The Indian Journal of Pediatrics (April 2021) 88(4):372–373
https://doi.org/10.1007/s12098-020-03542-2

SCIENTIFIC LETTER

Evaluation of an Online Interactive IMNCI Training Program in Nursing Students

Poonam Joshi[1] · L. Levis Murry[1] · Rimple Sharma[1] · Cecilia Mary[1] · Kamlesh Kumari Sharma[1] · T. K. Jena[2] · Rakesh Lodha[3]

Received: 21 August 2020 / Accepted: 12 October 2020 / Published online: 4 November 2020
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To the Editor: To reduce the under-five mortality, an integrated management of neonatal and childhood illnesses (IMNCI) program was launched in India [1, 2]. The level of education and training imparted to health professionals during the pre-service period influences analytical approach during patient care [3, 4]. In the B.Sc. Nursing course, students receive IMNCI training during their third year of study, using multimodal approach including interaction with facilitator and the use of student's handbook, chart booklets, videos, role plays, and hands-on clinical sessions. COVID-19 pandemic has made face-to-face teaching impractical, and education is largely imparted online. With this background, we decided to test the effectiveness of a 2-wk online, interactive training program administered through a learning management system SARAL (Student Advanced Resources And Learning) in terms of knowledge gain and acceptability of program. The study was approved by Ethics committee. The training program included self-reading sessions of uploaded e-modules of IMNCI (prepared by UNICEF) and self-assessment exercises within the module; web-based daily interactive session with facilitators, and video viewing sessions on sick young infants and children, for a period of 3 h per day. Training was imparted in small groups with facilitator: student ratio of 1:14–15. A knowledge questionnaire and semi-structured acceptability performa (10 items) with 5-point Likert scale [strongly agree (5), agree (4), uncertain (3), disagree (2) and strongly disagree (1)] were used for data collection. Three open-ended questions "what the participants liked the most in the entire online IMNCI training program, what they did not, and suggestions to improve the training program" were analyzed separately. There was significant improvement in the knowledge scores of students [$n = 72$, mean age: 22.06 ± 1.32 y] after the training (14.67 ± 4.07 vs. 24.32 ± 2.54, $p < 0.01$). The mean acceptability score of the students was 39.02 ± 3.91 (Supplementary Table 1). Majority of students (60, 83.3%) liked the interactive online session followed by watching videos (40, 55.5%), module reading (25, 34.7%) and self-assessment in each module (44, 61.1%). Students gave suggestions to include treatment part along with assessing and classifying sick young infant and child in the videos (18, 25%), and addition of formative online assessment in the training program (9, 12.5%). In the present study actual hands-on clinical sessions could not be arranged for the students due to COVID-19 pandemic. However, we tried to compensate for the clinical sessions by substituting with interactive videos covering history taking, assessing young infants and children for signs of sickness, classifying them, preparing and administering medication at the clinic as part of pre-referral treatment and preparing a referral note etc. Single center study done on a small number of nursing students further limits the generalizability of the study findings. One of the essential requirements for online training programs is the availability of a dedicated e-learning platform for the students. We recommend that colleges should equip themselves with e-learning platform in order to provide online interactive training to the students for essential module based courses such as IMNCI.

Compliance with Ethical Standards

Conflict of Interest None.

Electronic supplementary material The online version of this article (https://doi.org/10.1007/s12098-020-03542-2) contains supplementary material, which is available to authorized users.

✉ Poonam Joshi
pjoshi495@gmail.com; pjoshi69@rediffmail.com

[1] College of Nursing, AIIMS, New Delhi, India

[2] School of Health Sciences, Indira Gandhi Open University, New Delhi, India

[3] Department of Pediatric Medicine, AIIMS, New Delhi, India

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