

Integrating Movement-Based and Reflective Learning in Mental Health Education: A Pilot Study

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ABSTRACT

Mental health literacy (MHL) supports the recognition of mental health concerns and understanding of available support. This pilot study examined pre-post changes in MHL and explored participants' experiences of a six-session multimodal dance-based programme among undergraduate students aged 18–26 years at JSS Academy of Higher Education & Research, Mysuru, India. In a one-group pre-test–post-test design, 25 students expressed interest, 21 were recruited, and 16 completed all six 90-minute sessions and both assessments. MHL was measured using the 35-item Mental Health Literacy Scale. Paired-samples t-tests were conducted, with Wilcoxon signed-rank tests used for sensitivity analyses of non-normally distributed subscales. Written reflections and facilitator-documented verbal reflections were analysed thematically. Total MHL scores increased from 103.25 (SD = 10.61) at pre-test to 118.63 (SD = 7.15) at post-test, $t(15) = -5.64$, $p < .001$. Significant improvements were observed in recognition of mental health concerns, risk-factor awareness, self-treatment knowledge, professional-help knowledge, and attitudes, whereas information-seeking scores did not change significantly. Six qualitative themes highlighted mental health understanding, emotional awareness, help-seeking self-efficacy, resource awareness, engaging and non-threatening learning, and programme feasibility and acceptability. These preliminary findings suggest that the programme was associated with improved MHL scores and positive participant experiences. Larger controlled studies with follow-up assessments are required to evaluate effectiveness and the sustainability of observed changes.

Keywords: *Mental health literacy; dance-based programme; undergraduate students; mental health education; pilot study.*

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INTRODUCTION

Mental Health Literacy (MHL) is a vital aspect of mental health promotion, influencing how individuals recognize psychological difficulties, understand their possible causes and risk factors, identify appropriate sources of support, and respond to mental health concern. The concept extends beyond an ability of mental health condition identification; it encompasses knowledge of self-help strategies, professional support, information-seeking and attitudes that facilitate recognition and management of psychological difficulties. Jorm described mental health literacy as “the knowledge and beliefs that assist in the recognition, management and prevention of mental disorders”, highlighting its relevance to individual and community mental health.¹

In this context, university students represent an important population for mental health literacy initiative. To transition into higher education, is to face academic demands, changing social relationships, increased

independence and decisions concerning personal and professional identity. These experiences occur during a developmental period in which promotion of mental health and early support are particularly relevant. Lui and colleagues in their systematic review, identified that among the most frequently mentioned barriers to university students getting help for depression and anxiety are self-reliance, stigma and poor mental health literacy. Social support and good mental health literacy were identified as facilitators.³ These findings highlight the importance of promoting and encouraging students' ability to identify mental health concerns, comprehend the resources for support that are available and cultivate help-seeking attitudes.

Structured measures that examine various dimensions of mental health knowledge, awareness and attitudes can be used to evaluate mental health literacy. O'Connor and Casey(2015) developed the Mental Health Literacy Scale (MHLS), offers a standardised approach to assessing

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mental health literacy across various domains.⁴ Reviews of mental health literacy measures have also highlighted the importance of evaluating knowledge, attitudes and help-seeking-related dimensions when examining mental health literacy outcomes.⁵ Such measures can support the systematic evaluation of educational programmes designed to improve mental health understanding. These developments emphasize the importance of examining specific dimensions of mental health literacy when evaluating educational programmes.

Educational initiatives aimed to improving mental health understanding and literacy commonly incorporate structured information, awareness activities and discussions and also opportunities to understand mental health concerns. The systematic review by Reis and colleagues identified variation in the approaches used in mental health literacy training programmes for university students, highlighting the need for further investigation of intervention formats and their outcomes²; although structured psychoeducation provides essential information, mental health education may also benefit from experiential and participatory learning opportunities that encourage active engagement, reflection and personal meaning-making for participants. Integration the educational content with creative and embodied activities may offer an additional way to engage learners with mental health concepts; and such approaches are intended to complement existing established psychoeducational methods rather than replace professional mental health services. This creates scope for exploring complementary approaches that extend mental health education beyond just information delivery towards more experiential forms of engagement.

