Development and Implementation of Module for Medical Graduates to Improve Socio-cultural Sensitivity towards People Living with HIV

Abstract

Background: Health professionals are documented as an important cause for stigmatizing people living with HIV (PLHIV). Since traditional teaching on HIV in India does not address cultural competencies, medical graduates lack sociocultural sensitiveness while addressing the health needs of PLHIV. Aim: The aim of this study is to develop and to implement a module for medical graduates to improve their sociocultural sensitivity toward PLHIV. Methodology: A module was designed and introduced to address the core sensitive issues in HIV among medical graduates with the help of trained faculty. It included community education sessions including interaction with PLHIV to address cross-cultural issues and understand their health needs. Feedback for the perception of faculty and students was obtained. Knowledge and skills improvement was assessed through pre- and post test and direct observation of procedural skills (DOPS). Results: Mean feedback score was high for all the components covered by the module. It was found to be more for “usefulness of module” (4.91 ± 0.27836 on a scale of 5) than other components of the module. Feedback by faculty showed almost perfect agreement on “improvement of student’s clinical skills” and “bringing perfection in their future practice” across multiple raters. Multiple response open-ended feedback showed, 78 (19%) responses affirmed improvement in communication skills with training in this module. Pre- and post test mean score for knowledge showed an increase (22.1 to 26.49). Mean skills improvement as per expectations were 86.81 and beyond expectations were 5.34. Conclusions: Training the medical graduates in structured HIV specific module improves their socio-cultural sensitivity toward PLHIV and is perceived useful.

Keywords: Medical graduates, module, people living with HIV/AIDS, sociocultural sensitivity

Introduction

India has the highest number of medical colleges in the world. This unprecedented growth has occurred in the past few decades in response to increasing health needs. The curriculum of undergraduate medical courses in India needs a major reform to handle more complex health problems.

HIV/AIDS is a one of the tough problems which is perpetuated by high-risk behavior, lack of a concrete cure, attached stigma, and discrimination. People living with HIV and AIDS (PLHIV) not only face discrimination from the society but also from the healthcare professionals during their day to day encounter in the hospitals. In this context, bridging the gap between this marginalized group and the health and social system is a tremendous task in a country like India where sexual matters are considered as taboo and rarely discussed.

PLHIV face discrimination in the society. Health professionals are often perceived to be an important cause of stigma for PLHIV.[1,2] Conventional teaching on HIV/AIDS in India does not address cultural competencies.[3] Therefore, medical graduates lack socio-cultural sensitiveness in addressing the health needs of this marginalized population group restricting their access to mainstream health-care system.[4]

Hence, it was anticipated that administering an HIV-specific module would improve their overall socio-cultural sensitivity toward PLHIV. The present study was conducted with an objective to develop a standard module for same and its implementation among medical graduates, assess the outcome and perception of the faculty and students.

Methodology

The study was carried out with 106 MBBS third professional students posted in...
A module was designed by the research team adapting the WHO guideline for teaching HIV/AIDS in medical schools.[1] Following the AETC (AIDS Education and Training Centre) model,[6] a three-tier activity was designed to enhance the cultural sensitivity comprising of awareness, attitude, and skills. The module covered core sensitive issues in HIV such as doctor–patient relationship, values and belief, cultural and epidemiological aspects, life cycle events, and cross-cultural communication.[7-14] The 10 h module consisted of six sessions such as didactic lecture, group discussion (think pair share), cinemeducation, case scenario discussion, and role play. Interaction with PLHIV volunteers was included, with appropriate measures to ensure confidentiality and comfort, with an objective to address cross-cultural issues and understand their health needs. The module was validated by peer experts and pilot tested on the 7th semester students. Principal components of the feedback questionnaires were analyzed and internal consistency checked (Cronbach’s alpha = 0.76) by independent experts.

Feedback on the module and its implementation was obtained from faculty and students using predesigned, pretested, and validated anonymous questionnaires comprising of five-point Likert scale. Students were also asked about the future utility of this module through a closed-ended multiple response question. Qualitative information about the knowledge gained from training in this module and its utility in medical career was obtained from the faculty narratives. They were transcribed, translated, coded for thematic analysis, and analyzed by multiple raters for reliability. Pre-and post-comparison test was conducted with the same sets of validated questions to evaluate the improvement in knowledge. Evaluation of skills assessed through DOPS and feedback was given to the students.

Collected data were entered into MS excel worksheet (version 2010) and analyzed using SPSS (version 20) software. Mean and standard deviation were calculated. Student t test was used to compare between 2 means while analysis of variance was used to compare more than 2 means. For categorical variables, the number and percentage distribution were calculated. The level of significance was set at P < 0.05. Kappa score was used to check reliability.

