**Student Paramedic Anticipation, Confidence, and Fears**

**Introduction**

 Paramedics have a special role in promoting the health of people, especially when they get involved in caring for mental health patients. Therefore, they need adequate education to prepare them for the tasks they will encounter in their practice.  In the *article “Student paramedic anticipation, confidence and fears: Do undergraduate courses prepare student paramedics for the mental health challenges of the profession?”*, Jones et al. (2017) discuss how undergraduate studies prepare students for their paramedic practice. Therefore, a critical review of this article provides insight into the level of preparedness of paramedic students from their personal perspectives.  Sharp and Thompson (2016) noted that most of the cases that paramedics attend to in the pre-hospital setting eventually end up in critical care or the intensive care unit to be specific. Meanwhile, Devenish et al. (2015) underscored the fact that there is logic to paramedic practice, where no one was really born with any special abilities to withstand the pressure, anticipation and sometimes fears that come with working in emergency services and critical care. This paper presents a critical appraisal of the article Jones et al. (2017) to show how undergraduate studies prepare paramedic students for their future work in emergency settings, mostly involving mental care.

**Research Question**

Using the PEO (population, exposure, and outcomes) framework, the review’s research question was set as, “How well are undergraduate paramedic students prepared for mental health in order to help them deliver quality service to patients?” From the research question, the main population of focus is student paramedics. The exposure is undergraduate course, while the outcome is quality mental health to patients.

**Literature Search Strategy**

The study was conducted as a qualitative secondary research. As a secondary research, the researcher relied exclusively on existing works of research in the body of literature (Adams & Schvaneveldt, 2011). As part of this, it was necessary to search various databases to retrieve the best articles to be critiqued. Three main electronic databases were used for the search, which are British Nursing Index (BNI), PyschINFO, and MEDLINE. The first approach to the search was to develop two main themes around which the search and critique would revolve. The themes were set from the research questions and included (1) mental health readiness in undergraduate courses for paramedics, and (2) impact of undergraduate course readiness on paramedic performance. With the themes, some keywords were formed such as paramedic course readiness, mental health readiness, course readiness and mental health, mental health quality delivery, an undergraduate course for paramedics, and impact of course readiness on paramedics. The keywords were clued into the database with over 630 articles being identified. The researcher, however, wanted to select and critique only four (4) articles in order to ensure comprehensiveness (Bell, 2005). For this reason, the SPIDER tool was first used as an inclusion and exclusion criteria to reduce the number of sources.

|  |  |
| --- | --- |
| Components | Criteria |
| Sample | Paramedic students; patients |
| Phenomenon of interest | Course readiness for paramedic students |
| Design | Both qualitative and quantitative |
| Evaluation | Both qualitative and quantitative evaluations were included |
| Research type | Primary research was included; secondary research was excluded |

With the SPIDER tool, there was a resulting number of 432 articles. Further exclusion criteria were thus applied. For example, only articles published in British Journals were considered. Also, those older than 5 years were excluded. These two additional criteria reduced the number further to 46. With the 86, the researcher applied skimming and scanning to handpick the best four for the study.

**2.2 Critical framework**

Critiquing articles is an important aspect of secondary research in general and systematic review to be specific (Creswell, 2007). Cooper (2008) noted that critiquing of articles helps researchers to assess the level of quality and rigour that were attached to the conduct of existing studies. The more quality existing studies are, the more reliable they are to be used in reporting findings of an area of interest in a research (Ghauri & Gronhaung, 2012). To achieve this, the Critical Appraisal Skills Programme (CASP) framework was utilised. As seen in the appendix, the CASP contains a set of 10 questions on different areas of the research process, including credibility, integrity, validity, and reliability (Gill & Johnson, 2007). The questions asked are in the areas of research problem, purpose, literature review, methodology, data analysis, and discussion. To use the CASP for this study, each of the 10 questions was scored for the selected article. When a question was answered ‘yes’, it was scored 2. When a question was answered ‘no’, it was scored 0. Those answered ‘not clear’ were scored 1.

