

Research Article

ICU nurses feel unprepared to care for patients with mental illness: A survey of nurses' attitudes, knowledge, and skills

Reuben Weare^{a,c}, Cameron Green^{a,*}, Michael Olasoji^b, Virginia Plummer^{c,d,e}^a Department of Intensive Care, Peninsula Health, Victoria, Australia^b School of Health Sciences, Faculty of Health, Arts & Design, Swinburne University of Technology, Victoria, Australia^c Continuing Education Development Unit, Peninsula Health, Victoria, Australia^d Nursing and Midwifery, Faculty of Medicine, Nursing and Health Sciences, Monash University, Victoria, Australia^e School of Nursing and Health Care Professions (Adjunct), Federation University, Australia

ARTICLE INFO

Article history:

Accepted 4 March 2019

Keywords:

Critical care
Intensive care
Mental health
Nursing

ABSTRACT

Objectives: To examine the knowledge, skills, and attitudes of a cohort of Australian nurses towards caring for patients with mental illness in the intensive care unit.**Research design:** A questionnaire was developed and distributed via internal email to all nurses working in the study intensive care unit. Responses were anonymous.**Setting:** A metropolitan intensive care unit located in Melbourne, Australia.**Main outcome measures:** Intensive care nurses completed a 76-question self-administered questionnaire.**Results:** Forty intensive care nurses completed the survey, a response rate of 35.7% (n = 40/112). Respondents were predominantly female (82.5%) and held a post-graduate qualification (62.5%).

ICU nurses felt that they needed further training and education to care for patients with mental illness in the intensive care unit. While respondents were empathetic to this patient group, negative stereotypes and stigma were reported by some participants. The pressures of the environment were perceived barriers to delivering optimal person-centred care for patients with mental illness.

Conclusion: This sample of nurses felt they require education and support in order to care for patients with mental illness in the intensive care unit. Further education may also help to reduce negative perceptions of this patient group.

© 2019 Elsevier Ltd. All rights reserved.

Implications for clinical practice

- Psychiatric comorbidities are common among patients admitted to the Intensive Care Unit and present unique challenges for the clinicians caring for them. Despite this, intensive care nurses in Australia receive little education and training in the care of patients with mental illness.
- This study aimed to survey the attitudes, skills and knowledge of a cohort of intensive care nurses towards the care of mentally ill patients.
- Nurses in the present study felt under-prepared to deliver person-centred care to patients with a mental illness in the intensive care unit setting. While many respondents believed that psychological care was important, stigma and stereotyping was also apparent.
- The findings of this study will help to identify negative staff attitudes, as well as deficits in knowledge, and skills, which may be addressed through further education. The questionnaire responses will assist us to identify what resources and support nurses require to better care for patients with mental illness appropriately.

Abbreviations: ICU, Intensive Care Unit; IQR, inter-quartile range; SD, standard deviation.

* Corresponding author at: Department of Intensive Care, Frankston Hospital, 2 Hastings Road, Frankston, VIC 3199, Australia.

E-mail address: CGreen@phcn.vic.gov.au (C. Green).

Introduction

Mental illnesses are among the top ten causes of disability worldwide, accounting for approximately 13% of the global disease burden (Giandinoto and Edward, 2015). In addition, individ-

uals with mental illness also experience poorer physical health. Studies have reported that individuals with mental illnesses are twice as likely to die prematurely from preventable causes, are more likely to develop chronic physical illnesses, and have an estimated reduction in life expectancy of between 10 and 30 years (Giandinoto and Edward, 2014, 2015; Zolnierrek, 2009). These findings may result from the complex interaction between physical illness and mental health; greater exposure to risk factors for illness (such as increased rates of smoking) among individuals with mental illness (Cook et al., 2014) or barriers to accessing or engaging with primary healthcare (Giandinoto and Edward, 2014).

