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Enhancing Mental Health Literacy and Reducing Depression Stigma: A Study of Vignette-Based Blended Teaching among Undergraduates

Ngangom Karorpati Chanu¹, Aruna Subramaniam², Poongodi Mohan³, Pratheesha Ilangoan⁴, Porkodi Arjunan⁵, Jothi J⁶

¹ Department of Community Medicine, Kasturba Medical College, Manipal, Manipal Academy of Higher Education, Manipal, India.
ngangom.kmcmpl2023@learner.manipal.edu

² Sri Ramachandra Faculty of Nursing, Department of Community Health Nursing, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Chennai, Tamil Nadu 600116, India. aruna.s@sriramachandra.edu.in

³ Sri Ramachandra Faculty of Nursing, Department of Community Health Nursing, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Chennai, Tamil Nadu 600116, India. poongodimohan@sriramachandra.edu.in

⁴ Sri Ramachandra Faculty of Nursing, Department of Child Health Nursing, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Chennai, Tamil Nadu 600116, India. pratheesha.i@sriramachandra.edu.in

⁵ College of Applied Medical Sciences, King Faisal University, Kingdom of Saudi Arabia. Porkodi863@gmail.com

⁶ Sri Ramachandra Faculty of Nursing, Department of Community Health Nursing, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Chennai, Tamil Nadu 600116, India. jothij@sriramachandra.edu.in

ABSTRACT: Introduction: Depression, a leading cause of death, often begins in adolescence and severely impacts undergraduate students. It affects their academic performance, leads to absenteeism, social isolation, and poor academic standing, highlighting the urgent need for intervention. This study aimed to evaluate the effectiveness of Vignette-Based Blended Teaching (VBBT) in improving mental health literacy regarding depression and reducing stigma among undergraduates.

Methods: A quasi-experimental pre-test-post-test control group design was employed, involving 180 undergraduate students (95 in the intervention group and 85 in the control group) selected through simple random sampling. Data were collected using three instruments: the Mental Health Literacy Questionnaire for Depression, the Self-Stigma of Seeking Help Scale, and the Perception of Stigmatization by Others for Seeking Help scale. The VBBT intervention was delivered in two phases: Phase 1 involved online interactive teaching, followed by Phase 2, which consisted of three weeks of conventional face-to-face teaching. Data were analyzed using SPSS version 26.0, with results reported through descriptive and inferential statistics.

Results: Post-test results showed a 52% increase in mental health literacy scores, with a reduction in self-stigma by 10.5% and perception of stigmatization by 48.8%. The intervention significantly improved mental health literacy ($t(179) = 25.36, p < 0.001$),

reduced self-stigma ($t(179) = -9.59, p < 0.001$), and lowered perceived stigmatization ($t(179) = 31.97, p < 0.001$).

Conclusion: VBBT effectively enhances mental health literacy and reduces stigma regarding depression. Further studies are recommended to evaluate the long-term retention of these outcomes over one-month, three-month, and one-year intervals.

1. INTRODUCTION

Worldwide, depression remains one of the leading contributors to disease burden and disability, impacting approximately 280 million people globally (WHO, 2021). It is a pervasive mental health issue that transcends cultural, economic, and geographical boundaries, posing a significant threat to global health (Chokshi et al., 2016; Kyu et al., 2018). Depression affects individuals across all age groups, with adolescents being particularly vulnerable (Dutta et al., n.d.; Garba et al., 2025; Zhang et al., 2023). Its profound impact manifests through personal suffering, reduced productivity, and disruptions in social and familial relationships (Deng et al., 2022; Safdar et al., 2020). Among mental health disorders, depressive disorders rank as a significant global health challenge, being the second leading cause of non-fatal health loss and the fourth major contributor to Disability-Adjusted Life Years (DALYs) in 2019 ("Global, Regional, and National Burden of 12 Mental Disorders in 204 Countries and Territories, 1990–2019," 2022). Depression often begins at a young age and is characterized by its long-lasting and recurrent nature (Chu et al., 2022; Department of Educational Foundation Faculty of Education Nasarawa State University, Keffi & Okpe, 2021; Wickersham et al., 2021). Without timely intervention, its severity can escalate, potentially leading to suicide the fourth leading cause of death among individuals aged 15–29 years (Lovero et al., 2023; Chadda, 2018; Polanczyk et al., 2015).

