

## The Role Of Mental Health Training In Improving Nurses' Ability To Care For Patients With Mental Disorders

Sri Ariyanti<sup>1</sup>, Mora<sup>2</sup>, Pongky Sipahutar<sup>3</sup>, Warti Ningsih<sup>4</sup>, Irwan Hadi<sup>5</sup>, Rahmat Pannyiwi<sup>6</sup>

<sup>1</sup>Ilmu Keperawatan, Institut Teknologi dan Kesehatan Muhammadiyah Kalimantan Barat, Jl. Sungai Raya Dalam II, Kalimantan Barat, Indonesia. <sup>2</sup>Ilmu Keperawatan, STIK GIA Makassar, Jl Tanjung Bunga, Makassar, Indonesia  
<sup>3,6</sup>Kedokteran, Universitas Pertahanan RI, Kawasan IPSC Sentul, Bogor, Indonesia. <sup>4</sup>Keperawatan, Akademi Keperawatan YAPPI Sragen, Jln. KH Agus Salim No. 50, Sragen, Indonesia. <sup>5</sup>Ilmu Keperawatan, STIKES YARSI Mataram, Jl. Lingkar Selatan, Mataram, Indonesia

Article Info	ABSTRACT
<b>Keywords:</b> E-Learning, Mental Health Training, Mental Disorders, Nurses, Technology, VR/AR Simulation.	Mental health training plays a crucial role in improving nurses' ability to care for patients with mental disorders, but challenges in conventional training still exist. This study aimed to evaluate the effectiveness of technology-based mental health training, specifically e-learning and VR/AR simulation, in improving nurses' knowledge, skills and confidence. The research method involved an experimental design with a randomized control group and monitoring of nurses' performance before and after the training. The results showed significant improvements in nurses' knowledge, practical skills, and confidence after undergoing technology-based training. The implication is that the use of technology in mental health training can improve the quality of care for patients with mental disorders and strengthen nurses' clinical practice.
This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc/4.0/">CC BY-NC</a> license 	<b>Corresponding Author:</b> Sri Ariyanti Institut Teknologi dan Kesehatan Muhammadiyah Kalimantan Barat Jl. Sungai Raya Dalam II, Sungai Raya, Kalimantan Barat 78117, Indonesia <a href="mailto:ariyanti.stikmuhptk@gmail.com">ariyanti.stikmuhptk@gmail.com</a>

### INTRODUCTION

Mental health is a fundamental aspect of a holistic health system, which demands special attention and care, especially from health professionals such as nurses (Zolnierek, 2008; Søvold *et al.*, 2021; de Diego-Cordero *et al.*, 2023). Nurses have an important role in providing care and support for patients with mental disorders, who often face various challenges in daily clinical practice . These challenges include a lack of specialized knowledge, practical skills, and adequate confidence in dealing with complex cases of mental illness. Previous research has shown that many nurses feel inadequately trained and unprepared to deal with clinical situations involving mental disorders, which can result in suboptimal patient care and reduced quality of mental health care. Given the important role nurses play in the mental health system, significant efforts are needed to improve their competencies through effective training programs that are based on the latest technological developments. Proper training will not only improve the quality of care but also ensure that nurses can provide better and

more empathetic support to patients with mental disorders (Cleary, 2003; Gabrielsson, Sävenstedt and Olsson, 2016; Roberge *et al.*, 2016).

A current issue in the context of mental health training for nurses is the lack of access to quality and sustainable training. Many hospitals and health facilities do not have adequate resources or infrastructure to provide comprehensive training for nurses. As a result, nurses often feel unprepared and lack confidence in dealing with patients with mental disorders. In addition, even when training is available, it is often not adapted to the practical needs of nurses in the field, which limits the effectiveness of the training. There are also issues related to evaluating and measuring the impact of mental health training on nurse performance and patient health outcomes. Many training programs lack a systematic evaluation mechanism to assess the improvement in nurses' knowledge, skills and attitudes following training. Without adequate evaluation, it is difficult to determine whether the training was truly effective and how it can be improved in the future. In addition, the lack of in-depth and evidence-based research on the long-term benefits of mental health training is also an obstacle to the development of better and more effective training programs (Marques *et al.*, 2016; Ko, Wagner and Spetz, 2018).

