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**Situation awareness: when nurses decide to admit or not admit a person  
with mental illness as an involuntary patient**

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## Situation awareness: when nurses decide to admit or not admit a person with mental illness as an involuntary patient

### Abstract

**Aim** This paper will explore the application of situation awareness in nursing to determine its suitability as a framework to study how the decision to admit or not admit a person as an involuntary patient is made.

**Background** The decision by a specially qualified nurse to admit or not admit a person to a mental health facility against their will remains a central component of contemporary mental health legislation. The decision has an impact on a person's autonomy and human rights. Conversely, the decision to admit may facilitate urgent assessment and treatment and ensure the safety of the individual and others. Research highlights that decision-making in this context is challenging due to the multiple information sources and often incomplete information available to the clinician. Situation awareness is a concept used to explain how practitioners identify, use and make meaning of a multitude of factors and elements relevant to their practice. **Design** Discussion paper. **Data sources** A search of terms related to situation awareness and mental health nursing was conducted in the period 2000 - present. **Implications for nursing** Exploring nurses decision-making using a situation awareness framework provides for a more nuanced understanding of nurses knowledge and skill when deciding to admit or not a person as an involuntary patient. **Conclusion** The concept of situation awareness provides a framework to better understand the decision-making process associated with the involuntary admission decision.

### Disciplines

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Situation awareness: when nurses decide to admit or not admit a person with mental illness as an involuntary patient

#### **RUNNING HEAD**

The use of situation awareness to admit or not admit a person with mental illness as an involuntary patient

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**ABSTRACT**

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**Aim.** This paper will explore the application of situation awareness in nursing to determine its suitability as a framework to study how the decision to admit or not admit a person as an involuntary patient is made.

**Background.** The decision by a specially qualified nurse to admit or not admit a person to a mental health facility against their will remains a central component of contemporary mental health legislation. The decision has an impact on a person's autonomy and human rights. Conversely, the decision to admit may facilitate urgent assessment and treatment and ensure the safety of the individual and others. Research highlights that decision-making in this context is challenging due to the multiple information sources and often incomplete information available to the clinician. Situation awareness is a concept used to explain how practitioners identify, use and make meaning of a multitude of factors and elements relevant to their practice.

**Design.** Discussion paper

**Data Sources.** A search of terms related to situation awareness and mental health nursing was conducted in the period 2000 – present.

**Implications for Nursing.** Exploring nurses decision making using a situation awareness framework provides for a more nuanced understanding of nurses knowledge and skill when deciding to admit or not a person as an involuntary patient.

**Conclusion.** The concept of situation awareness provides a framework to better understand the decision-making process associated with the involuntary admission decision.

#### **KEYWORDS**

Situation awareness, involuntary admission, involuntary patient, decision-making, mental health, mental health nurse, psychiatric nurse

#### **SUMMARY STATEMENT**

##### **Why is this research or review needed?**

- The decision by a specially qualified mental health nurses to admit or not admit a person to a mental health facility as an involuntary patient remains a central component of contemporary mental health legislation worldwide.
- Considering the associated complexity of the decision, the significant consequences and the lack of related study, there is a need for research on how a decision to admit or not admit someone as an involuntary patient is made.

- The concept of situation awareness provides a suitable framework to understand how specially qualified mental health nurses make the decision to admit or not admit someone as an involuntary patient.

#### **What are the key findings?**

- There is a dearth of research literature examining the use of situation awareness by mental health nurses; let alone literature that focuses on specially qualified mental health nurses deciding to admit or not admit someone as an involuntary patient.
- A search of literature has identified that situation awareness is a concept that has transferred to health and nursing practice.

#### **How should the findings be used to influence policy/practice/research/education?**

- Increased understanding and contextualisation of situation awareness to specific practices in nursing will better inform future decision-making and will contribute to the promotion of relevant nursing practice and education.
- A greater understanding of situation awareness in nursing would lead to expansion of the concept while simultaneously allowing for the implementation of interventions that promote safety by reducing patient care errors.
- By exploring situation awareness in a mental health setting, nursing research would be a prominent voice in the study and application situation awareness in interpersonal interactions.

## INTRODUCTION

The decision by a specially qualified mental health nurses to admit or not admit a person to a health facility against their will and for further assessment remains a central component of contemporary mental health legislation worldwide (World Health Organisation [WHO] 2005). Legislation from Australia (see Mental Health Act 2007 [NSW] and Mental Health Act 2014 [Victoria]), the United Kingdom (see Mental Health Act 2007), Canada (see Mental Health Act 1990 [Ontario] and Mental Health Act 2000 [Alberta]), the United States of America (see California Welfare and Institutions Code – Section 5150-5155), and, New Zealand (see Mental Health [Compulsory Assessment and Treatment] Act 1992) for example, each lawfully enact that a person can be admitted involuntarily, based on the decision of a mental health practitioner (such as a nurse).

