

# Impact of a Novel Approach for Undergraduate Medical Ethics Education in The Middle East and South Asia

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## Research Article

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# Abstract

## Background

Complexities of ethics education, combined with socio-cultural issues specific to the medical curricula of the developing country context, have created resource constraints that impact medical ethics education delivery in countries like Pakistan and Saudi Arabia. These constraints include the dearth of contextually relevant texts, shortage of trained teachers and confines in institutional regulations in the regions. Focused strategies are required to address these constraints. Workbook-based ethics learning (WBEL) is one such strategy based on a contextually relevant ethics education model.

## Purpose

This study aimed to evaluate the effectiveness of ethics education, delivered through the WBEL strategy, on students' learning and satisfaction in medical colleges of Pakistan and Saudi Arabia.

## Methods

A pre-post-test intervention study was conducted in two medical colleges, Jinnah Sindh Medical University, Pakistan and King Abdulaziz University, Saudi Arabia. An ethics course was structured using the WBEL strategy and delivered to early clinical years medical students. The impact on student learning was measured by pre-and-post administration of a set of Key Feature Questions (KFQ) and a Script Concordance Test (SCT). A twenty-eight-item course feedback questionnaire was developed to collect students' perceptions regarding the WBEL strategy.

## Results

Of the total 125 students who consented, 90 (72%) completed the pre-and post-test measures, and 103 returned the feedback forms at the two sites. The post-test scores in KFQs were significantly higher than pretest scores in both Pakistani and Saudi students ( $p$ -value  $< 0.001$ ). There was no significant pre-to-post difference in overall SCT scores ( $p = 0.057$ ). The majority of participants considered the overall course to be valuable. They provided positive feedback on the Workbook's usefulness and the enhancement of critical thinking within the course. Ethics case discussions, classroom quizzes, and reflective writing were considered most effective for learning during the course.

## Conclusion

The findings suggest that the WBEL is a promising way forward in medical ethics education as it resulted in a notable increase in participants' knowledge and ethical decision-making skills. The study also

provides evidence of feasibility for using the WBEL strategy for teaching ethics in resource-limited regions.

## Background

Competency in medical ethics is considered essential for medical graduates [1, 2]. It is reflected in the goals of formal curricula in almost all healthcare institutes and medical programs [3–5]. Achieving this goal has remained a complex task for educators around the World [6–9]. Additionally, the influences of the socio-cultural environment of a region or country further add to the complexities of this discipline [4, 10, 11]. The implications of this can be especially problematic for medical curricula in countries like Pakistan and Saudi Arabia, representing the Middle East and South Asian regions, which share features that make them different from most developed western cultures. These countries have several common resource constraints in relation to undergraduate medical ethics education [12]. These include non-availability of culturally relevant texts, a limited number of trained medical ethics teachers and institutional policies which do not support the implementation of ethics as an essential part of the curriculum [13]. To develop a successful approach to ethics education in the face of such constraints, a thoughtfully designed and contextually tailored educational approach is required [14–16].

An innovative educational strategy, named workbook-based ethics learning (WBEL), was developed using a robust consultative process undertaken in a prior study [17]. This innovative strategy is grounded in the principles of cognitive load theory and contextually relevant ethics education model (CREEM, Fig. 1).

The model is considered useful to scaffold the process of ethics education to provide culturally relevant learning experiences, safe and respectful environments for ethical discourse and opportunities for reflection and feedback [18]. The development and refinement of the WBEL through the consultative process [17] ensured that the strategy has the characteristics required for the effective delivery of ethics education. With these characteristics, the WBEL strategy has the potential to 1) be modified to suit the contextually relevant needs of the society where it is being implemented, 2) address the resource constraints to medical ethics education by providing contextual reading material and guidance to the teachers on effective delivery of ethics education, and 3) provide engaging exercises for social-learning activities, and structure for reflection and feedback, while ensuring that the cognitive load remains appropriate.

The purpose of the current study was to evaluate the effectiveness of the WBEL strategy on students' knowledge and ethical decision-making skills and engagement in the context of Pakistan and Saudi Arabia. This research's implications may contribute to the development of ethics education in other regions with similar context.

## Methods

The ethics approval for this study was acquired from the ethics review committee of King Abdulaziz University (reference no. 393 – 15), Jinnah Sindh Medical University (reference no. 2016-30), where the study was conducted, and the University of New South Wales (UNSW) (approval no. HC15640) Australia, where the primary author was enrolled as a PhD scholar. All methods were performed in accordance with the relevant guidelines and regulations of UNSW.

## Study design and sample size

This study employed a Quasi-experimental, pre-post-test intervention design. All the study participants received the intervention, the EWB, in an ethics course delivered through the WBEL strategy, and the study measured students' progress across and within the participating groups.

An *a priori* power analysis sample size calculation was performed using G\*Power, version 3, commonly used in the social, behavioural, and biomedical sciences [19]. The magnitude of the effect size was interpreted on Cohen's suggestions of a  $d$  of 0.30 as "small",  $d$  of 0.50 as "medium", and  $d$  of 0.80 as "large" [20]. A value between medium and large was estimated based on previous studies that used Script Concordance Test (SCT) [21–23] and Key Feature Questions (KFQ) [24] for assessing clinical reasoning in various situations, and discussion with the experts. The calculation revealed that an adequate sample size of 64 students has 90% power to detect an effect size of  $d = 0.6$  with an alpha of 0.05 (two sides).

## Participant recruitment

The ethics course was delivered to early clinical year students at the two medical schools: fourth-year students in a six-year program at Rabigh Faculty of Medicine at KAU in September 2017, and third-year students in a five-year program at Sindh Medical College at JSMU in March 2018.

The students attending the course in their respective settings were informed about the study and invited to participate by a non-faculty staff member. The courses' delivery was kept as similar in the two locations as possible, including the same primary facilitator. The course format included short, interactive lectures, video demonstrations, role-plays, case and topic discussions.

The pretest was conducted at the beginning, on the first day of the course. The students were asked to complete the feedback forms and the post-test at the end of the course. All the collected data were de-identified before analysis.

## The intervention

The ethics course designed using the WBEL strategy and spanning over 30 contact hours [25], structured using the WBEL strategy, was delivered in undergraduate medical programs at the two sites. This strategy used a workbook specifically designed through a robust consultative process [17] to enhance the delivery of the ethics content. The Workbook was designed as a complete resource to address the constraints introduced above. Figure 2 shows the content of the Workbook.

The content in the Workbook was sequenced to optimise the cognitive load for students [26, 27]. The initial part of the Workbook introduced users to course outcomes, teaching-learning methods used within the course, and a description of how to use the Workbook during the course. Each topic was introduced with some short reading material which provided an overview of the content in clear, easy to understand language to activate students' working memory. Specific learning outcomes for the topics (Fig. 3) and relevant material from national guides and codes of ethics were incorporated within the Workbook, along with the description of topics, where needed, in coloured boxes to make it user-friendly and to decrease the extrinsic load [28]. The reading was followed by interactive activities for students, designed as constructive learning experiences, with observation and reflection. Such constructive learning activities have shown to enhance students' learning [29]. The activities included case discussion vignettes, role-plays and video clips to initiate discussions with peers and provide a basis for collaborative, constructive learning [30]. Space for documenting students' reflections and faculty feedback is provided after every Workbook activity (Fig. 4).

