, comprehensive, and timely understanding of the nurses’ perspective of assessment tool use.

**Gaps in Literature**

Because post-intensive care syndrome results from a combination of factors, more study is needed of the interaction of PADIS assessment tools and concurrently assessing
multiple symptoms. By identifying the behavioral, normative, and control beliefs that serve as the underlying determinants of following PADIS practice guidelines, important information about the kinds of beliefs that would need to be changed to effect a change is collected. Providing this kind of information contributes to the approach to effective behavior change interventions (Fishbein & Ajzen, 2015). A better understanding of critical care nurses and bringing focus on one or more of their three major beliefs (i.e., behavioral, normative, control) can lead to changes in intention and, thereby, decision making that limits patient exposure to the stressors of PADIS symptoms.

Only sparse data were reported in the studies of this integrative review with information related to other components of The Reasoned Action Approach --background factors, origins of beliefs, and actual behavioral control. Some background factors like gender, experience, and education were discussed but others were missing including personalities and understanding of ethics. Reports of environmental constraints by critical care nurses were absent in most of the studies. Direct measurement of workload was found only in one study (Olsen et al., 2015). A better understanding of available resources and distinction between perceived and actual workload would deepen the understanding of PADIS tool use.

Most of the studies in this review relied on self-report by nurses which presents limitations of the studies. People may not be able to accurately recall their past behavior, or they may choose not to report it accurately usually due to self-presentation concerns (Fishbein & Ajzen, 2015). The cluster of constructs related to individual nurses and critical care culture as well as origins of beliefs could be more rigorously studied with direct observation, interviewing, and/or valid instrument use. The need exists for in-depth psychological and behavioral studies of critical care nurses’ decision-making process in assessment tool use and workplace culture. A deeper understanding would facilitate
efficient and substantive implementation strategies to encourage use of the recommended, valid, and reliable assessment tools.

Conclusion

The implementation of the use of PADIS assessment tools are effective and to improve patient outcomes; however, the findings of this review suggest a wide range of personal beliefs by nurses affect use of recommended assessment tools. Numerous misperceptions of the tools also hinder use, yet patient-centered focus, nurse empowerment, and support from other stakeholders are associated with nurses using the tools. To better understand clinical decision-making of critical care nurses, more robust studies of their perceptions and behaviors are required. PADIS guidelines have empirical evidence using rigorous study designs with additional support from reported application in practice. Addressing nursing and highlighting the positive characteristics of assessment tool use and compatibility with nursing ethics promote awareness and interest among critical care nurses to implement evidence-based practice (Cullen & Adams, 2012).
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intensive care nurses caring for patients with delirium: A phenomenological study.

*Intensive and Critical Care Nursing, 44*, 92–98.


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High nursing workload is associated with adverse outcomes for nurses as well as patients. Workload influences patient outcomes and is associated with less reporting of adverse events, workarounds, increased patient length of stay, increased patient falls, higher rates of in-hospital mortality, hospital-acquired infection, medication errors, abandonment of treatment, needle stick and sharps injuries (Assaye et al., 2020; Carayon & Gurses, 2008; Granados-Plaza et al., 2021). High nursing workload also impacts the nursing workforce as manifested by stress, burnout, the intent to leave, and absenteeism (Aiken et al., 2001; Assaye et al., 2020; Berlinger, 2017; Carayon & Gurses, 2008). While the body of theoretical and empirical literature on nursing workload has significantly increased over the last two decades (Aiken et al., 2001; Assaye et al., 2020; Berlinger, 2017; Carayon & Gurses, 2008; Granados-Plaza et al., 2021), the multidimensionality of workload has resulted in challenges in measurement development and implementation approaches. Compounding these workload challenges are the crises of current nursing and nursing leadership dilemmas against the backdrop of the COVID-19 pandemic.

**Background**

**Nursing Workload**

From a management perspective, workload is operationalized through nurse staffing and involves patient-to-nursing staff ratios, hours of direct patient care, and overtime use. Occasionally, the types of nurses, years of experience, availability of support staff, and team interdisciplinarity are also operationalized. Nursing managers often track staff retention variables include workforce absenteeism, use of float teams, and nurse turnover (Thériault et al., 2019) to evaluate nursing workload.

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In contrast to the management perspective, workload from a nurse’s perspective encompasses the operationalized variables of staffing, but also includes psychosocial and physical factors related to the organization, patient characteristics, and the nurses themselves. Patient factors include acuity of illness (Alghamdi, 2016), dynamic patient events like rapid responses and transporting patients for procedures (Moore et al., 2016), patient dependency, patient age and weight, number of medication doses per day, and overall complexity of care (Junttila et al., 2019).

Organizational factors consist of availability of resources, average daily census, patient turnover, caseload, mandatory reporting of data, documentation, use of technology, and organizational decisions like mandatory education and meetings (Junttila et al., 2019; Lebet et al., 2021; Myny et al., 2012). When strained by heavy workload, organizational factors can potentially contribute to deliberate deviations from policies or written procedures (Jam et al., 2018). Also, cost constraints are ubiquitous in health systems, but these constraints increase pressure upon nurses to do more with less and sometimes with a reduced skill set that does not match patient acuity (Harvey et al., 2020).

Influencing factors on workload specific to the nurse may be cognitive burden (Ng & Curley, 2012), work interruptions (Myny et al., 2012) and nurse perceptions of adequacy of resources and quality of care (Junttila et al., 2019). Overall, nurse workload is situational (Carayon & Gurses, 2008) and specific to each nurse who is part of a particular staff and caring for a unique patient in a fluctuating environment.

**Care Ethics**

Definitions of care ethics by theorists in the field are generally broad. In the early development of care ethics, Noddings (1988) identified caring as an ethical orientation and a form of relational ethics. Tronto (1993) devised this definition of care:
On the most general level, we suggest that caring be viewed as a species activity that includes everything that we do to maintain, continue, and repair our ‘world’ so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all of which we seek to interweave in a complex, life sustaining web. (p. 102)

At the core of all the care ethics definitions is the notion that humans are a part of a system of associations and are fundamentally relational. Therefore, the ontology and epistemology are based on relations.

The care ethics criteria proposed by Klaver, Elst, and Baart (2014) place ethical emphasis on relationships as a source of knowing and the place to receive recognition and care. The criteria also describe care ethics as context-bound and situation-specific. Relationships are broader than personal relationships and involves institutional and systemic realities. Care is viewed as a practice rather than a virtue or motive with an emphasis on the detailed study of the practices to be informed. Leget et al. (2019) expanded on criteria offered by Klaver et al. (2014) and proposed a view of limiting research of care ethics to qualitative methods studying lived experiences, practices of care, and the way society is organized. The authors did not consider their way as the only way but a fruitful epistemological approach for care ethics.

The focus on lived experiences is important in order to feed back into the lives of concrete people who are the subject of care, and as such, the ultimate evaluators of what is morally wrong or right... Caring practices are embedded in larger structures that make up society as a whole, in which power relations are defined and contested and which have impact on the way we are able to deliver that care we would like to deliver. Studying these structures and analyzing its impact on caring
practices and the lived experiences of people prevent us from being politically naïve.

(Leget et al., 2019, p. 23)

Although the onus of nurses’ workload is not solely on nurse managers, analysis must include the understanding of the dependence of the nurse upon the nurse manager and the value of their relationship and shared “world” of patient care. Maio (2017) points out that relationships “become a prism through which to view ethical problems” (p. 56). For nurses, relationships are central to a day’s work and include the obvious nurse-patient relationship as well as other inter- and intra-professional relationships. It is through this prism that this qualitative systematic review is performed by recognizing the shared responsibility of health systems leaders, unit leaders, and nurse managers to change staffing structures and address system concerns that increase workload. By deliberately focusing on the relationships between nurse managers and nurses from this care ethics perspective - with the nurse manager as the caregiver and the nurse as the care receiver - the issue of nursing workload can be addressed through shared experience and responsibility.

<table>
<thead>
<tr>
<th>Phases of Caring</th>
<th>Sub-Questions</th>
<th>Explanatory Statement</th>
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<tbody>
<tr>
<td>Caring About</td>
<td>Is there a need regarding workload? Should this need be met?</td>
<td>Care erosion and hardship on nurses due to heavy workload are two major needs.</td>
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<tr>
<td>Taking Care Of</td>
<td>What is the responsibility of nurse managers for the need? How do nurse managers respond?</td>
<td>Nurses and managers share a moral burden for decreased workload.</td>
</tr>
<tr>
<td>Caregiving</td>
<td>What is the actual, visible work done by the nurse managers in response to needs?</td>
<td>Nurses need support and role models from nurse managers for managing workload.</td>
</tr>
<tr>
<td>Care Receiving</td>
<td>How are the nurses affected by the care they receive?</td>
<td>Due to lack of care received, nurses have adopted defensive and proactive strategies to get work done.</td>
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</table>
Evaluation

A deeper understanding of workload from a qualitative approach serves to promote action to retain nurses, increase productivity, and improve nurses’ well-being and patient outcomes (Racy et al., 2021). Therefore, the review question for this qualitative systematic review was, “What are the specific care ethics aspects related to nursing workload in the acute care setting?” Because care ethics is relational, the focus was on the relationships between nurses and nurse managers specifically with the nurse as the care-receiver and the nurse manager as the caregiver. The review sub-questions are found in Table 5.

Table 6 Search Strategy of Databases

<table>
<thead>
<tr>
<th>Database</th>
<th>Search Strategy</th>
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<tbody>
<tr>
<td>CINAHL</td>
<td>CINAHL Subject Headings: &quot;Workload&quot; and &quot;Nursing Staff, Hospital&quot;</td>
</tr>
<tr>
<td></td>
<td>Key Term in Abstracts: “Qualitative”</td>
</tr>
<tr>
<td>MEDLINE</td>
<td>MESH terms: &quot;Workload&quot;, &quot;Nursing Staff, Hospital&quot;, “Qualitative Research”</td>
</tr>
<tr>
<td>PsychINFO</td>
<td>Key Terms in Abstracts: &quot;Workload&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Nursing&quot; OR “Nurse” OR &quot;Nurses&quot;</td>
</tr>
<tr>
<td></td>
<td>“Qualitative”</td>
</tr>
<tr>
<td></td>
<td>&quot;Acute Care&quot; or &quot;Hospital&quot; or &quot;Inpatient Care&quot;</td>
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</table>

Methods

An initial review of MEDLINE, CINAHL, and PsycINFO was conducted to determine appropriate subject headings, search words or phrases, and MESH terms. This informed the development of a search strategy which was tailored for each information source. For review of the initial group of studies (n = 110), the four features of care ethics (Klaver et al., 2014) guided the inclusion criteria. These criteria in relation to nursing workload were: (1) concrete feedback of lived experiences by both nurses and managers of the relationship between nurses and nurse managers (i.e., relationship-based programming); (2) context and
situation details; (3) institutional and systemic realities; and (4) empirical evidence of care as a practice. A full search strategy for the databases is detailed in Table 6. Figure 3 illustrates the flow chart of the review.

This qualitative systematic review was conducted according to the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis (Figure 3) (Aromataris & Munn, 2020). Potentially relevant studies (n=29) were retrieved in full, and their citation details imported in the JBI System for the Unified Management, Assessment, and Review of Information. Eligible studies were critically appraised for methodological quality using the standard JBI

**Figure 3 Results of the Search of Databases and the Study Inclusion Process**

Identification of studies via CINAHL, MEDLINE, PsychINFO

- Records identified from databases (n = 110)
- Records removed before screening: Duplicate records (n = 43)
- Records screened (n = 67)
  - Not English language: (n = 3)
  - Ineligible context: (n = 2)
  - Ineligible study design: (n = 7)
  - Dissertation: (n = 1)
  - Ineligible phenomena of interest: (n = 20)
  - Ineligible participant characteristics: (n = 5)
- Total studies included in review (n = 29)
Critical Appraisal Checklist for Qualitative Research (Munn et al., 2019). With the JBI approach, the first step is to extract findings from the studies. Findings are verbatim extracts of the author’s analytic interpretation. Each finding is then accompanied by an illustration which is a direct quotation from the study (Table 7).