This decision is a significant feature of the United Nations Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care (United Nations [UN] 1991); the guiding principles of mental health legislation worldwide (see Mental Health Act 2007 [NSW] for example). Principle 16.1 states that a person may be admitted involuntarily to a mental health facility ‘if and only if a qualified mental health practitioner authorised by law for that purpose determines that a person has a mental illness’ (United Nations 1991). The decision to admit someone involuntarily is a function of mental health legislation that may lead to involuntary treatment and thus positive health and safety outcomes for the individual and others (United Nations 1991). Indeed, WHO recognizes involuntary admission as a vital method of ensuring that a person ‘attains their right to health’ (WHO 2005, p. 46). However, admitting someone against their will is also recognized to

negatively impact a person's autonomy, liberty and their human rights (Sattar, Pinal, Din, & Appelbaum 2006, WHO 2005).

The consequences associated with the decision, be they positive and negative, makes the decision one of great import (Sattar *et al.* 2006). Due to weak state of global data related to mental health services (Baxter, Patton, Scott, Degenhardt & Whiteford 2013) a precise understanding of how many people are affected by the decision cannot be quantified. However, data from the World Health Organisation Mental Health Atlas (WHO 2011) indicates that a significant number of people may be impacted by the decision. From the 95% of included WHO Member States (184/193) the median annual rate of mental health admissions to general hospitals is 24.2 per 100,000 of the population; and to mental hospitals is 34.4 per 100,000. The figures provided by WHO (2011) do not indicate rates of involuntary versus voluntary admissions; however, each person represented by these statistics required a health practitioner to make a decision about their admission.

Due to the significant impact of the decision, established and specific criteria indicating the requirement for involuntary admission is a common feature of mental health legislation worldwide (WHO 2005). According the United Nations principles, involuntary treatment should only occur based on the consideration of particular legislated criteria, being: the presence of a mental disorder; the seriousness likelihood of immediate or imminent danger and/or need for treatment; and, that the admission includes a therapeutic purpose (United Nations 1991). An example of such criteria is evident in Section 19 of the NSW Mental Health Act 2007. This states that a person may be admitted involuntarily when: a practitioner has examined the person; has formed the opinion that the person is mentally ill; and determines that involuntary admission is necessary.



How a healthcare practitioner makes the decision is not well understood. For example, when a practitioner walks into a person's home to discuss their mental health, in that moment what is the practitioner observing of the person; what things are they noticing from the broader environment; and, what are they remembering from the person's health history to inform their decision? There are a multitude of information sources that influence a clinician's decision related to; patient characteristics, clinician characteristics and organisational and other contextual characteristics (Mulder, Koopmans & Lyons 2005). What is known about the decision in general is that it is often made quickly and it is complex; based on a large amount of intricate and maybe incomplete information (McGarvey, Leon-Verdin, Wanchek & Bonnie 2013, Unick, Kessell, Woodard, Leary, Dilley & Shumway 2011).

Considering the associated complexity of the decision, its significant consequences and the current dearth of study of how a decision is made, there is a need for a greater understanding of the involuntary admission decision. Developing understanding of how specially qualified mental health nurses make the decision will mature knowledge of an important healthcare practice and thus expedite the decision-making process leading to better health provision outcomes. As a complexity of factors inform a decision-making process of such import, a framework that enables the investigation of how a complex decision is made is essential.

## **BACKGROUND**

The concept of situation awareness (SA) originated to explain a pilot's 'state of knowledge'; their cognitive ability to gather, sort and process information from complex and dynamic environments (Endsley 1995). Basically, according to Endsley and Jones (2012, p. 13),

situation awareness is being aware of what is happening around you and understanding what that information means for you now and in the future. In what has since been recognised as the seminal definition of the concept, Endsley (1995, p. 36) defined SA as the:

perception of the elements in the environment in a volume of time and space, the comprehension of their meaning and the projection of their status in the near future.

Endsley's (1995) definition positions SA as a practitioner's recognition and use of relevant of stimuli from an environment. The environment refers to the immediate, physical site of the practitioner, as well as the broader, contextual setting. Situation awareness involves a practitioner understanding stimuli from the total setting, in the context of a task or goal. It involves understanding the stimuli, determining the stimuli's relevance to a task or goal and understanding what action or inaction in response to stimuli might mean for the future.