Our main objective was to develop students' ability to identify and resolve potential ethical issues in their context and discuss contemporary ethical issues faced by physicians worldwide.

Each of the student attending the course received the Workbook to be used in the WBEL process. They used the Workbook to complete the following stages of learning (Fig. 1), derived from the CREEM [18]:

- Step 1: The Learning experience

The learning was triggered by an experience designed within the students' socio-cultural context. A case vignette, role-play or video clip with an ethical issue in healthcare delivery is used to trigger the learning process.

- Step 2: Assimilation, refinement and organisation

The student explores background information relevant to the ethical issues through the reading material in the Workbook to identify the information relevant to analyse the given context.

- Step 3: Experimentation, accommodation and consolidation

The learning process moves forward when the student tries to make sense of the new concepts by using the information to address the ethical issues, discuss what s/he has learned to enhance understanding of the issues within the context and make informed decisions to resolve the relevant issues.

The learning process is supported by the students' social interactions with peers and facilitator during the discourse. The students reflect on their newly gained experience and receive feedback from the facilitator, which further refines their understanding.

## **Evaluation tools**

Pre-and post-measures evaluated the effectiveness of the intervention in this study. Learners' views on the intervention were collected via a survey form. These measurement tools and the survey instrument are described below.

### **Pre-post-test measures:**

The WBEL strategy's effectiveness was evaluated using pre-and post-test administration of a Script Concordance Test (SCT) and Key Feature Questions (KFQ) specifically designed for this research. SCTs have been shown to assess students' ethical reasoning skills in situations with uncertainty [31]. They are highly suitable in situations where there can be more than one correct answer [32]. The SCTs in this study provided a means to assess students' decision-making abilities in relation to the given scenarios. They assessed students' ability to analyse their decisions when new information was introduced.

KFQ focuses on challenging aspects of clinical problems where students are more likely to make errors [33]. They are based on problem-solving in clinical case scenarios. In a typical KFQ, the case briefly describes a problem with a critical feature embedded in the description. The key feature forms the stem and is followed by one or more questions. The questions are aimed at key features or problems in the clinical case rather than factual knowledge. The learners are required to make relevant decisions by identifying the key features in the case [34]. KFQs have been used in various formats, including MCQ, short answer and True/False formats, in paper-pencil and computerised versions [35]. The SCT and KFQ items were developed explicitly for this study by one of the authors (MSS), following the recommendations given by Fournier and colleagues [36] and Lubarsky and colleagues [37]. The items were reviewed independently by the research team members (CB and AT) and four experienced ethics educators in the region to ensure relevance, content and face validity [38]. Twenty SCTs with three questions per vignette and ten KFQs with two questions in each were included in the final version of the test paper. Testing time of 90 minutes was considered adequate for this evaluation in this context [39]. Test takers were provided with a 30-minute orientation before the assessment, in which they were informed about the assessment process and tools.

### **Students' feedback:**

Written anonymous feedback from students was gathered to evaluate their satisfaction, impact on learning and feasibility of the intervention. This was done using the Course Feedback Questionnaire (CFQ), constructed by adapting two instruments:

- The Motivated Strategies for Learning Questionnaire (MSLQ), developed at the University of Michigan [40]. The original version of MSLQ consists of 81 items distributed across 15 scales. Each item is scored on a seven-point Likert-type measure. MSLQ is extensively used for theoretical and applied studies in diverse samples and settings [41]. Two subscales of MSLQ were found to be relevant for the evaluation of the WBL strategy in this research. These included six items of the Task value scale and five items of the Critical thinking scale.

- Feedback Questionnaire 2 (FQ2) was developed for a previous study conducted in the same context [42]. The FQ2 included a total of 27 items which were piloted with previous year students in the study setting. Based on the experience gained from the pilot, the items were reviewed and modified for comprehensibility, feasibility and presentation. Seventeen items were finally selected from FQ2 for incorporation in the CFQ developed for this study. These items included three questions regarding the use of a workbook and 14 on various teaching methods employed to facilitate learning during the course.

Thereby, the CFQ in this research consisted of 28 items (Table 1), including eleven items from the MSLQ and 17 items from FQ2. The research team then reviewed the 28 items CFQ to establish face and content validity [43].

Table 1  
Course feedback questionnaire statements

|    |   |
|----|---|
| 1  | <b>What I have learned in this course will help me in other courses (MSLQ 4)</b>  |
| 2  | I liked using the Workbook for learning during the course   |
| 3  | It is important for me to learn the material in this course (MSLQ 10)   |
| 4  | I enjoyed the ethics and professionalism course   |
| 5  | I am very interested in the content given in the Workbook (MSLQ 17)   |
| 6  | This course will help me in resolving ethical problems in my professional life  |
| 7  | I think the Workbook was useful for my learning (MSLQ 23)   |
| 8  | The reading material given in the workbook was very helpful for my learning in this course  |
| 9  | I liked the subject matter of this course (MSLQ 26)   |
| 10 | Understanding the subject matter of this course was very important for me (MSLQ 27)   |
| 11 | I found the classroom quizzes very useful for my learning in this course  |
| 12 | I often questioned things I read in the workbook to decide if I find them convincing (MSLQ 38)  |
| 13 | The ethical case discussions in the classroom was very useful for my learning in this course  |
| 14 | When a theory, interpretation, or conclusion is presented in class or in the Workbook, I try to decide if there is good supporting evidence (MSLQ 47) |
| 15 | Reflective writing in Workbook was very useful for my learning in this course   |
| 16 | The student presentations in the classroom were very useful for my learning in this course  |
| 17 | I treat the course material as a starting point and try to develop my own ideas about it (MSLQ 51)  |
| 18 | I found the movie clips and videos very useful for my learning in this course   |
| 19 | I try to play around with ideas of my own related to what I have learned in this course (MSLQ 66)   |
| 20 | I learned a lot from people sharing their experiences during the course   |
| 21 | Whenever I read or heard a statement or conclusion in this class, I thought about possible alternatives (MSLQ 71)                                     |
| 22 | Rate the usefulness of each of the following activities for your learning during the course   |
|    | a) Classroom quizzes  |
|    | b) Ethics case discussions  |
|    | c) Experience sharing   |
|    | d) Movie clips/ Video demonstrations  |

|          |  |
|----------|--|
| <b>1</b> | <b>What I have learned in this course will help me in other courses (MSLQ 4)</b> |
|          | e) Reflective writing  |
|          | f) Student presentation  |
|          | g) Role-plays  |

## Analysis

All the data was entered and analysed on SPSS version 24. Frequencies and percentages were calculated for gender, location, and feedback domains.