Among many such approaches, dance-based approaches to mental health education provide a possible avenue for experiential engagement; as dance involves movement, rhythm, expression, attention and bodily awareness, offering opportunities for participants to engage with physical and emotional experiences. Dance movement therapy (DMT) is a psychotherapeutic approach that uses movement and body-based processes to support emotional, cognitive, social and physical integration.⁶ However, it is important to distinguish a dance-based educational programme from formal clinical DMT. The incorporation of selected movement-based principles into a psychoeducational programme does not, by itself, constitute a clinical DMT intervention.

The psychological effects of dance and DMT have attracted sustained research interest. Koch and colleagues pooled controlled intervention studies in a meta-analysis and found beneficial effects of dance and DMT across a range of health-related psychological outcomes, although interventions and study contexts differed markedly.⁶ Fong Yan and colleagues likewise assessed the effectiveness of dance relative to other forms of physical activity, reporting results that bear on both psychological and cognitive health outcomes.⁷ Together, these reviews offer a rationale for examining dance-based approaches in mental health

settings. Their primary focus, however, was on psychological and cognitive health outcomes rather than mental health literacy. Whether, and how, movement-based experiential learning can contribute to particular mental health knowledge and attitudinal domains therefore remains largely unexamined. Arts-based approaches have also been explored as a means of facilitating mental health education and discussion among university students. Atayero and colleagues examined a pilot arts-based approach that incorporated sensory, physical and creative activities to facilitate engagement with mental health and representations of mental distress.⁸ This work provides a relevant precedent for exploring creative and participatory approaches to mental health education in higher education. However, the study's focus differs from the present investigation, which examines pre- and post-programme changes in mental health literacy following a structured multimodal dance-based programme.

This gap points to a possible role for multimodal teaching formats. Pairing movement-based activities with audio-visual material, guided reflection and psychoeducation could allow students to encounter mental health information through several modes of learning. Movement can serve as the experiential element, and guided reflection may prompt participants to think about their experiences and reactions. Audio-visual material and structured psychoeducation, in turn, can supply detailed information on common mental health problems, risk factors, self-help strategies, professional support and help-seeking. Combining these components yields an educational approach that merits preliminary evaluation and is not yet an established means of improving mental health literacy.^{2 6 7}

Even so, the integration of these two strands within structured mental health literacy programmes has received little attention, despite growth in both literatures. Existing reviews describe considerable variation in how mental health literacy is taught to university students², and separately report psychological and cognitive outcomes of dance interventions.^{6 7} Neither body of work can show whether adding dance-based activities to structured psychoeducation is linked to change in particular dimensions of mental health literacy. Preliminary work is therefore justified to test this combination and explore how participants experience such programmes. Against this background, this pilot study examined changes in mental health literacy among undergraduate students who completed a six-session, multimodal, dance-based mental health literacy programme. It had three specific aims: (i) to measure participants' mental health literacy before and after the programme using the Mental Health Literacy Scale (MHLS); (ii) to examine change in overall mental health literacy and in its assessed attributes, namely recognition of mental health conditions, knowledge of risk factors, self-treatment, professional help, information-seeking, and attitudes towards mental health and help-seeking; and (iii) to understand participants' experiences and perceptions of the programme through their written

reflections and the verbal reflections documented by the facilitator. The study followed a quantitatively driven mixed-methods approach, in which the qualitative findings were intended to complement the quantitative results and give context to participants' learning experiences. In doing so, it aimed to provide preliminary evidence on whether movement-based activities, audio-visual learning, guided reflection and psychoeducation can be meaningfully combined in mental health literacy education for university students.