Consequently, mental illnesses are common among critically ill patients admitted to the Intensive Care Unit (ICU), with studies reporting a prevalence of psychiatric illness approximately 2.5 times that of the general population (Wunsch et al., 2014). A recent study found that 12.7% of patients admitted to a French ICU over a 13-year period had a pre-existing psychiatric diagnosis (Gacouin et al., 2017); while 6.2% of nonsurgical patients requiring mechanical ventilation in a Danish ICU had a psychiatric diagnosis within the previous 5 years (Wunsch et al., 2014). A study of 129 Veterans Health Administration hospitals in the USA found 28% of nonsurgical ICU patients had pre-existing psychiatric diagnoses (Abrams et al., 2010).

Despite this, nurses specialising in ICU receive little training in mental health, limiting their ability to provide person-centred care to patients with mental illness (Giandinoto and Edward, 2014; Knaak et al., 2017; MacNeela et al., 2012).

Patients with comorbid mental illnesses present unique challenges for clinicians in acute medical settings (MacNeela et al., 2012). These challenges have been identified as: psychological engagement and relationship building; clinicians' experience of fear; negative attitudes and stereotyping; poor mental health literacy; being positive and optimistic in providing care and environmental factors (Giandinoto and Edward, 2014; MacNeela et al., 2012).

Stigma, stereotyping and negative attitudes towards patients with mental illness have been reported from health professionals in a range of settings, and represent a barrier to patients' treatment and recovery (Bailey, 1998; Giandinoto and Edward, 2014; Knaak et al., 2017). Mentally ill patients in acute medical settings may contend with negative generalisations, stigma and therapeutic pessimism from clinicians, borne from limited training and awareness of mental illness (Giandinoto and Edward, 2014; Knaak et al., 2017).

A qualitative study of ICU clinicians found that inadequate education and training were barriers to caring for patients with mental illness, along with a lack of institutional support and positive reinforcement or feedback from patients (Bailey, 1998). Another study conducted among a small sample of ICU nurses from New Zealand (Murch, 2016) found that a majority were confident conversing with patients with mental illness, but found it difficult to establish rapport with them. Almost half of respondents reported concerns about their personal safety when caring for patients with mental illness, a finding that is common throughout the literature (Bailey, 1998; Giandinoto and Edward, 2014, 2015; Knaak et al., 2017; MacNeela et al., 2012; Murch, 2016).

Currently there is little published literature investigating the skills, knowledge, and attitudes of ICU nurses towards caring for patients with mental illness. Understanding these may assist in identifying knowledge gaps, and aid in the development of training and education packages aimed at enhancing the skills of ICU nurses when working with patients with mental illness. Such interventions may also reduce stigma and enhance person-centred care.

Methods

Objectives

This study aimed to survey the skills, knowledge, and attitudes of ICU nurses towards caring for patients with mental illness.

Setting

This exploratory descriptive study was conducted in a metropolitan ICU, located in Melbourne (Australia). This 15-bed medical-surgical ICU admits approximately 1300 patients per annum, and employs approximately 120 nursing staff.

Currently, mental health clinicians review patients admitted to this ICU on a referral basis only.

Hospital databases indicate that over a 12-month period (2017–2018), 22.7% of patients admitted to the study ICU ($n = 300/1,319$) had at least one pre-existing psychiatric diagnosis (not including drug or alcohol abuse). One-fifth (20.3%, $n = 61$) of these patients were admitted as a result of self-harm.

Ethical approval

This study was reviewed and approved by the institutional Human Research and Ethics Committee (approval number: LNR/432026/PH-2018).

Participants

All nurses working in the study hospital's ICU were invited to participate in this survey (Fig. 1)

Survey development

A questionnaire was developed collaboratively between clinicians and researchers experienced in mental health and intensive care. Questions included original items and some adapted to be applicable to the ICU setting from validated questionnaires, including the Therapeutic Optimism Scale (Byrne et al., 2006), the Jefferson Scale of Physician Empathy (Hojat et al., 2001), the Attitudes Towards Attempted Suicide Questionnaire (Ouzouni and Nakakis, 2009), and the Community Attitudes to Mental Illness Scale (Taylor and Dear, 1981). Face validity was established through consultation with academics and clinicians with experience in mental health and ICU.