**2.3 Limitations**

As with most other secondary studies, the major limitation faced in this study was the researcher’s inability to authenticate the originality of data presented in the study (Hakim, 2010). The reason this limitation arose was that the researcher was not the one who personally collected data presented in the studies that were collected. Meanwhile, this limitation was partially addressed by critiquing the research methods that the various authors reported to have used in conducting their studies.

3.0 Critique of published research

The search strategy conducted resulted in four (4) main articles been selected but only one with a topic relating to the study was used.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Article | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Total |
| Jones et al. (2017) | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 18 |

The article by Jones et al. (2017) was scored 17 out of 20, which is generally a high score. Analysing the quality of that article, it would be noted that it had its least scores on questions 2, 3 and 7. Question 2 looks at whether the researchers looked at the right types of papers. Jones et al. were given a low score for this because most of their papers were not very current. Consequently, it was presumed that some other articles that had current information for the study were ignored. Question 3 also touches on whether relevant studies were included in the study. For this also, a low score was given because of the same reason of not including as many current studies as possible. When old studies are used, it becomes difficult to get results that reflect the current state of affairs (Muir‐Cochrane et al., 2018). Question 7 also touches on the preciseness of the results. The results from Jones et al. were reflective of their research question but they were not presented in a precise manner. This was because the researchers failed to use thematic presentation of results that would have made it easier to associate each set of results with a particular research question. Apart from these three questions, Jones et al. were scored high for all remaining seven questions. For example, the results of their study were very applicable to the local population of student paramedics and how they are prepared for the healthcare sector.

The description of the results shows their level of accuracy. For instance, the participants report that knowledge obtained from the school prepares them for the practice. Others indicated they learnt how to deal with their personal mental issues such as anxiety and fear, which enabled them to adapt quickly to the work environment. The authors managed to achieve these objectives as per the information presented in the results section.

The researchers, however, fail to describe the theoretical framework used in this study. Therefore, it is difficult to relate the findings to the existing nursing concepts. Nevertheless, the information used, including literature review supports the pilot study, thereby making it possible for readers to understand the information.

On the issue of ethical consideration, the researchers complied with all the requirements. They obtained informed consent from the students by informing them of the purpose of the study and the use of data collected. Students were also not forced to engage in the study since they had the right to withdraw at any point.

**4.0 Discussion of findings and conclusion**

In this section, the findings collected in relation to the two main themes set from the research questions are presented and discussed. The section is completed with a conclusion that answers the research question set.

**4.1 Profession readiness in undergraduate courses for paramedics**

Two of the articles selected addressed the issue of professional readiness within the undergraduate course designed for paramedics. Williams and Webb (2015) reported that there are two main ways in which most undergraduate courses incorporate professional readiness for students. These are through the use of practical attachments and special students support programmes. Within the body of literature, the use of practical attachments is widely reported as a means of offering student paramedics professional readiness. Boyle and McKenna (2017) emphasized that practical attachment may take place either internally within the universities or in the form of clinical where students are attached to health facilities to gain personal experience. Assessing the impact of such practical attachment on students, Hickson, Williams, and O’Meara (2015) stated that this is the best means to ensure that students have a feel of the exact things they will experience once they start practicing as professionals. With both the internal and external practices, Williams and Beovich (2017) were confident they serve as a platform for building student anticipation for the real world while helping to deal with anxiety that may be associated with the work. Meanwhile, Munro, O'Meara, and Kenny (2016) expressed the thought that in order for students to gain confidence and eliminate fear, they need more of external practices especially in the context of mental health cases.