Adequate knowledge, skills and confidence are the main cornerstones for nurses in caring for patients with mental disorders. However, the reality of the field shows that many nurses face significant challenges in handling mental health cases. Problems often encountered include a lack of knowledge about the diagnosis and treatment of mental disorders, limitations in implementing appropriate therapeutic approaches, and a lack of adequate support and resources from the work environment (Bjorkman *et al.*, 2018; Chou and Tseng, 2020; Varcarolis and Fosbre, 2020). The lack of specialized and targeted training in the field of mental health is also one of the main causes of nurses' inability to provide optimal care to patients with mental disorders. Therefore, this study aims to identify the specific problems faced by nurses in caring for patients with mental illness, with a focus on the lack of adequate training. With a deeper understanding of these challenges, it is hoped that more effective and relevant training approaches can be developed for nurses, so that they can provide better care to patients and improve their quality of life (Barlow *et al.*, 2018; Perkins *et al.*, 2018; Dalglish *et al.*, 2020).

This study aims to measure the effectiveness of technology-based mental health training in improving nurses' ability to care for patients with mental disorders. Patients with mental disorders often require comprehensive and sensitive care, which requires high knowledge, skills and confidence from nurses. However, the reality of the field shows that nurses often face challenges in providing adequate care to patients with mental disorders, such as a lack of knowledge about appropriate diagnosis and treatment, as well as a lack of skills in managing complex clinical situations. Through technology-based training approaches, such as e-learning and VR/AR simulations, it is expected that nurses can gain more in-depth knowledge, necessary practical skills, and increase their confidence in caring for patients with mental disorders. This study will also evaluate the long-term impact of this training on nurses' performance and patient health outcomes, thus making a significant

contribution to our understanding of the effectiveness of new and innovative training methods in the mental health context.

In the context of mental health, gap analysis is an important aspect that needs to be considered. Although there have been various studies and training programs that have led to the improvement of nurses' ability to care for patients with mental disorders, there are still gaps that need to be addressed (Kilbourne et al., 2018; Santri, 2021). These gaps could stem from a lack of focus on certain aspects of existing training, a lack of technology integration in the development of training programs, or even a lack of evaluation of the long-term impact of the training provided. Therefore, this study will identify critical gaps in the existing research literature on mental health training for nurses. With a better understanding of these gaps, it is hoped that this study can make a meaningful contribution in developing more comprehensive, effective, and sustainable training programs for nurses in caring for patients with mental disorders.

This study represents a significant step forward in answering the call to improve the training of nurses in caring for patients with mental disorders. In this context, novelty and research justification are important aspects to consider. The novelty of this study lies in the approach of incorporating the latest technologies, such as e-learning and VR/AR simulation, in mental health training for nurses. This approach is expected to provide a more interactive, realistic, and relevant learning experience with actual clinical situations, which in turn will strengthen nurses' knowledge, skills, and confidence in caring for patients with mental disorders.

The justification for this study lies in the urgent need to improve the quality of mental health care, especially given the increasing prevalence of mental disorders in society. With new and innovative training approaches, it is hoped that nurses can provide more effective, empathic, and holistic care to patients with mental disorders. This study also aims to provide practical and evidence-based recommendations for the development of future training programs, so that they can have a positive and significant impact on the overall practice of mental health care.

## METHODS

Problem Solving the role of mental health training in improving nurses' ability to care for mentally ill patients with technology-based training program development methods

### Online Training and E-Learning

**Comprehensive Curriculum Design:** Design a curriculum that includes basic theories, practical approaches, and case studies on the care of patients with mental disorders. The curriculum should be developed by experts in mental health and nursing education.

**Digital Learning Platform:** Use an interactive and user-friendly e-learning platform. The platform should support various learning formats such as videos, articles, quizzes and discussion forums. For example, platforms such as Moodle, Coursera, or the hospital's in-house platform.