The survey consisted of demographic questions regarding respondents' age, gender, nursing qualifications, and approximate years of experience as a nurse. Participants were also asked whether they had experience nursing in a mental health setting.

Participants were then asked to indicate their level of agreement to sixty-seven statements using a five-point Likert-type scale (Leung, 2011). These statements were broadly grouped as relating to respondents' "knowledge" ($n = 12$), "skills" ($n = 15$), and "attitudes" ($n = 40$).

Finally, participants were asked whether they had received training in topics relating to mental health (e.g. mental status assessment, general counselling skills), and were given the opportunity to provide free-text suggestions as to their needs relating to caring for patients with mental illness in the ICU. The survey instrument is included as *Supplementary Materials*.

The questionnaire was piloted among a convenience sample of twelve ICU nurses. The questionnaire was well received and only minor changes to wording were recommended. Internal consis-

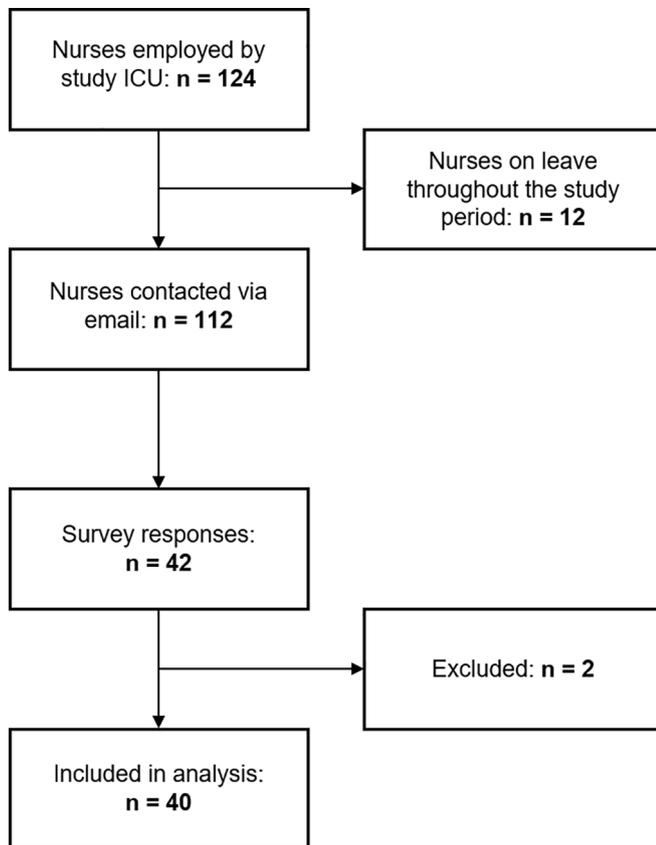


Fig. 1. Flow diagram of recruitment into the present study. Twelve nurses employed by the study intensive care unit (ICU) were on leave throughout the study period. Two responses were excluded as they provided only minimal demographic information.

Table 1
Characteristics of respondents to the survey. MH = Mental Health.

