

AUSTRALASIAN JOURNAL OF
PARAMEDICINE



Undergraduate paramedic students' perception of mental health using a pre- and post-questionnaire

Kate Emond
La Trobe University, Bendigo, Victoria

Susan Furness
La Trobe University, Bendigo, Victoria

Melissa Deacon-Crouch
La Trobe University, Bendigo, Victoria

Research

Undergraduate paramedic students' perception of mental health using a pre- and post-questionnaire

Kate Emond PhD candidate, is a Lecturer (Nursing) and Postgraduate Coordinator Mental Health¹, Susan Furness PhD candidate, is a Senior Lecturer (Paramedicine)¹, Melissa Deacon-Crouch PhD candidate, is a Senior Lecturer (Nursing) and Course Coordinator (Nursing)¹

Affiliation:

¹La Trobe University, La Trobe Rural Health School, Bendigo, Victoria

Abstract

Introduction

It is well recognised that mental illness causes significant morbidity and mortality, and has been identified as a national health priority. Despite this, there is a paucity of research about paramedic student perceptions and attitudes toward those experiencing mental health presentations. The objective of this study was to explore the mental health perceptions of a final year cohort of paramedic students from a regional Victorian university.

Methods

Final year undergraduate paramedicine students enrolled in the core subject Advanced Mental Health Practice were invited to participate in both pre- and post-subject surveys and record their perceptions of mental health using electronic questionnaires. The questionnaires used nine 5-point Likert scale questions and three multiple option questions using declarative statements.

Results

Of the 25 eligible students, 16 completed the pre-subject questionnaire and 12 completed both the pre- and post-subject questionnaires. The results indicated that this cohort held common myths and misconceptions relating to mental health combined with a lack of general knowledge about mental illness and its paramedic management. These perceptions altered following the introduction of the mental health subject.

Conclusion

The results suggest that the implementation of a mental health subject into paramedicine undergraduate curriculum has the ability to positively alter perceptions of mental health. This may lead to students acquiring the knowledge and attitudes required to manage mental health presentations.

Keywords:

paramedic, mental health, attitude, perception, student

Corresponding author: Kate Emond, k.emond@latrobe.edu.au

Introduction

Mental illness is recognised as a global health issue causing significant morbidity and mortality (1) and is one of seven designated national health priorities of the Australian government (2). Almost one in five Australians suffer from a mental illness at some stage in their life (3) and providing appropriate services related to mental health is at the forefront of the needs of Australians (2).

In the past decade, the rapid change in the role of the paramedic has precipitated the introduction of additional skills and procedures aimed at improving the pre-hospital management of a range of conditions (4). The role of the paramedic in assessing and managing mental illness in this changing environment has not been comprehensively explored (5), despite the management of mental health presentations becoming an increasingly significant part of health care in the pre-hospital context (6). Studies conducted have established that paramedics feel there has been inadequate education and training, and an overall unpreparedness to manage mental health presentations (7-9). An analysis by Roberts (7) into the perceptions of paramedics regarding their role, education, training and working relationships when attending mental health cases, identified that additional education would benefit their ability to manage mental health presentations, as they currently felt their education was limited.

Mental health content has recently been introduced into the La Trobe University (Victoria) undergraduate curriculum in paramedicine with the aim of preparing students to manage mental health presentations in pre-hospital care. The aim of this study is to evaluate student perceptions of mental health both prior to and following completion of this mental health subject.

Methods

Study design

This was a pre- and post-study utilising an electronic survey to elicit responses from student paramedics about their perceptions of mental health.

Participants

The sample was purposive in nature and involved La Trobe University, La Trobe Rural Health School fourth year undergraduate paramedicine students enrolled in the core subject 'Advanced Mental Health Practice'. There were 25 students eligible to participate in the study.

Instrumentation

The electronic questionnaires were designed to include nine 5-point Likert scale questions and three multiple option questions using declarative statements and totalling 12 items. Students were asked to choose one option for each statement to indicate their level of agreement or disagreement. Although

data derived from Likert scales is considered ordinal, it is acceptable to include descriptive statistical analyses (10). It should be noted there is a paucity of validated tools to measure the attitudes and perceptions of student paramedics (11).

Procedure

Students were invited to participate in the study by postings via the paramedicine e-noticeboard. Invitations included details of the study along with the link to the questionnaire and participant information statement. Participants were students (N=25) currently enrolled in the final year of their undergraduate paramedicine program. The survey was implemented twice: upon commencement of the advanced mental health subject, and at its completion. Students were informed that their consent was implied by completing and submitting the electronic survey. Students could withdraw from the study at any time up until final submission of the electronic survey, as once submitted, survey responses could not be linked to students.

Data analysis

Descriptive statistics were utilised to analyse the data.

Ethics

Ethics approval from the La Trobe University Human Ethics Committee Research Compliance Unit was obtained.

