Effectiveness of Nurse-Led Psychosocial Awareness Program on Knowledge and Attitude Regarding High-Risk Behavior among Nursing Students

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ABSTRACT

Background: High-risk behaviour among nursing students presents a growing concern that warrants targeted educational interventions. This study evaluated the effectiveness of a nurse-led psychosocial awareness program on knowledge and attitudes regarding high-risk behaviour prevention among nursing students.

Methods: A quantitative pre-experimental one-group pre-test post-test design was conducted among 60 seventh-semester B.Sc. Nursing students recruited via non-probability convenience sampling from a nursing college in Kozhikode, India. Data were gathered using a validated structured knowledge questionnaire, an attitude rating scale, and a prevalence checklist. The intervention comprised interactive discussions, audiovisual aids, and structured role plays addressing risk factors, warning signs, and prevention strategies.

Results: The mean knowledge score significantly increased from 8.15 ± 1.79at pre-test to 10.86 ± 1.04post-intervention ($t(59) = 13.68, p < 0.001$). A statistically significant positive shift in participant attitudes was also observed following the session.

Conclusion: The nurse-led psychosocial awareness program effectively enhanced students' understanding and fostered supportive attitudes toward high-risk behaviour prevention. Integrating structured psychosocial modules into nursing curricula can bolster proactive peer identification and mental health support.

Keywords: High-risk behaviour, Nursing students, Psychosocial awareness program, Knowledge, Attitude, Suicide prevention

INTRODUCTION

High-risk behaviours among undergraduate students represent a critical public health priority, exerting profound negative effects on academic performance, interpersonal relationships, and psychological well-being. Nursing students face distinctive vulnerabilities, including rigorous academic demands, clinical rotations, secondary trauma, and professional accountability. scribd

Epidemiological evidence underscores the urgency of addressing mental distress in health professional cohorts. In Kerala, a cross-sectional study among 1,102 medical students reported a 33.7% prevalence of suicidal ideation, significantly associated with academic strain, perceived discrimination, and victim-blaming attitudes. Nationally, a survey involving 8,542 university students documented an 18.8% lifetime prevalence of suicidal ideation. Furthermore, among 223 undergraduate nursing students, 68.7% exhibited permissive or stigmatising attitudes toward suicide, highlighting the need for structured, culturally adapted educational interventions.

Similarly, a 2023 investigation involving 188 nursing students in Mumbai demonstrated pervasive misconceptions and underscored the need for suicide risk assessment and prevention training. Interventional research across 314 nursing students confirmed that targeted suicide education positively shifts clinical attitudes toward suicidal risk.

Equipping prospective nurses with early identification skills, validated knowledge, and empathetic attitudes is essential for peer gatekeeping and clinical practice. Therefore, this study evaluated the effectiveness of a nurse-led psychosocial awareness program on knowledge and attitudes regarding high-risk behaviour prevention among nursing students.

Statement of the Problem

A pre-experimental study to assess the effectiveness of a nurse-led psychosocial awareness program on knowledge and attitude regarding the prevention of high-risk behaviour among nursing students at a selected nursing college in Kozhikode, Kerala.

Objectives

- To assess baseline knowledge regarding the prevention of high-risk behaviour among nursing students.
- To determine the baseline prevalence of high-risk behaviours and associated risk indicators among nursing students.
- To evaluate baseline attitudes regarding high-risk behaviour prevention among nursing students.
- To determine the effectiveness of a nurse-led psychosocial awareness program in improving knowledge and attitudes regarding the prevention of high-risk behaviour among nursing students.

Hypotheses

All statistical hypotheses were tested at an alpha level of $p < 0.05$:

- H_1**:** There is a statistically significant increase in post-test knowledge scores regarding the prevention of high-risk behaviour among nursing students following the nurse-led psychosocial awareness program.
- H_2**:** There is a statistically significant improvement in post-test attitude scores regarding the prevention of high-risk behaviour among nursing students following the nurse-led psychosocial awareness program.