Situation awareness is a cognitive construct, a mental picture that a practitioner develops by way processing environmental information at three distinct levels. These are: Level 1 – the perception of the elements in the environment (perception of cues); Level 2 – the comprehension of the current situation (comprehension of cues); and, Level 3 – the projection of future status (projection of what cues mean for the future) (Endsley 1995) (shown in figure 1). The three levels of processing are interrelated and dependent on one another, in that there is no comprehension of environmental information without perception and no projection of what environmental information means for the future, without comprehension (Jalote-Parmar, Badke-Schaub, Ali & Samset 2010, p. 64).

Situation awareness makes environmental information useful. Environmental information is the sensory data received by a practitioner as visual, aural, tactile, gustatory and olfactory cues (Endsley 2000). Situation awareness is a practitioner's complete conceptualisation of an event by way of processing these environmental cues, for the purposes of action in the form of a decision. Core to contemporary understanding of SA, is its theoretical positioning as an antecedent of decision-making (Endsley & Jones 2012, Stubbings, Chaboyer & McMurray 2012). Situation awareness is discussed as the main precursor, or 'primary basis' on which a decision is made (Endsley & Jones 2012); and, is needed for people to perform tasks effectively (Endsley 2000).

The relationship of SA to decision-making has seen the concept applied to disciplines outside of piloting; commonly with a focus on promoting effective decision-making to: improve operational outcomes; reduce human error; and, improve safety (Blandford & Wong 2004, Fore & Sculli 2013, Kokar & Endsley 2012, Vidulich & Tsang 2012). While the tasks and the environmental information in each setting vary greatly, SA remains a foundation for decision-making (Endsley & Jones 2012). Disciplines that have adopted SA, include: air-traffic control (Chiappe, Vu, Strybel 2012, Mogford 1997); marine traffic control (Chauvin, Clostermann & Hoc 2008); emergency response services (Blandford & Wong 2004, Endsley 1995); driving safety (Underwood, Ngai & Underwood 2013); the defence forces (Berggren, Prytz, Johansson & Nahlinder 2011, Matthews, Eid, Johnsen & Boe 2011); and health care (Stubbings *et al.* 2012, Wright, Taekman & Endsley 2004).

The concept of SA is transferable as it is defined in terms of the goals, objectives and decision tasks of a specific job or function (Endsley 2000, Endsley & Jones 2012). For example, Underwood *et al.* (2013) discuss SA in the context of driving safety. Here, SA is

related to how a motorcycle driver searches and scans the roadway for hazards and is aware of the manoeuvring capabilities of their motorcycle. Specific hazards, such as merging traffic, are used by Underwood *et al.* (2013) to study a driver's awareness and response. Situation awareness in this context includes perception of salient environmental elements, such as other road users and the roadway configuration and the projection of their status in the immediate future (Underwood *et al.* 2013).

How SA is used in areas such as driver safety, illustrates how the concept may be used in relation to the involuntary admission decision. Understanding SA in the context of the involuntary admission decision may highlight how nurses scan and search for information; what specific information they search for and reveal how nurses use this information informed by their legislative and policy obligations.

The study and application of SA in the discipline of nursing is increasing. For example, recently, SA has been linked to the decision-making in providing mobility care in nursing homes (Taylor, Sims & Haines 2014) and in recognising and responding to a deteriorating patient (Stayt, Merriman, Ricketts, Morton & Simpson 2015). This paper adds to this exploration SA in nursing, specifically how SA is used in the context of mental health and the involuntary admission decision.

## **DATA SOURCES**

A search of the literature was conducted to explore the current and potential positioning of situation awareness in areas related to mental health nursing. Several databases, including CINAHL, Proquest, PubMed, Scopus, Web of Science, HealthSource – Nursing/Academic

Edition, Nursing Consult, Academic Search Complete, were searched with the search terms: situation awareness or situational awareness; mental health nurs\* or psychiatric nurs\*.

Searches were limited to the date criteria of 2000 – present. Due to difficulty in locating any material specific to all aspects of the topic, a broader search was conducted using the terms: situation awareness; situational awareness; mental health nurs\*; psychiatric nurs\*;nurs\*; mental; psychiatric; mental health; and/or mental illness. A search of the terms ‘situation awareness’ and ‘mental health’ or ‘psychiatric’ and ‘nurs\*’ produced fifteen results. The combination of ‘situation awareness’ or ‘situational awareness’ and nurs\* produced 92 results.