**Accessibility and Flexibility:** Ensure that the training can be flexibly accessed by nurses anytime and anywhere. This allows nurses to take part in training without having to leave their duties at the hospital or clinic.

### **Virtual Reality (VR) and Augmented Reality (AR)**

**Clinical Simulation:** Developing VR and AR-based simulations that replicate real clinical situations where nurses have to handle patients with mental disorders. This provides a safe and controlled practical experience, allowing nurses to practice and hone their skills without risk to the patient. **Real-Time Interaction:** The real-time interaction feature in the simulation allows nurses to get immediate feedback and learn from their mistakes. This helps boost confidence and ability in dealing with complex and challenging situations.

### **Technology-Based Evaluation and Assessment**

**Pre-test and Post-test:** Evaluate nurses' knowledge, attitudes, and skills before and after training using structured and online-based tests. This helps in objectively measuring the effectiveness of the training. **Data Analysis and Feedback Loop:** Collect and analyze data from tests and participant feedback to continuously improve training content and methods. Feedback can be collected through online surveys and discussion forums within the learning platform.

### **Dynamic and Updated Training Content**

**Periodic Updates:** Ensure that training content is kept up-to-date with the latest information and best practices in the mental health field. This can be done through collaboration with mental health experts and researchers who keep abreast of the latest developments in the field. **Access to Additional Resources:** Provide access to relevant journals, articles, and other educational resources through the e-learning platform. This allows nurses to deepen their knowledge beyond the core training materials.

By adopting technology-based training program development methods, it is expected that nurses' ability to care for patients with mental disorders will improve significantly. Nurses will be more confident and prepared to face various challenges in the care of patients with mental disorders, which will ultimately improve the quality of care and patient health outcomes.

## **RESULTS AND DISCUSSION**

### **Online Training and E-Learning**

Developing a comprehensive curriculum is the first step in implementing this method. The curriculum should include basic theories on mental disorders, practical approaches to care, and relevant case studies. To ensure quality content, collaboration with mental health experts and nursing educators is essential. Once the curriculum is finalized, the training can be implemented through an interactive and easy-to-use e-learning platform such as Moodle or Coursera. The platform should support various learning formats such as video tutorials, scientific articles, interactive quizzes, and discussion forums, so that nurses can learn flexibly according to their schedules without disrupting their main duties in the hospital or clinic.

### **Virtual Reality (VR) and Augmented Reality (AR)**

VR and AR technologies can be used to create realistic clinical simulations, where nurses can practice managing mentally ill patients in a safe and controlled environment. In these simulations, nurses can encounter various complex clinical situations and gain valuable practical experience. Real-time interaction in the simulation allows nurses to receive

immediate feedback from instructors or automated systems, so they can learn from mistakes and hone their skills. This experience not only improves technical abilities, but also builds nurses' confidence in dealing with similar situations in the real world.

### **Technology-based Evaluation and Assessment**

Evaluation of the effectiveness of the training can be done through a structured, online-based pre-test and post-test. Before the training begins, nurses should undergo an initial test to gauge their level of knowledge, attitude and skills. After the training is completed, the same test is administered to measure the improvements that have been achieved. The data from these tests were then analyzed to assess the effectiveness of the training. In addition, feedback from participants was collected through online surveys and discussion forums to gain insight into their experiences during the training. This feedback is invaluable for improving future training content and methods.

### **Dynamic and Updated Training Content**

To keep the training relevant and effective, the content must be updated regularly in line with the latest developments in the field of mental health. Collaboration with mental health experts and researchers is essential to ensure that training materials always reflect best practices and the latest findings. In addition, the e-learning platform should provide access to additional resources such as relevant journals, scientific articles and other reading materials. This allows nurses to continue to deepen their knowledge and keep up with the latest developments in the mental health field, even after the formal training is completed. Thus, the training not only improves the nurses' skills directly, but also encourages continuous learning.

This study was conducted to evaluate the effectiveness of technology-based training program development methods in improving nurses' ability to care for patients with mental disorders. The study involved 100 nurses working in a psychiatric hospital, who were divided into an intervention group and a control group. The intervention group received e-learning and VR/AR simulation-based training for 4 weeks, while the control group received no training.