	All Respondents	Nurses without experience in MH settings (n = 32)	Nurses with experience in MH settings (n = 8)
Age			
<25 years	7.5% (n = 3/40)	6.3% (n = 2/32)	12.5% (n = 1/8)
26–35	37.5% (n = 15/40)	34.4% (n = 11/32)	50.0% (n = 4/8)
36–49	32.5% (n = 13/40)	34.4% (n = 11/32)	25.0% (n = 2/8)
50+	20.0% (n = 8/40)	21.9% (n = 7/32)	12.5% (n = 1/8)
Prefer not to say	2.5% (n = 1/40)	3.1% (n = 1/32)	0% (n = 0/8)
Gender			
Male	15.0% (n = 6/40)	12.5% (n = 4/32)	25.0% (n = 2/8)
Female	82.5% (n = 33/40)	84.4% (n = 27/32)	75.0% (n = 6/8)
Prefer not to say	2.5% (n = 1/40)	3.1% (n = 1/32)	0% (n = 0/8)
Highest Nursing Qualification			
Diploma	7.5% (n = 3/40)	9.4% (n = 3/32)	0% (n = 0/8)
Bachelor's Degree	30.0% (n = 12/40)	21.9% (n = 7/32)	62.5% (n = 5)
Post-Graduate Certificate	45.0% (n = 18/40)	50.0% (n = 16/32)	25.0% (n = 2/8)
Post-Graduate Diploma	12.5% (n = 5/40)	12.5% (n = 4/32)	12.5% (n = 1/8)
Master's Degree	5.0% (n = 2/40)	6.3% (n = 2/32)	0% (n = 0/8)
Years as a qualified nurse			
2 years or less	5.1% (n = 2/39)	3.2% (n = 1/31)	12.5% (n = 1/8)
3–5 years	17.9% (n = 7/39)	16.1% (n = 5/31)	25.0% (n = 2/8)
6–10 years	28.2% (n = 11/39)	25.8% (n = 8/31)	37.5% (n = 3/8)
11–20 years	17.9% (n = 7/39)	19.4% (n = 6/31)	12.5% (n = 1/8)
21–30 years	17.9% (n = 7/39)	22.6% (n = 7/31)	0% (n = 0/8)
More than 30 years	12.8% (n = 5/39)	12.9% (n = 4/31)	12.5% (n = 1/8)
Years working in ICU			
2 years or less	22.5% (n = 9/40)	9.4% (n = 3/32)	75.0% (n = 6/8)
3–5 years	17.5% (n = 7/40)	21.9% (n = 7/32)	0% (n = 0/8)
6–10 years	22.5% (n = 9/40)	25.0% (n = 8/32)	12.5% (n = 1/8)
11–20 years	15.0% (n = 6/40)	15.6% (n = 5/32)	12.5% (n = 1/8)
21–30 years	22.5% (n = 9/40)	28.1% (n = 9/32)	0% (n = 0/8)
More than 30 years	0.0% (n = 0/40)	0.0% (n = 0/32)	0% (n = 0/8)

tency was formally evaluated using Cronbach's Alpha, which suggested good reliability within each of the three scales (Knowledge: $\alpha = 0.76$; Skills: $\alpha = 0.90$; Attitudes: $\alpha = 0.82$).

Data collection

An online survey was constructed using SurveyMonkey™ and distributed to all nurses employed by the study ICU via the staff email list. Participants were reminded that their participation was voluntary, and all responses were anonymous.

The survey remained open for one month, and a reminder email was sent two weeks after the initial invitation.

Data analysis

Data were exported from the online survey platform for analysis. Descriptive statistics are provided as median and interquartile range (IQR) or mean and standard deviation (SD) as appropriate. Categorical data are presented as a percentage of valid responses.

Results

Forty-two survey responses were received, two of which included only demographic information. These were excluded, leaving forty responses for analysis. This gives a completion rate of 35.7% of nurses who worked in the ICU during the study period (n = 40/112).

A majority of respondents were female (82.5%, n = 33/40), and held a postgraduate qualification (62.5%, n = 25/40). Respondents varied in age and years of nursing experience (Table 1). Twenty percent of respondents had experience working in mental health settings.

Knowledge

A majority of respondents believed they had a good understanding of the causative factors of mental illness (67.5%, $n = 27/40$), and of the ways in which mental health can affect physical health (92.5%, $n = 37/40$). Despite this, only 17.5% felt adequately trained to care for patients with mental illness ($n = 7/40$). Some misconceptions were also evident, with a majority of respondents believing that patients with mental illness in ICU were most commonly admitted because of self-harm (55.0%, $n = 22/40$); and that patients with mental illness were more prone to violence or aggression (67.5%, $n = 27/40$).