2. MATERIALS AND METHODS

2.1 Study Design

This was a quantitatively driven mixed-methods pilot study with a single-group pre-test post-test design. Pilot studies are well suited to generating preliminary evidence, examining research procedures and informing later investigations, although they are not generally intended to establish definitive intervention effectiveness.⁹ The study therefore examined changes in mental health literacy after a six-session multimodal dance-based programme, with qualitative reflections added to give further insight into participants' experiences. The quantitative strand was the primary component. It involved a standardised mental health literacy measure administered before and after the programme. The qualitative strand comprised written reflections collected after each session and verbal reflections documented by the facilitator. These data helped explain how participants experienced the programme and placed the quantitative findings in context. Because the design had a single group and no comparison group, pre-post differences were interpreted as preliminary changes associated with participation, not as evidence of a causal effect.

2.2 Study Setting and Participants

The study was conducted at JSS Academy of Higher Education & Research (JSS AHER), Mysuru, Karnataka, India. Participants were undergraduate students recruited through convenience sampling. The sample included 16 students aged 18 to 26 years who agreed to take part and provided written informed consent. All 16 participants attended all six sessions and completed both the pre-programme and post-programme assessments. The final analytical sample was therefore 16, with no attrition during programme delivery.

2.3 Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee of JSS Medical College, Mysuru, Karnataka, India (Approval No. JSSMC/IEC/08042026/25NCT/2026) prior to the commencement of data collection. The study was conducted in accordance with the ethical principles governing research involving human participants. All participants were informed about the purpose and procedures of the study, voluntary nature of their participation and the confidentiality of the information obtained. Written informed consent was obtained before enrolment from all participants. Participant information and research data were handled confidentially in line with

institutional requirements and used solely for the purposes of the study.

2.4 Assessment of Mental Health Literacy

Mental health literacy was assessed with the Mental Health Literacy Scale (MHLS) developed by O'Connor and Casey (2015).⁴ The 35-item English version was used. It covers recognition of mental health conditions, knowledge of risk factors and causes, knowledge of self-treatment, knowledge of professional help, information-seeking, and attitudes associated with mental health and help-seeking. The MHLS was administered before the first session and again after the sixth. Scoring followed the instructions of the original scale developers, with higher total scores indicating higher mental health literacy. The overall score and the assessed attributes were both included in the quantitative analysis to examine change between the two time points.

2.5 Multimodal Dance-Based Mental Health Literacy Programme

The programme consisted of six structured sessions of 90 minutes each, held in May and June 2026. It combined movement-based activities, music, audio-visual materials, creative activities, guided reflection and psychoeducation. This multimodal structure was intended to give participants opportunities for active involvement and reflection alongside the presentation of mental health information. The content covered recognition and understanding of mental health concerns, risk factors, self-help and self-treatment strategies, professional sources of support, information-seeking, and attitudes towards mental health and help-seeking. Movement-based activities served as experiential learning components, and guided reflection encouraged participants to consider their experiences in relation to the concepts introduced. Psychoeducational inputs and audio-visual materials added information relevant to each session.

Materials included music for movement activities, movement ribbons, coloured scarves, drawing and other art supplies, worksheets and reflection sheets. Publicly available YouTube videos depicting situations of mental distress were used as audio-visual resources. These were presented alongside psychoeducation and experiential activities to support engagement with mental health concepts.

The principal researcher, a psychology research scholar with formal training in Dance Movement Therapy from CMTAI, India, facilitated all six sessions. No other facilitators were involved. The programme was educational in orientation and drew on selected principles of Dance Movement Therapy (DMT), experiential learning and reflective practice.

2.5.1 Structure of the Programme

The six sessions were built around mental health literacy content and delivered through movement-based activities, music, audio-visual materials, creative activities, psychoeducation and guided reflection. Participants engaged with the content through these activities and

recorded their experiences in written reflections after each session. The session-wise structure, including the learning

focus and corresponding activities, is presented in Table 1.