Results

Participant demographics

Of the 25 eligible students, 64% (N=16) completed the pre-survey with 48% (N=12) completing the post-survey. All students were less than 25 years of age. Key findings for participant responses pre- and post-intervention are shown in Table 1.

Discussion

This study explored paramedic students' perception of mental illness and the skills required to manage mental health presentations. The items in the questionnaire were selected based on the knowledge and skills relevant to the role of a novice paramedic, and are reflective of both the Ambulance Victoria clinical practice guidelines and competencies fundamental to the profession. A number of authors have expounded the importance and relevance of mental health knowledge in the pre-hospital field (4,5,7,9) and in this study all students agreed that it is important for paramedics to have knowledge of mental illness, with 94% of participants in strong agreement. The results of this study can be grouped thematically into two main sections: general knowledge about mental illness and its paramedic management, and common myths and misconceptions.

Table1. Participant responses pre- and post-intervention

		Pre-test	Post-test
5-point Likert scale questions	Response	%	%
It is important for paramedics to have knowledge of mental disease	Strongly disagree	0	0
	Disagree	0	0
	Unsure	0	0
	Agree	6	2
	Strongly agree	94	98
People with severe mental illness do not fully recover	Strongly disagree	6	0
	Disagree	19	82
	Unsure	56	0
	Agree	13	18
	Strongly Agree	6	0
Paramedics should have a sound knowledge of the Mental Health Act	Strongly disagree	0	0
	Disagree	0	0
	Unsure	0	0
	Agree	50	25
	Strongly Agree	50	75
I would be comfortable managing a person with a mental health illness	Strongly disagree	6	0
	Disagree	13	0
	Unsure	25	33
	Agree	50	42
	Strongly agree	6	25
Talking about suicide encourages people to attempt suicide	Strongly disagree	38	34
	Disagree	31	58
	Unsure	31	0
	Agree	0	8
	Strongly agree	0	0
People who are agitated and require sedation and restraint should be transported by police	Strongly disagree	13	25
	Disagree	56	67
	Unsure	31	0
	Agree	0	8
	Strongly agree	0	0
People with psychosis are violent and dangerous	Strongly disagree	6	26
	Disagree	44	33
	Unsure	50	33
	Agree	0	8
	Strongly agree	0	0
Multiple choice answer questions			
Estimation of prevalence of mental illness	Correct	69	82
	Incorrect	31	18
Identification of main causes of agitation	Correct	73	75
	Incorrect	27	25
Identification of assessment components not required in the mental state exam	Correct	75	92
	Incorrect	25	8

Discussion (continued)

General knowledge about mental illness and paramedic management

The results of this study indicated that students' level of comfort improved upon completion of the mental health subject. It should be noted that prior to the commencement of the subject, students might not have had in-field exposure to patients with mental illness, which may have impacted on their responses. The inclusion of mental health education alongside in-field mental health clinical placements may have increased the students' level of comfort in relating to patients with mental illness.

Knowledge levels relating to both mental status assessments and agitated patients from both a clinical practice and theoretical perspective were noted to have improved at the completion of the advanced mental health subject. Literature suggests that there is a need for appropriate paramedic educational opportunities from which this knowledge can be gained (5,7).

Townsend and Luck (12) purport that 'there is evidence of a misunderstanding of the legal and ethical issues that surround decision making in mental health treatment'. The introduction of the mental health subject into the undergraduate curriculum removed an element of legal misunderstanding, as results indicated students gained an appreciation and awareness of paramedic legislative requirements applicable to managing patients with mental illness.

Common myths and misconceptions

Studies that have investigated stigma and misconceptions towards people with mental illness have found that health professionals hold negative attitudes towards people with a mental illness and to psychiatry in general (13,14). Ross and Goldner (13) identified that there was a lack of knowledge to confidently manage people with mental illness, and this knowledge gap was linked to their fear of this patient population. The results from our study identified that education and knowledge of mental illness decreased students' perceptions of people with psychosis as being violent and dangerous, therefore potentially addressing the knowledge gap linked to fear of mental illness.

A systematic review of quantitative literature by Rees et al (15) identified that there was a gap in understanding towards people who self-harm and that further education was needed to guide paramedics in working with people that engage in self-harming behaviour (15). The findings from our study revealed that following education relating to suicide and self-harm, students agreed that talking about suicide does not encourage people to attempt it. This indicates that students may be more likely to engage patients in discussions about suicidality, improving both interpersonal communication with patients and informing their clinical management and decision making.

Future research

The introduction of a standalone mental health subject within undergraduate paramedic curriculum can lead to an improvement in perceptions and management of mental illness. Rigorous research is required to investigate ways of ensuring paramedic students are comfortable managing mental health presentations. We believe that learning objectives relating to critical reflection upon, and reframing of, current practice is an essential component of undergraduate mental health curricula. Future studies relating to learning objectives are needed to confirm and validate this belief. Investigation regarding the use of simulated patient scenarios and their ability to improve confidence and competence is also warranted, and will be discussed in a future article.