In India, an estimated 7.5% of the population suffers from mental health disorders, translating to significant societal and economic burdens (*WHO Report | India News - Times of India*, n.d.). Between 2012 and 2030, mental health conditions are projected to result in an economic loss of approximately USD 1.03 trillion in India alone as reported by WHO, 2019 (222.Pdf; n.d.; V, 2024). Despite being treatable, depression often goes unaddressed, with fewer than half of affected individuals worldwide receiving adequate care and support (Puyat et al., 2016; Thornicroft et al., 2017). The prevalence of depression among college students is a growing concern. Evidence suggests that one in four (25%) university students experience depression during their academic journey (Sheldon et al., 2021). This phase of life represents a critical period of transition, characterized by the challenges of academic pressure, social integration, and career development. Such stressors can exacerbate the risk of developing mental health issues, including depression. Unfortunately, many students fail to seek help due to poor mental health literacy (MHL) and the stigma surrounding mental illness (J. Zhang et al., 2024). Research indicates that nearly half of college students remain reluctant to access professional mental health support, even when resources are available on campus (Lipson et al., 2019; Rafal et al., 2018).

The treatment gap for mental disorders is alarmingly high, particularly in low- and middle-income countries like India (Rathod et al., 2017; O. P. Singh, 2018). The National Mental Health Survey (2015–16) identified several barriers contributing to this gap. On the demand side, factors such as low perceived need, limited awareness, socio-cultural beliefs, and stigma hinder help-seeking behaviours (Al Omari et al., 2022; Al-Shannaq & Aldalaykeh, 2023; Clark et al., 2018; Dardas et al., 2017). On the supply side, the challenges include inadequate mental health resources, uneven distribution, and inefficient utilization of available facilities (Sanghvi & Mehrotra, 2021). These barriers compound the burden of mental disorders, leaving many individuals without the support they need (Jennings et al., 2015). Mental health literacy encompasses the knowledge and skills required to recognize mental health disorders, facilitate help-seeking, and understand treatment options. It also involves the ability to provide first aid and support to others and adopt strategies to prevent mental illnesses (Loureiro et al., 2013; Sweileh, 2021).

In recent years, digital programs have emerged as a promising approach to promoting mental health literacy (Hui et al., 2015; Kurki et al., 2021; Mamun et al., 2020). These interventions use educational strategies with a cognitive orientation, enabling participants to learn about mental health issues in an engaging and accessible manner (Lattie et al., 2019; Saleem et al., 2021). Digital programs often incorporate audiovisual elements, such as video vignettes, to enhance the learning experience. These formats have been shown to effectively communicate key concepts, reduce stigma, and promote positive mental health

behaviors (den Hertog et al., 2021; Durán et al., 2022). In the context of depression, digital interventions can provide targeted education on recognizing symptoms, seeking help, and supporting others (Fernández-Batanero et al., 2025; Goldberg et al., 2022). The incorporation of video vignettes depicting real-life scenarios offers a practical and relatable way to improve understanding and foster empathy. This approach has the potential to bridge the gap in mental health literacy, particularly in resource-limited settings where access to traditional mental health services may be restricted (Li et al., 2024; Philippe et al., 2022).