Conceptual Framework

The conceptual framework for this study was developed using Ludwig von Bertalanffy's General System Theory (1968)

METHODOLOGY

Research Approach and Design

A quantitative research approach utilizing a pre-experimental one-group pre-test–post-test design was employed ($O_1 \rightarrow X \rightarrow O_2$), where O_1represents the baseline assessment, Xdenotes the nurse-led psychosocial awareness program, and O_2represents the post-intervention assessment.

Setting and Participants

The study was conducted at KMCT College of Nursing, Kozhikode, Kerala. The target population comprised

undergraduate nursing students. A sample of 60 seventh-semester B.Sc. Nursing students was recruited using non-probability convenience sampling.

Variables

- **Independent Variable:** Nurse-led psychosocial awareness program.
- **Dependent Variables:** Knowledge and attitude regarding the prevention of high-risk behaviour.
- **Extraneous / Demographic Variables:** Age, gender, religion, and monthly family income.

Instruments and Measures

Data were collected using a structured four-part tool developed and validated for the study:

- **Section A: Demographic Proforma:** A 4-item questionnaire recording age, gender, religion, and monthly family income.
- **Section B: Structured Knowledge Questionnaire:** A 12-item multiple-choice instrument assessing etiology, risk factors, warning signs, and prevention strategies for high-risk behaviours (score range: 0–12).
- **Section C: Attitude Rating Scale:** A 10-item Likert scale assessing participant beliefs, stigma, empathy, and attitudes toward suicide and high-risk behaviour prevention (score range: 10–50).

Validation and reliability: Content validity was established through review by a panel of seven experts (three nursing educators, threee psychiatric nursing specialist, and one clinical psychologist), who evaluated item relevance, clarity, and comprehensiveness; items with a content validity index (CVI) <0.80 were revised or removed. Internal consistency reliability was assessed in a pilot sample (n=10) not included in the main analysis: Cronbach's α was 0.78 for the Knowledge Questionnaire and 0.82 for the Attitude Rating Scale, indicating acceptable reliability.

Intervention Protocol

The session comprised four sequential modules:

1. **Orientation and baseline reflection (10 minutes):** Brief introduction to session objectives
2. **Interactive didactic segment (25 minutes):** Facilitator-led discussion on psychosocial stressors, maladaptive coping, and gatekeeping roles; supported by 12 slides covering definitions, epidemiology, and local resource pathways.
3. **Audiovisual case vignettes (20 minutes):** Two 5-minute video scenarios depicting early behavioural, verbal, and situational warning signs, followed by guided debrief (10 minutes) linking cues to action steps.
4. **Skills practice via role-play (35 minutes):** In triads, students rotated through 3 scripted scenarios (8 minutes each) practicing active listening, crisis communication, de-escalation phrases, and referral scripting; each round concluded with 2 minutes of peer feedback using a checklist.

All materials (slide deck, facilitator script, role-play scripts, and checklists) are available from the corresponding author upon request to support replication.

Ethical Considerations

Ethical clearance was granted by the Institutional Ethics Committee of KMCT College of Nursing and admini-

strative permission was obtained from institutional authorities. Written informed consent was secured from each participant prior to enrolment after explaining the study aims, voluntary nature of participation, and right to withdraw without academic penalty. No adverse events were reported during or after the session.

Statistical Analysis

Data were analyzed using descriptive and inferential statistics. Continuous variables were expressed as mean ± standard deviation (SD), and categorical variables were summarized using frequencies and percentages. Paired t-tests were conducted to evaluate differences between pre-test and post-test scores. The threshold for statistical significance was set at $p < 0.05$.

Effect sizes for within-subject changes were computed as paired-samples Cohen's d_z, defined as the mean difference divided by the SD of the difference scores ($d_z = \bar{D}/SD_D$), with 95% confidence intervals derived from the t-statistic and degrees of freedom.