Two or more like findings were then grouped into a category that is accompanied by an explanatory statement (Table 5). Finally, groups of categorized findings were aggregated into synthesized findings. The JBI meta-aggregative approach was used for the synthesis of the evidence. The meta-aggregative approach does not require re-interpretation of findings but instead enables generalizable statements in the form of recommendations (Aromataris & Munn, 2020). The synthesized findings were then organized and presented in the four phases of caring – caring about, taking care of, caregiving, and care-receiving (Tronto, 1993) and expressed as statements of recommendations for policy or procedures regarding nursing workload.

**Inclusion Criteria**

Only English language published studies that reported first-hand experiences, perceptions, perspectives, or views on nursing workload from nurses or nurse managers in the acute care setting were included. This review considered studies that focused on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research and feminist research (Aromataris & Munn, 2020; Leget et al., 2019). Mixed method studies that reported rich qualitative descriptions were also included.
Table 7 Extracted Findings from Studies based on Features of Care Ethics

<table>
<thead>
<tr>
<th>Relationship-Based Programming</th>
<th>Context and Situation Details</th>
<th>Institutional and Systemic Realities</th>
<th>Empirical Evidence of Care as a Practice</th>
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<tbody>
<tr>
<td>Charette, Goudreau, &amp; Bourbonnais (2019)</td>
<td>One new graduate nurse also believed that the nurse manager wanted her to finish her orientation as quickly as possible to be given a full workload.</td>
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<td>“It’s huge. You have a limited amount of time. Our patients, they have a lot going on. And you’d love to stay a little longer with them but you’re thinking in the back of your mind, you’ve got 10 other things you’ve got to get done right now. And you have to cut the conversation off.”</td>
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<td>Dierckz de Casterlé et al. (2020)</td>
<td>The team-based pharmacy model may need to re-evaluated in the light of the evidence for the potential weakening in the working relationship between pharmacists and nurses and the perceived increase in workload for nurses.</td>
<td>(Pro)active strategies.</td>
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<td>“Historically pharmacists have been a great ally for nurses in attempting to ensure that medications are correctly prescribed by Drs. Nowadays nurses don’t have the time or the stomach to educate Drs who are in-different or patronizing when their prescribing errors are pointed out to them or when they are asked to rewrite illegible medication prescriptions.”</td>
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"I had 5 different preceptors in 19 days. [...] The nurse manager wanted us to finish our orientation as quickly as possible, so she changed the schedule because I would have finished later. So, to be “functional” faster, well, I was switching from one preceptor to the other."
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<tr>
<td>Emotional Exhaustion</td>
<td>Most of the participants experienced severe fatigue due to increased workload and insomnia.</td>
<td>Workload: expectations not always adapted to their skill level - Participants said that nurses have a significant workload on acute care units. They defined this workload as the number of patients, the complexity of their situations and their care. Participants attributed this significant workload to the limited financial and human resources of the organization; some participants talked about a work overload that was even felt by experienced nurses.</td>
<td>Theme: Reorganize nursing workflow to optimize shift patterns Subtheme: Adjust shift patterns dynamically according to workload Uncertainties and emergencies have emerged during the COVID-19 outbreak, which are different from routine clinical nursing work. In the early stage of the epidemic, nurses worked an 8- or 12-hr shifts. In addition, many patients were sent to isolation wards with only one nurse on duty, resulting in an increased workload. Therefore, the head nurses should have dynamically adjusted nurses’ working hours and increased the number of nurses on duty according to the workload to ensure patient safety and care quality.</td>
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<td>&quot;We’ve had a nurse who broke down and she’d just had enough. The Duty Manager went to see her, and she said, “What are you upset about? What’s the problem, Look at your time management?” I said, have a look at the board, have a look at how many nurses we’ve got and how many patients we’ve got. There’s nothing wrong with this nurse - at times she is running, and she can’t run anymore ...she’s had enough.&quot;</td>
<td>&quot;The number of patients has increased a lot. A 24-hour shift is quite tiring, insomnia and insufficient rest are at the peak level! I used to get tired before. Now, I get tired twice as much.&quot;</td>
<td>&quot;I work on the evening shift, and I constantly see that nurses are overloaded, and it is due to the context of care, which is more and more complex. Experienced nurses already have difficulty doing everything they have to do and finishing on time, and I’m not...&quot;</td>
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<td>Excessive workloads, work environments that are substantially different from the familiar ones, and environmental pressure caused depressive emotions and obsessive behaviors in many nurses.</td>
<td>&quot;I think [I can tolerate] the eight hour working hours. It [was] mainly at the beginning, we [were] not familiar with...&quot;</td>
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<td>&quot;The intensive care area, which is already depressing, has become more and more depressing. I feel like a robot that is worried about its own life, runs for other lives and has forgotten itself” (P 28). Another participant</td>
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"We've had a nurse who broke down and she'd just had enough. The Duty Manager went to see her, and she said, "What are you upset about? What's the problem, Look at your time management?" I said, have a look at the board, have a look at how many nurses we've got and how many patients we've got. There's nothing wrong with this nurse - at times she is running, and she can't run anymore ...she's had enough."
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<td>responded, “My obsessions have increased, and this affects me more and more every day. I started to feel like this virus is everywhere.”</td>
<td>even talking about when they are preceptors”. In this context, it then becomes difficult or even impossible to adapt the orientation period and the first weeks of autonomous work to the rhythm and level of expertise of each NGN in a progressive manner. Some participants expressed that after their 19-day orientation period, NGNs should not have the same workload as other nurses, but that their load should be progressively increased over a few more weeks. However, according to participants,</td>
<td>anything including workflow and environment when we work[ed] in [the] middle and night shifts. So, the work efficiency and work quality [were] certainly affected, and we were stressed and tired. In fact, at that time, there were fewer nurses on the middle and night shift, I think the night shift [should have more] nurses. In the middle shift, patients infected with COVID-19 were constantly sent to the isolation wards for treatment. Four or five patients were sent together. So, I have to arrange beds for them, prepare daily necessities, and solve their various problems, and then I</td>
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| **Lee et al. (2021)**<br>Insufficient staffing and concerns about overtime was also addressed<br>“I feel like [I have to decide whether] to wait for one hour to [get a lift] team delivered to my room, [or whether to wait] for the second person to come here. [That would] save my back [but can] end up [with] overtime. Then, I [would] get coached by my manager . . . So, I would choose . . . just quick do this and get on with it rather than get in trouble.” | Some participants mentioned that NGNs may not have sufficiently developed leadership skills, self-confidence and professional identity to be able to meet this requirement in the first months of their practice<br>"The nurse is supposed to be the leader of that team with the LPN, but the newly hired nurse freshly out of school doesn’t have a well-developed sense of leadership and she has little confidence in her actions and in herself. Whereas some of the LPNs working here have been here for a long time, so she will try to lead the NGN, she will make decisions she is not supposed to. And the NGN will let her, because she wants to be a part of the team" (clinical nurse specialist)<br>One NGN felt that, even though she learned a great deal<br>contextual factors preventing this are recurrent.<br>"In a perfect world, after the orientation period, we would like to gradually increase the load […] But then, for example, on the first autonomous day of the NGN, someone calls in sick and we can’t find anyone to replace her. Because we are understaffed, the NGN must take on the same workload as the other nurses. Reality catches up with us […] even if we judge that the NGN should not have, let’s say, six patients, but should rather start with four for a week and then we progressively increase, we consolidate; well, that is not the reality we have to deal with”<br>The last aspect of the workload expressed by participants is the administrative burden inherent to the nursing role. According to participants, a considerable volume of documentation must be completed<br>need to take venous blood and arterial blood gas analysis [for] testing. Always busy, [it] never stops. In the night shift, I started working at 3:30 and that day I remember there were about 20 venous blood, more than 20 arterial blood gas, and about 40 throat swabs, and I had to give oral medicine to the patients. There was a lot of work to do. The workload is heavy, and more nurses are needed.”. (Participant 5) “At the beginning, [it was a] mess. We adjust[ed] our schedules dynamically. At first, we worked an eight-hour shift, then we worked a six-hour shift, finally we settled on a four-hour shift...”<br>**Theme:**<br>Communication between managers and front-line nurses to humanize shift patterns - Occasionally, nursing managers may neglect first-line nurses’ opinions due to the rapid development and the
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<td>from her floating experiences, she always felt excluded from the rest of the team and felt she was assigned a heavier workload than she would normally have: &quot;Constantly changing units, teams, specialties, it is very stressful. When you go back on the same units, you start to know the teams, so it’s easier. I often worked on evening shifts, so I started to know the evening teams. But I was definitely feeling that I was not part of any team. And sometimes you know that you have the heaviest patients and that you would not have that section if you were a part of the regular team.&quot;</td>
<td>for each patient. Although this documentation is essential to ensure the continuity of care, one nurse manager said that the number of forms to complete constantly increases and can have a negative impact on direct care: &quot;There are so many forms and paperwork. When a patient is admitted, they have 13 forms to fill out! [...] All this paperwork takes the nurses away from direct care to patients.&quot; (Nurse Manager)</td>
<td>urgency of the epidemic, which results in communication difficulties. Therefore, communication should be strengthened to adjust shift patterns appropriately taking front line nurses’ perspectives into consideration. “A volunteer male nurse think[s] the shifts arrangement is not reasonable. I know it’s really difficult for any head nurse to solve the problem. It is necessary to explore how to arrange the shift arrangement reasonably. And communication is very important.”</td>
<td>Martin &amp; Bouchard (2020) Decrease in quality of care - Many participating nurses said that they had seen a decrease in quality of care. This is a situation that Sylvain attributes to the tendency of hospital nurse managers to want to increase the number of patients supported by each staff nurse.</td>
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<td>Chua et al. (2019) The most challenging issue reported by nurses was struggling to provide close vigilance to patients during night shifts when there were significantly fewer staff. “There are fewer staff during night shifts. We can’t monitor patients so closely. ... I had to accompany one patient to the toilet. My EN was on break and other staff were</td>
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"I think to obey the order. For me personally, although I can develop a good habit—a work habit of strict execution and it’s also possible to exercise my willpower, actually the head nurse should consider my physical and mental health and listen to my opinions, and then make"
"What we manage to give ... is a minimum. Patients ... would have to be moved every two hours, but that’s no longer the case. ... We do not have time to lift them up anymore. We put them in disposable incontinence adult diapers, to save time."

A critical portrait of the operations management role in strategic planning approach in hospital centers—a predominantly negative portrait—emerged from the FGs saying that hospital management is obsessed with economic imperatives that dictate all managerial behaviors. They reported that management prevailing within the different wards does not take into account the point of view of the staff nurses and fails to inform them of changes, even when these new

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<td>&quot;What we manage to give ... is a minimum. Patients ... would have to be moved every two hours, but that’s no longer the case. ... We do not have time to lift them up anymore. We put them in disposable incontinence adult diapers, to save time.&quot;</td>
<td>occupied. When my EN returned from break, she found [that] patient X [had] collapsed.”</td>
<td>appropriate scheduling, which is more conducive to my nursing work.”</td>
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Theme: Nurses' various feelings and views on shift patterns
Subtheme: Pay attention to nurses' physical and psychological well-being

"I measured my heart rate and oxygen saturation when I [was] wearing the protective gear in the isolation room. Sitting in the chair without moving, my heart rate had reach 120 beats per minute and the oxygen saturation was only 94% to 95%. In addition, protective suits, masks are recommended to change [after] four hours. After more than four hours, there is a concern about whether the protective gear is still effective for me.”.