Table 1. Structure and content of the six-session multimodal dance-based mental health literacy programme

Session	Core activities	Learning focus
1	Navarasa exploration and movement journaling	Mental health awareness and emotional literacy
2	Abhinaya, case vignettes and group reflection	Recognition of mental health concerns
3	Pressure-support movement and resilience mapping	Risk factors, causes and protective factors
4	Rhythmic footwork and breathing	Self-help strategies and emotional regulation
5	Partner mirroring, role-plays and resource exploration	Professional help and mental health resources
6	Group choreography and reflection	Help-seeking attitudes and programme closure

2.6 Data Collection Procedure

Data were collected at two assessment points so that changes in mental health literacy could be examined across programme participation. The pre-programme MHLS was administered before the first session, and the post-programme MHLS after the sixth. All 16 participants completed both. Qualitative data were gathered throughout the programme to capture experiences as participants moved through the sessions. Written reflections were collected after every session, which allowed responses and perceptions to be recorded at several points. The facilitator documented verbal reflections shared during sessions as written notes. These were not audio-recorded or transcribed. The written reflections and facilitator notes were considered together during analysis. This made it possible to look at recurring patterns across all six sessions, rather than relying only on accounts given at the end of the programme.

2.7 Data Analysis

2.7.1 Quantitative Analysis

Quantitative data were analysed in the Statistical Package for the Social Sciences (SPSS), version 25. Descriptive statistics including means and standard deviations were calculated for pre-programme and post-programme MHLS total and subscale score. Paired-samples t-tests were used to compare pre-programme and post-programme scores for the overall MHLS score and its subscales. Pre-post differences were examined using paired-samples t-tests to assess changes in scores between the two assessment points.

The normality of within-participant difference scores was assessed using the Shapiro–Wilk test and visual inspection of normal quantile–quantile (Q–Q) plots. The Shapiro–Wilk test was used because of the small sample size, with interpretation informed by graphical inspection rather than the significance test alone (10). Total MHLS and attitudes difference scores did not show statistically significant departures from normality. Significant departures were identified for recognition, risk-factor awareness, self-

treatment knowledge, professional-help knowledge, and information-seeking.

Wilcoxon signed-rank tests were subsequently conducted as sensitivity analyses for the five subscales with significant departures from normality. These analyses examined whether the conclusions of the primary paired-samples t-tests remained consistent when a non-parametric method was used. The results of the primary and sensitivity analyses were interpreted together, without selecting results on the basis of statistical significance alone.

All statistical tests were two-tailed, with significance set at $p < 0.05$. The analysis focused on the direction, magnitude and statistical significance of the pre-post differences. Given the small sample and the lack of a comparison group findings were cautiously interpreted and considered preliminary.

2.7.2 Qualitative Analysis

Qualitative data were analysed using thematic analysis informed by the approach described by Braun and Clarke (2006).¹¹ The analysis aimed to identify recurring patterns of meaning relating to participants' experiences, perceptions and learning during the programme.

The researcher and research supervisor collaboratively examined the written reflections collected across all six sessions, together with the facilitator-documented verbal reflections. Recurring patterns relevant to the study objectives were identified, and codes and broader themes were developed through collaborative discussion. The emerging themes were reviewed and refined to ensure that they adequately represented the content of the available reflections. Six qualitative themes were developed from reflections across all six programme sessions rather than being assigned to individual sessions. These themes were used to complement the quantitative findings and provide contextual insight into participants' experiences of the programme. Because verbal reflections were documented as facilitator notes rather than verbatim transcripts, the qualitative interpretations were limited to the content and

detail available in the written material. Given the exploratory pilot design, quantitative and qualitative findings were considered complementary sources of information about changes in mental health literacy and participants' experiences of the programme.¹²