Inference on the impact of the intervention on learning was drawn by statistically analysing the improvement in scores on SCT and KFQ items in the pre-post-test measure. Mean  $\pm$  SD or Median (IQR) were calculated for all SCT and KFQ questions. Independent sample *t*-test and Mann Whitney *U*-test were applied to assess the significant difference of SCT and KFQ scores between various groups. Paired *t*-test was applied to assess pre-and post-training scores on SCT and KFQ.

The internal consistency reliability using Cronbach's alpha of the CFQ was initially calculated for investigating its appropriateness. The analysis of scores from the 7-point Likert scale on CFQ was performed according to the guidance given for MSLQ [44]. Chi-square test and Fisher exact test were applied to assess the significant association between categorical variables and feedback domains.

A p-value of less than 0.05 was considered statistically significant.

## Results

The overall pretest scores between JSMU and KAU students did not show statistically significant differences, suggesting that the two cohorts were similar. Therefore, the data from cohorts were considered together for measuring the impact of the intervention.

Table 2 shows participants from the two universities. Rabigh Faculty of Medicine at KAU was an all-men institute at the time of the study, while at JSMU, female students were significantly more in number. Overall, the study sample was evenly distributed between male (42%) and female (58%) students; however, there was a gender imbalance between the two locations where the study was conducted.

Table 2  
Participation of students

|  | Number of students         |                  |                             |
|--|----------------------------|------------------|-----------------------------|
|  | JSMU                       | KAU              | Total                       |
| Attended ethics course                   | 88                         | 37               | 125                         |
| Completed pre- & post- test for analysis | 63<br>(male 10, female 53) | 27<br>(all male) | 90<br>(male 37: female 53)  |
| Feedback forms returned                  | 72<br>(male 12, female 60) | 31<br>(all male) | 103<br>(male 43: female 60) |

Of the total 125 students who attended the ethics course at the two sites, 90 (72%) completed the pre-and post-test measures, and 103 (82%) returned the CFQ feedback forms. The post-test scores in KFQs were significantly higher as compared to pretest scores ( $p$ -value < 0.001). There was no significant difference in overall SCT scores ( $p = 0.057$ ) between pre-and post-test (Table 3). When SCT items were analysed individually, significant improvement was noted in 14 out of 60 items (Table 3). The *McNemar test* was used to explore the difference between their knowledge and skills “before and after” design. These were found significant in 10 of 60 SCT items (Table 4) and 12 of 20 KFQ items (Table 5).

Table 3  
Pre- and post- test comparisons

| Questions   | N  | Pre- test     |              |             | Post- test    |               |             | P value              |
|---|----|---------------|--------------|-------------|---------------|---------------|-------------|----------------------|
|   |    | Mean<br>± SD  | Min-<br>Max  | Median(IQR) | Mean<br>± SD  | Min-<br>Max   | Median(IQR) |                      |
| <b>Pakistan</b>   |    |               |              |             |               |               |             |                      |
| SCT   | 63 | 16 ±<br>2.9   | 8.9–<br>20.6 | -           | 16.7 ±<br>2.8 | 10.8–<br>21.8 | -           | 0.075 <sup>⊠</sup>   |
| KFQ   | 63 | -             | 0–16         | 8(6–11)     | -             | 0–19          | 12(10–14)   | 0.000 <sup>**⊠</sup> |
| <b>Saudia</b>   |    |               |              |             |               |               |             |                      |
| SCT   | 27 | 14.9 ±<br>2.8 | 9.5–<br>22   | -           | 15.3 ±<br>3   | 10.5–<br>21.1 | -           | 0.075 <sup>⊠</sup>   |
| KFQ   | 27 | 6.2 ±<br>2.5  | 0–13         | -           | 9.6 ± 4       | 2–17          | -           | 0.000 <sup>**⊠</sup> |
| <b>Female</b>   |    |               |              |             |               |               |             |                      |
| SCT   | 53 | 16 ±<br>2.9   | 8.9–<br>20.6 | -           | 16.7 ±<br>2.7 | 10.8–<br>21.8 | -           | 0.075 <sup>⊠</sup>   |
| KFQ   | 53 | -             | 0–16         | 8(6–11)     | -             | 0–19          | 12(10–14)   | 0.000 <sup>**⊠</sup> |
| <b>Male</b>   |    |               |              |             |               |               |             |                      |
| SCT   | 37 | 15.2 ±<br>2.9 | 9.5–<br>22   | -           | 15.6 ±<br>3.1 | 10.5–<br>21.1 | -           | 0.000 <sup>**⊠</sup> |
| KFQ   | 37 | 6.7 ±<br>2.7  | 0–13         | -           | 9.9 ±<br>4.3  | 0–18          | -           | 0.015 <sup>*⊠</sup>  |
| <b>Overall</b>  |    |               |              |             |               |               |             |                      |
| SCT   | 90 | 15.7 ±<br>2.9 | 8.9–<br>22   | -           | 16.3 ±<br>2.9 | 10.5–<br>21.8 | -           | 0.057 <sup>⊠</sup>   |
| KFQ   | 90 | 7.4 ±<br>3.8  | 0–16         | -           | 11.1 ±<br>3.9 | 0–19          | -           | 0.000 <sup>**⊠</sup> |
| *P-value < 0.05, **P-value < 0.0001, ⊠ Paired t-test, ⊠ Wilcoxon test |    |               |              |             |               |               |             |                      |