With regards to the use of special student programmes, Kirk et al. (2018) noted that this is a form of one-on-one student service, which seeks to address the unique career threats and fears that individual students may feel that they have. The special student support takes several forms including offering career guidance and counseling. In a study by Chang, Tsai and Williams, B. (2017), it emerged that most student paramedics who use special student support programmes are those who lack the needed confidence about the personal academic progress. That is, such students have the fear that their weak academic performance may translate negatively on the field of work. To this effect, most such students are offered remedial tuition and in some cases, extended practical works to enhance their confidence levels, while helping to improve their academic scores (Williams & Teese, 2016). Meanwhile, Williams et al. (2015) opined that as much as academic successes are important, most universities are admonished to be more practice-oriented than theoretically oriented.

In the other work that was selected under this theme, Boyle and McKenna (2017) also found two main means by which universities offer professional readiness for undergraduate paramedics. These are the use of practical attachment as was also mentioned by the previous researcher and the exclusive use of guidance and counseling. Explaining the concept of guidance and counseling further, Ford et al. (2015) stressed that there are several social and psychological aspects of mental health care, which make people and society, in general, develop some wrong perceptions and attitudes towards it. When students in their entire life have grown up in areas with very wrong perceptions about people with mental health and their course provides that they work in that field, they may need additional guidance and counseling on ways to correct some of the wrong impressions and perceptions they have developed over the years. It is mainly for this reason that most universities have guidance and counseling units specifically decided to prepare student paramedics for the field of mental health care (Williams et al., 2017).

**4.2 Impact of undergraduate courses readiness on paramedic performance**

         According to Jones et al. (2017), undergraduate studies are effective at preparing paramedic students for their future work in mental care. Undergraduate student paramedics are likely to develop post-traumatic stress disorder (PTSD) as a result of the wide range of equipment they use, medical procedures and the different patient conditions they are likely to encounter. Therefore, the course teaches them self-care to enable them to counter the trauma that comes along with the daily practices of the paramedics. This is achieved by making them realize the source of their stress and knowing how and when to seek help whenever they find themselves in such situations. The help can be sought from friends, relatives or close family members and other paramedics who are in-training or those who have been in the profession for long and have trauma experience.

        Most importantly, the course teaches the students on the signs of mental trauma and on how to identify it either within themselves or colleagues. In case the student has identified that he or she has post-traumatic stress disorder, the course teaches them on the coping techniques so as to prevent some extreme instances from happening such as committing suicide as experienced in different countries. The technique involves seeking help immediately the first sign is noticed. It further warns the students about the dangers of isolation which have been observed among the traumatized paramedics.

         The undergraduate course also ensures student mental health by giving the students hands–on-skills which are carried out in the same room where the medical procedures are performed. The course provides all the necessary equipment and specimens including life-sized training dummies, manikins, bandage rolls and stretchers for the practice to ensure there is familiarity. It further encourages the use of each other for practice, for instance using each other’s arm to practice on how to insert IV lines.

         The course also prepares the students for the traumatizing and the potential risks that they are likely to encounter. It ensures the acceptance and creates a special liking for the paramedic job. This ensures that the student doesn’t avoid the scenes but rather be the first on the scene and help the victims. By so doing, mental illness is reduced and makes them be more prepared for the task ahead of them.

        The medical schools have also trained and employed paramedical personnel to help in the assessment and devising ways of handling paramedical students who may not be having the ability to cope or handle mental illness. The students once identified, they are given advice on the support training that is available and goes through fitness to practice processes to prepare them adequately.

        The undergraduate course also provides interactive sessions and lectures between the students, lecturers, consulting psychiatrists and practicing paramedics. This session focuses on an understanding of anxiety, stress, and depression among the paramedics. The sessions focus also on the causes of stress, differentiating between anxiety and stress and sources of help and treatment available. The sessions encourage the paramedical student to ask questions and form discussion groups within themselves. These groups form the basic part where they can go for help in case they fall victims of this mental health. In these sessions also students share the experiences that they encountered while they are in attachment to help build their confidence.

       Lastly, the course has designed websites in various departments that are easily accessible to the paramedical students. This website provides information on the campaign about mental health, resources on the mental health conditions and information on how can a student access mental health advice and help both within and outside the medical school. The website also provides the documentation by the previous students. The x-students document their experiences and encounters concerning medical health during the attachment and practice.