Skills

Only 10.3% ($n = 4/39$) of respondents believed that the training they had received in ICU had given them adequate skills to care for patients with mental illness; and all respondents (100%, $n = 37/37$) believed that they could be better prepared to deal with situations concerning patients with mental illness.

Less than a quarter of respondents reported having the ability to complete a basic mental state examination screening for mental illness or a basic mental health risk assessment (23.1% each, $n = 9/39$).

A majority of respondents felt confident in communicating medical information to patients with mental illness (71.8%, $n = 28/39$), and were comfortable in discussing a patient's mental illness with them (46.1%, $n = 18/39$). However, many reported that they were concerned they might "say the wrong thing" when talking to patients with a mental illness (48.7%, $n = 19/39$), and that they found it confronting to talk to a patient who was hallucinating (25.7%, $n = 10/39$) or expressing delusional or paranoid ideas (51.3%, $n = 20/39$).

Attitudes

Three key themes were identified: that ICU nurses empathise with patients with mental illness; the challenges of the ICU environment; and negative perceptions or stigma.

Respondents reported feeling empathy towards patients with mental illness (68.4%, $n = 26/38$) and disagreed with the statements that "understanding patients' psychological state has no bearing on patients' ICU treatment" (84.2%, $n = 32/38$) or outcomes (89.5%, $n = 34/38$). A majority also agreed that empathy demonstrated by nurses has the potential to positively influence the experience of a patient with mental illness (81.6%, $n = 31/38$). Despite this, 51.3% ($n = 19/37$) did not believe that patients in ICU received adequate psychological support, and 29.7% ($n = 11/37$) felt that patients with mental illness were not treated with empathy in this unit. In particular, some respondents reported difficulty understanding the perspective of a patient who had self-harmed (12.9%, $n = 5/39$). Small proportions reported feeling frustrated and irritated with patients admitted to ICU following self-harm (24.3%, $n = 9/37$), with some going so far as to agree that such patients are "a waste of their time" (8.1%, $n = 3/37$) or that individuals who have self-harmed "do not deserve to come to ICU" (5.4%, $n = 2/37$).

Respondents to this survey did not believe that the ICU was a good environment in which to manage mental illness (59.4%, $n = 22/37$), with 48.7% ($n = 18/37$) believing that their workload made it difficult to care for patients with mental illness. Many (40.5%, $n = 15/37$) also believed that they did not have enough time to build rapport with patients with mental illness in the ICU setting. A majority (86.5%, $n = 32/37$) felt that the support of a mental health nurse would enable them to better care for patients with a mental illness in ICU.

A number of responses indicated that stigma and negative stereotypes associated with mental illness persist among some participants. A majority of respondents believed that patients with mental illness made the ICU a more unpredictable environment (62.2%, $n = 23/37$), and a quarter (27.0%, $n = 10/37$) believed that patients with mental illness impacted negatively on other patients in ICU. Over seventy percent (73.7%, $n = 22/38$) reported that they sometimes felt nervous when they were assigned a patient with a mental illness, and 10.5% ($n = 4/38$) reported they would prefer not to care for a patient with mental illness if they had a choice.

Discussion

ICU nurses in the present study reported feeling under-prepared to care for patients with mental illnesses in the ICU setting. While participants did place value on understanding patients' psychological state, a lack of training and the pressures of the ICU environment may impede the delivery of person-centred care. Respondents were largely empathetic to patients with mental illness, however a number of respondents reported negative perceptions or attitudes.

Individuals with mental illness have unique needs that present challenges for clinicians in acute medical settings (Giandinoto and Edward, 2014; Pinto-Foltz and Logsdon, 2009). At present, Australian nurses specialising in ICU receive little formal training in the care of patients with mental illness. This is despite psychiatric comorbidities being significantly more common in the ICU population than both the general population and the general hospital setting (Wunsch et al., 2014). Our findings are in line with previous studies that have identified knowledge gaps regarding care of mentally ill patients among clinicians in acute medical settings (Giandinoto and Edward, 2014; Knaak et al., 2017).