Table 4  
SCT question assessed separately

| Questions | Pre-test |              | Post-test |              | P-value              | Content                                  |
|-----------|----------|--------------|-----------|--------------|----------------------|--|
|           | Min-Max  | Median (IQR) | Min-Max   | Median (IQR) |                      |  |
| Q1a       | 0-0.6    | 0.2(0.1–0.6) | 0-0.6     | 0.2(0.1–0.2) | 0.057 <sup>⊠</sup>   | Confidentiality (Hep B)                  |
| Q1b       | 0-0.5    | 0.2(0.2–0.2) | 0-0.5     | 0.2(0.2–0.5) | 0.000 <sup>**⊠</sup> |  |
| Q1c       | 0-0.7    | 0.7(0.3–0.7) | 0-0.7     | 0.7(0.3–0.7) | 0.761 <sup>⊠</sup>   |  |
| Q2a       | 0.1–0.4  | 0.2(0.1–0.4) | 0.1–0.4   | 0.2(0.1–0.2) | 0.214 <sup>⊠</sup>   | Consent (Jehovah's witness)              |
| Q2b       | 0-0.4    | 0.2(0-0.3)   | 0-0.4     | 0.3(0.1–0.3) | 0.340 <sup>⊠</sup>   |  |
| Q2c       | 0.1–0.4  | 0.3(0.1–0.4) | 0.1–0.4   | 0.3(0.1–0.4) | 0.694 <sup>⊠</sup>   |  |
| Q3a       | 0-0.5    | 0.3(0-0.4)   | 0-0.5     | 0.2(0-0.3)   | 0.008 <sup>*⊠</sup>  | Confidentiality (HIV husband)            |
| Q3b       | 0-0.5    | 0.5(0.4–0.5) | 0-0.5     | 0.5(0.4–0.5) | 0.100 <sup>⊠</sup>   |  |
| Q3c       | 0-0.6    | 0.2(0-0.6)   | 0-0.6     | 0.2(0.2–0.6) | 0.893 <sup>⊠</sup>   |  |
| Q4a       | 0-0.4    | 0.3(0.2–0.4) | 0-0.4     | 0.3(0.2–0.4) | 0.392 <sup>⊠</sup>   | Consent (surgery in Old female)          |
| Q4b       | 0-0.5    | 0.2(0-0.2)   | 0-0.7     | 0.2(0.1–0.7) | 0.506 <sup>⊠</sup>   |  |
| Q4c       | 0-0.7    | 0.2(0-0.7)   | 0-0.5     | 0.2(0-0.3)   | 0.169 <sup>⊠</sup>   |  |
| Q5a       | 0-0.5    | 0.2(0-0.3)   | 0-0.3     | 0.2(0.2–0.3) | 0.141 <sup>⊠</sup>   | Whistle blowing (medical negligence)     |
| Q5b       | 0-0.3    | 0.2(0.2–0.3) | 0-0.3     | 0.2(0.2–0.3) | 0.179 <sup>⊠</sup>   |  |
| Q5c       | 0–1      | 1(0–1)       | 0–1       | 1(0–1)       | 0.724 <sup>⊠</sup>   |  |
| Q6a       | 0-0.6    | 0.1(0-0.4)   | 0-0.4     | 0.3(0.1–0.3) | 0.000 <sup>**⊠</sup> | Breaking bad news (old female with mets) |
| Q6b       | 0-0.4    | 0.3(0.1–0.3) | 0-0.4     | 0.3(0.1–0.3) | 0.697 <sup>⊠</sup>   |  |

| Questions | Pre-test |              | Post-test |              | P-value             | Content  |
|-----------|----------|--------------|-----------|--------------|---------------------|--|
|           | Min-Max  | Median (IQR) | Min-Max   | Median (IQR) |                     |  |
| Q6c       | 0.1–0.5  | 0.1(0.1–0.5) | 0.1–0.5   | 0.1(0.1–0.5) | 0.030 <sup>*§</sup> |  |
| Q7a       | 0.1–0.4  | 0.1(0.1–0.3) | 0.1–0.4   | 0.1(0.1–0.3) | 0.034 <sup>*§</sup> | Beginning of life care (termination of pregnancy)    |
| Q7b       | 0.1–0.4  | 0.2(0.1–0.3) | 0.1–0.4   | 0.2(0.1–0.2) | 0.016 <sup>*§</sup> |  |
| Q7c       | 0-0.4    | -            | 0-0.4     | -            | 0.334 <sup>§</sup>  |  |
| Q8a       | 0-0.4    | 0.2(0-0.3)   | 0-0.4     | 0.2(0-0.3)   | 0.288 <sup>§</sup>  | Conflict of interest (Dubai trip for junior doctor)  |
| Q8b       | 0-0.4    | 0.1(0-0.3)   | 0-0.4     | 0.2(0-0.3)   | 0.832 <sup>§</sup>  |  |
| Q8c       | 0-0.7    | 0.2(0.1–0.7) | 0-0.7     | 0.7(0.2–0.7) | 0.019 <sup>*§</sup> |  |
| Q9a       | 0-0.6    | 0.6(0.3–0.6) | 0-0.6     | 0.6(0.4–0.6) | 0.163 <sup>§</sup>  | Public health (immunisation of one yr. old)          |
| Q9b       | 0-0.5    | -            | 0-0.5     | -            | 0.634 <sup>§</sup>  |  |
| Q9c       | 0-0.5    | 0.3(0.1–0.5) | 0-0.5     | 0.1(0.1–0.3) | 0.167 <sup>§</sup>  |  |
| Q10a      | 0-0.4    | 0.2(0-0.4)   | 0-0.4     | 0.2(0-0.4)   | 0.198 <sup>§</sup>  | Publication ethics (plagiarism)                      |
| Q10b      | 0-0.5    | 0.3(0.2–0.5) | 0-0.5     | 0.3(0.2–0.5) | 0.847 <sup>§</sup>  |  |
| Q10c      | 0-0.4    | 0.4(0.1–0.4) | 0-0.4     | 0.4(0.1–0.4) | 0.008 <sup>*§</sup> |  |
| Q11a      | 0-0.3    | 0.2(0-0.3)   | 0-0.3     | 0.2(0-0.3)   | 0.382 <sup>§</sup>  | Breaking bad news (friend with carcinoma)            |
| Q11b      | 0.1–0.3  | 0.2(0.1–0.3) | 0.1–0.3   | 0.2(0.1–0.3) | 0.684 <sup>§</sup>  |  |
| Q11c      | 0-0.4    | 0.3(0.1–0.4) | 0-0.4     | 0.3(0.1–0.4) | 1.000 <sup>§</sup>  |  |
| Q12a      | 0-0.4    | 0.3(0-0.4)   | 0-0.4     | 0(0-0.3)     | 0.006 <sup>*§</sup> | Care of the vulnerable (3 year. old with meningitis) |
| Q12b      | 0-0.6    | 0.3(0-0.6)   | 0-0.6     | 0.3(0-0.6)   | 0.009 <sup>*§</sup> |  |