 In a related study, Ghatora et al. (2017) discussed the benefits that come with ensuring undergraduate course readiness for paramedic students. Through a content analysis method, it was found that one common theme that emerged from the study by Jones et al. (2017) was the issue of professional confidence. The study established that there is a direct relationship between student readiness and professional confidence. That is, the more the course is prepared to offer professional readiness through the means discussed above, the better the chances that students will gain confidence about themselves to carry out their duties as paramedics in the future. Justifying why the relationship exists between readiness and confidence, Williams et al. (2014) stressed that students who are course and professionally ready have the confidence that they will make little or no errors when carrying out their roles. This situation alone affects their overall confidence positively.

Another theme of the impact that the content analysis found was the elimination of fear and anxiety (Ghatora et al., 2017). Boyle (2015) indicated that naivety with paramedic practice in mental health has the potential of increasing fears and anxiety in professionals, which in turn affects service delivery negatively. Meanwhile, Schucan et al. (2015) posited that such fears and anxiety come about when there is little or no practical experience for professionals. This is because more practical experience means professionals will encounter the same situation more than once, based on which they will use previous experiences to address new challenges. When students are offered practical attachments in school, it helps them to acquire the needed experience ahead of their professional practice and so eliminates fear and anxiety (Hayes, 2016).

**4.3 Conclusion**

This was a qualitative research, which investigated the impact of undergraduate studies on the level of paramedic students’ preparedness for working in mental health settings. Through the results discussed above, it can be concluded that there is a high level of readiness for the students. The readiness take place in many different ways and this is a situation in ensuring that different learning needs of students can be addressed effectively. At the same time, it has clearly emerged that the type of readiness offered the students have a positive impact on their future practice as paramedics in the field of mental health. Based on this, it can be concluded that the current state of student preparedness for paramedic undergraduates is commendable. Going into the future, it will be important to maintain the practices, while attempting to find new modalities of offering student readiness. It is strongly believed that the more modalities there are, the greater the chances of meeting each student’s needs very squarely in ensuring they go to the professional field fully prepared for the task ahead of them.

**References**

Adams, G. & Schvaneveldt, J. (2011). *Understanding Research Methods*. New York: Longman.

Bell, J. (2005). *Doing Your Research Project*. Fourth Edition. Maidenhead: Open University Press

Boyle, M. J. (2015). Promoting the next wave of paramedic researchers. *Australasian Journal of Paramedicine*, *12*(4).

Boyle, M., & McKenna, L. (2016). Paramedic and midwifery student exposure to workplace violence during clinical placements in Australia–A pilot study. *International journal of medical education*, *7*, 393.

Boyle, M., & McKenna, L. (2017). Paramedic student exposure to workplace violence during clinical placements–A cross-sectional study. *Nurse education in practice*, *22*, 93-97.

Chang, Y. T., Tsai, K. C., & Williams, B. (2017). what are the educational and curriculum needs for emergency medical technicians in Taiwan? A scoping review. *Advances in medical education and practice*, *8*, 649.

Cooper, H. (2008). *Synthesizing Research: A Guide for Literature Reviews*. Harlow: Pearson Education Limited.

Creswell, J. (2007). *Review of the Literature*, Thousand Oaks: Sage Publications.

Devenish, S., Clark, M., Fleming, M., & Tippett, V. (2015). Australian paramedic graduates transitioning into UK NHS ambulance services: what are the potential challenges?. *International Paramedic Practice*, *5*(3), 61-67.

Ford, R., Webb, H., Allen-Craig, S., Goodwin, V., D'Antonio, J., & Lofts, C. (2015). A simulated wilderness exercise: the development of relational competence in paramedic students. *International Paramedic Practice*, *5*(1), 14-21.

Ghatora, B., Renshaw, L., Burrell, L., & Doran, D. (2017). Inter-professional learning across the forensic science and paramedic science degrees. *Journal of Forensic Research and Analysis*, *1*(1).