### **Nurses' Knowledge and Skills**

Pre-test and Post-test: The analysis showed that the intervention group had a significant increase in knowledge and skills after the training. The average score of nurses' knowledge increased from 60% in the pre-test to 85% in the post-test. Practical skills in handling clinical situations with mentally ill patients also improved significantly, with skill scores increasing from 55% to 80%. Feedback from Nurses: Most nurses in the intervention group reported that they felt more confident and prepared to deal with complex clinical situations after the training. They also stated that the training materials were easy to understand and very relevant to their daily work.

### **Effectiveness of VR/AR Technology**

Simulation Experience: VR/AR simulations provide an interactive and realistic learning experience. Nurses felt that training through these simulations was helpful in understanding the patient's condition and providing appropriate care. The real-time feedback provided in the simulation helps nurses correct mistakes and hone their skills. Increased Confidence: Nurses

who practiced using VR/AR technology showed a significant increase in confidence in dealing with patients with mental disorders. They felt better prepared to face challenges that arise in clinical practice.

### **Technology-based Evaluation and Assessment**

**Feedback Mechanism:** The e-learning system used enabled comprehensive data collection on nurses' performance during the training. Feedback from trainees indicated high satisfaction with the evaluation methods used, which were considered fair and helpful in improving their skills. **Continuous Improvement:** Based on feedback from participants, several improvements were made to the training materials to make them more interactive and relevant. This included the addition of recent case studies and adjustments in the teaching approach.

### **Discussion**

This study shows that a technology-based training program, which includes e-learning and VR/AR simulation, is effective in improving nurses' knowledge, skills, and confidence in caring for patients with mental disorders. The significant improvement in knowledge and skill scores after training suggests that this approach is not only effective but also accessible and applicable in various clinical settings.

### **Advantages of E-Learning**

Accessibility, E-learning provides flexibility for nurses to learn according to their own schedule, without having to interrupt their primary duties. This is especially important for nurses who work in shifts and have busy schedules. Interactivity, the e-learning platform used in this study provides a variety of interactive learning formats, such as videos, quizzes, and discussion forums, which help to strengthen participants' understanding and engagement.

### **Benefits of VR/AR Simulation**

**Realistic Learning Experience,** VR/AR simulations provide learning experiences that approximate real clinical situations, allowing nurses to practice in a safe and controlled environment. It is highly effective in improving nurses' practical skills and confidence. **Real-Time Feedback,** the ability to provide immediate feedback in simulations helps nurses learn from their mistakes and improve their skills quickly.

### **Technology-Based Evaluation**

**Precise Measurement,** the pre-test and post-test methods used in this study provided an objective measurement of nurses' improved knowledge and skills. This allowed researchers to accurately evaluate the effectiveness of the training program. **Continuous Improvement,** feedback from trainees enables continuous improvement of the training program, ensuring that the materials are always relevant and up-to-date with the latest developments in the field of mental health.

## **CONCLUSION**

Based on an in-depth analysis of the role of mental health training in improving nurses' ability to care for patients with mental illness, it can be concluded that technology-based approaches, such as e-learning and VR/AR simulations, have great potential to address the challenges faced by nurses. This research has provided a deeper understanding of the specific



issues nurses face, as well as identifying critical gaps in the existing research literature. The results of this study make a significant contribution in developing more effective, relevant and sustainable training approaches for nurses in caring for patients with mental disorders. As such, it is recommended to continue the research and development of this technology-based training program and conduct a long-term evaluation of its impact on nurses' performance and patient health outcomes. Clinical practice, and technology developers in implementing this new approach. A concerted effort is needed to integrate the latest technologies in nurse education curricula and provide adequate resources for effective training. In addition, further research also needs to focus on evaluating the long-term impact of this technology-based training on clinical practice, quality of care, and patient health outcomes. With solid cooperation between various relevant parties, it can be expected that technology-based mental health training will become a more common standard and can make a significant contribution to improving overall mental health care.

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