Limitations of this study

There are several limitations to this study, including a small sample size and the absence of a control group. There is a possibility of selection bias, as individuals may have entered into the study with undisclosed life experiences relating to mental illness or a specific interest in mental health. Additionally, it is not known whether students had prior exposure to in-field mental health presentations. The study was conducted within a single institution and the results are not necessarily representative of all paramedic students.

Conclusion

This paper presents an exploration of the knowledge and attitudes of a small group of final year student paramedics. The study was conducted as prior research has established that paramedics have reported inadequate mental health education and training, and a lack of preparedness when responding to callouts. It may be concluded that introducing education regarding mental health into undergraduate curriculum can lead to the knowledge and attitudes required to manage mental health presentations in the pre-hospital environment.

Conflict of interest

The authors declare they have no competing interests. Each author has completed the ICMJE conflict of interest statement.

Acknowledgements

We would like to thank all the fourth year paramedic students from La Trobe University for their participation in the research study.

References

1. World Health Organization. Incidence and prevalence of mental illness. World Health Organization; 2005. Available at: www.who.int/mental_health/en/
2. Council of Australian Governments. National action plan on mental health 2006-2011. Canberra: Australian Government; 2006. Available at: www.coag.gov.au/node/512 [Accessed 2 June 2014].
3. Australian Bureau of Statistics. National Survey of Mental Health and Well-being: summary of results, Australia 2007. 2008 ABS cat. no. 4326.0. Available at: www.abs.gov.au/ausstats/abs@.nsf/mf/4326.0 [Accessed 25 August 2014].
4. Grbich C, O'Meara P. Paramedics in Australia: Contemporary challenges of practice. Melbourne: Pearson Education, 2008.
5. Shaban RZ. Accounting for assessments of mental illness in paramedic practice: A new theoretical framework. *Australasian Journal of Paramedicine* 2005;3(3):1–10. Available at: <http://ro.ecu.edu.au/jephc/vol3/iss3/5/> [Accessed 16 March 2014].
6. Lowthian JA, Curtis AJ, Cameron PA, Stoelwinder JU, Cooke MW, McNeil JJ. Systematic review of trends in emergency department attendances: an Australian perspective. *Emerg Med J* 2010;28(5):373–7. Available at: <http://emj.bmj.com/content/early/2010/10/20/emj.2010.099226.full.html> [Accessed 25 August 2014].
7. Roberts L, Henderson J. Paramedic perceptions of their role, education, training and working relationships when attending cases of mental illness. *Australasian Journal of Paramedicine*. 2012;7(3):1. Available at: <http://ro.ecu.edu.au/jephc/vol7/iss3/1> [Accessed 16 March 2014].
8. Shaban RZ. Paramedics' clinical judgment and mental health assessments in emergency contexts: Research, practice, and tools of the trade. *Australasian Journal of Paramedicine* 2012;4(2):4. Available at: <http://ro.ecu.edu.au/jephc/vol4/iss2/4> [Accessed 16 March 2014].
9. Parsons V, O'Brien L. Paramedic clinical decision-making in mental health care: A new theoretical approach. *JPP* 2011;3(10):572–9. Available at: <http://dx.doi.org/10.12968/jpar.2011.3.10.572> [Accessed 25 August 2014].
10. Norman G. Likert scales, levels of measurement and the “laws” of statistics. *Adv Health Sci Educ Theory Pract* 2010;15(5):625–32.
11. Ross L, Duigan T, Boyle M, Williams B. Student paramedic attitudes towards the elderly: A cross-sectional study. *Australasian Journal of Paramedicine* 2014;11(3):5. Available at: <http://ro.ecu.edu.au/jephc/vol11/iss3/5/> [Accessed 16 March 2014].
12. Townsend R, Luck M. Protective jurisdiction, patient autonomy and paramedics: The challenges of applying the NSW Mental Health Act. *Australasian Journal of Paramedicine*. 2012;7(4):5. Available at: <http://ro.ecu.edu.au/jephc/vol7/iss4/5/> [Accessed 16 March 2014].
13. Ross CA, Goldner EM. Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: A review of the literature. *J Psychiatr Ment Health Nurs* 2009;16(6):558–67.
14. Björkman T, Angelman T, Jönsson M. Attitudes towards people with mental illness: A cross-sectional study among nursing staff in psychiatric and somatic care. *Scand J Caring Sci* 2008;22(2):170–7.
15. Rees N, Rapport F, Thomas G, John A, Snooks H. Perceptions of paramedic and emergency care workers of those who self harm: A systematic review of the quantitative literature. *J Psychosom Res* 2014;77(6):449–56.