Ghauri, P. & Gronhaung, K. (2012). *Research Methods in Business Studies: A Practical Guide*. London: Financial

Gill, J. & Johnson, P. (2007). *Research Methods for Managers*. London: Paul Chapman. Times Prentice Hall.

Hakim, C. (2010). *Research Design: Successful Designs for Social and Economic Research*. London: Routledge.

Hall, B. J., Bell, A., & Latham, J. (2018). Design of a Mental Calculation App for Paramedic Students. *Journal of Academic Language and Learning*, *12*(1), A227-A238.

Hayes, J. (2016). *Decision-making: understanding undergraduate'fitness to practise'panels using a simulated case study approach* (Doctoral dissertation, Liverpool John Moores University).

Hickson, H., Williams, B., & O’Meara, P. (2015). Paramedicine students’ perception of preparedness for clinical placement in Australia and New Zealand. *BMC medical education*, *15*(1), 168.

Jones, R., Holmes, L., Brightwell, R., & Cohen, L. (2017). Student paramedic anticipation, confidence, and fears: Do undergraduate courses prepare student paramedics for the mental health challenges of the profession? *Australasian Journal of Paramedicine*, *14*(4).

Kirk, A., Armstrong, K., Nurkka, N., & Jinks, A. (2018). The impact of blame culture on paramedic practice: A qualitative study exploring English and Finnish paramedic perceptions. *International Journal of Emergency Services*.

Meadley, B., Olaussen, A., Delorenzo, A., Roder, N., Martin, C., Clair, T. S., ... & Williams, B. (2017). Educational standards for training paramedics in ultrasound: a scoping review. *BMC emergency medicine*, *17*(1), 18.

Muir‐Cochrane, E., O'kane, D., McAllister, M., Levett‐Jones, T., & Gerace, A. (2018). Reshaping curricula: Culture and mental health in undergraduate health degrees. *International journal of mental health nursing*, *27*(2), 652-661.

Munro, G., O'Meara, P., & Kenny, A. (2016). Paramedic transition into an academic role in universities: a scoping review. *Journal of Paramedic Practice*, *8*(9), 452-457.

Schucan B. K. L., Newman, M., Hargreaves, K., & Sawtell, M. (2015). Workplace-based learning for undergraduate and pre-registration healthcare professionals: A systematic map of the UK research literature 2003-2013.

Sharp, R., & Thompson, S. (2016). Understanding the place of advance directives in paramedic pre-hospital care. *Whitireia Nursing & Health Journal*, (23), 13.

Williams, B., & Beovich, B. (2017). Experiences of Sessional Educators within an Australian Undergraduate Paramedic Program. *Journal of University Teaching & Learning Practice*, *14*(1), 13.

Williams, B., & Teese, D. (2016). A cross-institutional analysis of Australian undergraduate paramedic students’ attitudes towards interprofessional collaboration. *Journal of interprofessional care*, *30*(1), 97-102.

Williams, B., & Webb, V. (2015). A national study of paramedic and nursing students' readiness for interprofessional learning (IPL): Results from nine universities. *Nurse education today*, *35*(9), e31-e37.

Williams, B., Beovich, B., Ross, L., Wright, C., & Ilic, D. (2017). Self-efficacy perceptions of interprofessional education and practice in undergraduate healthcare students. *Journal of interprofessional care*, *31*(3), 335-341.

Williams, B., Brown, T., Boyle, M., McKenna, L., Palermo, C., & Etherington, J. (2014). Levels of empathy in undergraduate emergency health, nursing, and midwifery students: a longitudinal study. *Advances in medical education and practice*, *5*, 299.

Williams, B., Brown, T., McKenna, L., Palermo, C., Morgan, P., & Brightwell, R. (2015). Students' attitudes toward interprofessional learning: A comparison between two universities. *Journal of allied health*, *44*(4), 201-207.