## **DISCUSSION**

The suitability of SA to understand the process of deciding to admit or not admit a person to a health facility against their will is realized by its increased application in health care (Blandford & Wong 2004, Campbell & Watters 2013, Endsley 2000, Jalote-Parmar *et al.* 2010, Stubbings *et al.* 2012, Wright *et al.* 2004). Situation awareness is increasingly studied in a variety of health disciplines; such as Campbell and Watters’ (2013) application of SA in the emergency surgical setting and Korikiakangas, Weldon, Bezemer and Kneebone’s (2014) application to the field of anaesthesiology. The application of SA in these environments is mostly underpinned by the pursuit for informed decision-making in health practice (Wright *et al.* 2004); and decision making in a complex environment (Vidulich & Tsang 2012). How it is studied and applied in such settings, underscores its appropriateness to develop understanding of the involuntary admission decision.

## SA for decision-making

Considering the significance of the decision for people, research that centres on the involuntary admission decision-making process is limited. Some research exists (see for example Anderson & Eppard 1995, Clark & Bowers 2000, Engleman, Jobes, Berman & Langbein 1998), but little is known of the specifics that inform the decision. Rotvold and Wynn's (2015) study found that 43% of General Practitioners (GPs) based their decision to admit someone on events and the person's behaviour prior to any consultation taking place. Forty five per cent of GPs base their decision on events and behaviour both prior to and during consultation (Rotvold & Wynn 2015). What Rotvold and Wynn's (2015) study does not explore however, are the cues that GPs use in these situations to inform their decisions. Healthcare practitioners or in the case of this paper, nurses, are making the involuntary admission decision, but the information they are using, how are they using it and why remains unknown. Over a decade ago, Clark and Bowers (2000, p. 392) argued that 'studies of how these decisions are made in real time are needed'. Using SA will assist in the provision of such insight.

Understanding that SA is a practitioners' real-time snap-shot or 'mental picture' (Blandford & Wong 2004) of a situation, leading to a decision, highlights its appropriateness as a framework to explore of how decisions are made. Blandford and Wong (2004, pp. 1-2) explored SA in the context of the decision-making of ambulance dispatchers. The practice of ambulance dispatchers was observed and participants were interviewed to establish how routine work was performed and how various information elements from their practice were handled and managed (Blandford & Wong 2004, p. 5). Participants from the study described their cognitive development and maintenance a 'mental picture' of a situation. This 'mental

picture' is described by Blandford and Wong (2004, p.23) as an outcome of SA and involved 'aspects of knowing: the external environment, the systems and the tasks'. The 'mental picture' informed participant's subsequent decisions. Similarly, Wright *et al.* (2004, p. i66) describe SA as an 'internal mental model of the current state of an individual's environment'. Wright *et al.* (2004, p. i65) state that such 'awareness and comprehension is critical in making correct decisions that ultimately lead to correct actions'.

In the context of healthcare, SA is commonly discussed in relation to clinical decisions and patient health and outcomes (Busby & Witucki-Brown 2011, Cooper, Kinsman, Buykx, McConnell-Henry, Endacott & Scholes 2010, Cooper, Cant, Porter, Missen, Sparkes, McConnell-Henry & Endacott 2012, Singh *et al.* 2006). Busby and Witucki-Brown (2011) sought to discover the process of SA in multi-casualty incidents and develop theory as to its use by health providers. They argue that where SA is affected by 'bad information' this can lead to faulty decisions and poor patient outcomes. Similarly, Singh *et al.* (2006, p. 163) in their study of diagnostic errors in medicine, write that;

[SA] is critical to the success of a decision process in any dynamic real world setting such as aviation or medicine...could help to reduce errors in diagnosis and lead to significant improvements in patient care

The relationship SA has with decision-making and improving patient health and outcomes is also explored in the contexts of: reducing practitioner errors (McKenna, Missen, Cooper, Bogossian, Bucknall, & Cant 2014, Singh *et al.* 2006; Stubbings *et al.* 2012, Wright *et al.* 2004); enhancing responsiveness in clinical situations (McKenna *et al.* 2014); communication and information transfer (Wright 2013, Young-Xu, Fore, Metcalf, Payne,

Neily & Sculli 2013); mitigating adverse events or practice errors (Sitterding, Broome, Everett & Ebright 2012, Wright 2013); clinical handover or transfer of responsibility (Wright 2013); supporting the skills of vigilance and monitoring (Fore & Sculli 2013, Wright & Fallacaro 2011); managing patient safety (Schulz, Endsley, Kochs, Gelb & Wagner 2013); responding appropriately to deteriorating patients (Bogossian *et al* 2013, Cooper *et al.* 2010, Cooper *et al.* 2011, Cooper *et al.* 2013, McKenna *et al.* 2014, Reid & Bromiley 2012); and, the education and assessment of student nurses (Bogossian *et al.* 2013, Cooper *et al.* 2010, McKenna *et al.* 2014).