| Questions | Pre-test |              | Post-test |              | P-value             | Content                                       |
|-----------|----------|--------------|-----------|--------------|---------------------|---|
|           | Min-Max  | Median (IQR) | Min-Max   | Median (IQR) |                     |   |
| Q12C      | 0-0.4    | 0.3(0.2-0.4) | 0-0.4     | 0.3(0.2-0.4) | 0.882 <sup>§</sup>  |   |
| Q13a      | 0.1-0.3  | 0.2(0.2-0.2) | 0.1-0.3   | 0.2(0.2-0.2) | 0.266 <sup>§</sup>  | Breaking bad news (man with mets)             |
| Q13b      | 0-0.4    | 0.3(0.1-0.4) | 0-0.4     | 0.3(0.1-0.4) | 0.554 <sup>§</sup>  |   |
| Q13c      | 0-0.7    | 0.1(0.1-0.1) | 0-0.7     | 0.1(0.1-0.7) | 0.190 <sup>§</sup>  |   |
| Q14a      | 0-0.8    | 0.2(0-0.8)   | 0-0.8     | 0.2(0-0.8)   | 0.011 <sup>*§</sup> | Research ethics (consent from minors)         |
| Q14b      | 0-0.6    | 0.1(0-0.3)   | 0-0.6     | 0.3(0-0.6)   | 0.016 <sup>*§</sup> |   |
| Q14c      | 0-0.4    | -            | 0-0.4     | -            | 0.620 <sup>§</sup>  |   |
| Q15a      | 0-0.7    | 0.2(0-0.7)   | 0-0.7     | 0.1(0-0.7)   | 0.480 <sup>§</sup>  | Conflict of interest (friend's lab)           |
| Q15b      | 0-0.5    | 0.3(0.2-0.5) | 0-0.5     | 0.3(0.2-0.4) | 0.190 <sup>§</sup>  |   |
| Q15c      | 0-0.6    | 0.4(0-0.6)   | 0-0.6     | 0.4(0.4-0.4) | 0.421 <sup>§</sup>  |   |
| Q16a      | 0-0.5    | 0.3(0-0.5)   | 0-0.5     | 0.3(0.2-0.5) | 0.068 <sup>§</sup>  | Confidentiality (when to breach?)             |
| Q16b      | 0-0.8    | 0.8(0.2-0.8) | 0-0.8     | 0.8(0.2-0.8) | 0.080 <sup>§</sup>  |   |
| Q16c      | 0-0.5    | 0.1(0.1-0.5) | 0-0.5     | 0.3(0.1-0.5) | 0.010 <sup>*§</sup> |   |
| Q17a      | 0-0.4    | 0.2(0.1-0.3) | 0-0.4     | 0.3(0.1-0.3) | 0.048 <sup>*§</sup> | Truth telling (school sick-leave certificate) |
| Q17b      | 0-0.9    | 0.1(0-0.9)   | 0-0.9     | 0.1(0-0.9)   | 0.582 <sup>§</sup>  |   |
| Q17c      | 0-0.7    | 0.1(0.1-0.7) | 0-0.7     | 0.1(0.1-0.7) | 0.941 <sup>§</sup>  |   |
| Q18a      | 0-0.5    | 0.2(0.2-0.3) | 0-0.5     | 0.3(0.2-0.5) | 0.385 <sup>§</sup>  | Medical Error (reporting)                     |
| Q18b      | 0-0.3    | 0.2(0.2-0.3) | 0-0.3     | 0.2(0.2-0.3) | 0.427 <sup>§</sup>  |   |

| Questions   | Pre-test |              | Post-test |              | P-value            | Content                             |
|---|----------|--------------|-----------|--------------|--------------------|-------------------------------------|
|   | Min-Max  | Median (IQR) | Min-Max   | Median (IQR) |                    |                                     |
| Q18c  | 0-0.4    | 0.3(0.1-0.4) | 0-0.4     | 0.3(0.1-0.4) | 0.897 <sup>⊠</sup> |                                     |
| Q19a  | 0.1-0.3  | -            | 0.1-0.3   | -            | 0.219 <sup>⊠</sup> | Publication ethics (authorship)     |
| Q19b  | 0-0.6    | 0.4(0-0.6)   | 0-0.6     | 0.4(0.4-0.6) | 0.268 <sup>⊠</sup> |                                     |
| Q19c  | 0-0.4    | 0.2(0.1-0.3) | 0-0.4     | 0.2(0.1-0.3) | 0.759 <sup>⊠</sup> |                                     |
| Q20a  | 0-0.4    | 0.4(0.1-0.4) | 0-0.4     | 0.1(0.1-0.4) | 0.390 <sup>⊠</sup> | End of life care (pulling the plug) |
| Q20b  | 0-0.5    | -            | 0-0.5     | -            | 0.061 <sup>⊠</sup> |                                     |
| Q20c  | 0-0.6    | 0.4(0-0.6)   | 0-0.6     | 0(0-0.4)     | 0.384 <sup>⊠</sup> |                                     |
| *P-value < 0.05, **P-value < 0.0001, ⊠ Paired t-test, ⊠ Wilcoxon test |          |              |           |              |                    |                                     |

Table 5  
KFQ items assessed separately

|  |       | Pre test |          |          | P value            |
|--|-------|----------|----------|----------|--------------------|
|  |       | 0        | 1        | Total    |                    |
|  |       | N(%)     | N(%)     | N(%)     |                    |
| 21A Truth telling/ Respect for human dignity/ autonomy |       |          |          |          |                    |
| Post test  | 0     | 10(11.1) | 5(5.6)   | 15(16.7) | 0.000**            |
|  | 1     | 28(31.1) | 47(52.2) | 75(83.3) |                    |
|  | Total | 38(42.2) | 52(57.8) | 90(100)  |                    |
| 21B Consent  |       |          |          |          |                    |
| Post test  | 0     | 19(21.1) | 10(11.1) | 29(32.2) | 0.050 <sup>□</sup> |
|  | 1     | 22(24.4) | 39(43.3) | 61(67.8) |                    |
|  | Total | 41(45.6) | 49(54.4) | 90(100)  |                    |
| 22A Doctor-patient relationship                        |       |          |          |          |                    |
| Post test  | 0     | 34(37.8) | 11(12.2) | 45(50)   | 0.265 <sup>□</sup> |
|  | 1     | 18(20)   | 27(30)   | 45(50)   |                    |
|  | Total | 52(57.8) | 38(42.2) | 90(100)  |                    |
| 22B Truth telling/ Respect for human dignity/ autonomy |       |          |          |          |                    |
| Post test  | 0     | 46(51.1) | 13(14.4) | 59(65.6) | 0.711 <sup>□</sup> |
|  | 1     | 16(17.8) | 15(16.7) | 31(34.4) |                    |
|  | Total | 62(68.9) | 28(31.1) | 90(100)  |                    |
| 23A Consent  |       |          |          |          |                    |
| Post test  | 0     | 11(12.2) | 6(6.7)   | 17(18.9) | 0.000**            |
|  | 1     | 48(53.3) | 25(27.8) | 73(81.1) |                    |
|  | Total | 59(65.6) | 31(34.4) | 90(100)  |                    |
| 23B Respect for human dignity/ autonomy                |       |          |          |          |                    |
| Post test  | 0     | 27(30)   | 12(13.3) | 39(43.3) | 0.005**            |
|  | 1     | 31(34.4) | 20(22.2) | 51(56.7) |                    |
|  | Total | 58(64.4) | 32(35.6) | 90(100)  |                    |