Despite the growing recognition of digital interventions, there is limited research on the use of vignette-based blended teaching (VBBT) for improving mental health literacy in India (Ayesha et al., 2023). VBBT combines video vignettes with face-to-face sessions to provide a comprehensive and interactive learning experience. This approach has been shown to address key challenges associated with mental health education, such as stigma and lack of engagement. Given the critical need to address mental health literacy among university students, this study aims to evaluate the effectiveness of vignette-based blended teaching in improving mental health literacy regarding depression. The intervention involves the use of video vignettes depicting male and female students experiencing symptoms of depression, combined with interactive sessions to enhance understanding and application of knowledge.

2. METHODS

2.1. Design

This study adopted a quasi-experimental pre-test-post-test control group design. Informed consent was obtained from all participants through consent forms.

2.2. Participants and Procedure

The study was conducted from August 2021 to December 2021 at two selected constituent colleges the Faculty of Physiotherapy and the Faculty of Pharmacy under Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu. Administrative approval and ethical clearance from the Institutional Ethics Committee were obtained before the study. The sample size was calculated based on a previous study (Gambari et al., 2018), required sample size was 34 participants in each group to achieve a significance level of 0.05 and 80% power. Simple random sampling method was used to recruit the participants, the coin method was used for randomization, ensuring unbiased group allocation. The process was carried out by an individual who was not directly or indirectly involved in the research to maintain objectivity. This person flipped a coin to randomly assign participants to either the intervention or control group, ensuring that the selection process remained free from researcher influence and preserved the integrity of the study design., 95 participants were recruited into the intervention group and 95 into the control group. Due to personal reasons, 10 participants from the control group withdrew, resulting in 85 final participants in that group. The inclusion criteria were: undergraduate students willing to participate, enrolled in the Faculty of Physiotherapy or Pharmacy, and able to understand and communicate in English. Informed consent was obtained, and participants were provided with information sheets detailing the potential risks and benefits of the study, emphasizing their autonomy to withdraw at any stage.

2.3. Intervention

The Vignette-Based Blended Teaching (VBBT) intervention was implemented for 95 participants in the intervention group. Microsoft PowerPoint presentations, videos, and case scenarios were used to deliver the content. The objectives of the VBBT were to equip participants with essential skills and knowledge to address depression effectively. These objectives included helping participants recognize the common symptoms of depression, promoting respect and dignity for individuals experiencing it, and understanding the fundamental principles of depression assessment. Additionally, the intervention aimed to develop effective communication skills for interacting with individuals facing depression, guide participants in conducting thorough depression assessments, and manage any associated physical health conditions. Furthermore, the VBBT sought to prepare participants to provide psychosocial interventions, not only for people with depression but also for their caregivers.

The VBBT intervention was delivered in two phases: Phase 1: Online Interactive Teaching; This phase included incomplete short stories (vignettes) reflecting real-life depression scenarios to encourage discussion and problem-solving. The online teaching involved three PowerPoint presentations, two videos, and three case studies accessible via the SRIHER online portal. The intervention was delivered over three sessions (40 minutes each), covering four core components: introduction to

depression, depression assessment, depression management, and follow-up. A quiz was provided at the end of each session.

Phase 2: Face-to-Face Teaching; In this phase, the researcher reviewed the online course content through quizzes and discussions. Additional case studies and role-plays were included to provide hands-on experience in applying assessment skills, first aid, and intervention techniques in different scenarios. Participants were divided into four groups, with 20 - 25 students per group.

2.4. Control Group

The control group consisted of undergraduate students from the Faculty of Pharmacy. They continued with their usual activities during the study period, and post-test assessments were conducted at the same intervals as the intervention group. Upon completion of the study, the control group received access to the VBBT content.

2.5. Measures

At the beginning of the first session, baseline demographic information and pre-test data were collected from participants via a Google Form. After the intervention, participants were asked to complete the post-test using hardcopy questionnaires, which were distributed and later collected by the researcher. To minimize bias, an individual not involved in the study was assigned to gather the completed post-test questionnaires from the participants. The demographic variables measured included age, gender, area of residence, parents' educational status, parents' employment status, and family income. Additionally, clinical data such as family history and leisure activities were also collected.