(Transform 6) "I feel uncomfortable. I wear the protective gear all the time. And I have to wear diapers. I try to adapt
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<td>procedures would affect them directly. They are being confronted with the challenge of continually deploying new projects in hospital wards, projects that directly affect their work as caregivers and make them feel as if they were literally dominated by change. Many of them denounce the failures of arbitrary management that is to it both physically and mentally.</td>
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<td>“OK, this one work 12-hour shifts on weekends, and it works for me.” “So, I will not move him/her to a different shift.” Well, let’s see, according to the convention, it’s the youngest [that should be moved], this one is in surplus, and you say it works for you on a 12-hour shift on weekends, so you will not move that person?</td>
<td>Patient assessment practices Besides the perception that the more “complex” physical assessments belonged to the domain of the medicine profession, the perceived complexity, time and workload pressure, lack of confidence, and lack of role models to correct their practice were also seen as barriers to nurses’ use of “complex” physical assessment skills</td>
<td>Delegating in cases of extreme need or sticking to the usual routine were other examples of survival strategies. To some nurses, doing the work in a routine manner offered structure and support when working under time pressure. Routine disruption, on the contrary, acted as a source of extra stress and time pressure.</td>
<td>Theme: Being busy with catching up with the new guidelines for MERS Subtheme: frequently changing guidelines</td>
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<td>Fear-based management</td>
<td>“We learnt [‘complex’] physical assessment in school, but I don’t think we have the time to do [them]. I don’t think we are empowered to do [‘complex’] physical assessments, and we’re not confident to do them as well. For the doctors, like the house officers, they have time to practice and someone to correct them. We have no one to correct us!”</td>
<td>“Time pressure and routines... if you have routines, you don’t have much ...I mean ... You know what you have to do, so ... Normally, you know that you can do it within that time frame because it’s nothing new [It’s routine]. And then you think, ‘Yes, I can do it’. Unless, of course, something comes up, which interferes with that routine, and then the workload increases.”</td>
<td>“MERS guidelines kept changing. At first, (we were told to) do thing this way and this is the guideline. We needed time to understand and practice a new guideline; however, guidelines kept changing without considering our adjustment to a new one.”</td>
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| "There is a coordinator who wanted to force me to work overtime. She threatened me to send an act of insubordination to the Order. I do not know if you know, when you’re a young person coming out of school, how scary it can be. I saw nurses stay in mandatory overtime and crying. They were exhausted and afraid to make mistakes. The older | Missing the big picture - "Blinded" by | "The most difficult thing was that protocols were changed daily. Working along with memorizing new protocols was very difficult. While workload increased, (we) were told this has been changed this way and that has been changed that way in shift change meetings" | "We promptly communicated and shared updated information among
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<td>ones often ... will blow their nurse managers off: “I’m leaving, and that’s all there is to it.”“Yeah, but there are ladies of my age who say to young people: “No, no, you are the youngest and you have to stay! ... Yeah, yeah, it’s a fact, that’s true too. That’s because, in the history of mandatory overtime, everyone ends up simply defending their own turf. &quot;limited flexibility that nurse managers have to improve the prevailing working conditions in various hospital care units“More often than not, heads of care units in the throes of any situation of conflict,</td>
<td>overwhelming workload - Many enrolled and registered nurses illustrated accounts of overwhelming workload mismatched with inadequate staffing levels, which impaired their capabilities to “see” clinical deterioration. “Sometimes, we are held up with something else. We won’t know how the other patients are. We won’t know that the patient deteriorates unless another staff passes by [and says], ‘Patient XX doesn’t look good.’”</td>
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<td>nurses within the unit, thoroughpaced Talk (a free mobile instant messaging application for smartphones with free texting).&quot; &quot;We had a notice note summarized about new information on MERS. We change shifts, we read the note and were also told what we have to be cautious because of what has been changed and it helped. It helped because we never had MERS before and didn’t know how we have to send the specimens and did not know how to cope with it. It worked as basic guidelines.&quot;</td>
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<td>They have very little ammunition to battle with only just the back of a spoon . . .”</td>
<td>Harvey et al. (2020)</td>
<td>Keers et al. (2018)</td>
<td>Liang et al. (2019)</td>
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| Emotional Exhaustion | "This low resource of nursing numbers doesn't take into account that actually people [nurses] are going over and above what they're required to do, and what they're contracted to do, just to get through, and, actually, for an accountant's eyes or for a management accountant or a business manager, what they see is actually these guys are doing relatively well on what they've got.” | The working environment. The majority of participants (n = 17) described working environments that were noisy, chaotic, and/or busy. This type of environment led to distractions and interruptions, high workload and rushing, and when combined with other factors led to both skill-based and planning errors as nurses were not able to focus on the medicines administration task. "Rushed, there were lots of people milling around in the corridor, there were doctors running on and off the ward requesting prescription charts, there were medical students who were doing bloods on another patient in the clinic at the same time, so it was really crowded, it just felt really... just really rushed, I had to get the medication round finished to get on | Theme: Care impact – advantages
Subtheme: Reducing healthcare providers' workload
Participants believed robotics could reduce their workloads. An important factor affecting participants' perception of the advantages of robotics was their sense that intelligent devices were ideal for performing repetitive actions and assisting with precision treatment. Including: Assist in routine work "Usually while new patients are admitted, we have to do a physical assessment and a family assessment. We also have to do a unit orientation; it usually takes a lot of time... I think robotics can help us in this area. (Staff nurse 2–26yrs-R) I would like robotics to help me with the strategies of garbage classification, how to weigh the diapers,
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<td>with the rest of the day [. . .] One of the medical students was asking me where the blood bottles and needles were.&quot; High perceived workload, inadequate skill mix and particularly low staffing were major themes interconnecting the majority of errors. Low staffing was reported to be commonplace and appeared chronic in some cases, with causes including sickness, annual leave and wards acting as a staff “donor” (N11, &gt; 5 years) to others requiring personnel. “. . . which is another issue, agency staff only. They don’t know the ward, they don’t</td>
<td>remind me to collect urine at regular intervals...this kind of routine. Furthermore, patients or families can ask robots to repeat something as many times as...they need. &quot;&quot;I hope robots can help us track the result of patients' lab data and interpret it, since patients always have multiple tests in the lab and we get the data back at different times. If robots can collect all results and interpret blood tests, genetic tests, and other tests for us, it will help a lot.&quot;&quot;</td>
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<td><strong>Stavropoulou et al. (2020)</strong></td>
<td><strong>Tamata et al. (2021)</strong></td>
<td><strong>know the patients, so you’re the only qualified with three or four agency staff only, who don’t have the ward, who don’t know the patients. So, you can’t rely on them. All you need to do is to rely on yourself, you know?</strong></td>
<td><strong>Martin &amp; Bouchard (2020)</strong></td>
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| The routines seemed to continue without critical reflection and the management did not get involved. | Physical and mental risks. Some participants stated that work overload and work for long hours causes more physical and medical risks. “Shortage of nurses affects our physical body very badly. We experienced back pain and back injury for trolleying patients to the theatre and to other diagnostic units. . . .and we felt tired and cannot provide the best quality nursing care to our patients”  

Other physical risks which was reported by all participants is when they don’t have enough time to rest and eat or drink due to too much workload and limited nurses. P24 expressed that they don’t have enough time to rest and eat during busy times which affect her physical body and her health. “Most of the time our | | “It [would help] if administrators would be more present in the field and less often in meetings .... They could see the whole scheme of things [that are done by staff nurses]. It would help [to] give some feedback to people.”  

Through her testimony... she insists that these administrators are not constantly monopolized by meetings. But these meetings, in her opinion, have the effect of making them lose contact with the reality in the field. According to Danielle (14II), the meetings should not be abolished, but they should be succinct and directly relate to what happens within the hospital wards. |
ward is busy and those times I don’t have enough time to rest and eat or even drink which affects my physical health."

Most nurses reported that high job demands increase physical and mental health problems. P9 mentioned the impact of stress to physical and mental problem on nurses

“Stress affects our mental health when we are exhausted due to work overload which prevents us to think properly which also increases the chances to make mistakes”.

“When we have too many patients and lack of skills especially for us inexperienced nurses, it affects us psychologically as well which can affect our performance”.

Medical risk. One of the respondents stated that medical errors are one of the common risks that occur due to stress from working long

participants expressed perceived challenges with their workload and described fast-paced, demanding, or increased workload

“I’ve been a nurse for 20 years, and I’m more and more frustrated every day at work because we’re expected to do more with less every day.” Another nurse noted “[My] med-surg unit is very fast-paced. There’s a lot of expectations. There’s not time allowed for things you do need to do like teaching and moving patients, so people have to move quickly.” “They’ve added so [many] more protocols . . . If a patient got a hip or knee surgery, they have to stand up within eight hours of surgery. Those demands are added on the top of everything we have.” “I feel like patients [are] a lot heavier than before. [There are] more older patients. They have more mobilizing problem [to help].”

You walk in: “OK, 10-minute meeting. There, I told you about respect, I told you about this and that [...] how could we organize ourselves?” It does not take money to do that, [...] it just takes some administrators, who are able to drop their paperwork, to look at the reality and to say: “No, this way [to work], it doesn’t make sense!” And probing around: “You, what are you thinking? [And you,] what do you think?

... proposes that nurse administrators, like other physicians, have the opportunity to adopt a mixed practice through which they would be able to act as nurse administrators while remaining active at the clinical level.

“I find that interesting to see physicians who may have mixed practices will continue to [...] follow their patients and [...] will be able to manage at the same time. But for staff nurses ...
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<td>hours or work overload.</td>
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<td>from that moment on, if we do nursing management, as well, absolutely under this approach, bygones would be bygones with respect to [. . . ] the caring.&quot;</td>
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|                                | “I have experienced the result of stress that causes high chances of errors in our workstation which threaten the lives of the patient. Some prevented errors are the result of work overload and long hours of work which prevent nurses from perform their duties effectively and increase the chances to make mistakes”.

Four participants reported that medical errors were seen in their workstation due to physical and |

|                                   |                               |                                     | Stavropoulou et al. (2020) |

Getting organizational support in terms of a good working environment, provision of training, less workload and more facilities were mentioned as means of enabling participants to integrate empathic care in practice.
Lack of support. Most respondents reported that lack of support from the leaders causes low working morale and low motivation... the leaders in the hospital management haven’t provide much support to the nurses. “We always confront our nursing managers or clinical supervisors concerning problems in our workplace such as poor working equipment needing replacement and poor working environment, but they always give excuses and no action taken seriously which affects our morale of work...” P15 (a 35-year-old male RN) Another participant added: “We hardly see the managers or supervisors doing regular visitation to support nursing staff and to assess nurses work performance, this causes low staff motivation.”

Womack et al. (2019)

3.2. Activity patterns
3.2.1. Temporal shift rhythms
Day shift work rhythms described by RNs were largely shared across patient care units. RNs psychological stress where they gave incorrect medication to the patients.

“Few times I gave incorrect medication to patients because I can’t think properly due to tiredness and exhaustion or sometimes, I gave the correct medication but I don’t explain it well to the patient especially the dose, time and route of administration”.

“Most of the time due to frustration and too much workload I don’t practice infection control rules and regulations which cause more medical risk to my patients”.

Womack et al. (2019)

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“Most of the time due to frustration and too much workload I don’t practice infection control rules and regulations which cause more medical risk to my patients”.

Finally, issues of interpersonal relationship, effective cooperation and personal motivation were highlighted.

“We had to conduct actual exercises after work in case the epidemic became serious.”

“I was exhausted after working all day, and I had to perform practical exercises after work, which was even more exhausting.”