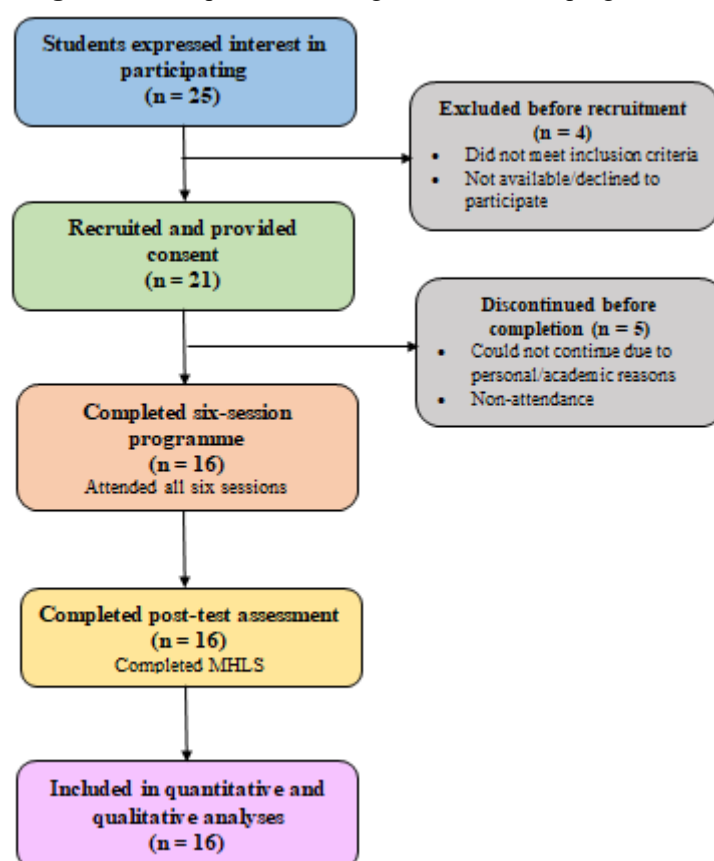
3. RESULTS

3.1 Participant Flow and Programme Completion

Of the 25 individuals who initially expressed interest in participating, four were excluded and 21 participants were

recruited into the programme. Of those recruited, 16 completed all six sessions and both pre-programme and post-programme assessments, while five discontinued participation due to educational commitments and health issues. This corresponded to a completion rate of 76.2% and a discontinuation rate of 23.8% among recruited participants. All 16 participants who completed, attended all six programme sessions and provided complete assessment data. Quantitative analyses were therefore conducted using data from these 16 participants.

Figure 1. Participant flow through the six-session programme



3.2 Descriptive Statistics

Descriptive statistics were calculated for the total Mental Health Literacy Scale (MHLS) score and its six subscales before and after the programme. Higher mean scores were observed at the post-programme assessment across all seven subscales. The mean total MHLS score increased from 103.25 (SD = 10.61) at pre-programme assessment to 118.63 (SD = 7.15) at post-programme assessment. Paired-

samples t-tests indicated statistically significant pre-post differences in total MHLS, recognition, risk-factor awareness, self-treatment knowledge, professional-help knowledge, and attitudes. Information-seeking did not show a statistically significant difference. Descriptive statistics and paired-samples t-test results are presented in Tables 1 and 2 respectively.

Table 1. Descriptive statistics for pre-programme and post-programme MHLS scores (n = 16)

Outcome	Pre-programme Mean (SD)	Post-programme Mean (SD)
Total MHLS	103.25 (10.61)	118.63 (7.15)
Recognition	24.13 (3.40)	26.06 (2.59)
Risk-factor awareness	6.06 (1.12)	6.94 (0.93)
Self-treatment knowledge	5.94 (0.93)	6.88 (0.81)

Professional-help knowledge	8.69 (1.35)	9.88 (1.09)
Information-seeking	15.25 (3.21)	15.56 (2.13)
Attitudes	43.19 (9.09)	53.31 (6.37)

Table 2. Paired-samples t-test results for pre–post MHLS comparisons (n = 16)

Outcome	Mean difference (Pre – Post)	95% CI	t(15)	p-value
Total MHLS	–15.375	–21.186 to –9.564	–5.640	< .001
Recognition	–1.938	–2.727 to –1.148	–5.230	< .001
Risk-factor awareness	–0.875	–1.057 to –0.693	–10.247	< .001
Self-treatment knowledge	–0.938	–1.071 to –0.804	–15.000	< .001
Professional-help knowledge	–1.188	–1.477 to –0.898	–8.733	< .001
Information-seeking	–0.313	–1.554 to 0.929	–0.536	.600
Attitudes	–10.125	–14.506 to –5.744	–4.926	< .001

Note: Mean differences were calculated as pre-programme minus post-programme scores.