### Results

Feedback of the module by the faculty included in this project showed high mean scores for ability to sensitize about PLHIV and their health needs. There is no significant mean difference (P > 0.05) between different components of the modules, and therefore, all the components have a high agreement. The mean score was found to be more for “usefulness of module” (4.91 ± 0.27836 on a scale of 5) than other components of the module [Table 1].

Similarly, feedback of the module among students showed that there was no significant mean difference (P > 0.05) in all aspects, i.e., the students strongly agreed in all the aspects of the module in Likert scale. Mean score was found to be more in overall “quality” (4.6122 ± 0.65839) and “content” (4.6053 ± 0.66002) of module notes [Figure 1].

Perception of faculty and students about the outcome of the module [Table 2] suggested that the mean score is high in

| Module components questions | Faculty feedback (n=20) | Student’s feedback (n=106) |
|-----------------------------|-------------------------|----------------------------|
| Mean (scale of 5)±SD        | SE                      | 95% CI for mean            | P             | Mean (scale of 5)±SD | SE                      | 95% CI for mean            | P             |
|                             | Lower bound             | Upper bound                |                | Lower bound             | Upper bound                |                |
| Overall good quality of module notes and reading material | 4.8833±0.31577 0.07061 | 4.7356 | 5.0311 | 0.663 | 4.6122±0.65839 0.06395 | 4.4854 | 4.7390 | 0.705 |
| Relevant module for final MBBS | 4.7417±0.53660 0.11999 | 4.4905 | 4.9928 | | 4.5425±0.69505 0.06751 | 4.4086 | 4.6763 |
| Good content of module      | 4.8667±0.32714 0.07315 | 4.7136 | 5.0198 | | 4.605±0.66002 0.06411 | 4.4782 | 4.7325 |
| Good presentation of module | 4.8667±0.40681 0.09097 | 4.6763 | 5.0571 | | 4.5299±0.75691 0.07352 | 4.3841 | 4.6756 |
| Module is useful            | 4.9167±0.27836 0.06224 | 4.7864 | 5.0469 | | 4.4937±0.77491 0.07527 | 4.3445 | 4.6429 |
| Total                       | 4.8550±0.38098 0.03810 | 4.7794 | 4.9306 | | 4.5567±0.70949 0.03082 | 4.4962 | 4.6172 |

SD: Standard deviation; SE: Standard error; CI: Confidence interval
“achieving the objective” (4.95 ± 0.224) and (4.76 ± 0.578). The mean score was also high for “knowledge gained as per expectations” (4.85 ± 0.489) and (4.65 ± 0.633). Thematic analysis from the faculty narratives showed that a maximum number of responses (14/20) goes with the “improvement in clinical competency for students.”

Inter-rater agreement between the responses among faculty suggested that almost perfect agreement on the improvement of clinical skills (κ = 1) and perfection in their future practice (κ = 0.97) across multiple raters. However, there was a weak agreement on student’s clinical competency (κ = 0.46) and empathy toward patients (0.32). There was also no agreement on student’s capability on independent decision-taking (κ = 0.1) [Table 3].

Student’s feedback on future utility of the training on module collected through the multiple response instrument revealed that 78 (19%) responses mentioned improvement in communication skills followed by 67 (16%) affirming dealing with HIV patients in future in a more sensitive manner and 58 (14%) opinions saying that it will help them understanding HIV problem better due to module-based training.

Totally 106 students were assessed for gain in knowledge after implementing the module. The pre- and post comparison score (out of a total score of 30) showed the mean score as 22.1 and 26.49, respectively, which was statistically found to be highly significant (P < 0.01) [Figure 2].

![Figure 1: Mean comparison of responses on module](image)

| Table 2: Faculty and student perception about the outcome of the module (n=20) |
|-------------------------------------------------|-----------------|-----------------|-----------------|
| Perceptions                                          | Faculty (n=20) | Students (n=106) |               |
|                                                   | Mean likert±SD | Rank            | Mean likert±SD | Rank |
| Module training achieve the specified objectives    | 4.95±0.224     | 1               | 4.76±0.578     | 1    |
| Knowledge gained from training in this module met your expectations | 4.85±0.489     | 2               | 4.65±0.633     | 2    |
| Knowledge gained from training in this module help us while changing student’s understand towards PLHIV | 4.40±0.883     | 3               | 4.50±0.746     | 4    |
| Knowledge gained from training in this module help us while changing student’s perceptions towards PLHIV | 4.40±0.883     | 3               | 4.57±0.704     | 3    |