Lindgren & Graneheim (2021)

Lack of time was described as the root of many organizational deficiencies and a hindrance to good nursing practice. The participants related lack of time to understaffing and high workload at the wards. They described lack of...
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<td>described an intense work period between 7:30a.m. and 11:00a.m.</td>
<td>timesometimes contributing to self-harming incidents at the ward as patients sought the staff’s attention. Many incidents could have been avoided if staff had had time to notice these people before they harmed themselves.</td>
<td>“Because it had been possible to avoid many incidents if you had the opportunity to acknowledge them before they had harmed themselves.”</td>
<td>Martin &amp; Bouchard (2020)</td>
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<td>One participant compared the start of day shift to “Double Dutch” with many competing demands for time and attention layered atop time-sensitive shift routines such as 9:00a.m. medications, assessments, and clinical documentation. The 8:00–10:00a.m. time period was described as the worst time of day for unexpected events</td>
<td>“The morning is usually a very busy time, because each of us has 4 patients that need something right off the bat. There are usually new orders coming in right at 6 or 7 am; all the meds are due, somebody needs something. And right when you’re about to leave a patient room, something else happens. And you never know when the ostomy’s going to burst or the dressing’s going to fall off and you’re</td>
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**Martin & Bouchard (2020)**

Axis 1: Reflective look on current state of things

Description of the work overload:

No longer having access to their role as caregivers as collateral effects of being overloaded at work, participating nurses described a multitude of phenomena that make them feel that they no longer have access to their caregiver roles.
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<td>gonna need to re-do the whole thing...You’re just hoping that some of that doesn’t happen in the morning when you have this long list of stuff to do.”</td>
<td>These phenomena included the fact of constantly feeling like they are putting out fires and to be forced to omit certain nursing interventions, even essential ones.</td>
<td>&quot;A blood test ..., it is prescribed and nurses will not do it. Or dressings, ... are not done three times a day, [but] once a day. Hence nurses are called to make professional mistakes.&quot;</td>
<td>Many participating</td>
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<td>3.2.2. Signs of manageability Ability to address self-care needs including hydration, nutrition and restroom breaks was the most frequently reported sign of a “good shift”. Additional signs include timely clinical documentation and getting off work on time. RNs noted that clinical documentation time doubles as time for rehydration and footrest. The atmosphere on a good shift is pleasant, with short social conversations (e.g., “How was your weekend? “) between care activities.</td>
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<td>“I got to eat lunch, yeah, just 30 minutes”. P19: “Got to go to the bathroom when I needed to.” P15: “Yeah.” P18:</td>
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<td>Many participating</td>
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<td>“Charting in real time” (laughs) P15: “Oh, that’s a dream!” P18: “It’s wishful thinking, but if you DID, then you would know that is the best day ever (laughs).” P19: “Appropriate answer.”</td>
<td>nurses who have been staff nurses for several years told us of no longer being able to cope with the unexpected and to no longer interacting with patients</td>
<td>&quot;It is not possible to be with the patient .... Over the past twenty years, the idea that I had of the nursing profession, it’s now completely degraded. It has nothing to do with being a nurse anymore.&quot;</td>
<td>Najafi et al. (2018) The inclusion criteria were as follows: nurses who had experienced workplace violence from patients and/or their relatives, their superiors and/or physicians and who had at least 6 months of work experience.Workload pressure - All the nurses believed that nursing shortages and heavy workloads made it difficult for them to provide effective care to patients and caused</td>
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<td>3.2.3. Demand bursts RNs report that workload can vary considerably across a shift. Workload escalation may occur as a result of a single large event, multiple small events, or a gradual increase in aggregate patient demand. Participants shared that “falling behind” is often preceded by a cluster of tasks that each require ≥15 min of uninterrupted time. “Sometimes I’m having a great day, and all of a sudden it gets busy for 20 minutes, so I procrastinate those meds for 45 minutes.” “So, you need to get next door to see if that really is v-tach, or if your patient is just scratching</td>
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<td>themselves. And you look outside, cuz you’re with somebody on the commode and there’s nobody there. So, you quick take off your gloves and wash your hands, run next door to check the patient, silence the alarm, then take off your gloves and wash your hands really quick to get back to make sure they haven’t gotten off the commode. Those are the times that patients can fall, and you have two patients at risk. What do you do?</td>
<td>dissatisfaction among patients/relatives and physicians</td>
<td>“The greatest hardships include a lack of personnel and high workload...the number of nurses is less than the number of the beds...; the more tired the nurses are, the more there is tension and conflict.”</td>
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<td>Siyun et al. (2017)</td>
<td>Most felt that medical care and routine bedside care were prioritized over providing psychosocial care and expressed that they would only provide psychosocial care if there was extra time.</td>
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<td>&quot;Because we are just really busy and we cannot provide this psychosocial care for patient. we cannot sit down and talk to the patient and find out more. I mean we are short of time in the wards definitely because we are always occupied with all the routine work&quot;</td>
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<td>Stavropoulou et al. (2020)</td>
<td>Confront the barriers Heavy workload and understaffing were reported by the participants as impeding factors for the integration of empathic care in practice. Elimination of these barriers, was considered essential for being able to integrate empathic care to practice.</td>
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<td>&quot;...most of the nurses think that (empathic care) it is a luxury...time is not enough...” (p3, Site A). &quot;...if we had more personnel,...every nurse could find the way to provide it” (empathic care) (p5, Site A). &quot;...the heavy workload is an obstacle...and the lack of training...”</td>
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<td>Storaker, Nåden, &amp; Sæteren (2017)</td>
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<td>The painful busyness To safeguard the individual patient’s need for a totality of care, to help enable the patient to make independent decisions by providing adequate, suitable information, to respect the patient’s right to make his or her own choices, and to ensure</td>
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<td>confidentiality were regarded as important values. The participants described that they had only a marginal opportunity to live out their ethical values in their daily practice, and this led to ethical challenges. They characterized a general working day as a state of chaos without any opportunity to have a say concerning improvement.</td>
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<td>&quot;I feel that I have no control. Other people govern my day, and I cannot do it myself. It is impossible to do what I have planned for the day. There is no time for reflection.&quot;</td>
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<td>&quot;It is inexhaustible, isn’t it? As soon as the patient is discharged, I don’t even have time to wish them a good recovery; three new patients are beside me, ready to be admitted and put in the room I haven’t even had the time to clear out yet.&quot;</td>
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<td>Thus, professional nursing values</td>
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<td>seemed to fade and even vanish in the process of adapting to the existing culture.</td>
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<td>&quot;Yes, I get tired sometimes. However, I used to be much more tired some years ago, because then I cared about it. When I got back home, I thought, “Good Lord, today we had a conversation while another patient was listening” for example. Nevertheless, in the course of time, you learn to ignore some of the feelings. Therefore, you learn almost to ignore the feeling that OK, ethics is not that important. Of course, it is terrible. It definitely is, but after a while, you do not bother. In the end, you will find that there are other things to worry about instead. In addition, it is tragic.&quot;</td>
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<td><strong>Tamata et al. (2021)</strong></td>
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|                                |                             | Heavy workload. All the participants (25) working in the hospitals have confirmed that workload has been a challenge when there are extremely limited nurses to manage the patients on each shift. P3 stated that shortage of nursing and workload is seen throughout the hospital wards which exceed the number of nurses working per shift.  

"Shortage of nursing is seen throughout the hospital wards and is a long-term issue where workload exceeds the number of nurses working in one shift."

All the participants (25) also reported that the workload is increasing because of the high number of patients’ admitted. P16 compared the population in the past with the current and stated that when the population increased, diseases also increased that caused workload on nurses |
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<td>&quot;In the past, the population was less but now the population increases due to the high number of disease cases that causes more patients’ admission and more workload to us nurses.&quot;</td>
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<td>Some of the participants (15) reported an inadequate number of nurses working in each shift also create challenges due to workload when other nurses on sick calls or annual leave. P6 expressed the workload when only one nurse worked to cover for nurses who were on various leaves.</td>
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<td>&quot;Workload is too much as most of the time only two nurses working in each shift is not enough, if one staff on sick leave or annual leave then we must double the shift.&quot;</td>
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<td>Lack of workforce. Increased workload compared to a smaller number of nurses working in the</td>
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<td>hospitals causes nurses’ physical exhaustion leading to job dissatisfaction as expressed by all 25 participants. P11 expressed the result of lack of workforce to his well-being. “Workload is too much in the hospital wards and we cannot do all our work at one time-. . . . I normally experienced tiredness and exhaustion and not interested to work due to incomplete jobs seen each day.”</td>
<td>Valizadeh et al. (2018)</td>
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<td>abstracted to two main categories including “excessive workload alongside inadequate staffing” and “the lack of value on compassionate care.”</td>
<td>&quot;I must do a lot of work in my shift. For example, I assess patients’ needs, control vital signs, ... In this situation I ignore psychological aspects and compassionate care, I only focus on physical care. I think for finishing my ordinary tasks”. As the number of patients is more, I can’t communicate with them all ... I have not more time to listen to them.”</td>
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<td>&quot;I provide care to many patients in each shift, I take care of 15 patients. You only think about the amount of time I allocate to control their vital sign ... I must do other tasks too. I am under pressure to finish my tasks. (Nurse 2) We complete a lot of paperwork in our daily practices, it wastes our time. I&quot;</td>
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| **think it is a main barrier ... Most of my time is wasted by filling out written work; so, I could not spend my time on clinical work and compassionate care.**  
"""When I want to transfuse blood to my patient, I fill out a lot of forms ... In fact, most of this works is not necessary."""  
""My organization wants me to fill some papers. Unfortunately, the system gives more importance to paperwork, rather than giving importance on providing high quality care. Therefore, I have to complete them. "" |
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<th>Relationship-Based Programming</th>
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<td><strong>Waltz et al. (2020)</strong></td>
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<td>Theme 5: Workload/staffing</td>
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<td>The need to maintain adequate levels of staffing was viewed as a high priority. Common topics frequently included the ratio of nurses to patients, acuity levels, increasing numbers of tasks that they are being asked to complete and the number of nursing assistants available.</td>
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<td>&quot;I feel like their expectations versus the patient load that we have, and the tasks we need to do is unrealistic. Sometimes the tasks can be overwhelming. It is like they are always coming up with something new for you to do. It's like 'just add that to my list' (chuckling). On days that we are short on PCAs (patient care assistants) we have to do vitals, blood sugar checks—it is an extra weight on you to do those things so that really affects your job&quot;</td>
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<td>Relationship-Based Programming</td>
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<td>satisfaction. You feel more overwhelmed.&quot;</td>
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<td>3.4.2. Workplace culture</td>
<td>Multiple participants remarked that demand bursts that create unsafe patient situations or inability to provide high-quality care result in workplace frustration. One participant noted a gap between the anticipated and lived work experience of working as an RN, stating that time-sensitive, technical tasks such as passing medications crowd out time for therapeutic interaction and whole-person care.</td>
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<td>Relationship-Based Programming</td>
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<td>“Sometimes there's the worry of ‘Am I the person who's sucking up the resources on the unit?’ I don't want to be the person cuz then you're like, ‘Well, are they thinking I can't handle my assignment? ‘... I think nursing attracts people with personalities that are a lot of times Type A, or like gung-ho, or like yeah, yeah, yeah. We just keep saying yes, I can do that, I can do that, I can do that. And then it's like, (whispers) ‘No, you can't.’”</td>
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Note. With the JBI approach, the first step is to extract findings from the studies. Findings are verbatim extracts of the author’s analytic interpretation. Authors and year are in bold. Each verbatim finding is then accompanied by an illustration which is a direct quotation from the study (in italics).
Caring About: Care Erosion and Hardship

The first phase of caring is “noting the existence of a need and making an assessment that this need should be met” (Tronto, 1993, p. 105). In the context of the relationship between the nurse manager and the nurse, the authors sought to first discover if there is a need regarding workload and should this need be met. Significant needs were found in the qualitative studies to decrease workload. Heavy workloads are often caused by time restraints, large patient-to-nurse ratios, and lack of resources.