Pre-post differences were statistically significant for the total MHLS score and for five of the six subscales. The mean total score increased by 15.375 points, and the attitudes subscale showed a mean gain of 10.125 points. Significant differences were also found for recognition, risk-factor awareness, self-treatment knowledge and professional-help knowledge. Information-seeking was the one subscale that did not reach significance, with a smaller mean difference and a confidence interval that included zero. These results describe change among participants who completed the programme. Given the single-group design and small sample, they should be read as preliminary associations and not as evidence of a causal effect.

3.3 Normality Assessment and Sensitivity Analyses

Normality was assessed using the Shapiro–Wilk test and visual inspection of Q–Q plots (10). Difference scores for total MHLS and attitudes did not significantly deviate from normality ($p = .260$ and $p = .319$, respectively). Significant departures were observed for recognition ($p = .017$), risk-factor awareness ($p < .001$), self-treatment knowledge ($p < .001$), professional-help knowledge ($p < .001$), and information-seeking ($p = .003$).

Wilcoxon signed-rank tests were conducted as sensitivity analyses for these five subscales. The results were consistent with the paired-samples t -tests: post-programme scores were significantly higher for recognition ($Z = -3.128$, $p = .002$), risk-factor awareness ($Z = -3.742$, $p < .001$), self-treatment knowledge ($Z = -3.873$, $p < .001$), and professional-help knowledge ($Z = -3.578$, $p < .001$). Information-seeking remained non-significant ($Z = -1.174$, $p = .240$).

Table 3. Wilcoxon signed-rank sensitivity analyses for MHLS subscales (n = 16)

Outcome	Positive ranks	Negative ranks	Ties	Z	p-value
Recognition	15	1	0	–3.128	.002
Risk-factor awareness	14	0	2	–3.742	< .001
Self-treatment knowledge	15	0	1	–3.873	< .001
Professional-help knowledge	15	0	1	–3.578	< .001
Information-seeking	10	3	3	–1.174	.240

Note: Positive ranks indicate higher post-programme scores, negative ranks indicate lower post-programme scores and ties indicate no change.

The sensitivity analyses corroborated the primary comparisons across all five subscales, with no discrepancies in statistical conclusions. Given the small sample, absence of a control group, and lack of adjustment for multiple comparisons, these findings should be interpreted as preliminary.

3.4. Qualitative Findings

Thematic analysis of participants' written reflections and facilitator-documented verbal reflections yielded six provisional themes concerning mental health learning and programme experiences.¹¹

Table 4. Qualitative themes and illustrative participant reflections

Theme	Interpretation	Illustrative verbatim reflection
1. Understanding of Mental Health	Participants described a clearer understanding of mental health	"I learned that mental health problems can affect anyone."

	concerns and their recognition.	
2. Help Seeking Self-Efficacy	Participants reflected on greater comfort with seeking help and more accepting attitudes towards professional support.	“I feel more comfortable seeking help when needed.”
3. Understanding one’s emotions	Participants described increased awareness of their emotions and the ways stress may affect them.	“The activities helped me understand my emotions better.”
4. Engagement with learning format	Participants perceived dance and movement-based activities as enjoyable and less intimidating than conventional lecture-based learning.	“Learning through dance was fun and not intimidating.”
5. Awareness of mental health resources	Participants described greater awareness of mental health information and available sources of support.	“I now know where to look for mental health information.”
6. Programme feasibility and acceptability	Participants reflected on the accessibility, engagement, and perceived suitability of the programme.	“The activities were easy to follow.”

These themes together offer preliminary insight into participants’ perceived learning and experiences. The qualitative findings complement the quantitative results by contextualising participants’ responses to the programme.