Previous studies have shown that a well-designed educational package can improve the knowledge and skills of generalist nurses when providing care to patients with mental illness (Clarke et al., 2006; Higgins et al., 2016). It is likely that ongoing education and training will result in improved outcomes for both staff and patients (Clarke et al., 2006), with one article suggesting that improved education and training were key to improving the health interactions and outcomes for patients with mental illness in the general health setting (Knaak et al., 2017).

Respondents to the current study agreed that understanding a patient's mental state was relevant to both their treatment and outcomes in ICU; however, some respondents felt that patients with mental illness did not receive adequate psychological support in this setting. Some respondents reported difficulty empathising with patients with mental illness, and particularly with those admitted to ICU following deliberate self-harm. This ranged from frustration (24.3%) to a belief that such patients do not deserve to be admitted to ICU (5.4%). These findings are in line with previous studies (Bailey, 1998), where clinicians reportedly found the provision of care to individuals who wanted to die to be "the antithesis of the purpose of ICU" (pg. 11).

There is a significant body of literature that suggests that individuals with mental illness experience stereotyping or stigma from a wide range of sources within the healthcare setting (Bailey, 1998; Giandinoto and Edward, 2014; Knaak et al., 2017). The results of our survey suggest that the ICU environment is no different. Respondents to the present survey perceived patients with mental illness to be more prone to violence and aggression when compared to other patients and to be unpredictable, views that have been reported by previous studies in acute medical settings (Giandinoto and Edward, 2014, 2015). This led a majority of respondents in the present study to report feeling nervous when tasked with caring for patients with mental illness, and a small

proportion (10.5%) to report that they would prefer not to directly care for a patient with a mental illness, given the choice. There is little evidence to suggest that individuals may be more prone to violence or aggression simply because they experience a mental illness (Varshney et al., 2016).

Stigma is an important influence in the healthcare received by stigmatised patient groups (MacNeela et al., 2012), and negatively affects access and outcomes in general health settings for patients with mental illness.

Throughout the literature, there is an over-reaching theme of fear amongst healthcare workers (Giandinoto and Edward, 2015). It would also appear that greater education, training and support on an ongoing basis could be key in reducing this fear and improving care delivery for patients with mental illness, and improving job satisfaction for nurses (Arvaniti et al., 2009; Knaak et al., 2017; Pinto-Foltz and Logsdon, 2009).

The results of this survey suggest that many respondents felt that the pressures of the ICU environment also affect the ability of nurses in this setting to deliver optimal care to patients with mental illness. These include the time pressures and workload associated with nursing care in this setting, which many respondents felt prevented them from developing rapport with their patients. Previous studies have reported that the environments of acute medical wards and emergency departments present challenges for the provision of person-centred care to patients with mental illness (Giandinoto and Edward, 2014; Marynowski-Traczyk and Broadbent, 2011; Reed and Fitzgerald, 2005). Specifically, these settings have been perceived as lacking privacy; too noisy and chaotic for patients who may require a calming environment; and staffed by clinicians who lack the time and training to deliver the level of care that patients with a mental illness require (Giandinoto and Edward, 2014; Marynowski-Traczyk and Broadbent, 2011).

Respondents agreed that care of patients with mental illness in ICU could benefit from greater input and support of mental health clinicians. Such a service is likely to deliver benefits for both clinicians and patients, but places additional strain on mental health services (Reed and Fitzgerald, 2005; Zolnierok, 2009).