The cause and effect of time restraints on acute care nurses vary. In their study of capacity strain in the hospital workplace, Womack et al. (2019) reported multiple shifts between workload demand through a shift, adaptive strategies that may not be consistent with policies or procedures, and some tasks may be deferred. Time pressure on patient care sometimes forces nurses to ration care – to give up work that should be done in favor of work that must be done (Bishop & MacDonald, 2017; Dierckx de Casterlé et al., 2020; Martin & Bouchard, 2020). Lack of time was also described as contributing to self-harming incidents by patients to attract nurses’ attention (Lindgren et al., 2021). Nurses indicate that signs of good time management include the ability to address self-care needs like eating, drinking, and using the restroom, even if clinical documentation time is often doubling as time for rest and rehydration (Womack et al., 2019).

Large patient ratios have notable negative impacts on nurses and patients. This is often due to inadequate staffing (Cengiz et al., 2021; Chua et al., 2019; Lee & Lee, 2017; Tamata et al., 2021), but also an overall higher number of patients admitted and lack of coverage of sick calls or annual leave (Tamata et al., 2021). Contributing to the large patient ratios is the current coronavirus pandemic. Reflecting to the sustained influx of acute care patients due to the
pandemic, one participant responded, “The number of patients has increased a lot. A 24-hour shift is quite tiring, insomnia and insufficient rest are at the peak level! I used to get tired before. Now, I get tired twice as much” (Cengiz et al., 2021, p. 2008).

Time scarcity and inadequate staffing and resources lead to patient care erosion and hardship on the nurses. Nurses reported no longer having access to their role as caregivers (Martin & Bouchard, 2020) leading to ethical dilemmas. Psychosocial care of patients is deprioritized, and empathetic care is considered a luxury (Siyun Chen et al., 2017; Stavropoulou et al., 2020). These dilemmas create a gap for nurses between the anticipated and lived work experience (Womack et al., 2019). Further hardships included emotional exhaustion, fatigue, insomnia, lack of confidence, increased workplace violence, and other physical and mental risks and problems (Cengiz et al., 2021; Chua et al., 2019; Harvey et al., 2020; Liang et al., 2021; Najafi et al., 2018; Tamata et al., 2021).

Patient care erosion and medical errors are other unfortunate results of heavy workloads (Chua et al., 2019; Lindgren et al., 2021; Martin & Bouchard, 2020; Tamata et al., 2021; Womack et al., 2019). Minimal and deferred care was reported with blinding to clinical deterioration (Chua et al., 2019; Martin & Bouchard, 2020; Womack et al., 2019). Although current literature often focuses on the outcome of care left undone, the causative elements of resource and time scarcity and a lack of a normative framework for decision making by nurses to prioritize care have not been studied sufficiently (Scott et al., 2019). However, Renolen et al. (2018) studied nurses’ struggle with maintaining workflow by task juggling and with implementing new scientific knowledge by “battling counter current” (p. 185) of insufficient support and lack of time.

Taking Care of: Shared Moral Burden
The second phase of caring is “taking care of” or “assuming some responsibility for the identified need and determining how to respond to it” (Tronto, 1993, p. 105). This phase of caring about nursing workload means finding what the responsibility of nurse managers concerning the identified workload needs is and how do the nurse managers respond. In some instances, the values of a workplace differ from the values of the nurse. This can result in role conflict when incongruous organizational resources or expectations compromise professional standards (Harvey et al., 2020). Harvey et al. (2020) also reported nurses who described how they were treated as commodities to accomplish checklists and mandatory reporting and felt devalued. Nurse managers are also often in “the throes of any situation of conflict, [and] they have very little ammunition to battle with, only just the back of a spoon” (Martin & Bouchard, 2020, p. 312).

The moral burden of care compromising or care rationing needs to be shared at the organizational level and not solely placed on individual nurses (Scott et al., 2019). Pressures from patients, other professionals, supervisors, organizational demands, and other environmental factors can shape ethical practice. At times, the logic of managers that prioritizes rationing efficiency clashes with the autonomy and expertise of professionalism (Livingstone et al., 2021).

However, it is imperative to acknowledge that “nurse managers’ consciousness is being bifurcated – what they know from experience, from being there, is overruled by authoritative institutional information” (Fast & Rankin, 2018, p. 8). Harvey et al. found a need among nurses to for managers to understand their exhaustion and their dilemmas like waiting on resources at the risk of overtime hours (Harvey et al., 2020). Managers who have reconciled the clash between professionalism and managerialism by prioritizing one over the other or blending the two may have lessened conflict and tension (Livingstone et al., 2021). Open communication
between managers and nurses that takes the nurses’ perspective into consideration can optimize and humanize shift patterns (Gao et al., 2020).

**Caregiving: Need for Support and Role Modelling**

The third phase of caring is caregiving. This is the actual, visible work done in response to needs. To address nursing workload, staffing decisions need to be based on evidence regarding impact on the assigned nurses and patients. Unfortunately, this review found evidence of actual, visible actions by management that was uncaring. Nurses who are new graduates have reported a desire to finish orientation periods before working independently, but contextual factors sometimes do not allow for full orientation (Charette et al., 2019). Martin and Bouchard (2020) presented a predominantly negative impression of managers’ behavior with fear-based management, forced overtime, and obsession with finances. Ethical dilemmas occurred on the units without role modelling or involvement from managers, and organizational culture often emphasizes documentation or compassionate care (Chua et al., 2019; Stavropoulou et al., 2020; Valizadeh et al., 2018). Respondents indicated that this lack of support from the leaders causes low morale and low motivation (Tamata et al., 2021). Additionally, when nurses go above and beyond what they are required to do, managers often overlook the strain and conclude that nurses do well with what they have (Harvey et al., 2020).

**Care-Receiving: Survival or Proactive Strategies**

The final phase of caring is care-receiving or recognizing that “the object of care will be affected by the care it receives” (Tronto, 1993, p. 107). This review sought to find how nurses are affected by the care they receive from nurse managers but found more adaptations due to lack of care received. If this final phase fails, nurses adopt survival strategies like increased pace of work, completion of care beyond allocated hours, and sacrificing health and well-being to do
what needs to be done (Dierckx de Casterlé et al., 2020; Scott et al., 2019). Care rationing compromises ethical values and leads to feelings of failures (Dierckx de Casterlé et al., 2008, 2020). The resulting stress is known to lead to burnout that results in emotional exhaustion, depersonalization, and lack of personal accomplishment (Andela & Truchot, 2017; Maslach & Leiter, 2008). Two solutions proposed were for management to not be monopolized by meetings to allow time for presence on the units and for management be encouraged to have mixed practices that allow for direct patient care (Martin & Bouchard, 2020).

**Conclusion**

Nursing workload is complex and contributing factors are sometimes not addressed in the workplace. Competing priorities for nurses cause ethical dilemmas that can compromise professional values, moral agency, and patient-centered care. Most nurses are nurses for the caring aspects. If the four phases of care succeed, nurses are allowed some control over their workload and can include in their patient care things they enjoy the most (Dierckx de Casterlé et al., 2020; Gaudine, 2000). To reduce nursing workload, a care ethics perspective can provide solutions through fortifying interprofessional relationships and enhancing empathetic actions.

**Implications for Nursing Management**

The conflict between reducing health care costs and mandates of quality patient care have created on going decision making at the bedside and the managerial level. Care ethics challenge the depersonalization of nurse managers caring for nurses and encourages a view of the detailed, everyday experiences. Situational, individual, and team approaches to management allows for incorporation of personal values and ethics of care to support patient-centered care. Leadership initiating conversations and being proactive about time pressures, care rationing, and managerial logic can lead to balanced workloads, reduced tensions, and
increased job satisfaction for both the nurse and the nurse manager. Bujacz et al. (2021) reported that nurses moving from early to mid-career remain in jobs in which they experience increased control and support with a reduction of job demands. Conversely – in the same group of nurses – adverse health outcomes were associated with low autonomy, low support, and moderated job demands.

Nurse autonomy can be expanded to a unit characteristic of collective efficacy that can guide manager efforts. Collective efficacy is defined as the capacity of a group of nurses to solve problems and correlates with an improved work environment and less missed care (Scott et al., 2019; Smith et al., 2018). Focus on the work environment and collective efficacy aligns well with the relational aspects of care ethics that are quality of interactions, space for human connection, and reflective practice for improvement (O’Rourke et al., 2019).
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CHAPTER 3: “IT KILLS YOUR SOUL”
ETHICAL SENSITIVITY OF PADIS CARE AMONG CRITICAL CARE NURSES:
A MIXED METHODS STUDY

Introduction

Advancements in critical care have resulted in higher survivor rates and a broader focus on patients’ quality of life after hospitalization. Unfortunately, after critical illness, patients may suffer from persistent and debilitating consequences that are directly caused by the presence of common conditions in critically ill patients including pain, agitation, sedation, delirium, immobility, and sleep disruption (PADIS).2 As part of the strategy to improve quality health care, one of the overall aims is to improve patient-centered care by paying attention to physical comfort and respecting patient’s values, preferences, and expressed needs.3 In 2013 (updated in 2018), the Society of Critical Care Medicine developed PADIS guidelines for patient care to improve ICU outcomes.4,5 To implement the guidelines, a patient care PADIS bundle of interventions and actions was compiled and is highly recommended for implementation due to strong evidence of positive patient outcomes.6,7

Implementation of the care bundle has been shown to reduce incidence of coma, ventilator and hospital days, and delirium, as well as increasing hospital survival.8,9 Despite endorsement from critical care societies and quality improvement agencies, uptake of the bundle has been limited. Costa et al.10 identified 107 barriers to bundle delivery. The barriers were related to the protocol, organizational domains, patients, and providers. Compounding the existing problems with implementation, new data related to COVID-19 patients have suggested that practice guidelines are being neglected, higher doses of sedatives and analgesics are being prescribed, and non-ICU trained staff are treating patients during surges. Related to nurses’ perspectives, two, statistically significant barriers identified that relate to nurse attitudes
(internal disposition and way of thinking) are workload burden and role clarity related to the bundle.¹¹,¹² Because personal attitudes and values comprise personal ethics, deeper inquiry into the role of personal ethics and barriers to evidence informed, PADIS care is warranted.

One provision of the Code of Ethics for Nurses includes that nurses bear responsibility for the nursing care of their patients, and that they are required to comply with standards of care like PADIS practice guidelines.¹³ Some nurses understand the ethical nature of nursing practice (ethical awareness), recognize the ethical consequences (i.e., ethical sensitivity) of PADIS care, thereby become familiar with practice guidelines, and exercise moral agency to implement evidence informed PADIS care. Others do not or cannot exercise their moral agency because of other personal, environmental, and perhaps ethical reasons.¹¹,¹²,¹⁴–¹⁶

Critical care nurses are typically equipped to recognize the ethical implications of higher-risk clinical situations or dramatic issues like end-of-life decisions and allocation of scarce resources. However, the ability to recognize moral conflict and ethical consequence (i.e., ethical sensitivity) of everyday tasks included in PADIS care like mobilizing a patient or appropriate medication administration is not often recognized or discussed. An understanding of nurses’ ethical sensitivity of PADIS care and ethical awareness (as an attribute of ethical sensitivity) provides a practical basis for understanding nurses’ decision making about implementing evidence informed, PADIS care. The absence of ethical sensitivity results in the patient’s needs not guiding care, the nurse not intervening when expected, or the nurse practicing routine- or task-based care as opposed to patient-centered care (see Figure 4). Compounded by exposure to unsupportive environments, ethical issues go unaddressed and eventually become status-quo. Nurses are positioned to notice emerging problems, but -- without ethical sensitivity -- patients may be harmed, and nurses may experience moral distress. Nurses are required to possess high levels of professional competence and ethical maturity to address technological
and medical advances, the growing complexity of care situations, and the requirement that nurses constantly and critically reflect on how they can contribute to their patient’s well-being.\textsuperscript{15} The studies of Milliken and her colleagues\textsuperscript{17–21} -- who developed the EAS tool proposed for use in this study -- are the only studies found directly related to ethical sensitivity and critical care nursing in the literature. Therefore, the purpose of this study is to explore the ethical awareness and ethical sensitivity of PADIS care among critical care nurses.