4. DISCUSSION

This pilot study examined pre-post changes in mental health literacy following a six-session multimodal dance-based programme for undergraduate students. Total Mental Health Literacy Scale (MHLS) scores increased significantly, with improvements also observed in recognition of mental health concerns, risk-factor awareness, self-treatment knowledge, professional-help knowledge, and attitudes. Information-seeking was the only domain in which the change did not reach statistical significance. These findings offer preliminary evidence of changes in several dimensions of mental health literacy following participation in the programme. However, the absence of a control group means that these changes cannot be attributed to the programme alone.

The increase in total MHLS scores is consistent with the broader literature showing that structured educational approaches can improve mental health literacy among university students and young people.^{2 17 20} The present study extends this line of inquiry by examining a programme that combined psychoeducation with movement-based activities, music, creative tasks, and guided reflection. Rather than positioning this format as an alternative to established mental health education, the findings support further investigation of its potential contribution to student learning.

4.1 Changes Across Mental Health Literacy Domains

The subscale results indicate that changes differed across domains. Significant improvements in recognition, risk-factor awareness, self-treatment knowledge, and professional-help knowledge suggest that participants

obtained higher post-programme scores across several areas of mental health literacy. Comparable gains in knowledge have been reported in evaluations of mental health first-aid and other structured educational programmes.^{12 20 21} Direct comparison remains difficult, however, because these studies differ in their content, delivery, populations, and assessment methods.

The improvement in attitudes is also noteworthy. Mental health literacy extends beyond factual knowledge to include beliefs and attitudes that influence how individuals interpret mental health concerns and respond to them.^{1 4 26} Previous research has examined educational and anti-stigma approaches as means of improving attitudes towards mental health and help-seeking.^{14 30} In the present study, the higher post-programme attitude scores indicate a change in measured responses, but they do not establish whether participants subsequently became more likely to seek help or support others in doing so.

Information-seeking showed no statistically significant pre-post change. This result highlights a distinction between developing knowledge and applying it to the active search for information. Students may benefit from additional opportunities to identify credible sources, evaluate mental health information, and navigate available support services. Help-seeking is influenced by factors beyond knowledge, including stigma, personal beliefs, and perceived barriers to accessing care.^{3 13 14} Future versions of the programme could therefore incorporate practical information-search tasks and guided exercises on accessing appropriate support.

4.2 The Multimodal Programme as an Educational Approach

The programme integrated movement-based activities, music, creative expression, guided reflection, and psychoeducation. This combination provided a

participatory format for engaging with mental health concepts. Research on dance and dance movement therapy has identified benefits across selected psychological outcomes, although findings vary by intervention, population, and study design.^{6 7} Arts-based approaches have likewise been explored in mental health education and stigma reduction, including work involving young people in India.^{8 19}

The present findings should be interpreted within this wider but still developing body of evidence. The study did not compare the multimodal programme with conventional psychoeducation or isolate the effects of individual activities. It is therefore not possible to determine whether movement, creative engagement, group participation, or the psychoeducational content contributed most to the observed changes. The programme is best understood as an educational approach informed by selected principles of dance movement therapy, experiential learning, and reflective practice, rather than as a clinical intervention whose therapeutic effectiveness has been established.

4.3 Participants' Experiences and the Qualitative Findings

The qualitative component was included to explore how participants experienced the programme and provided context for the quantitative findings. The qualitative themes concerned understanding mental health, Help-seeking self-efficacy, understanding one's emotions, awareness of mental health resources, engagement with the learning format and programme feasibility and acceptability. These themes reflected the participants' perceived learning, emotional reflection, attitudes towards help-seeking and experiences of the format of the programme.

Participants reported their experience of dance-based learning as enjoyable and non-threatening, which highlights the potential value of participatory activities that could offer a way to approach sensitive subject matter through shared activity and reflection rather than relying exclusively on didactic instruction. The reflections also indicated perceived improvement in mental health understanding and awareness of available mental health support.