RESULTS

Section 1: Sociodemographic Characteristics of the Participants

Table 1: Frequency (percentage) distribution of sociodemographic characteristics of the sample. (N=60)

slno	Variable	category	Frequency (f)	Percentage (%)
1	**Age**			
		21-22 years	4	6.60%
		23-24 years	54	90%
		Above24 years	2	3.33%
2	**Gender**			
		Male	15	25%
		Female	45	75%
3	**Religion**			
		Hindu	18	30%
		Christian	2	3.33%
		Muslim	40	66.60%
4	**Monthly income**			
		Below-50000	20	33.30%
		50000-80000	25	41.60%
		Above-80000	15	25%

A total of 60 seventh-semester B.Sc. Nursing students participated in the study. The vast majority of participants (n=54, 90.0%) were aged between 23 and 24 years. Regarding gender distribution, three-fourths of the cohort were female (n=45, 75.0%), while males accounted for one-fourth (n=15, 25.0%).

In terms of religious affiliation, two-thirds of the participants identified as Muslim (n=40, 66.7%), followed by Hindu (n=18, 30.0%) and Christian (n=2, 3.3%). Analysis of monthly family income revealed that 41.7% (n=25) had a family income between ₹50,000 and ₹80,000, one-third (n=20, 33.3%) reported an income below ₹50,000, and one-fourth (n=15, 25.0%) reported an income exceeding ₹80,000.

Section 2: Knowledge Regarding Prevention of High-Risk Behaviour

Prior to the intervention, the majority of nursing students exhibited moderate knowledge (n=35, 58.3%), followed by good knowledge (n=14, 23.3%), poor knowledge (n=10, 16.7%), and excellent knowledge (n=1, 1.7%). Following the implementation of the nurse-led psychosocial awareness program, a substantial positive transition was observed: over half achieved good knowledge (n=35, 58.3%), over one-third attained excellent knowledge (n=21, 35.0%), and only 6.7% (n=4) remained in the moderate knowledge category, with no participants remaining in the poor knowledge tier.

Table 2 : Frequency and Percentage Distribution of Knowledge Levels

N=60

Knowledge level	Score range	pretest	%	posttest	%
Very poor	0-3	0	0%	0	0%
Poor	6-Apr	10	16.67%	0	0%
Moderate	9-Jul	35	58.33%	4	6.67%
Good	11-Oct	14	23.33%	35	58.33%
Excellent	12	1	1.67%	21	35%

Table 3: Effectiveness of the Awareness Program on Knowledge Scores (N=60)

Assessment	Mean ± SD	Mean Difference (95% CI)	Paired t (df)	p-value	Effect size d_z (95% CI)
Pre-Test	8.15 ± 1.79	2.71 (2.28 to 3.14)	t(59)=13.68	<0.001**	1.77 (1.42 to 2.11)
Post-Test	10.86 ± 1.04				

Statistically significant at $p < 0.001$.

As presented in Table 3, the overall mean knowledge score increased from 8.15 ± 1.79 (out of 12) at the pre-test to 10.86 ± 1.04 at the post-test, reflecting an absolute mean gain of 2.71 ± 1.53. Inferential analysis using a paired t-test demonstrated that this enhancement was statistically significant ($t(59) = 13.68, p < 0.001$), with a large effect size ($d_z = 1.77$,95% CI 1.42–2.11), providing strong empirical support for hypothesis H_1.

Section 3: Attitude Regarding Prevention of High-Risk Behaviour

At baseline, nearly two-thirds of the nursing students demonstrated a moderate attitude (n=39, 65.0%), one-fourth exhibited an unfavourable/poor attitude (n=15, 25.0%), and only 10.0% (n=6) demonstrated a favourable/good attitude regarding the prevention of high-risk behaviour. Following the nurse-led psychosocial awareness program, a notable positive shift was observed: the proportion of students with a good attitude increased fourfold to 40.0% (n=24), 58.3% (n=35) maintained a moderate attitude, and participants with a poor attitude dropped substantially to 1.7% (n=1).

Table 4. Distribution of sample according to attitude of nursing students.

Attitude level	Score range	Pre-test	%	Post-test	%
Very poor	22-Oct	0	0%	0	0%
poor	23-33	15	25.00%	1	1.70%
moderate	34-40	39	65.00%	35	58.30%
good	41-47	6	10%	24	40%
Excellent	48-50	0	0%	0	0%

Table 5: Effectiveness of the Awareness Program on Attitude Scores (N=60)

Assessment	Mean ± SD	Mean Difference (95% CI)	Paired t (df)	p-value	Effect size d_z (95% CI)
Pre-Test	35.78 ± 3.89	3.95 (3.09 to 4.81)	t(59)=8.86	<0.001**	1.14 (0.86 to 1.42)
Post-Test	39.73 ± 3.22				

Statistically significant at $p < 0.001$.