In their critical review of the literature related to nurses' use of SA in decision-making, Stubbings *et al.* (2012) reviewed five empirical studies. Results of their study highlight that the nursing literature focuses on individual factors that influence SA, interpersonal behaviours influencing SA, improved working relationships and patient care (Stubbings *et al.* 2012). Results also highlight the dearth of empirical studies of SA and decision-making focussed on nursing. However, Stubbings *et al.* (2012, p. 1450) contend that 'situation awareness is an essential skill for effective decision-making'.

In their conceptual analysis of SA in the context of nursing, Fore and Sculli (2013) argue that defining and applying SA in nursing practice is vital. Fore and Sculli (2013, p. 2619) state that a failure of nurses 'to achieve and maintain SA presents threats to patient safety'. Similarly, Sitterding *et al.* (2012) argue that to reduce practice errors related to human factors, a contextual understanding and defining of the concept is important for improving SA for nursing practice. Through a hybrid concept analysis of SA, studying contemporary theory as well as the perspectives of practicing nurses, Sitterding *et al.* (2012, p. 89) contextually defines SA as the;



dynamic process where a nurse perceives each clinical cue relevant to the patient and his or her environment; comprehends and assigns meaning to those cues resulting in a patient-centric sense of salience; and projects or anticipates required interventions based on those cues

Sitterding *et al.*'s (2012, p. 89) definition offers much in the way of applying the concept to nursing as the definition can be transferred across a range of nursing speciality areas. For example, the definition can be applied to a mental health or a cardiac setting, where nurses' knowledge and understanding of the nuanced cues of a situation informs their decision making. This serves to highlight a significant feature of SA; that SA is influenced by and axiomatic to a practitioner's knowledge and experience of their practice setting.

Stubbings *et al.* (2012) assert that further development and clarification of specific skill sets associated with SA in nursing are needed. Such clarification could be used to inform specific nursing practices and enable nurses to make deliberate, effective, assertive and safe decisions in their areas of practice (Stubbings *et al.* 2012). One such example of this is the practice where a nurse decides to admit or not admit a person with mental illness as an involuntary patient.

Stubbings *et al.* (2012, p. 1444) define SA as the 'global term for the level of awareness and dynamic understanding that a practitioner has of a situation' and thus the 'first-step of decision-making'. Stubbings *et al.* (2012, p. 1444) argue the need for a nurse to have SA in practice, as it is essential 'in all complex, dynamic occupational settings reliant on human operators making decisions where safety is paramount'. This understanding is critical for the

Accepted Article

application of SA to the involuntary admission decision. According the United Nations Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care (United Nations 1991) the involuntarily admission of a person to a mental health facility as a patient only if a qualified mental health practitioner authorized by law decides that, because of mental illness: ‘there is a serious likelihood of immediate or imminent harm to that person or to other persons’; or, a ‘failure to admit or retain that person is likely to lead to a serious deterioration in his or her condition or will prevent the giving of appropriate treatment’ (p. 10). Safety, as an element of nurses’ decision-making, is paramount.

As well as being a central factor of the decision, safety is also affected by the decision outcome; as are the health and human rights of a person (Sattar *et al.* 2006, WHO 2005). A decision made about safety acts as a ‘form of substituted decision-making’ (Callaghan & Ryan 2014, p. 753), which requires the practitioner to deliberate on several potential outcomes related to not only safety but also health and human rights. The significance of these outcomes makes the decision not only an immensely important one, but adds to an already complex decision-making process (Sattar *et al.* 2006). Situation awareness in this context, will direct a spotlight on a complex decision of considerable consequence.

Understanding the relevant features, the things, the cues that inform a practitioner’s real-time ‘mental picture’, or their SA, will illuminate how the decision to admit or not admit a person with mental illness as an involuntary patient is made. Understanding the decision-making process by applying SA can promote informed decision-making of the future (Fore & Sculli 2013); including that of the involuntary admission decision by highlighting the cues a nurse uses to determine an involuntary admission. Cues such as the presence of a mental disorder, the seriousness likelihood of imminent danger and/or need for treatment and, whether the

admission will be therapeutic (United Nations 1991).