In addition to patients who are admitted to ICU with a pre-existing mental illness, up to 80% of all ICU patients will develop acute psychosis (delirium) while in ICU (Cavallazzi et al., 2012). A previous study conducted in this ICU reported that 35.2% of patients developed delirium during their ICU stay (Green et al., 2019). It is also increasingly recognised that many survivors of critical illness experience a “post-intensive care syndrome” characterised by cognitive impairment, reduced quality of life and mental health issues including depression, anxiety, and post-traumatic stress (Hatch et al., 2018; Myhren et al., 2010; Rawal et al., 2017). It is likely that greater education and training in mental health care for ICU nurses will lead to greater awareness of all mental health issues affecting ICU patients and improved delivery of patient-centred care for these patient groups, in addition to those admitted to ICU with comorbid mental illness.

Limitations and strengths

This study has a number of limitations that must be acknowledged. It is a single centre study, with a relatively small sample of ICU nurses. Despite this, we are reassured by the characteristics of our respondents, which are representative of our nursing staff population. While these findings identify a number of areas for improvement and education, a national or multi-centre survey may be required before the results can be generalised to a wider population.

While the present survey asked ICU nurses to assess their skills, attitudes, and knowledge regarding the care of patients with men-

tal illness, it is possible that there is a discrepancy between respondents' perceived and actual knowledge, attitudes, and abilities.

Finally, nurses are only one group of clinicians that care for patients in the ICU. Medical and allied health staff may also have a significant influence on patients' experiences and outcomes. An investigation of the knowledge, skills, and attitudes of these clinicians is warranted, but is beyond the scope of the present study.

This study is one of only a handful to investigate this area. It presents valuable insights for the planning and delivery of person-centred care for this vulnerable patient group, as well as nurse training/education and support.

Conclusion

Mental illness is common among patients admitted to ICU; however nurses in the present study felt under-prepared to provide person-centred care for this patient group. While respondents were largely empathetic to patients with mental illness, stigma persists. Ongoing education, training, and support for ICU nurses is likely to reduce stigma and improve the care and outcomes for this vulnerable patient group.

Role of the funding source

N/A.

Conflict of interest

None to declare.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.iccn.2019.03.001>.

References

- Abrams, T.E., Vaughan-Sarrazin, M., Rosenthal, G.E., 2010. Preexisting comorbid psychiatric conditions and mortality in nonsurgical intensive care patients. *Am. J. Crit. Care* 19 (3), 241–249.
- Arvaniti, A., Samakouri, M., Kalamara, E., Bochtsou, V., Bikos, C., Livaditis, M., 2009. Health service staff's attitudes towards patients with mental illness. *Soc. Psychiatry Psychiatr. Epidemiol.* 44 (8), 658–665.
- Bailey, S.R., 1998. An exploration of critical care nurses' and doctors' attitudes towards psychiatric patients. *Aust. J. Adv. Nurs.* 15 (3), 8–14.
- Byrne, M., Sullivan, N., Elsom, S., 2006. Clinician optimism: development and psychometric analysis of a scale for mental health clinicians. *Aust. J. Rehabil. Counselling* 12 (1), 11–20.
- Cavallazzi, R., Saad, M., Marik, P.E., 2012. Delirium in the ICU: an overview. *Ann. Intensive Care* 2 (1), 49.
- Clarke, D.E., Brown, A.M., Hughes, L., Motluk, L., 2006. Education to improve the triage of mental health patients in general hospital emergency departments. *Accid. Emerg. Nurs.* 14 (4), 210–218.
- Cook, B.L., Wayne, G.F., Kafali, E.N., Liu, Z., Shu, C., Flores, M., 2014. Trends in smoking among adults with mental illness and association between mental health treatment and smoking cessation. *JAMA* 311 (2), 172–182.
- Gacouin, A., Maamar, A., Fillatre, P., Sylvestre, E., Dolan, M., Le Tulzo, Y., Tadie, J.M., 2017. Patients with preexisting psychiatric disorders admitted to ICU: a descriptive and retrospective cohort study. *Ann. Intensive Care* 7 (1), 1.
- Giandinoto, J.A., Edward, K.L., 2014. Challenges in acute care of people with comorbid mental illness. *Br. J. Nurs.* 23 (13), 728–732.
- Giandinoto, J.A., Edward, K.L., 2015. The phenomenon of co-morbid physical and mental illness in acute medical care: the lived experience of Australian health professionals. *BMC Res. Notes* 8, 295.
- Green, C., Bonavia, W., Toh, C., Tiruvoipati, R., 2019. Prediction of ICU delirium: validation of current delirium predictive models in routine clinical practice. *Crit. Care Med.* 47 (3), 428–435.
- Hatch, R., Young, D., Barber, V., Griffiths, J., Harrison, D.A., Watkinson, P., 2018. Anxiety, Depression and Post Traumatic Stress Disorder after critical illness: a UK-wide prospective cohort study. *Crit. Care* 22 (1), 310.
- Higgins, A., Carroll, M., Sharek, D., 2016. Impact of perinatal mental health education on student midwives' knowledge, skills and attitudes: a pre/post evaluation of a module of study. *Nurse Educ. Today* 36, 364–369.