As shown in Table 5, the overall mean attitude score significantly increased from 35.78 ± 3.89 (out of 50) at pre-test to 39.73 ± 3.22 at post-test, yielding an absolute mean improvement of 3.95 ± 2.98. Paired t-test analysis confirmed that this positive shift was statistically significant ($t(59) = 8.86, p < 0.001$), with a large effect size ($d_z = 1.14$,95% CI 0.86–1.42), providing empirical validation for hypothesis H_2.

DISCUSSION

The present study evaluated the impact of a nurse-led psychosocial awareness program on knowledge and attitudes regarding high-risk behaviour prevention among undergraduate nursing students. The findings demonstrated a statistically significant enhancement in knowledge scores from 8.15 ± 1.79 to 10.86 ± 1.04 ($t(59) = 13.68, p < 0.001$), alongside a notable improvement in positive attitude scores from 35.78 ± 3.89 to 39.73 ± 3.22 ($t(59) = 8.86, p < 0.001$). Effect sizes were large for both outcomes ($d_z = 1.77$ for knowledge; $d_z = 1.14$for attitude), indicating substantial practical significance beyond statistical significance. These results corroborate previous literature indicating that structured, pedagogical suicide-prevention initiatives significantly elevate clinical competency and foster supportive attitudes among nursing trainees.journals.

The substantial gains observed in both domains are largely attributable to the multimodal instructional design of the intervention. Rather than relying solely on passive didactic lectures, the integration of audiovisual aids, interactive case discussions, and experiential role-play exercises provided students with safe opportunities to practice crisis communication, de-escalation, and referral pathways. The baseline prevalence checklist findings further underscore the urgency of early identification, peer gatekeeper training, and accessible institutional counselling services. Taken together, these findings strongly advocate for embedding structured psychosocial and suicide-prevention training into core undergraduate nursing curricula.

LIMITATIONS

- **Study Design:** The pre-experimental one-group pre-test–post-test design lacked a concurrent control group, limiting causal inferences due to potential testing or history effects.
- **Sampling and Generalizability:** The investigation utilized non-probability convenience sampling with a sample size of 60 students from a single institution, which restricts the generalizability of the findings to broader nursing populations.
- **Evaluation Timeline:** Outcomes were evaluated immediately post-intervention without longitudinal follow-up, leaving long-term retention of knowledge and attitudinal sustainability unassessed.
- **Self-Report Bias:** Reliance on self-administered questionnaires and checklists may introduce social desirability bias, particularly concerning sensitive topics such as self-harm and suicidality.

RECOMMENDATIONS

- **Methodological Replication:** Replicate the investigation using multi-centre randomized controlled trials (RCTs) or quasi-experimental two-group designs with active control arms to confirm treatment efficacy.

- **Longitudinal Evaluation:** Incorporate prospective follow-up intervals (e.g., at 1, 3, and 6 months) to determine the retention of knowledge and persistence of favourable attitudes over time.
- **Curricular Integration:** Formalize nurse-led psychosocial awareness and crisis-intervention modules within standard undergraduate nursing curricula across universities.
- **Skill-Based Competency Assessment:** Future studies should implement Objective Structured Clinical Examinations (OSCEs) or simulated standardized patient scenarios to evaluate real-time gatekeeping skills and clinical de-escalation competencies alongside self-reported scores.

CONCLUSION

The nurse-led psychosocial awareness program proved highly effective in elevating knowledge and cultivating supportive attitudes toward high-risk behaviour prevention among seventh-semester B.Sc. Nursing students. By combining interactive discussions with practical role-playing, the intervention successfully equipped prospective nurses with essential competencies for identifying warning signs and facilitating peer mental health referrals. Incorporating structured psychosocial awareness frameworks into professional healthcare education represents a vital strategy for addressing youth vulnerability and promoting campus-wide psychological well-being.

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