The application of SA can be discussed in terms of the steps taken to ‘achieve SA’ (Endsley & Jones 2012, p. 14). Endsley’s (1995) three levels of SA – perception, comprehension and projection – are referred to as the steps a practitioner takes (Endsley & Jones 2012) to make a decision in the context of specific goal(s). By way of example, consider a nurse entering a distressed person’s home to initiate therapeutic engagement whilst also conducting a mental health assessment. In this instance, the nurse’s overall goal is to understand the nature, scope and consequences of mental distress to help inform the nurse of what practical steps are needed improve the life of the person experiencing mental ill health, in the least restrictive manner (WHO 2005).

The first step, ‘perception’, involves the nurse perceiving the status, attribute and dynamics of relevant elements of the person in their environment (Endsley & Jones 2012). For instance, information for the nurse may come from a combination of visual and auditory senses. The nurse may see the person behaving in a particular way. They may see the person presenting with darkened eyes and dishevelled grooming. The nurse may hear the tone and cadence of the person’s speech. They may hear the person discussing a sense of hopelessness, a lack of support and wanting to end their life. They may also see a large pile of indiscriminate tablets on a table.

The second step, ‘comprehension’, requires the nurse to understand what the cues mean in relation to relevant goals (Endsley & Jones 2012). For example, the nurse may understand the person’s behaviour as restless or agitated. The tone and cadence of the person’s voice may be

understood as distressed and pressured. The darkened eyes may be understood as the person being tired. The nurses synthesises their readings of these visual and auditory cues and integrates this with their knowledge and experience, as well as their goal/s. This would result in the nurse determining if there is a serious and immediate risk of the person attempting suicide.

The third step, 'projection', involves the nurse using their comprehensive understanding of the cues to predict what may occur in the future (Endsley & Jones 2012). This allows the nurse to be proactive in making decisions (Endsley & Jones 2012) and act in response to this potential outcome and in line with their goal/s. In this instance, the nurse may predict if no action was taken on their behalf, the person will attempt and/or complete suicide. This projection therefore, ultimately leads the nurse to make a decision.

Although important for decision-making, any subsequent decision by is not, by definition, part of what constitutes SA. Any decision, any outcome or performance of actions based on the decision and feedback from performance is interrelated but is not what forms SA (Endsley 1995). Situation awareness is the three levels or steps of perception, comprehension and projection. A practitioner may use SA in a situation, but ultimately make and act on an erroneous decision (Endsley & Jones 2012). Situation awareness may be just one facet, however, it is one recognised as essential and critical for the decision-making process (Stubbings *et al.* 2012, Sitterding *et al.* 2012).

## SA for decision making in complex environment

The complexity and dynamic nature of mental health nursing practice is widely identified in the literature (Cleary 2004, Cleary, Walter & Hunt 2005, Cutcliffe 1997, Fourie, McDonald, Connor & Bartlett 2005, Mathers 2012). Furthermore, the complexity of the decision to admit or not admit a person with mental illness as an involuntary patient is well realized (Anderson & Eppard 1995, Clark & Bowers 2000, Engleman *et al.* 1998, McGarvey *et al.* 2013, Unick *et al.* 2011). Making the decision to admit someone as an involuntary patient is identified as a complex and critical practice (Anderson & Eppard 1995); with research commonly focussing on specific individual factors as predictors of involuntary admission (George, Durbin, Sheldon & Goering 2002, McGarvey *et al.* 2013, Mihai, Allen, Beexhold, Rosu, Nirestean, & Damsa 2009, Mulder *et al.* 2005, Preti, Rucci, Santone, Picardi, Miglio, Bracco, Norcio, & de Girolamo 2008, Unick *et al.* 2011).

Research has shown that a multitude of information sources influence a clinician's decision. These may include patient characteristics, clinician characteristics and organisational and other contextual characteristics (Mulder *et al.* 2005). The involuntary admission of a person under mental health legislation is found to be related to the clinical need of the person - such as, the presence and severity of symptoms of mental illness (George *et al.* 2002, McGarvey *et al.* 2013, Preti *et al.* 2008, Unick *et al.* 2011); the psychosocial or social functioning of the person - such as, impaired work functioning, social withdrawal and conflict with family members (George *et al.* 2002, Preti *et al.* 2008); risk to self (George *et al.* 2002); risk to others (Engleman *et al.* 1998); family and friends desire (Mulder *et al.* 2005); and, other client characteristics - such as the persons demographics and admission history (McGarvey *et al.* 2013, Unick *et al.* 2011).