|                                    |       | Pre test |          |          | P value            |
|------------------------------------|-------|----------|----------|----------|--------------------|
|                                    |       | 0        | 1        | Total    |                    |
|                                    |       | N(%)     | N(%)     | N(%)     |                    |
| 24A Confidentiality                |       |          |          |          |                    |
| Post test                          | 0     | 39(43.3) | 7(7.8)   | 46(51.1) | 0.003**            |
|                                    | 1     | 24(26.7) | 20(22.2) | 44(48.9) |                    |
|                                    | Total | 63(70)   | 27(30)   | 90(100)  |                    |
| 24B Confidentiality                |       |          |          |          |                    |
| Post test                          | 0     | 22(24.4) | 7(7.8)   | 29(32.2) | 0.000**            |
|                                    | 1     | 32(35.6) | 29(32.2) | 61(67.8) |                    |
|                                    | Total | 54(60)   | 36(40)   | 90(100)  |                    |
| 25A Confidentiality                |       |          |          |          |                    |
| Post test                          | 0     | 7(7.8)   | 7(7.8)   | 14(15.6) | 0.003**            |
|                                    | 1     | 24(26.7) | 52(57.8) | 76(84.4) |                    |
|                                    | Total | 31(34.4) | 59(65.6) | 90(100)  |                    |
| 25B Confidentiality/ legal issues  |       |          |          |          |                    |
| Post test                          | 0     | 22(24.4) | 7(7.8)   | 29(32.2) | 0.000**            |
|                                    | 1     | 30(33.3) | 31(34.4) | 61(67.8) |                    |
|                                    | Total | 52(57.8) | 38(42.2) | 90(100)  |                    |
| 26A Respect for human dignity      |       |          |          |          |                    |
| Post test                          | 0     | 26(28.9) | 3(3.3)   | 29(32.2) | 0.000**            |
|                                    | 1     | 30(33.3) | 31(34.4) | 61(67.8) |                    |
|                                    | Total | 56(62.2) | 34(37.8) | 90(100)  |                    |
| 26B Consent                        |       |          |          |          |                    |
| Post test                          | 0     | 59(65.6) | 10(11.1) | 69(76.7) | 0.302 <sup>□</sup> |
|                                    | 1     | 5(5.6)   | 16(17.8) | 21(23.3) |                    |
|                                    | Total | 64(71.1) | 26(28.9) | 90(100)  |                    |
| 27A Consent in emergency situation |       |          |          |          |                    |
| Post test                          | 0     | 30(33.3) | 11(12.2) | 41(45.6) | 0.839 <sup>□</sup> |

|  |       | Pre test |          |          | P value               |
|--|-------|----------|----------|----------|-----------------------|
|  |       | 0        | 1        | Total    |                       |
|  |       | N(%)     | N(%)     | N(%)     |                       |
|  | 1     | 13(14.4) | 36(40)   | 49(54.4) |                       |
|  | Total | 43(47.8) | 47(52.2) | 90(100)  |                       |
| 27B Respect for human dignity                |       |          |          |          |                       |
| Post test                                    | 0     | 45(50)   | 4(4.4)   | 49(54.4) | 0.000 <sup>**</sup> □ |
|  | 1     | 24(26.7) | 17(18.9) | 41(45.6) |                       |
|  | Total | 69(76.7) | 21(23.3) | 90(100)  |                       |
| 28A Truth telling/ Respect for human dignity |       |          |          |          |                       |
| Post test                                    | 0     | 56(62.2) | 2(2.2)   | 58(64.4) | 0.000 <sup>**</sup> □ |
|  | 1     | 21(23.3) | 11(12.2) | 32(35.6) |                       |
|  | Total | 77(85.6) | 13(14.4) | 90(100)  |                       |
| 28B Respect for human dignity                |       |          |          |          |                       |
| Post test                                    | 0     | 47(52.2) | 8(8.9)   | 55(61.1) | 0.003 <sup>**</sup> □ |
|  | 1     | 26(28.9) | 9(10)    | 35(38.9) |                       |
|  | Total | 73(81.1) | 17(18.9) | 90(100)  |                       |
| 29A Whistle blowing                          |       |          |          |          |                       |
| Post test                                    | 0     | 7(7.8)   | 13(14.4) | 20(22.2) | 0.073 <sup>□</sup>    |
|  | 1     | 25(27.8) | 45(50)   | 70(77.8) |                       |
|  | Total | 32(35.6) | 58(64.4) | 90(100)  |                       |
| 29B Whistle blowing                          |       |          |          |          |                       |
| Post test                                    | 0     | 34(37.8) | 6(6.7)   | 40(44.4) | 0.000 <sup>**</sup> □ |
|  | 1     | 44(48.9) | 6(6.7)   | 50(55.6) |                       |
|  | Total | 78(86.7) | 12(13.3) | 90(100)  |                       |
| 30A Whistle blowing                          |       |          |          |          |                       |
| Post test                                    | 0     | 35(38.9) | 19(21.1) | 54(60)   | 0.451 <sup>□</sup>    |
|  | 1     | 25(27.8) | 11(12.2) | 36(40)   |                       |
|  | Total | 60(66.7) | 30(33.3) | 90(100)  |                       |

|                                  |       | Pre test |          |          | P value            |
|----------------------------------|-------|----------|----------|----------|--------------------|
|                                  |       | 0        | 1        | Total    |                    |
|                                  |       | N(%)     | N(%)     | N(%)     |                    |
| 30B Ttruth telling               |       |          |          |          |                    |
| Post test                        | 0     | 53(58.9) | 9(10)    | 62(68.9) | 0.061 <sup>□</sup> |
|                                  | 1     | 20(22.2) | 8(8.9)   | 28(31.1) |                    |
|                                  | Total | 73(81.1) | 17(18.9) | 90(100)  |                    |
| *P-value < 0.05, □ Mc Nemar test |       |          |          |          |                    |

The CFQ showed high reliability of 0.95 using Cronbach's Alpha, with all components contributing equally to the questionnaire's reliability. The feedback showed that most participants (97%) considered the course to be of value. Ninety-four per cent (94%) thought it improved their critical thinking and that it was useful. Eighty-nine per cent (89%) found the WBEL to be a valuable learning strategy during the course. Students appreciated the use of diverse methods employed for the facilitation of learning. Study participants highly appreciated case discussions using case vignettes (91%) and video clips (87%) for student engagement and active learning. A significant majority, 84% and 78%, considered classroom quizzes and reflective writing as worthwhile for learning during the course.

## Discussion

The purpose of this study was to assess the impact of WBEL, a novel educational strategy, on students' ethics-related knowledge and course engagement, in the context of the region of the Middle East and South Asia. The countries in the Middle East and South Asian regions share commonalities that set them apart from developed western cultures in relation to this component of medical programs. The differences are in terms of societal norms, politics, legislation, beliefs, traditions and lifestyles [45]. It is important to note that these regions also have a substantial global impact on medical education as they contain 60% of the medical institutes producing medical graduates [46]. These graduates provide healthcare services to a large local population within the region and form a significant portion of international medical graduates (IMGs) serving in the developed western World [47]. For example, an estimated 45 per cent of the IMGs in the USA originate from the Middle East and South Asian regions [48].

As noted previously, several countries in the Middle East and South Asian regions face resource constraints and gaps that impact undergraduate medical ethics education. Among these constraints, the lack of culturally relevant texts is significant, as contemporary medical ethics has not developed indigenously and instead is considered an imported western concept [12, 13]. In support of this view, educators in Saudi Arabia [4] and Pakistan [49] argue that the importation of a secular western

curriculum of ethics is not in accord with the religious teachings in the region. They emphasise that ethics education requires an inclusive, more reflective, and socially relevant approach to which the students can relate. Several other medical ethics educators in the region also opine that the Anglo-European ethical traditions that shape contemporary medical ethics education are not sufficient to encompass the indigenous values and beliefs of students in these regions [4, 14, 49–51]. Other constraints that have been identified as hampering the integration of medical ethics into the curriculum include a lack of competent, dedicated medical ethics teachers and often indifferent institutional policies [2, 6–9].

