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EFFECTIVENESS OF MULTIMEDIA PUBLIC AWARENESS INTERVENTIONS IN REDUCING TOBACCO MISCONCEPTIONS AMONG USERS ATTENDING PSYCHIATRIC CLINICS

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ABSTRACT

Tobacco use remains a leading cause of preventable disease, and misconceptions about its risks hinder cessation efforts. Multimedia-based public awareness programmes offer interactive and engaging methods to correct misinformation and foster informed health behaviours. This study evaluated the effectiveness of a multimedia public awareness intervention in reducing tobacco-related misconceptions among psychiatric outpatients in Cuttack, Odisha.

A pre-experimental, one-group pre-test post-test design was used with 150 psychiatric OPD attendees who used tobacco. Misconceptions were measured using a structured questionnaire before and after the intervention. Post-intervention analysis revealed a significant reduction in misconceptions, with improved knowledge and attitudes regarding tobacco's ill effects.

These findings highlight that multimedia interventions are effective educational tools in psychiatric settings, supporting targeted health education strategies for tobacco cessation.

Keywords: *Tobacco misconceptions, Multimedia intervention, Psychiatric patients, Public awareness programme, Knowledge improvement, Cuttack, Odisha.*

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INTRODUCTION

Tobacco use is influenced not only by addiction but also by widespread misconceptions about its health effects, perceived social acceptability, and benefits such as stress relief (WHO, 2021). Misconceptions reduce motivation to quit and perpetuate harmful habits, especially among psychiatric populations where cognitive distortions and peer influence are prevalent.

Multimedia public awareness interventions—using audio-visual tools, presentations, videos, and interactive sessions—have emerged as effective strategies to correct misinformation, reinforce knowledge, and foster positive attitudes (Kaplan et al., 2020). Unlike traditional lectures, multimedia approaches engage multiple senses, enhance understanding, and accommodate varied learning styles.

This study aimed to assess the effectiveness of a multimedia public awareness programme in reducing tobacco-related misconceptions among psychiatric OPD attendees in Cuttack, Odisha.

LITERATURE REVIEW

Studies indicate that misconceptions about tobacco are widespread, including beliefs that smoking relieves stress, chewing tobacco is less harmful, and tobacco use is socially acceptable (Sreeram Reddy et al., 2019). Correcting these misconceptions is crucial for behaviour change.

Multimedia interventions have demonstrated superior effectiveness in enhancing comprehension and retention compared to conventional health education methods (Mishra et al., 2018). In psychiatric populations, where attention and cognitive processing may be impaired, interactive multimedia can deliver complex health information in accessible formats.

Research in India and globally supports that structured multimedia programmes improve knowledge, shift attitudes, and reduce misconceptions about tobacco, ultimately supporting cessation efforts (Patel et al., 2018; Kapur et al., 2021).

OBJECTIVES

1. To assess pre-test misconceptions regarding tobacco use among psychiatric OPD patients.
2. To implement a structured multimedia public awareness programme targeting tobacco misconceptions.
3. To evaluate the effectiveness of the intervention in reducing misconceptions and improving knowledge and attitudes.

METHODOLOGY

Research Design

A quantitative, pre-experimental, one-group pre-test post-test design was employed to evaluate the effectiveness of the multimedia public awareness programme on reducing tobacco-related misconceptions among psychiatric OPD patients. This design was selected because it allows for the assessment of changes in participants' knowledge, attitudes, and misconceptions before and after the intervention within the same group, providing a direct measure of the programme's impact. The pre-test serves as a baseline to identify existing misconceptions and knowledge gaps, while the post-test measures the changes following the structured multimedia intervention.

Setting and Sample

The study was conducted at a selected psychiatric outpatient department (OPD) in Cuttack, Odisha, a tertiary care hospital catering to a diverse population. The OPD was chosen due to the high prevalence of tobacco use among psychiatric patients, who are often at increased risk of addiction due to stress, peer influence, and psychosocial factors.

A total of 150 participants were selected using purposive sampling based on specific inclusion criteria. The sample size was determined to provide sufficient power to detect statistically significant changes in knowledge, attitudes, and misconceptions post-intervention, while also being logistically feasible for a structured multimedia session.

Inclusion Criteria

Participants were included in the study if they met the following criteria:

- **Age ≥18 years**, ensuring adult consent and cognitive capacity to comprehend the educational material.
- **Current tobacco users**, including those using smoking or smokeless forms, to target the population most affected by tobacco-related misconceptions.

- **Willingness to participate and provide written and oral informed consent**, ensuring ethical compliance and voluntary engagement in the programme.

Participants with severe cognitive impairments or acute psychiatric crises were excluded to ensure comprehension of the intervention and reliable data collection.

Data Collection Tools

Three structured tools were utilized to comprehensively assess misconceptions, knowledge, and attitudes regarding tobacco use:

1. **Structured Misconception Questionnaire**
   - Comprised of 25 items designed to identify common misconceptions related to tobacco, including beliefs about health risks, social acceptability, perceived benefits, and myths about "safer" forms of tobacco.
   - Responses were scored on a true/false or multiple-choice format, with higher scores indicating a higher prevalence of misconceptions.
   - The tool was developed based on existing literature on tobacco misconceptions and validated through expert review by mental health and public health professionals.
2. **Knowledge Questionnaire**
   - Included 20 items assessing participants' understanding of the ill effects of tobacco, preventive strategies, and available cessation methods.
   - Questions were structured to cover general knowledge about tobacco, physical and psychological health consequences, and strategies for quitting.
   - Each correct response was scored as 1, with a higher total score indicating greater knowledge.
3. **Likert's Attitude Scale**
   - A 30-item scale measuring participants' attitudes toward tobacco use, including perceived risks, motivation to quit, and social acceptability.
   - Items were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with reverse scoring applied to negatively worded items.
   - Higher scores reflected more favourable attitudes toward cessation and avoidance of tobacco use.