Other identified factors of influence include service related factors - such as bed availability and the time of day of the referral and assessment (Engleman *et al.* 1998, Mihai *et al.* 2009, Mulder *et al.* 2005); clinician characteristics - such as clinical and psychotherapeutic experience and training, socio-demographic status, cultural background and gender (with more involuntary admissions by men and more voluntary admissions by women) (Mihai *et al.* 2009, Sattar *et al.* 2006); risk taking potential of the clinician (Sattar *et al.* 2006); the setting where the decision is made (Engleman *et al.* 1998, McGarvey *et al.* 2013); and, the relevant legal criteria (Engleman *et al.* 1998).

Consideration of the number of individual factors and their potential to feature and interplay situation, gives emphasis to the complexity of an involuntary admission decision. Anderson and Eppard's (1995, p. 727) psycho-phenomenological study focused specifically on the decision-making in this context. In their study, 24 clinicians were asked to describe one occasion of a 'hard' involuntary admission decision. Anderson and Eppard (1995) concluded that decision-making for involuntary admission is a complex and multifaceted; however, no further exploration of this was made. Study of this complex decision is needed (Clark & Bowers 2000); yet, at present, there is a dearth of research of SA in this context.

Vidulich and Tsang (2012, p. 263) discuss that SA is increasingly focussed on in health research, as health practitioners seek to 'meet the demands of their complex, dynamic' practice. Situation awareness has been studied and applied in areas of nursing in recognition of the complex and cognitively demanding nature of nursing practice in general (McKenna *et al.* 2014, Sitterding *et al.* 2012, Stubbings *et al.* 2012) and because nursing practice is based on an understanding that nurses are expected to recognise, comprehend and process large

amounts information (McKenna *et al.* 2014, Stubbings *et al.* 2012). Nurses practice in a ‘constant state of attention to the unexpected’ (Sitterding *et al.* 2012, p. 77), such as with the involuntary admission decision. The task is recognised as complex and challenging (Anderson & Eppard 1995, Clark & Bowers 2000, Engleman *et al.* 1998, McGarvey *et al.* 2013, Unick *et al.* 2011). The decision is often based on dynamic information some of which is incomplete (McGarvey *et al.* 2013, Unick *et al.* 2011) and is often made in situations where all contingencies cannot be controlled (Anderson & Eppard 1995), leading to unexpected and challenging situations.

The study and application of SA in nursing has commonly occurred in the areas of operating theatres and anaesthesia (see for example, Korikiakangas *et al.* 2014, Van Beuzekom, Boer, Akerboom & Dahan 2013, Wright 2013). In this context, focus is given to the role of SA to assist the nurse make sense of all the available complex and dynamic situational data. Wright’s (2013, p. 225) study of the transfer of care processes in the operating room environment is predicated on the ‘complexity of tasks’ that nurses have in anaesthesia practice and importance of nurses having adequate SA to reduce preventable accidents. Wright (2013, p. 225) offers a contextualised definition of SA, being; ‘the ability to perceive all elements of the patient’s condition and operating room environment, comprehend their meaning and project their status into the near future’. Wright (2013) considers SA of nurses’ work in anaesthesia we argue that SA may also be explored in the context of mental health nursing and the involuntary admission decision.

Endsley (2000, p. 16) refers to SA as a ‘situation model’. It is ‘knowing what is going on around you’ (Endsley 2000, p. 5) and recognising what is important and relevant to a goal, even when presented with large amounts of complex data. It involves a practitioner focussing

on what from the complex data is relevant to a decision and disregarding what is not and disregarding irrelevant information (Endsley & Jones 2012). In this way, SA facilitates systematic use of complex data, assisting decision-making. In a practical sense, this saves time, resources and the cognitive energy of practitioners.

A consideration with the involuntary admission decision is that it often occurs in a context of a person experiencing a mental health crisis or emergency (Unick *et al.* 2011). Wright, McGlen and Dykes (2012, p. 28) explain a mental health crisis as something that occurs ‘when people’s mental or emotional states deteriorate quickly, resulting in breakdowns of coping mechanisms’. It is with this in mind, along with the exploration of a structured assessment framework, that Wright *et al.* (2012) refer to SA. Although they do not explicitly state that an understanding of SA is required in the context of nurses working with mental health emergencies, Wright *et al.* (2012) do present ‘flawed SA’ as something undesirable.

The discussion of Wright *et al.* (2012) regarding ‘flawed SA’ serves to illustrate a gap in current understanding of this concept. However, before an understanding can be reached of what is adequate or inadequate SA, an understanding of what is SA is required. Understanding what makes SA, means understanding how a practitioner makes sense and use of elements in their environment. Endsley and Jones (2012, p. 20) contend that ‘by developing a good understanding of how people develop SA...strategies for designing to enhance SA will be more apparent’. Understanding what makes a practitioners SA in the context of mental health and the involuntary admission decision, will mean making sense of what environmental information a specialised mental health nurse uses and how it’s used, in their decision to admit or not admit a person with mental illness as an involuntary patient.



