

ORIGINAL ARTICLE

Driving Malaria Elimination: Transition from Traditional Prevention to High-Tech Intervention, Knowledge sharing through Webinar

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ABSTRACT

This study titled “Impact of webinar regarding transition from traditional prevention to high-tech intervention of malaria among nursing students in selected colleges at Uttarpradesh.”

Objectives: To assess pretest knowledge regarding transition from traditional prevention to high-tech intervention of malaria among nursing students, to organize and conduct webinar regarding transition from traditional prevention to high-tech intervention of malaria, to find out the impact of webinar.

Design and setting: Pre-experimental one group pre-test & post-test design was utilized.

Methods and materials: Through Purposive sampling technique 140 participants were chosen.

Results: After webinar, in posttest findings stated that the majority of participants 86 (61%) attained adequate knowledge, 46 (33%) students had moderate knowledge. Only 8 participants (6%) had inadequate knowledge category. The association between pretest knowledge and sociodemographic variables showed a significant relationship with year of studying ($\chi^2 = 12.02$, $P < 0.05$) indicating that knowledge level is associated with age factor and other variables did not influence knowledge transition from traditional prevention to high-tech intervention webinar.

Conclusion: The study showed that through this malarial day webinar, nursing student's gained knowledge regarding new high-tech malarial elimination strategies.

KEYWORDS

- Impact • Webinar • Transition • Traditional Prevention • High-Tech Intervention
- Malaria

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INTRODUCTION

In the current scenario, worldwide around 3.2 billion people are still at risk of getting the malaria. Three percent of the world's malaria cases are in India. India aims to eradicate malaria by 2030 and be free of the disease by 2027.¹ The front-line healthcare workers are nurses. A strong grasp of malaria elimination is crucial because it helps nurses to make early diagnosis, give appropriate treatments, and clarify community misconceptions regarding the disease. Transmission rates are directly lowered by their expertise. They are kept up to date on the latest developments in the eradication of malaria through webinars, seminars, workshops, and other events.

A quantitative study employed a random sampling technique, yielding a sample size of 61. According to the study, 88.5% of the participants had good understanding of how to diagnose a positive case of malaria, indicating that the 70.5% lecture content had prepared the participants to make a diagnosis and to be vigilant in spotting 90.1% risk factors. The main finding of the study was that third-year nursing students had diagnostic expertise and they can handle a Malaria positive case.²

The Malaria Consortium's 2025–2028 plan outlines the pillars that direct our work and the facilitators that allow us to make real, scalable, and long-lasting impacts. Malaria Consortium is dedicated to disseminating the expertise and experience as a preeminent technical organization via frequent webinars. Aim to improve the management, control, and eradication of illnesses like malaria by exchanging information and evidence. This solid base is expanded upon in the 2025–2028 strategy. It makes it possible for communities to make it possible for communities to make it happen.³

One of the serious public health concerns is this vector borne disease. The government of Mandla, ICMR, and FDEC India collaborated and demonstrated a Project. Controls were used throughout the project to make effective management and operational choices through mobile app. Due to effective supervision of anti-malarial activities cases were reduced in Mandla.⁴

Through direct interaction with nurses in Cameroonian villages surrounding Bamenda and their American counterparts, a study

was conducted as a critical first step towards building a culturally compelling intervention plan for malaria prevention/treatment. This study demonstrates a low-cost method to understand the daily experiences of medical staff. It is the first step toward building lasting, effective, and culturally relevant malaria interventions.⁵

About 85% of the world's malaria cases are found in India and sub-Saharan Africa, and India is dedicated to eradicating the disease by 2030. To show that indigenous malaria may be eradicated quickly, two innovative projects at Madhya Pradesh were started separately. The MEDP documented zero transmission for six consecutive months and reduced malaria incidence by 91%. Malaria cases decreased by 88% as a result of the DAMaN project.⁶