- Hojat, M., Mangione, S., Nasca, T., 2001. The Jefferson scale of physician empathy: development and preliminary psychometric data. *Educ. Psychol. Meas.* 61 (2), 349–365.
- Knaak, S., Mantler, E., Szeto, A., 2017. Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Manage. Forum* 30 (2), 111–116.
- Leung, S., 2011. A comparison of psychometric properties and normality in 4-, 5-, and 11-point Likert scales. *J. Soc. Serv. Res.* 37 (4), 412–421.
- MacNeela, P., Scott, P.A., Treacy, M., Hyde, A., O'Mahony, R., 2012. A risk to himself: attitudes toward psychiatric patients and choice of psychosocial strategies among nurses in medical-surgical units. *Res. Nurs. Health* 35 (2), 200–213.
- Marynowski-Traczyk, D., Broadbent, M., 2011. What are the experiences of Emergency Department nurses in caring for clients with a mental illness in the Emergency Department? *Australas. Emerg. Nurs. J.* 14, 172–179.
- Murch, R., 2016. Improving attitudes to mental health patients in ICU. *Nurs. N Z* 22 (8), 30–31.
- Myhren, H., Ekeberg, O., Toien, K., Karlsson, S., Stokland, O., 2010. Posttraumatic stress, anxiety and depression symptoms in patients during the first year post intensive care unit discharge. *Crit. Care* 14 (1), R14.
- Ouzouni, C., Nakakis, K., 2009. Attitudes towards attempted suicide: the development of a measurement tool. *Health Sci. J.* 3, 222–231.
- Pinto-Foltz, M.D., Logsdon, M.C., 2009. Reducing stigma related to mental disorders: initiatives, interventions, and recommendations for nursing. *Arch. Psychiatr. Nurs.* 23 (1), 32–40.
- Rawal, G., Yadav, S., Kumar, R., 2017. Post-intensive care syndrome: an overview. *J. Transl. Int. Med.* 5 (2), 90–92.
- Reed, F., Fitzgerald, L., 2005. The mixed attitudes of nurse's to caring for people with mental illness in a rural general hospital. *Int. J. Ment. Health Nurs.* 14 (4), 249–257.
- Taylor, S.M., Dear, M.J., 1981. Scaling community attitudes toward the mentally ill. *Schizophr. Bull.* 7 (2), 225–240.
- Varshney, M., Mahapatra, A., Krishnan, V., Gupta, R., Deb, K.S., 2016. Violence and mental illness: what is the true story? *J. Epidemiol. Community Health* 70 (3), 223–225.
- Wunsch, H., Christiansen, C.F., Johansen, M.B., Olsen, M., Ali, N., Angus, D.C., Sorensen, H.T., 2014. Psychiatric diagnoses and psychoactive medication use among nonsurgical critically ill patients receiving mechanical ventilation. *JAMA* 311 (11), 1133–1142.
- Zolnierek, C.D., 2009. Non-psychiatric hospitalization of people with mental illness: systematic review. *J. Adv. Nurs.* 65 (8), 1570–1583.