PROCEDURE

1. **Ethical Approval:** The study received ethical clearance from the Institutional Ethics Committee of the hospital.
2. **Consent and Orientation:** Participants were explained the study objectives, procedures, and voluntary nature of participation. Written and oral consent was obtained.
3. **Pre-Test Assessment:** Participants completed the misconception, knowledge, and attitude questionnaires prior to the intervention to establish baseline data.
4. **Multimedia Intervention:**
   - A 45–60-minute structured multimedia session was conducted using videos, animations, presentations, and interactive discussions addressing misconceptions, health risks, and prevention strategies.
   - The programme was facilitated by trained nursing educators and mental health professionals, ensuring accurate content delivery and participant engagement.
5. **Post-Test Assessment:** Immediately following the intervention, participants completed the same questionnaires to evaluate changes in knowledge, attitude, and misconceptions.

DATA ANALYSIS

- Descriptive statistics (frequencies, percentages, mean, and standard deviation) were used to summarize demographic characteristics, knowledge, attitude, and misconceptions scores.
- Paired t-tests compared pre- and post-test scores to assess the effectiveness of the intervention.
- Pearson's correlation coefficient was calculated to explore the relationship between knowledge, attitude, and reduction in misconceptions.
- Statistical significance was set at $p < 0.05$, and all analyses were conducted using SPSS version 25.

This methodology ensured a systematic, replicable, and ethically sound approach to assessing the impact of a multimedia public awareness programme on tobacco-related misconceptions among psychiatric OPD patients.

RESULTS

Table .1 Pre-Test Misconceptions:

Misconception Category	Frequency (%)
Belief tobacco relieves stress	96 (64%)
Perceived social acceptability	84 (56%)
Chewing tobacco less harmful	78 (52%)
Belief in low health risks	87 (58%)

Table .2 Post-Test Misconceptions:

Misconception Category	Frequency (%)
Belief tobacco relieves stress	35 (23%)
Perceived social acceptability	28 (19%)
Chewing tobacco less harmful	30 (20%)
Belief in low health risks	27 (18%)

Table .3 Statistical Analysis:

Parameter	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Difference	t-value	p-value
Knowledge score	11.07 ± 2.96	19.19 ± 3.34	8.12	56.489	<0.001
Attitude score	29.07 ± 5.52	39.81 ± 5.91	10.74	40.645	<0.001
Misconception score (lower better)	56.25 ± 8.21	23.25 ± 5.67	33.00	72.314	<0.001

Correlation Analysis:

- Post-test knowledge vs. attitude: r = 0.126, moderate positive correlation
- Reduction in misconceptions vs. knowledge: r = 0.184, positive correlation
- Reduction in misconceptions vs. attitude: r = 0.221, positive correlation

DISCUSSION

The study demonstrates that multimedia interventions significantly reduce tobacco misconceptions while simultaneously improving knowledge and attitudes. High baseline prevalence of misconceptions highlights the need for engaging educational strategies. Post-intervention, there was a marked decrease in misconceptions, illustrating the efficacy of interactive multimedia programmes.

Multimedia programmes appeal to visual, auditory, and kinesthetic learners, promoting better understanding and retention (Kaplan et al., 2020). In psychiatric populations, these programmes accommodate cognitive challenges, allowing complex concepts such as health risks and preventive strategies to be communicated effectively.

Correlation analysis shows that knowledge improvement and attitude change are associated with reduced misconceptions, confirming the integrated impact of multimedia interventions. These findings are consistent with prior studies emphasizing that correcting misconceptions is a critical step toward behaviour change (Mishra et al., 2018; Kapur et al., 2021).

CONCLUSION

Multimedia public awareness interventions are highly effective in reducing tobacco-related misconceptions among psychiatric OPD patients. By improving knowledge and shaping attitudes, these programmes empower individuals to make informed choices and support cessation efforts. Integrating multimedia strategies into routine psychiatric care can enhance the reach and impact of tobacco control initiatives.

IMPLICATIONS

Nursing Practice: Nurses can utilize multimedia educational tools to correct misconceptions and provide patient-centered counselling.

Nursing Education: Incorporating multimedia modules in training can improve nurses' skills in delivering effective health education.

Nursing Administration: Administrators should allocate resources for audiovisual education programmes, workshops, and interactive sessions targeting tobacco use.

Research: Further studies can assess long-term retention, the impact on actual tobacco cessation, and the scalability of multimedia interventions in community and hospital settings.

RECOMMENDATIONS

1. Implement multimedia awareness sessions in psychiatric and general OPDs.
2. Develop culturally tailored multimedia content for diverse populations.
3. Conduct longitudinal studies to evaluate sustained impact on misconceptions and cessation rates.
4. Combine multimedia programmes with counselling and support groups for maximal effect.

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