Mental health literacy was measured using the Health Literacy on Depression (HLD) questionnaire, which consists of 32 items covering four key areas: recognition of depression (2 vignettes and 10 items), help-seeking intentions (5 items), knowledge of first-aid support (7 items), and knowledge of interventions (8 items). Depression recognition was measured through two vignettes depicting a 19-year-old male and a 20-year-old female, both exhibiting symptoms of depression. Participants were asked to identify if anything was wrong with the individuals in the vignettes. The total score for depression recognition was 40, categorized as adequate knowledge (30-40), moderately adequate knowledge (20-31), or inadequate knowledge (0-19). Help-seeking intentions, knowledge of first-aid, and knowledge of interventions were assessed using 5-point rating scales. The overall scores for each section determined the level of mental health literacy, classified into adequate, moderately adequate, or inadequate. The tool's validity and reliability were established using a test-retest method, yielding an r -value of 0.82.

Participants' self-stigma and seeking help were measured using the standardised Self-Stigma of Seeking Help (SSOSH) scale. This 10-item scale designed to evaluate the potential impact on self-esteem when considering psychological help (Vogel et al., 2006, 2011). Participants rated their agreement with items such as "I would feel inadequate if I went to a therapist for psychological help" on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Five positive items were reverse-coded, and higher scores indicated greater self-stigma. The SSOSH scale demonstrated good reliability in previous studies, and its internal consistency in this study was Cronbach's $\alpha = 0.73$.

Perception of Stigmatization by Others for Seeking Help (PSOSH) was assessed using a standardized 5-item scale that measures perceived stigma associated with seeking mental health services (Vogel et al., 2009). Participants were asked to imagine how others might perceive them if they sought help for mental illness, with items such as "Think of you in a less favorable way" rated on a Likert scale from 1 (not at all) to 5 (a great deal). Higher scores indicated greater perceived stigma. The validity and reliability of the English version of the PSOSH were confirmed through a test-retest method, with an r -value of 0.91.

2.6. Statistical analysis

Data were analyzed using SPSS version 26.0. Categorical variables were presented as frequencies and percentages, and continuous variables as means and standard deviations. The homogeneity of variance was tested using the Chi-square test. The parametric paired t-test was used to evaluate intervention effects. Associations between categorical variables were assessed using the Chi-square test, with statistical significance set at p -values less than 0.05.

2.7. Ethical considerations

Ethical approval for this study was obtained from the Ethics Committee of Sri Ramachandra Institute of Higher Education and Research (REF: CSP/21/AUG/97.431). The study was conducted following the ethical principles outlined in the 1964 Declaration of Helsinki and its subsequent amendments.

3. RESULTS

3.1 Demographic proforma

The demographic variables for both the intervention group ($n=95$) and the control group ($n=85$). The age distribution showed that 35.8% of participants in the intervention group and 51% in the control group were aged 18–19 years, while 64.2% in the intervention group and 49% in the control group were 20 years or older ($p = 0.05$). Regarding gender, 35.8% of the intervention group and 57.6% of the control group were male, whereas 64.2% of the intervention group and 42.4% of the control group were female, with a significant difference noted ($p = 0.004$). For the area of residence, 20% of the intervention group and 27.1% of the control group resided in rural areas, while 80% and 72.9%, respectively, lived in urban areas ($p = 0.293$). Family income distribution revealed that 37.9% in the intervention group and 43.5% in the control group had an income between INR 10,000 to 24,999, 37.9% and 31.8%, respectively, earned INR 25,000 to 49,999, and 24.2% and 24.7%, respectively, had incomes above INR 50,000 ($p = 0.66$). Concerning a family history of depression, 83.2% of the intervention group and 91.8% of the control group reported no family history, while 16.8% and 8.2%, respectively, indicated a positive family history ($p = 0.331$). Among those with a family history of depression, the affected family members included parents (2.1% in the intervention group), siblings (4.2% in the intervention group and 1.1% in the control group), grandparents (2.1% and 2.4%, respectively), and others (8.4% and 4.7%, respectively). These findings provide an overview of the baseline characteristics of the study participants.