## IMPLICATIONS FOR NURSING

The application of SA to the setting of the involuntary decision would bring the concept firmly into the context of nursing practice. Such contextualisation would establish the suitability and transferability of SA to other areas of nursing recognised as complex and in need of informed decision-making. In all areas of practice nurses are responsible for making time sensitive, appropriate and accurate decisions across a range of practice settings at all levels of service delivery. Due to SAs positioning as a primary antecedent of decision-making (Johansen & O'Brien 2015, Stubbings *et al.* 2012), increased understanding and contextualisation of SA to specific nursing practices will better inform future decision-making and will contribute to advancement of nursing knowledge. Situation awareness, for example, could be applied to the exploration of how an emergency nurse triages particular patients or to the ethical decision-making practices of neonatal intensive care nurses.

Current studies of SA in nursing (see for example, McKenna *et al.* 2014, Wright 2013, Sitterding *et al.* 2012, Stubbings *et al.* 2012, Wright & Fallacaro 2011) explore how and why SA is important to nursing practice. However, these studies do not explore the direct relationship of SA and subsequent decision-making. Situation awareness is imperative in the nature and scope surrounding how nurses identify, make meaning and analyse multiple information sources when deciding to admit or not admit a person believed to be suffering from mental illness as an involuntary patient. A greater (and deeper) understanding of SA in nursing would lead to expansion of the concept while simultaneously allowing for the implementation of interventions that promote safety by reducing patient care errors (McKenna *et al.* 2014, p. 2). Application of knowledge garnered by such study would provide the foundation for education and training of decision-making in this setting.

Exploring SA in a mental health setting enhances nursing research prominence in the study and application of SA in interpersonal interactions. Being in despair, in deep distress and frightened may mean some people being assessed struggle for words and when they fail to find them may express themselves in ways that nurses – particularly those working with services users that are not familiar – are not accustomed to. Additional cues are critical and form part of the information being sought. To date no studies have been identified where a practitioner is required to rely on cues predominantly based on interpersonal relationships and interactions. A significant focus of SA research is based on system and human interface (Endsley 2000). Situation awareness in these contexts relies on or is improved by cues from particular technologies. The practice of deciding a person's need for involuntary admission to a mental health facility relies on a practitioner actively engaging with a person and the interpersonal activities of observation, monitoring and assessment of human behaviour (Cleary 2004, Cleary, Hunt, Horsfall & Deacon 2011, Hamilton & Manias 2007, Hamilton & Manias 2008, McGarvey *et al.* 2013, Mihai *et al.* 2009, Unick *et al.* 2011).

## CONCLUSION

Studying SA in the context of making a decision to admit someone or not as an involuntary patient would mature understanding of a critical mental health nursing practice and would also advance broader understanding of SA by exploring its application in the context of interpersonal engagement and human behaviour. Situation awareness and its application is an emerging focus of study in nursing. Its theoretical positioning as an antecedent of decision-making and its application in complex and dynamic practices marks SA an appropriate framework to understand how decisions are made in nursing.

Situation awareness is likely to be integral and embedded across a range of practice settings where nurses practice. In making the decision to admit or not to admit someone as an involuntary patient, qualified mental health nurses observe, monitor and assess a range of complex cues from their environment. The decision that these specially qualified mental health nurses reach is based on the perception, comprehension and projection of environmental cues; in other words, their SA. Understanding and defining SA in the context of qualified mental health nurses making such a decision will provide greater insight into an existing practice and allow for the future development of practice and education in this area.

While there is a body of literature on SA in health care and nursing, there is a scarcity of research that focusses on SA in mental health nursing. Furthermore, there is need to examine more deeply in a research framework the decision by a specially qualified mental health nurse to admit or not admit a person to a mental health facility as an involuntary patient.

Future investigation of SA in the context of a mental health nurses' decision to admit or not admit someone as an involuntary patient is needed as the decision has direct human rights and health implications (WHO 2005). Using SA as a framework for exploration of the involuntary decision will provide clearer understanding of decision-making in an important nursing practice. It will progress the current body of knowledge of SA in nursing. By exploring SA in a mental health setting, nursing research would be a prominent voice in the study and application SA in interpersonal interactions.

### **Author Contributions:**

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE\*):

- 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- 2) drafting the article or revising it critically for important intellectual content.

\* <http://www.icmje.org/recommendations/>

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