The nature of the qualitative records also warrants consideration. Written reflections were collected after each session, while verbal reflections were documented by the facilitator as written notes rather than audio-recorded and transcribed. Although these materials provided insight into participants' experiences, they may not capture the depth or nuance obtainable through recorded interviews. The qualitative findings should consequently be presented as exploratory and grounded in the available reflections.

4.4 Feasibility and Implications for Further Evaluation

Of the 21 students recruited, 16 completed all six sessions and both assessments, yielding a completion rate of 76.2%. All 16 completers attended every session. These figures indicate that the programme was delivered to completion by a substantial proportion of the recruited

sample, although the discontinuation of five participants remains important when considering its feasibility. The reasons for discontinuation were not established in the available data and should not be inferred.

Pilot studies are intended to inform the development and refinement of subsequent research, including assessment procedures, recruitment, retention, and implementation, rather than provide definitive estimates of effectiveness.^{9 12} Further evaluation should examine why participants discontinued, document the practical demands of programme delivery, and assess acceptability using clearly defined measures. A larger study could also investigate whether particular elements of the programme are more engaging or useful to participants.

The next stage of research would benefit from a comparison group, a larger and more diverse sample, and follow-up assessments. These additions would help distinguish programme-related changes from alternative explanations and establish whether improvements persist beyond the immediate post-programme assessment. Given the non-significant change in information-seeking, future evaluations could also examine whether knowledge gains translate into greater use of reliable information sources and support services.

4.5 Strengths and Limitations

An important strength of this study is the combination of quantitative assessment and participant reflections. This approach allowed immediate pre-post score changes to be considered alongside participants' accounts of their learning experiences. The use of an established mental health literacy measure⁴, assessment at two time points, and sensitivity analyses for subscales with non-normal difference scores also strengthens the transparency of the quantitative reporting.

The limitations, however, are substantial. The small convenience sample from a single institution limits the generalisability of the findings. The one-group pre-post design provides no counterfactual against which to assess change, so the contribution of the programme cannot be separated from repeated testing, concurrent experiences, or other influences. Analyses were restricted to the 16 completers, and the reasons for discontinuation were not established. The absence of follow-up data also means that the persistence of the observed changes remains unknown.

In addition, seven outcomes were examined without adjustment for multiple comparisons. The results should therefore be interpreted as preliminary rather than confirmatory. The qualitative component was based on written reflections and facilitator-documented verbal reflections, without audio-recorded interviews or independent coding. These features constrain the depth and transferability of the qualitative interpretation. Taken together, the limitations support further evaluation under a more rigorous design before broader conclusions are drawn.

4.6 Implications

The findings suggest that multimodal dance-based activities merit further investigation as one possible format for mental health literacy education among university students. Such programmes should complement established educational resources and accessible professional services, not replace them. Future research should assess implementation and acceptability systematically, include comparison conditions, and examine whether immediate changes in literacy are sustained and associated with meaningful help-seeking outcomes. A larger controlled study would provide a more robust basis for determining the programme's value and identifying the contexts in which it may be most useful.

5. CONCLUSION

This pilot study evaluated a six-session multimodal dance-based programme intended to support mental health literacy among undergraduate students. Total mental health literacy scores improved significantly from pre- to post-programme, as did recognition of mental health concerns, risk-factor awareness, self-treatment knowledge, professional-help knowledge and attitudes. Information-seeking did not change significantly. Sensitivity analyses supported the findings for subscales with non-normal difference scores.

These results offer a preliminary basis for further work on multimodal, experiential approaches to mental health literacy education in university settings. The qualitative component provides further insight on participants' experiences and complements the quantitative findings. The small convenience sample, the absence of a control group, participant discontinuation and the lack of follow-up assessment, however, limit the generalisability of the findings and preclude definitive conclusions about the effectiveness of the programme or the durability of the observed changes.

A larger controlled study that systematically assesses feasibility, acceptability and longer-term outcomes is warranted. Such work could show whether this approach is a useful complement to existing mental health literacy initiatives, and whether the immediate gains in knowledge and attitudes are sustained or lead to help-seeking behaviour.

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