PLHIV: People living with HIV; SD: Standard deviation

| Table 3: Frequency distribution of thematic analysis from faculty narratives |
|-------------------------------------------------|-----------------|-----------------|
| Code | Main themes and sub themes | n (n=20) | κ[6] |
| 1    | Students will be clinically more competent   | 14      | 0.46 |
| 1a   | Will be able to prove themselves             |         |      |
| 1b   | Will become good clinicians                  |         |      |
| 2    | Students can improve their clinical skills   | 2       | 1    |
| 2a   | Clinically they will be more competent       |         |      |
| 2b   | Will demonstrate better skill in HIV care    |         |      |
| 3    | Students will be more independent taking decisions | 6      | 0.1  |
| 3a   | They will be more confident to handle PLHIV cases alone |         |      |
| 3b   | Students won’t be referring many cases and handle themselves |         |      |
| 4    | It will help the student build their clinical career | 5      | 0.73 |
| 4a   | It will arouse interest in HIV care among students |         |      |
| 4b   | This will be helpful to choose their career in HIV care |         |      |
| 5    | It can bring perfection to their future practice | 4      | 0.97 |
| 5a   | Overall improvement in understanding PLHIV can bring changes |         |      |
| 5b   | Multi technique learning will help better understanding |         |      |
| 6    | They will be more empathetic towards patients | 9      | 0.32 |
| 6a   | Students will show good patient communication skills |         |      |
| 6b   | Attitude towards PLHIV will change            |         |      |

PLHIV: People living with HIV
Evaluation of improvement in skills was conducted through DOPS. Students were judged on six criteria [Figure 3]. The study suggested that the skills met the expectations in all six DOPS stations such as history taking (81.13%), communication (84.90%), clinical examination (92.4%), patient-centered skill (81.13%), empathy and dignity (87.73), and reassurance (93.39%). Mean skill improvement as per expectations (5 to 7 score) were 86.81 and beyond expectations (7–9 score) was 5.34.

**Discussion**

The prepared module can be used appropriately by introducing it to the curriculum. Khademalhosseini et al. conducted a comparative study with the help of empathy score among medical students at both basic and clinical levels. It showed that the lowest empathy score was seen in the 7th year students (55.51), whereas the highest was among the 1st year students (65.50). Lin et al. in their study on empathy and avoidance in treating patients living with HIV/AIDS among service providers in China AIDS care found that empathy was higher among participants aged 31–40 years. They also found that nurses, younger providers, and providers of lower education tend to avoid contact with PLHIV. That strengthens our effort to introduce this educational intervention at this point to understand this population better and develop empathy among the medical graduates.

As most of the studies advocate introducing empathy and humanities at the beginning of the medical curriculum, the present study demonstrates that an improvement in cultural sensitivity can be achieved by the proper blending of knowledge and clinical practice focusing on marginalized population for a stigmatized disease.

A study conducted by Ozakgül, Şendir, Atav, and Kızıltan to find out the attitude and empathic tendencies of Turkish undergraduate nursing students toward HIV/AIDS patients suggested that attitudes and empathic tendencies are related to knowledge and exposure to patients. In their study, they also found that those students with more positive attitudes had higher empathic tendencies toward HIV/AIDS patients. In the present study, we also attempted to demonstrate that bringing positive attitude using more than one modalities of teaching improves the attitude and skills.

In another study conducted by Lange-Tichelaar et al., total 171 nurses from sub-Saharan Africa) Tanzania, South Africa and Rwanda completed the blended e-learning training program with onsite workshops and a 12-week distance-based self-study period. It was found that the overall knowledge increased up to 14.5% after completion of the training program. For each of these modules, the knowledge increase was significant ($P < 0.005$). This was compared with baseline AIDS attitude scores toward PLHIV and found to increase after completion of the training. On a scale from 1 to 6, the average score for empathy was 5.3. This supports our observation on increase in knowledge and empathy skill through a module based learning.

Some of the suggestions which came from the faculty were on condensing the module into few sessions, conducting a 360° assessment for students, involving lesbian, gay, bisexual, and transgender population into the interaction group, etc. More interactive session at the beginning of the module and taking feedback after the end of each part of the module were some of the other suggestions.

However, this study had few limitations too.

- Almost all students included in the study attend classes regularly. There is no representation of the students who do not attend classes regularly
- All the students of the same batch could not participate in this study because the only batch of students posted in Department was included
- The students could not go to the PLHIV houses to understand their social surroundings because of the fear of identification and subsequent ethical issues.

**Conclusions**

In this study, the core cultural issues related to HIV/AIDS were explored and sensitive issues such as doctor–patient relationship, values and belief, cultural aspects, life cycle events, and communication were addressed. This will help the medical graduates understand about the disease better and develop overall empathy.
Therefore, encouraging the medical graduates and providing them with an opportunity to get trained through an HIV-specific module will improve their socio-cultural sensitiveness toward PLHIV.

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Conflicts of interest

There are no conflicts of interest.

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