**Aims**

**Aim 1:** To determine the measured level of ethical awareness as an attribute of ethical sensitivity among the critical care nurse participants.

**Aim 2:** To explore the ethical sensitivity of critical care nurses related to implementation of PADIS care.

**Aim 3:** To examine how the measured level of ethical awareness and ethical sensitivity exploration results converge, diverge, relate to each other and/or produce a more complete understanding of PADIS ethical sensitivity by critical care nurses.

**Methods**

**Design**

The approach to the phenomenon of ethical sensitivity of PADIS care was from a critical realist paradigm that acknowledges an objective approach but views relativism as offering insights into social contexts.\textsuperscript{22,23} An overall procedural diagram for this convergent parallel mixed methods (QUAL-quant) study is in Figure 4. The rationale for the mixed methods design allowed for convergence of the two forms of data to bring greater insight into critical care nurses’ ethical awareness than would be obtained by either type of data separately.
**Qualitative Approach.** Ethical sensitivity was explored by conducting an ethnography of critical care nurses to provide focus on the culture of critical care and explore the beliefs, values, and attitudes that structure the patterns of the nurses regarding PADIS ethical sensitivity. In addition to personal beliefs of nurses, interprofessional and environmental factors also have an impact on everyday practice. The way in which PADIS care was given on an everyday basis was observed and data collected from document review, field observations, individual interviews, and focus groups. Collecting, analyzing, and triangulating data from multiple sources is one defining characteristic of ethnography.

**Quantitative Approach.** In this study, ethical awareness was conceptualized and measured as a construct that consists of a hierarchical continuum using the Ethical Awareness Scale (EAS). The EAS is a reliable, valid, and psychometrically sound instrument (Cronbach’s alpha .83) used in research to explore and quantify the role of ethical awareness specifically in critical care nurses’ patient care. It is an 18-item scale that consists of one-sentence items that reflect nursing actions (Figure 5). Participants indicated if each action always has ethical implications, may have ethical implications, or never has ethical implications. As a requisite component of ethical sensitivity (Figure 4), ethical awareness is an important component of ethical and, thus, evidence-informed care.

**Setting and Participants**

The setting for this study was a 24-bed, critical care unit in the Midwest United States. The average patient census on the unit was 16 patients. The critical care unit served as a medical, surgical, cardiac, neuro, and trauma intensive care unit and provided invasive ventilatory and multiple-organ system support. The research site had approximately 40 critical-care-trained nurses as employees at the time of the study. Recruitment was conducted through
personal contacts, gatekeeper relationships, intra-organizational emails, and a monthly staff meeting. Purposive sampling was the main strategy to select the 19 critical care nurse participants. This met the standard for sample size in ethnographic studies of 10-20 knowledgeable participants. This type of sampling provided a variety of key informants who were willing to reveal and interpret the culture. A secondary strategy of maximum variation sampling was used as much as possible. The variation criteria were age, gender, ethnicity, nationality, religious affiliation, and years of critical care experience. These criteria were chosen based on existing literature linking these background factors to beliefs and decision making.
Inclusion criteria were full- or part-time employment status at the research site and being a registered nurse who was trained to provide bedside care for patients on the critical care unit. Exclusion criteria were being a nurse who cared for patients on the critical care unit who were not designated for critical care (e.g., a nurse caring for overflow patients from another unit and was not trained for critical care) or temporary employment status at the research site (e.g., travel nurse). The quantitative data collection's purpose was to add to the descriptions for the ethnography comparison. The quantitative scores were determined by using the external norms that are obtained by the developer of the EAS. Therefore, the sampling for the quantitative
Quantitative Data Collection and Analysis

Of the 19 participants in the study, 18 completed the EAS. Data was analyzed using Winsteps® software package which is specifically designed for Rasch model analyses. A variable map was created that represent each participant’s score (Figure 6) and category characteristic curves are shown in Figure 7.

Figure 6 The Ethical Awareness Scale Variable Map

Note. Winsteps® was used to generate a variable map based on the data collected. Overall, the variable map shows fair adherence to the ordering of items with fairly consistent progression between items (right side). The variable map demonstrates a good progression of participants (left side) with the majority of scorers falling towards the middle of the scale and a spread of scorers toward both tails.
Ethnographic Data Collection and Analysis

The ethnography component of this study predominantly involved qualitative data collection and analysis, although the document reviews and demographic information on the participants is considered quantitative. The use of conceptual framework in the qualitative approach guided the research construction (field observations, interview questions, and focus group facilitation) and situated the authors’ positionality. It also offered a reflexivity guidepost for the authors to see and contemplate their own subjectivities.\(^{30}\) The guiding framework was Weaver, Morse, and Mitcham’s concept analysis of ethical sensitivity and the corresponding model of dimensions (Figure 8).\(^{31}\)

Descriptive, non-identifiable patient data collection was based on practice guidelines.\(^{5}\) This study used strategies to move outside of the traditional long-haul ethnography. These strategies included narrowing the field of research to ethical sensitivity and PADIS care, using
multiple observational techniques (i.e., document review, field observations, individual interviews, and focus groups), selecting key informants, and using computerized techniques to code and analyze observations. The lead researcher observed the unit during weekdays, weekends, day shift, and night shift over a period of six weeks. The observations each lasted between two and six hours and occurred at different times of each shift. The total field observation hours were 86 hours, reaching the goal of 70 and 100 hours (determined by calculating the number of observations, hours per observation, and planned time period); however, the final number of hours was determined after a sufficient database has been collected to develop an in-depth understanding (saturation).

The process of ethnographic observation was initially unfocused and started with non-shadowing, detailed notetaking of individual nurse behaviors, communication patterns, and social interactions regarding PADIS care. The multimethod approach to the study has shown to
be a more accurate representation and elicit data about sensitive issues like ethical sensitivity.\textsuperscript{33}

After the data became more familiar, the lead researcher closely followed participants for shadowing observations and made field notes in a regular, systematic way. Notes were taken openly as the events occurred and transcribed immediately after leaving the field. Notes documented initial impressions, key events or incidents, and what the nurse participants experienced. The observations provided explanations for the displayed emotions and behaviors related to PADIS care that was later observed during interviews and focus groups.

Analytical memo writing was used to document conversations the lead researcher had with herself in the margins of the field notes upon which were later reflected and expounded. Some examples of memo writing included introspection about how the lead researcher personally related to the nurses and patients, insights into the thinking process, reflection of the social facets of the nursing culture, revelations about problems or ethical dilemmas in the study, or predictions of answers to research questions.\textsuperscript{34} These memos were included in the collection of data in the NVivo\textsuperscript{©} software for coding and categorizing similar to the transcripts and field notes.

The individual interviews were conducted by the lead researcher after the field observation of each participant at a location chosen by the participant. Each interview was between 20 and 40 minutes, was audio-recorded, and then transcribed verbatim. The focus group interviews were held on the cloud-based videoconferencing service Zoom. Considerations of contextual factors such as power dynamics, confidentiality, and security influenced the location. Two focus group interviews were held with six nurses each lasting about 45 minutes each. This met the proposed goal for focus groups of about 5-10 nurses in each focus group.\textsuperscript{26} The group and individual questions were also adapted around rich data\textsuperscript{35} found during the field
observations including observations of dyads and groups. The focus group discussions were also used to confirm data collected during the field observations and the individual interviews.

Descriptive statistics were generated to describe nurses’ demographic data using frequencies and percentages for categorical data and means, standard deviations, and medians were calculated for the numerical data (Table 8). Content and thematic analysis were used to analyze nursing field notes, staff interviews, and focus group data. The field notes were analytically coded, and the lead researcher wrote integrative memos during the coding process. Over eight hours of interviews and focus group conversations were transcribed verbatim and inserted into qualitative data analysis software (NVivo©) for data organization and storage. The transcripts were read independently by the lead researcher and another qualitative researcher to verify findings.

A conceptual framework guided the first cycle of coding which was line-by-line Structural Coding based on the concept of ethical sensitivity and its preconditions, attributes, and outcomes to represent the essence of large excerpts of the interviews. The method for the second cycle of coding was line-by-line Values Coding to reflect the participants’ values, attitudes, and beliefs. A value is defined as the importance one attributes to oneself, another person, thing, or idea. An attitude is the way one thinks and feels about oneself, another person, thing, or idea. A belief includes values and attitudes, plus one’s own knowledge, interpretations, opinions, and biases.

The researchers co-created, discussed, revised, and verified codes, categorize, and identified key themes using Saldaña’s coding manual as a guide. Special attention and effort were placed on the data to be responsible for true meanings and not rely on face value. Data
sufficiency and thematic saturation was determined when a rapid decrease in code development and an increase in frequency of assigned codes and themes was observed.

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<td>Mean (SD)</td>
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<td>Years of nursing experience</td>
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<td>Years of critical care experience</td>
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<td>Ethical Awareness Score</td>
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<td>Master of Science in Nursing</td>
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<td>High EAS Score</td>
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<td>High/Moderate EAS Score</td>
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<td>Moderate EAS Score</td>
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Validity and Rigor

For the quantitative component of the study, the EAS is a psychometrically sound and meaningful measure of ethical awareness in critical care nurses. Strong evidence shows internal consistency reliability and construct validity, and it fits the Rasch model. For the qualitative component, strategies to determine validity and rigor are interdependent and necessary for producing thick, rich data. In addition to the reflexive accounting discussed earlier, validity
and rigor were addressed through credibility, transferability, dependability, and confirmability.\textsuperscript{41} Credibility was addressed by prolonged engagement, persistent observation, triangulation, focus group confirmation of individual interview data, and process member checks. Peer review and debriefing prevented bias and aid in conceptual development. Transferability was attained by thick description and adequate sampling size to represent the phenomenon. An audit trail through memo writing provided dependability and confirmability. A process of data triangulation was performed using the multiple data sources (field observations, interviews and focus groups) and methods to provide validity to the findings.\textsuperscript{35,41}

**Ethical Considerations**

The study was examined by the institutional review boards of both the research site’s organization and the lead researcher’s university. Both boards examined the proposal for research integrity and approved the study. Considerations were in place to protect the employed nurses as a vulnerable population. The documentation of support from the organization’s nursing administration as well as the informed consent form indicated that nurse’s decision to participate, or not, had no effect on employment status, job performance, or relationship with the organization, supervisor, or other hospital leadership. A specific plan to protect the participants’ confidentiality and privacy is included in the informed consent document.

Alphanumeric codes were used for all participants to ensure anonymity and confidentially. Reciprocity was a key ethical issue to review to determine how participants, the gatekeepers, and the site’s organization will benefit from the research.\textsuperscript{42} Nurse participants received incentive gift cards for compensation for participation in the study. The secondary researcher is the lead researcher’s academic advisory committee chair and acted in an advisory
capacity to monitor participant safety, evaluate the progress of the study, to review procedures for maintaining the confidentiality of data, the quality of data collection, management, and analyses.

Results/Findings

Quantitative Results

EAS score between 32 and 54 is considered to be at a high level of ethical awareness.20 The overall EAS score for the group of participants was high with a mean score of 38.44 (SD=4.85). The raw score range of the EAS is 18-54.20 Of the 18 participants who completed the questionnaire, 16 participants scored in the high level of ethical awareness and one participant was on the line between moderate and high levels. According to the interpretation framework,20 high level scorers recognize the ethical implications of all practice actions, and exercise moral agency regularly. They are confident in their role in ethical situations. The remaining participant scored in the moderate level of ethical awareness. Moderate level scorers recognized the ethical implications of some practice actions and occasionally exercise moral agency. They tend to feel unsure about their role in ethical situations.