3.2 Level of Literacy

In the pre-test, the majority of undergraduate students in both the study and control groups demonstrated inadequate mental health literacy regarding depression. However, following the intervention, the study group showed a marked improvement in overall mental health literacy, as illustrated in Figure 1.

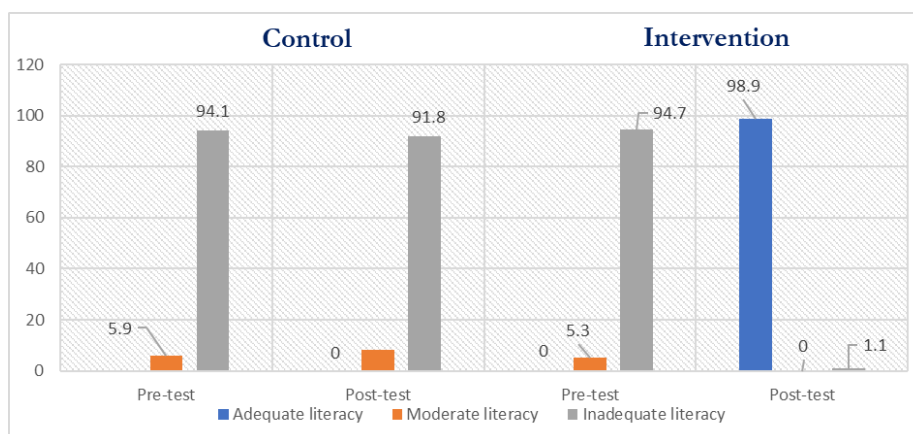


Figure 1. Percentage distribution of Overall Mental Health Literacy level among Undergraduate students in the intervention and control group during pretest and posttest

3.3 Level of Identification of Vignette

The study findings reveal that during the pre-test, 75 (78.9%) undergraduate students in the study group and 71 (83.5%) in the control group demonstrated inadequate literacy in identifying vignettes. However, in the post-test, 79 (83.2%) students in the study group exhibited adequate literacy, while 12 (12.6%) showed moderately adequate literacy. In contrast, the control group displayed a different trend, with 56 (65.9%) students showing moderately adequate literacy and 28 (32.9%) remaining inadequately literate in identifying vignettes.

3.4 Overall Mental Health Literacy

The intervention led to significant improvements in mental health literacy from pre-test to post-test, demonstrating its effectiveness. In contrast, the control group showed no significant changes between pre-test and post-test scores. In table 1 shows the findings, underscore the intervention's impact in enhancing mental health literacy compared to the negligible progress observed in the control group.

Table 1: The mean score of Overall Mental Health Literacy

Component	Intervention Group (Mean Scores)		Control Group (Mean Scores)	
	Pre test	Post test	Pre test	Post test
Recognition of Symptoms	13.9	36.6	13.8	16.1
Health-Seeking Intention	11.2	16.4	10.7	10.7
Knowledge of First Aid	8.2	25.5	7.7	11
Knowledge of Intervention	9.5	28.6	8.8	13.4
Overall Mental Health Literacy	42.8	107.3	41.0	52.3
Perception of Stigmatization by Others for Seeking Help	18.9	6.8	18.7	18.3
Self-stigma	16.4	11.2	12.3	10.7

3.5 Overall Mental Health Literacy and Identification of Vignette

During the pre-test, no differences were observed between the study and control groups. Table 2 , shows at post-test, there was a highly significant difference between the groups in overall mental health literacy and the ability to identify vignettes, with a large effect size of 0.96.