This study shows that the WBEL strategy is an enabler for the delivery of ethics education, and helps overcome the above resource constraints by creating appropriate content and methods through a robust consultative process [17]. The inclusion of focussed reading material and social interaction with peers and faculty in the WBEL model explicitly compensates for the lack of learning resources relevant to the regions [52, 53]. The strategy is further strengthened by the inclusion of reflective writing and feedback towards the end of the learning process. The reflection and feedback process also supports the students in assessing their learning by articulating how they have approached the given task using their previous knowledge and understanding of the new information [54]. The iterative refinement of this strategy with input from external experts, local faculty, and students (Shamim et al., 2021) is likely to enhance the strategy's effectiveness.

One of the aims of this study was to evaluate students' engagement in terms of satisfaction and enjoyability with this novel teaching strategy. Students' satisfaction and enjoyability have shown to be related to the diversity of the methods used in their learning process [55]. In addition to offering diversity to the learning process, the use of various teaching methods effectively covers different aspects of ethics education, like concepts, analysis, decision-making, that require distinct teaching methods for effective learning [56]. The feedback from students enrolled in this study showed an overwhelmingly positive response towards the diverse educational methods, like small group discussions, role-plays and video demonstrations, used in the ethics course.

Karagiorgi and Symeou (2005) suggest that students take ownership of problems or tasks and provide authentic, sound solutions when these are closer to their reality. For example, students find narration of problems that originate from their facilitators' or their own experiences as most stimulating and authentic [57, 58]. Therefore, in accordance with the CREEM framework, each session in the medical ethics course in this study started the learning process with a socio-culturally relevant experience based within an environment familiar to the students. The participants of this study acknowledged the value of this ownership and relevance. In other words, the ethics course provided the students with an authentic experience to construct their further learning.

In this study, the pre-and post-test, using KFQ and SCT items, systematically assessed the impact of the intervention. KFQ is focused on challenging aspects of clinical problems where learners are more likely to make errors [59]. Similarly, based on script theory in cognitive psychology (Charlin et al., 2000), SCT has shown to assess students' organisation of ethical knowledge while making decisions [31]. The

combination of the KFQ with SCT as pre-post-test measures provided a robust method to evaluate the impact of WBEL on developing ethical reasoning skills (abilities to identify ethical dilemmas and make decisions in a situation of uncertainty).

Although the course faculty belonged to diverse disciplines, without a primary qualification in ethics, the knowledge and guidance they received through the Workbook empowered them to deliver the course content effectively. The resource material in the Workbook informed the faculty about the scope and depth of content needed while sharing their experiences during the discourse. A shortage of medical teachers who are specifically trained to teach medical ethics is not a new [60] or isolated [61] phenomenon and has previously been identified as a resource constraint in medical ethics education in various contexts [8, 62, 63]. Students' feedback regarding the facilitators' performance during the course suggests that the provision of the Workbook and guidance for facilitators helped them overcome this constraint to some extent. Students' positive feedback about the overall ethics course and appreciation of different methods used was also seen as a source of encouragement to the faculty involved in delivering the ethics course in this study.

The findings of this study, thus, make some significant contributions to the literature. Firstly, the findings illustrate the practical relevance of the CREEM framework and WBEL strategy for the delivery of medical ethics education in the studied context. Secondly, the findings are likely to apply to other contexts with similarities to the study's regions. Last but not least, the paper contributes to the existing literature by providing initial evidence on the use of an innovative educational strategy for contextually relevant ethics education, thereby creating avenues for further contextually relevant research in medical ethics education.

## Limitations

The study found significant improvements in overall pre- to post- measures; however, the differences were more remarkable for the KFQs, while their performance in SCTs was weak. One reason for this discrepancy may be that the students at both sites were unfamiliar with SCTs as a testing method. It can be inferred that, as for any assessment tool, although SCTs have evidence of validity, they may not perform well with test-takers if they are not familiar with the tool [31, 64].

This study tested the WBEL in the context of only two institutes. The study participants were predominantly females in the Pakistan cohort and all males in Saudi Arabia. This gender imbalance was beyond the researchers' control. Nevertheless, the similarity of social contexts in these countries and nearly equal gender representation in the combined sample of participants may support the generalizability of results in countries with similar social context. However, these are still considered as limitations of this study. The impact of the intervention on medical ethics education generally will need further exploration.

## Conclusion

The study identifies WBEL as a promising way forward in delivering medical ethics education by demonstrating notable improvement in participants' knowledge and ethical decision-making skills. The Workbook design and its use within the WBEL strategy will be particularly beneficial for teaching ethics in regions where contextually relevant local reading material on healthcare ethics and specifically trained ethics educators are not readily available for medical students. The use and evaluation of the WBEL in other similar regions would generate further evidence of this strategy's wider applicability.

## List Of Abbreviations (In Alphabetical Order)

AT - Adrienne Torda

CB - Chinthaka Balasooriya

CFQ - Course Feedback Questionnaire

CREEM - Contextually Relevant Ethics Education Model

FQ 2 - Feedback Questionnaire 2

IMG - International Medical Graduates

JSMU - Jinnah Sindh Medical University

KAU - King Abdulaziz University

KFQ - Key Feature Questions

LB - Lubna Baig

MSLQ - Motivated Strategies for Learning Questionnaire

MSS - Muhammad Shahid Shamim

SCT - Script Concordance Test

UNSW - University of New South Wales

WBEL - Workbook based ethics learning

## Declarations

### Ethics approval

The ethics approval for this study was acquired from the ethics review committee of King Abdulaziz University (reference no. 393-15), Jinnah Sindh Medical University (reference no. 2016-30), where the

study was conducted, and the UNSW (approval no. HC15640) Australia, where the primary author is enrolled as a PhD scholar.

### **Consent for participation and publication**

The potential participants were informed about the researchers and the study in detail. The Participant Information Statement and Consent Form prescribed by UNSW was used to seek informed consent for the study and publication from students and faculty participating in the study. All the data were anonymized prior to analysis.

The authors further confirm that all methods were performed in accordance with the relevant guidelines and regulations of UNSW.

### **Availability of data and material**

All the data from this study is submitted to the UNSW compactus as per the University policy for safeguarding and future retrieval. The data that support the findings of this study are available from UNSW but restrictions apply to the availability of these data as they are not publicly available. Data are however available from the authors, MSS and CB, upon reasonable request and with permission of UNSW.

### **Competing interests**

The primary author was a PhD scholar at the University of New South Wales (UNSW), Sydney, Australia. This study is a part of the PhD thesis of the primary author.