Ethnography Findings

Document Review

The document review consisted of collecting and reading organizational policies, procedures, and training material from the facility intranet and linked education sites. PADIS practice guidelines were a part of the research site’s organizational policy. An evidence-based bundle of care7 which includes spontaneous awakening and breathing trials for ventilated patients, RASS goal of -2 to 0, delirium assessment every shift and when there is a change in mental status, and daily early mobilization screening was part of the critical care policies. A
delirium policy was referenced in another policy document but was not accessible. The components of the bundle were also part of the electronic charting system.

The behavioral pain assessment tools were required as part of the policy as well as individualized plan of care in coordination with the interdisciplinary health care team. Extensive descriptors for pain assessments and interventions were options in the electronic charting system. The current pain management policy recommended pharmacological and nonpharmacological interventions including positioning, heat and cold therapy, music therapy, and spiritual support. The nonpharmacological pain interventions were not used by the nurses observed during the study.

Field Observations, Interviews, and Focus Groups

Overall, the conditions of agitation, delirium, immobility, and sleep disruption were considered to be out of the boundaries of ethical sensitivity because of the observed need to point out the presence of an ethical issue regarding these conditions by the lead researcher. Only one nurse mentioned mobility with an understanding of the implications for the patient.

I always try to get my patient in the chair at least some point during the day, no matter what. I feel like that’s a level of care that we should be meeting... I feel like it makes them feel better or human.

The two conditions for which findings indicate ethical sensitivity by nurses were pain and level of sedation. However, the decision making was inconsistent regarding these conditions. Focus group findings were more reflective and ethically sensitive. Context and the ethics of the environment are important to consider and will be discussed later. Preconditions and attributes from the ethical sensitivity framework are used to further describe the findings within themes and categories.
**Theme 1: Ambiguous Beneficence.** Nurses were inconsistent with approaches to pain and agitation. At times, engagement in care was based on emotions (e.g., agitated patients), and interventions by the nurse were sometimes based on personal values (e.g., use of opioids for pain). These inconsistencies were revealed in both the communication with the patient and with how the nurse comforted the patient.

**Category 1.1. Communicating with the Patient.** Nurses’ reactions to two agitated patients indicate that they may have thought the patients had control of their agitation. Although the RASS scoring system describes restlessness and agitation as anxiety, aggression, and apprehension, these nurses did not interpret the patients’ behavior as delirium or agitation as a symptom of illness.

He wants to do his own thing. He is tired of having to wait. He was getting to the point where he was banging on things when we didn’t get in there immediately, and just not being appropriate with us.

When patients are super rude, we tell them, this is what we need to do and to help you, and they won’t do it. It’s very frustrating. It’s like, if you don’t want help, then you can leave, but you’re not going to survive if you leave. So, it’s like, you want to live? You want to die? It gets frustrating sometimes.

Some nurses questioned patients’ reports of pain and others were disadvantaged for pain control simply because they could ask for analgesics. This was interpreted as a shift in the nurses’ actions from treatment based on nurse assessment alone and that based on patient report of pain. The participants also showed hesitation with administering opioid analgesics even when they were prescribed indicating ethical dilemmas.
Pain for her is kind of hard because it’s like, is it actual chest pain or is it pain from lying in bed? She’s like, ‘my pain is an 8’, you know, talking to me, she’s going about her day. And then come back in 10 minutes later, she’s asleep. So, then it’s kind of hard... Versus agitation when they are on a ventilator, it is different. When all of a sudden, they are breathing way over the ventilator and are de-sating, they’re freaking out. I feel more apt to give a strong round of medications to sedate more, to give them more pain meds, versus I know you are in pain, but you’re here for your left main that’s 100% occluded. You are going to have some chest pain.

I think the initial dose is always hard with the narcotics. Sometimes I feel like when patients rate their pain 10 out of 10, pain is perceived different by everyone. And so, I feel like when you tell a physician that, and they are like, alright, give 0.5 of Dilaudid instead of trying something else first, sometimes I’m like, is this really going to benefit the patient. Now, three days later, they’re constantly asking for it by name. Sometimes I wish we could have started a bit different, but I think mainly just with the initial dose. But after they’ve been on it for days and days and days, I really don’t hesitate after that because you’re kind of past that point already.

Patients are requesting it...They know they can get it every two hours, and they are requesting every two hours on the dot. Can I get that pain med? Can I get that fentanyl?...In order for you to get better, in order for you to move to the next step, you can’t go home on fentanyl... In the back of my head, I think, this patient is specifically requesting fentanyl, that particular narcotic. That’s what they want. Sometimes, I keep it in the back of my mind.
Category 1.2. Comforting the Patient. Some participants also acknowledged the suffering and vulnerability of patients in pain or agitated, and others noted a change in their perspective since the COVID-19 pandemic.

I think we see them when they’re not at their best. Sometimes when you are sick, it’s kind of hard not to be a jerk.

He shouldn’t feel like our nurses are so rushed, rushed, rushed to get in and get out...

That’s hurtful to them, and that they don’t matter, and that their care doesn’t matter.

I have got to go in there for another hour. I put all my gown and stuff to give this guy fentanyl so he will relax... I just feel like sometimes, me included, we get a bad attitude towards that, and then that’s not within the patient’s best interest.

I don’t want to sound rude, but it’s kind of like a two-way street because you get these patients that are not vaccinated, they are wanting Ivermectin, they are doing all these things that aren’t necessarily the right thing to do, but you still have to treat them as a patient. I mean, I feel for him that he has to be proned. His face is swollen shut, he can’t even open his eyes, his whole mouth is swollen over his ET tube... It’s hard because I feel like being thrown into COVID as a new grad, it kind of took away... my ability to care. Because now it’s like, well, you didn’t get vaccinated, so you kind of put yourself in this position a little bit.

I feel bad for patients given the situations, because obviously it sucks and when people do things and it’s not their fault... I feel a lot of remorse for them. I feel terrible for them. But when people do things to themselves, that’s kind of gone out the window. I never thought that I’d be like that.
When asked if their decision making related to sedation, these nurses reflected on their own relationships.

I think...what would I want if I was this patient? What would I want someone to do for me? What would I do for one of my family members...my grandmother? How would I be treating her in this situation? I try to...put myself in those types of shoes.

I come from a family where...it’s not big things that matter, it’s the little things, too. We are doing a lot of big things here, but a little bit of repositioning, ice in the mouth. You know, just a lot of those little things are what we get paid to do...but we also choose to do them.

**Theme 2: Heedless Autonomy.** The participants reported struggles with incongruency of care with the physicians, symptom misinterpretation, and avoidance of ethically challenging decision making regarding pain, sedation, and mobility. Notably, no nursing leaders were seen on the unit providing support for any of these participants during the time of observation. Incidentally, there is neither a clinical nurse specialist nor a clinical educator assigned to the critical care unit that was observed for this study.

**Category 2.1. Conflicting with the Hierarchy.** Nurses were dependent on medications and provider orders. The lack of knowledge of nurse-driven interventions like those for delirium and weaning sedation resulted in ethical dilemmas that were compounded by a lack of ethical leadership from providers related to PADIS care.

You have to be reactive until they get you something. And it’s usually one medication at a time that doesn’t work until the second or third time when you have to call them to the bedside and explain the situation.
But for pain, delirium, agitation, and sleep... you have to have meds. You have to have your doctor trust you and believe in you or trust our expertise in what we’re seeing and believe in us. Instead of just brushing it off to day shift, and then we have to pass it off to the day nurse, who has to pass it off to the next doctor as a game of telephone and nothing gets done.

It depends on the physician. We have some that will really leave it up to us...And then we have some that literally just shut you down. And when you try to be a team player and try to work together to figure out what’s the root cause of the problem ... we have some physicians that are just like, ‘you are trying to practice as a doctor, that’s not your role.’ And just not being a team player.

I wish physician notes were more in-depth because they ultimately know the game plan and I feel like they verbalize it one time to one nurse and then expect us to carry on with it and explain it to all of the other physicians and still continue on with the plan. But no one really knows what the plan is.

**Category 2.2. Misinterpreting the Symptoms.** Agitation was consistently out of the boundaries of ethical sensitivity due to the absence of most nurses’ recognizing cues and patterns consistent with it as symptom of illness. Pain and agitation were lumped together and treated similarly with anxiolytics and analgesics given without evidence of understanding their differences. As mentioned earlier, anxiety is not understood as an early stage of agitation. Although fighting the ventilator or coughing can indicate pain or agitation, no recommended pain or agitation tools suggest that over-breathing a ventilator rate is an indication of discomfort. Yet, nurses often reported that as an indication to further sedate the patient.
He was getting fentanyl, but he was kind of abusing it, his pain is always a ten, always a ten, no matter if he got it or didn’t. They’re just trying to get him off of the IV and get him more consistent with a pain regimen orally. So, they got him some oxycodone. They started some Seroquel. He has some Ativan and I don’t know if it’s PO or IV, and then they started PO morphine. Scheduled. At bed time.

I only have fent. I don’t think he has Versed. Oh, I could have given him oxy. I am not going to lie. By the time I went in there, we were past the point of a delayed release, with agitation slash pain, so I gave the fent.

**Category 2.3. Avoiding the Struggle.** Some consider what is easy and not necessarily best for the patient. In one case, a physician wanted the patient mobilized and up in the chair, but the nurse reported that she did not want to get him up due to his inability to follow toe touch commands even with overhead patient lifts in the room. The following three nurses did not see the ethical implications of oversedation. All three of the patients had orders for a RASS of 0 to -1.

I could just still give him some pain meds and just put him back to sleep... I try my best not to, but sometimes... it would be easier to just sedate him. Give him some pain meds and be done. It would be easier.

When she’s intubated, I can’t really assess her unless she were to wake up and she was seeing things. But it just took a while for her to wake up, so she was sedated enough. If we were likely to extubate, I would definitely worry about it.

I guess with sedation... we don’t really want him over-breathing the vent...I can’t tell, neurological function, I guess. So, I’m still checking his pupils and what not. And raising sedation so he’s not over-breathing the vent. We aren’t at the point where he doesn’t
stop withdrawing. I have a lot to go, sedation-wise. I can go past double what I’m at right now, but I don’t feel comfortable doing that. He is over-breathing the vent a little bit, but it took a lot to get him to withdraw... I pinched his upper arm... I had to really get in there. He was grimacing as well. And then his pupils were reactive... So, I wasn’t worried about it. I was comfortable where we are at.

**Theme 3: Moral Distress.** Unfortunately, a pattern of significant moral distress was found regarding the ethical dilemma over using opioids for pain management and in response to not knowing the plan for patients to be weaned off of sedation.

**Category 3.1. Deprioritizing Pain.** Some participants had preconditions and attributes of ethical sensitivity with regards to pain like receptivity, responsiveness, and affectivity. However, their concerns about opioid misuse and depressive or hypotensive side effects of analgesics were often prioritized.

He has pain. Like a seven or eight. I know I need to give him something but I’ve been trying to stay away from the fentanyl today...he’s on Levophed, so I don’t really want to give fentanyl because I don’t want to drop his blood pressure any more....the only way I usually get an IV pain med is if they’re in there, really obviously, and visually, you can see they are in pain. Or he is rating it like a nine or ten.

I think most nurses have their own beliefs. If someone is struggling, I’m not going to withhold pain meds. But I like a little drive to keep them him a little more by not giving the fentanyl and getting him to move a little bit more.

**Category 3.2. Omitting Best Practices** More examples of delirium being out of the boundaries of ethical sensitivity due to lack of knowledge of any ethical implications were seen
in assessment and treatment. One patient had changes in RASS for 16 days with no CAM documentation. Nurses misunderstand the electronic record and thought that CAM is automatically scored (when it was not). Patients were not asked any screening questions for delirium. One patient was severely agitated, hallucinating, and getting olanzapine and the nurses documented CAM negative scores consistently but made notes using descriptors like anxious, anxiety, and short term memory loss at times. Providers were simultaneously documenting delirium for this patient.