Table 2 Comparison of Pre-test and Post-test Mean Score of Overall Mental Health Literacy and Identification of Vignette

Variables	Intervention group M ± SD	Control group M ± SD	Mean deference	Independent t & p value	Cohens D	Effect Size & Percentile Standing
Overall MHLRD						
Pre-test	42.8±9.66	41±6.16	1.8±3.50	1.48 0.141	7.59	0.96 83 (L)
Post-test	107.3±6.22	52.3±15.49	55±9.27	31.8 <0.001		
Identification of vignette						
Pre-test	0.9±0.70	0.7±0.77	0.20±0.07	2.33 0.07	12.64	0.98 83 (L)

Post-test	3.4±1.05	1±0.82	2.35±0.23	16.5 0.04		

M= Mean, SD= Standard Deviation, t= table value, p= proportion value, L-Large (L), MHLRD= Mental Health Literacy regarding Depression

3.6 Mental Health Literacy regarding Depression subcomponent among Undergraduate students

In table 3 shows the Significant differences were noted between the study and control groups in the mental health literacy subcomponent related to depression during the post-test, with a large effect size of 0.98. This indicates the substantial impact of the intervention on improving participants' understanding of depression

Table 3 Comparison of Pre-test and Post-test Mean Score of Mental Health Literacy regarding Depression subcomponents

Variables	Study group M ± SD	Control group M ± SD	MD± SD	Independent t & p value	Cohens d	Effect Size & Percentile Standing
Recognition of symptoms						
Pre-test	11.25±2.20	10.78±2.00	0.47±0.20	1.49 0.13	10.99	0.98 83 (L)
Post-test	16.44±1.47	10.78±2.00	5.66±0.53	21.78 <0.001 ***		
Help seeking intentions						
Pre-test	11.25±2.20	10.78±2.00	0.47±0.20	1.49 0.13	12.96	0.98 83 (L)
Post-test	16.44±1.47	10.78±2.00	5.66±0.53	21.78 <0.001 ***		
Knowledge of First aid support						
Pre-test	8.21±3.66	7.67±3.08	0.54±0.58	1.07 0.28	3.16	0.85 80 (L)
Post-test	25.57±1.09	11.99±6.89	13.58±5.80	18.96 <0.001 ***		
Knowledge of Intervention						
Pre-test	9.51±3.72	8.82±3.62	0.69±0.10	1.24	4.13	0.90

				0.22		82 (L)
Post-test	28.68±2.13	13.47±6.89	15.21±4.76	20.44 <0.001 ***		

***p<0.001 L-Large (L)

3.7 Mental health literacy regarding Depression and Stigma

In table 4 shows the Undergraduate students in the study and control groups exhibited significant differences in mental health literacy regarding depression, self-stigma of seeking help, and perception of stigmatisation by others for seeking help, as reflected in the pre-test and post-test mean difference scores. Notably, the effect size was large (0.9) for mental health literacy regarding depression and the perception of stigmatisation by others for seeking help, indicating a substantial impact of the intervention in these areas.

Table 4 Comparison of Mental health literacy regarding Depression and Stigma

Variable	Intervention group (Post – pre) M and SD	Control group (Post – pre) M and SD	Independent t value & p value	Cohens d
MHLRD	64.4 ± 11.5	11.2 ± 16.31	-25.36 <0.001 ***	14.01
SSOSH	5.2 ± 2.61	1.58 ± 2.43	-9.59 <0.001 ***	2.25
PSOSH	12.1 ± 3.54	0.43 ± 0.83	31.97 <0.001 ***	2.63

M= Mean, SD= Standard Deviation, t= table value, p= proportion value, L-Large (L), MHLRD= Mental Health Literacy regarding Depression, SSOSH = Self-Stigma of Seeking Help Scale, and the PSOHS = Perception of Stigmatization by Others for Seeking Help scale.