A descriptive study conducted and 50 samples from Mangalore were chosen. The majority of respondents (60%) had strong knowledge, 40% had moderate knowledge, and no one had poor understanding regarding malaria prevention, according to the study's findings.⁸ Hence it is very necessary to improve the health worker's knowledge on new high-tech malarial intervention strategies to eradicate malaria by 2030.⁷

Problem statement

"Impact of webinar regarding transition from traditional prevention to high-tech intervention of malaria among nursing students in selected colleges at Uttar Pradesh"

Objectives of study

- To evaluate the pre-test knowledge regarding transition from traditional prevention to high-tech intervention of malaria among students in selected nursing colleges at Uttarpradesh.
- To organize and conduct webinar regarding transition from traditional prevention to high-tech intervention of malaria.
- To assess the effectiveness of webinar regarding transition from traditional prevention to high-tech intervention of malaria among nursing students.
- To find the association between knowledge with demographic variables.

Hypothesis

H₁: There will be significant difference between pretest and posttest knowledge transition from traditional prevention to high-tech intervention of malaria among students in selected nursing colleges at Uttarpradesh.

H₂: There will be significant association between knowledge with demographic variables.

Assumptions

- Malaria transition webinar may bridge nursing student's knowledge from traditional prevention (bed nets, vector control) with high-tech interventions (genomic surveillance, AI-driven RDTs, vector genetic modification) which will be highly effective.
- It may update the nursing workforce of the future by greatly increasing global public health competency.

MATERIAL METHOD

Research approach and design:

Quantitative pre-experimental one group pretest and post-test design

Sampling Technique

By nonprobability purposive sampling technique there were 140 participants chosen.

Accessible Population

Nursing students who attended webinar from selected Colleges in Uttar Pradesh especially from colleges like Shail Institute of Nursing, Chiranjeev Nursing Institute, KNDM College of Nursing and Paramedical Science, Chiranjeev Nursing Institute, SCPM College of Nursing and Paramedical Sciences.

Criteria for sample selection

Inclusive criteria

- Nursing students who are studying in selected college at Uttar Pradesh.

Exclusive criteria

- Students who are not attending the webinar.
- Nursing Faculties those who attended were excluded in this study.

Description of the tool

The study tool considered of two sections,

Section A: Socio-demographic variables consist of baseline information of teenagers regarding age, sex, year of studying, residential status, previous knowledge etc.

Section B: Multiple-choice questionnaire regarding transition from traditional prevention to high-tech intervention of malaria.

RESULTS

This study Finding reveals that, maximum students belong to the age 20 years 65 (46%), female participants 112 (80%), most of them are studying third year 71 (51%), more students were from urban areas 77 (55%) and maximum 85 (61%) not knowing the new malarial elimination strategies. In pretest, 23 (16%) gained adequate, 73 (53%) had moderate and 44 (31%) scored inadequate knowledge whereas in posttest findings stated that the majority of participants 86 (61%) attained adequate knowledge, 46 (33%) students had moderate knowledge. Only 8 participants (6%) had inadequate knowledge category. The association between pretest knowledge and sociodemographic variables showed a significant relationship with year of studying ($\chi^2 = 12.02$, $P < 0.05$) indicating that knowledge level is associated with year of study and other variables did not influence knowledge.

CONCLUSION

Educational webinar was very successful in bridging the knowledge gap among nursing students about advanced malaria elimination strategies. Webinars and other digital educational interventions are very effective at improving students' knowledge and preparing future healthcare professionals to switch from conventional prevention methods to high-tech interventions.

Recommendations

- Effect of virtual webinar and traditional class room lectures on malarial high-tech intervention can be compared.
- A descriptive approach study can be done.
- To find impact of e-learning modules as standard pedagogical tools to rapidly

update students on evolving global health strategies, an experimental projects can be conducted.

- Study can be done using a larger, multi-centric sample size in various colleges of Uttarpradesh state to generalize the findings.

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