A couple of years ago, they made a big push for the CAM assessments... When it first came out, you were supposed to send a message to pharmacy and then pharmacy would look at all of the meds that the patient was on, and then speak with the physician regarding which medications should be stopped or changed, like narcotics or the meds that could cause confusion. But that never really seemed to get anywhere. We still chart on CAM because it’s just made up of the numbers of our neurological assessment, but it doesn’t go anywhere, so it doesn’t really guide anything.

Finally, without clear direction or leadership, nurses are experiencing moral distress over missed care related to delirium and sedation.

I always think that I can advocate better for my patients ... by understanding the end game rather than just the next six hours that I am trying to do on my shift ... Making sure I set night shift up with adequate pain resources and making sure they understand the plan for sedation and if we’re to keep them sleeping overnight or wean them off the vent ... but I feel like that’s when I go home and I’m like, Oh, I could have done that better, I could have done more in that sense.
The first time she was extubated, she went freaking nuts, very delirious. Was trying to get out of bed. We can’t be doing this two days post-op. That’s not good. So, I gave her, IM Zyprexa and Ativan and all this shit. And then she coded that night. That was total guilt. I was begging for Zyprexa so she would just calm the hell down, you know? Is it my fault? Should I have been more patient? If I had just sat there with her... Yeah, so that was a guilt-ridden thing. And I feel like that guilt kind of goes with numerous things. Should I have been more patient? Should I have been nicer? Should I have spent more time with the family? I feel like that happens all the time.

Integration of the quantitative and qualitative findings

The final aim of this convergent parallel mixed methods study was to integrate the qualitative and quantitative data. Most distinctive and surprising was the divergence of results. Quantitatively, all but one of the participants measured high ethical awareness, yet the qualitative findings showed patterns of a lack of ethical awareness of agitation, immobility, and sleep disruption care and lack of receptivity, moral perception, and affectivity to patients and their pain and sedation levels. Notably, when participants had time to stop and reflect during the focus group interviews, they showed as a group more ethical awareness of the implications of patients experiencing the PADIS conditions.

Discussion

The selected quantitative and qualitative findings presenting in this study provide a rich description and interpretation of the complexity of PADIS care from the perspective of the critical care nurse. These findings are consistent with previous studies that highlight barriers to implementing practice guidelines related to nurse attitudes, beliefs, role clarity, and workload burden.10–12,16 PADIS care is dependent on more than one nurse’s decision making but
encompasses moral attitude, ethical leadership, empowerment for ethical practice, and establishing and supporting a moral community. Additionally, the divergence of the quantitative and qualitative results is revealing. Although the nurses had overall high scores on the EAS indicating high ethical awareness, the positioning of most of the PADIS conditions outside the boundaries of their ethical sensitivity provides guidance for meaningful interventions.

**Care as an Empowering Moral Attitude**

The results of this study showed high individual levels of ethical awareness, but an unfortunate lack of moral agency and ethical action regarding most PADIS care. “Defining a failure in moral agency as a failure to take action obviates the actions that nurses do take, and continually take. Nonetheless, the action being taken by nurses is often ineffective at achieving the desired end.” Themes from this study show the complexity of PADIS care involves technical skills as well as a need for helping, teaching, and coaching less experienced nurses. Nurses must exhibit “solidarity with the patients’ well-being, to their willingness to identify with patients’ pain and suffering, and to their desire to do everything possible to relieve the patients’ situation.”

Moving toward the goal of patient-centered care requires communicating with patients. Although communication with critically ill and/or sedated patients is difficult and the paradigm shift for intubated patients to be lightly sedated makes patients more confused, nurses must consciously implement creative communication methods. These methods are also required when communicating with patients with other cognitive impairments or are experiencing agitation. Because nurses have the voice in the communication, they have the power. Therefore, they must shift some of the power back to the patient by using communication boards, writing, running down a list, and enlisting help from other professionals or family members. By
relinquishing some of the power, PADIS experiences can be better assessed from the patient’s perspective.

The participants often report mixed messages from different providers and showed evidence of a lack of knowledge about and accountability for existing policies for appropriate nursing action related to PADIS care. A lack of role clarity in nurses has been shown to reduce implementation of best PADIS practice but high role clarity strengthens helping behavior. When the role clarity and professional responsibilities are aligned with power, “professionals are able to use discretionary judgment while enacting their roles; feel safe to express moral uncertainty and raise ethical questions; and find that conflicts are addressed collaboratively.”

Moral Community and Ethical Leadership

To address the concerns of opioid abuse or misuse, nurses should also not carry the weight of this alone. In addition to a need for education of proper and intended use of opioid analgesics as well as patient monitoring, better opioid stewardship is the responsibility of nursing staff, pharmacists, physicians and other providers, anesthesiologists, and the patients. More efforts are also needed to implement the best practice non-pharmacological strategies such as sleep, physical positioning, massage, and relaxation with the full support of the interprofessional team and resources available to provide those interventions.

Contrary ethical behaviors are not unique to this group of participants. Other studies have noted unhelpful behaviors related to attitude, lack of optimal pain control, poor communication with patients, unresolved anxiety and agitation for patients, and sleep interruptions. However, ethical practice does not and should not rest solely on the shoulders of a bedside nurse. Context should be considered by all members of a care team and
the patient’s needs, goals, and values should be prioritized as much as possible to create a moral community.43

The lack of nursing leaders on the critical care unit for these participants during their time of patient care and the counterproductive communication and involvement of the physicians point to a gaping hole in ethical leadership. Ethical leadership has been defined as a style of leadership in which the leader exhibits ethically appropriate conduct and models that conduct through communication, reinforcement, and decision making.53 Ethical leaders are self-disciplined, responsible, and clear about ethical issues and standards. They also make decisions as role models for the process of ethical decision-making.53 No matter the critical care environment, this applies to whoever leads the interprofessional team. Specific to PADIS care, nurses should be exposed to the patterns of ethical reasoning and ethical practice in the context of patient-centered symptom management. This allows for critical and creative reflection of their own work.15

Conclusion

Nurses lacking ethical awareness and ethical sensitivity to PADIS care is not caused by poor morality of the nurses, but instead by competing demands for ethical sensitivity. Instead of repeated calls for implementation of practice guidelines, more effort is needed to establish moral community, ethical leadership, and individual ethical guidance for nurses to establish patient-centered decision making.

Implications

The conceptualization of everyday clinical work functions, patterns, and variabilities as well as perspective-taking of the nurses was a unique approach to a complex system.54 The ethnographic approach was innovative and brings progress to the status quo in terms of
understanding nurses’ ethical sensitivity of PADIS care. Most importantly, a novel approach to understanding specific components of implementation of PADIS can potentially reduce critically ill patients’ risk of detrimental sequelae and poor outcomes.

**Conflict of Interest**

There are no conflicts of interest to report.

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CHAPTER 5 CONCLUSIONS, INTERPRETATIONS, AND RECOMMENDATIONS

Research Methods

Many studies rely on self-report by nurses which presents limitations. People may not be able to accurately recall their past behavior, or they may choose not to report it accurately usually due to self-presentation concerns. The cluster of constructs related to individual nurses and critical care culture as well as origins of beliefs could be more rigorously studied with direct observation, interviewing, and/or valid instrument use. The need exists for in-depth psychological and behavioral studies of critical care nurses’ decision-making process in assessment tool use and workplace culture. A deeper understanding facilitates efficient and substantive implementation strategies to encourage evidence-based practice, as well as reason to continue qualitative or mixed methods studies of this population and these phenomena.

Nurses’ Beliefs

Among the barriers to ethical nursing practice are heavy workloads, insufficient time, organizational and financial constraints, and staffing problems. Often nursing literature focuses on external and contextual barriers, but the individual nurse’s beliefs are important to consider. Conventions such as practice guidelines, protocols, and care bundles should provide a framework for daily practice but should never be considered as the only interventions for implementing best practice. PADIS care of critically ill patients demands complex decision making by critical care nurses. The beliefs of nurses have a direct impact on that decision making and thus implementation of PADIS sensitive nursing care and subsequently the quality of patient outcomes.

By identifying the behavioral, normative, and control beliefs that serve as the underlying determinants of following PADIS practice guidelines, important information about the kinds of
beliefs that need to be addressed to effect a change is needed. Providing this kind of
information contributes to the approach to effective behavior change interventions. A better
understanding of critical care nurses and bringing focus on one or more of their three major
beliefs (i.e., behavioral, normative, control) can lead to changes in intention and, thereby,
decision making that limits patient exposure to the stressors of PADIS symptoms and conditions.

Evidence-based practice is effective and improves patient outcomes; however, the
findings of this study suggest a wide range of personal beliefs by nurses that effect their
practice. Patient-centered focus, nurse empowerment, and support from other stakeholders are
associated with better patient care. To better understand clinical decision-making of critical care
nurses, more robust studies of their perceptions and behaviors are required. PADIS guidelines
have empirical evidence using rigorous study designs with additional support from reported
application in practice. Addressing nursing practice and the compatibility with nursing ethics
promote awareness and interest among critical care nurses to implement evidence-based
practice.

Leadership, Care Ethics, and Workload

Nursing workload is complex and contributing factors are sometimes not addressed in
the workplace. Competing priorities for nurses cause ethical dilemmas that can compromise
professional values, moral agency, and patient-centered care. Most nurses are nurses for the
caring aspects. The four features of care ethics are: (1) concrete feedback of lived experiences
(i.e., relationship-based programming); (2) context and situation details; (3) institutional and
systemic realities; and (4) empirical evidence of care as a practice. If the four phases of care
succeed, nurses are allowed some control over their workload and can include in their patient
care things they enjoy the most. To reduce nursing workload, a care ethics perspective can
provide solutions through fortifying interprofessional relationships and enhancing empathetic actions.

The conflict between reducing health care costs and mandates of quality patient care have created ongoing decision making at the bedside and the managerial level. Care ethics challenge the depersonalization of nurse managers caring for nurses and encourages a view of the detailed, everyday experiences. Situational, individual, and team approaches to management allows for incorporation of personal values and ethics of care to support patient-centered care. Leadership initiating conversations and being proactive about time pressures, care rationing, and managerial logic can lead to balanced workloads, reduced tensions, and increased job satisfaction for both the nurse and the nurse manager. Nurses moving from early to mid-career remain in jobs in which they experience increased control and support with a reduction of job demands. Conversely – in the same group of nurses – adverse health outcomes were associated with low autonomy, low support, and moderated job demands.

Nurse autonomy can be expanded to a unit characteristic of collective efficacy that can guide manager efforts. Collective efficacy is defined as the capacity of a group of nurses to solve problems and correlates with an improved work environment and less missed care. Focus on the work environment and collective efficacy aligns well with the relational aspects of care ethics that are quality of interactions, space for human connection, and reflective practice for improvement.

**Ethical Sensitivity**

A deeper and more detailed exploration of ethical sensitivity of PADIS care revealed an obvious need to address core nursing care at the bedside in critical care. Nurses lacking ethical awareness and ethical sensitivity to PADIS care is not caused by poor morality of the nurses, but
instead by competing demands for ethical sensitivity. Instead of repeated calls for implementation of practice guidelines, more effort is needed to establish moral community, ethical leadership, and individual ethical guidance for nurses to establish patient-centered decision making.

The conceptualization of everyday clinical work functions, patterns, and variabilities as well as perspective-taking of the nurses was a unique approach to a complex system. The ethnographic approach was innovative and brings progress to the status quo in terms of understanding nurses’ ethical sensitivity of PADIS care. Most importantly, a novel approach to understanding specific components of implementation of PADIS can potentially reduce critically ill patients’ risk of detrimental sequelae and poor outcomes.