4. DISCUSSION

The findings of this study underscore the critical importance of addressing mental health literacy and stigma related to depression among undergraduate students. University life, while offering opportunities for personal and academic growth, places significant mental health burdens on students, which may not return to pre-university levels (Hernández-Torrano et al., 2020). This underscores the need for targeted interventions during this vulnerable phase. The implementation of VBBT demonstrated substantial promise in enhancing mental health literacy and reducing stigma, with statistically significant improvements ($p < 0.001$) in post-intervention assessments. The significant effect size (0.96) observed in this study aligns with prior research emphasizing the role of structured interventions in fostering mental health literacy. By utilizing vignettes, VBBT effectively contextualized depression scenarios, enabling students to better understand and identify mental health issues. This aligns with the findings of Yeshanew et al., (2020), which highlight the persistent inadequacies in community and traditional help-seeking intentions for mental health issues. By addressing these gaps, VBBT offers a pathway to empower students with knowledge and strategies to overcome personal and structural barriers to seeking help.

Interestingly, the study found no significant correlation between mental health literacy and stigma in the study group, a result consistent with Singh et al., (2020). While mental health literacy improved, stigma may be influenced by deeper societal attitudes

and biases that require prolonged efforts to dismantle. The weak positive correlation ($r = 0.32$) observed in the control group during pre- and post-tests suggests that while literacy and stigma may be linked, their interplay is complex and influenced by multiple variables. Rodríguez-Almagro et al., (2019) similarly found that socio-demographic factors were not significantly associated with levels of stigma, highlighting the universality of these challenges across diverse student populations. The non-significant association between mental health literacy regarding depression and socio-demographic variables in this study indicates that VBBT's effectiveness transcends individual differences such as age, gender, or academic background. This finding is vital for the scalability of such interventions across diverse undergraduate cohorts. The use of vignettes may help create a neutral, relatable, and engaging medium for discussing mental health, fostering a universal impact.

Despite the improvements observed in mental health literacy, the lack of significant changes in stigma warrants further investigation. Stigma may be deeply rooted in cultural norms and societal perceptions, requiring multifaceted approaches that include education, policy advocacy, and community engagement. Future research should explore long-term interventions that integrate VBBT with other stigma-reduction strategies, such as peer-led discussions or exposure to individuals with lived experiences of mental illness. Therefore, this study affirms the effectiveness of VBBT in enhancing mental health literacy and reducing depression stigma among undergraduate students. While the improvements in literacy are encouraging, addressing stigma remains a complex challenge. Continued efforts to refine and expand interventions like VBBT are essential to equip students with the tools to navigate mental health challenges and foster a more inclusive and supportive academic environment. These findings contribute valuable insights into the design of targeted, evidence-based programs to improve mental health outcomes in higher education settings.

4.1 Strength and limitations

The current study utilized Wiedenbach's Helping Art of Clinical Nursing Theory as its foundational framework. This theory emphasizes three key components: identifying the need for help, providing the necessary assistance, and validating that the help provided meets the identified need. These components guided the design and implementation of the intervention, ensuring a structured and patient-centred approach. The intervention itself was developed in alignment with the World Health Organization's module for depression management, further enhancing its relevance and evidence-based foundation. A notable limitation of the study was the timing of the post-test, which was conducted 21 days after the completion of the intervention. This timeframe restricted the ability to evaluate the long-term retention of mental health literacy regarding depression and the sustained impact of the VBBT intervention. The data collection period, limited to four weeks, posed additional constraints on assessing longer-term outcomes.

5. CONCLUSION

Vignette-based blended teaching proved to be an effective method for enhancing mental health literacy about depression and reducing stigma. The study findings highlight that post-intervention, a majority of undergraduate students in the study group successfully identified depression-related vignettes. This indicates that the intervention effectively improved their ability to recognize and understand depression in real-life scenarios. The results showed a significant increase in overall mental health literacy regarding depression among the participants. The intervention not only enhanced their knowledge but also contributed to a noticeable reduction in stigma, particularly concerning help-seeking intentions and perceived societal stigmatization. These outcomes emphasize the potential of VBBT to address key barriers to mental health support, fostering a more informed and empathetic perspective among students.

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