There is no conflict of interest.

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### **Authors' contribution**

All authors have significantly contributed to the study design, analysis and development of the manuscript for publication. The analysis was reviewed and improved by other authors. The first draft of the manuscript was prepared by MSS. All the other authors reviewed, revised and provided their input in improving the manuscript.

MSS Shamim was involved in conception of research idea, design of the work, the acquisition, analysis and interpretation of data. He prepared the first draft of the manuscript. As the corresponding author, he ensured that all listed authors have approved the manuscript before submission, including the names and order of authors, and that all authors receive the submission and all substantive correspondence with

editors, as well as the full reviews, verifying that all data and figures comply with the transparency and reproducibility standards.

LB contributed to developing the design of work and analyses and interpretation of the data. She substantially participated in reviewing the manuscript.

AT was involved in the development of the conceived idea and design of the work. she substantially participated in drafting and reviewing the manuscript.

CB contributed significantly to the development of the conceived idea and design of the work. He supervised the overall research process, analysis of data and substantially participated in reviewing and revising the manuscript.

All the authors have approved the submitted versions. They have agreed both to be personally accountable for the author's own contributions and to ensure that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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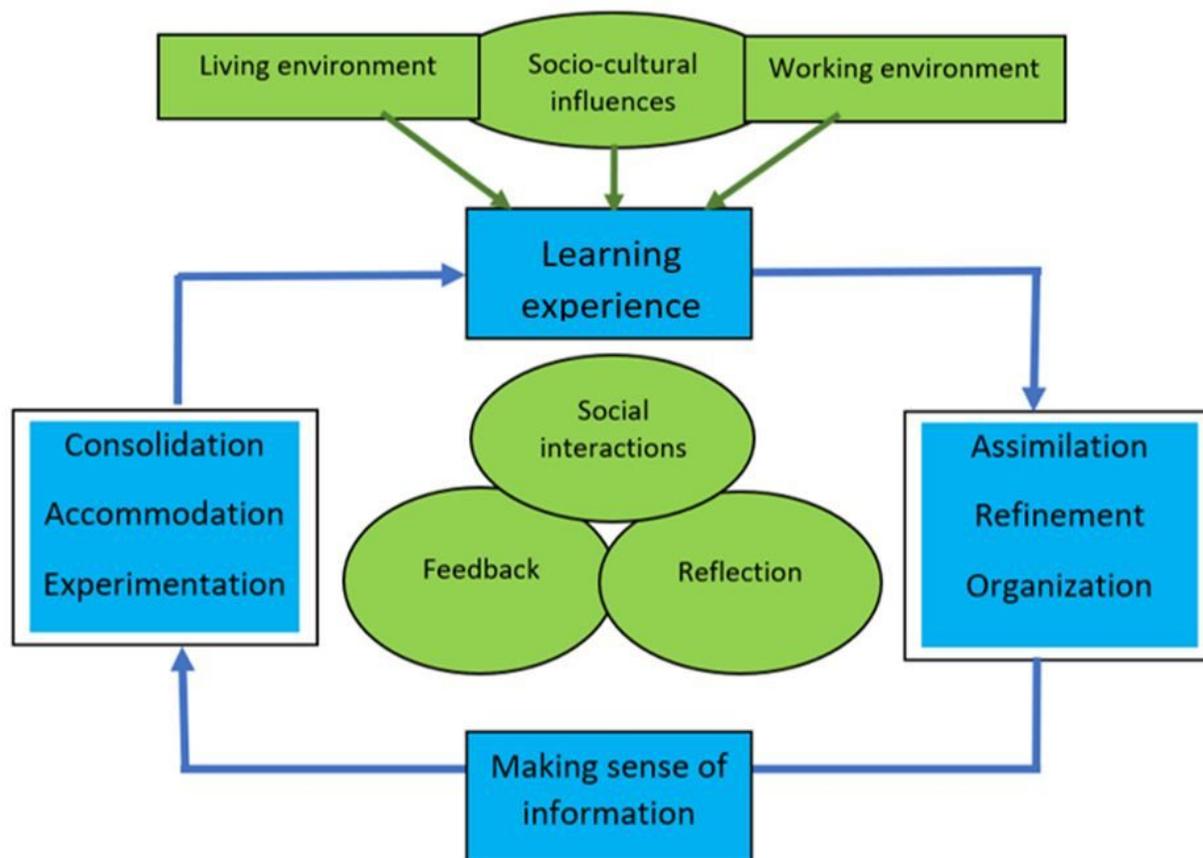
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## Figures



**Figure 1**

Contextually Relevant Ethics Education Model, a framework for developing WBEL [18]

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## Figure 2

Content topics in The Workbook

## Informed Consent

Informed consent refers to the principle that every individual has a right to decide for him or herself. The individual should receive the required information to take the decision. In medical practice, a person must give permission before receiving any type of treatment or undergoing investigation (interventional or non-interventional).

For consent to be valid, the person giving consent should have the capacity (emotional and psychological stability) to take decision

The consent it must be:

- Voluntary (without any undue pressure)
- Informed (with knowledge and understanding of the condition, treatment options and possible outcomes)

It is duty of the healthcare professional to ensure that a proper process of acquiring informed consent has taken place before any intervention.

According to the PM&DC's Code of Ethics<sup>9</sup>:

*"Consent is the 'autonomous authorization of a medical intervention by individual patients.' Patients are entitled to make decisions about their medical care and have the right to be given all available information relevant to such decisions. Patients have the right to refuse treatment and to be given all available information relevant to the refusal."*

### Student's Learning Outcomes

- Describe the principle and components of "informed consent"
- Demonstrate the process of consent-taking in different situations
- Recognize ethical issues arising due to improper consent taking

### Guidelines for Helping Patients Reach Informed Consent

For acquiring a valid consent, the doctor needs to be sure that patient understands his/her condition and different options for the procedure. Consent can be taken by initiating a conversation, asking questions, and communicating clearly in a way that is understandable for the patient.

Following are guidelines for taking an informed consent<sup>9</sup>:

- Consent process should take place in a relaxed undisturbed atmosphere
- Doctor should carefully describe the diagnosis and possible treatment options in a way that the patient can understand and comprehend
- Avoid medical jargon when describing treatments
- Give patient time to think and ask questions
- Listen carefully to patient's questions and statements
- Use written forms describing procedures and interventions
- Ask your patient to explain the situation to you in their own words
- Be aware of religious or cultural differences that may affect understanding
- Request an interpreter, if necessary
- Document the conversation in the patient's file/charts

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Figure 3

Sample of reading material in the Workbook

### Video Clip & Reflection Exercise

#### Sound of Silence

This is an educational video clip in which a couple comes to the clinic of a famous surgeon with the wife complaining of abdominal pain. The surgeon and his assistants diagnose the patient and make plans for surgery. The consent for surgery is taken by one of the assistant. She finds the process discomfoting. This video brings out the issue of respecting the patient's wishes and empowering the patient even when the individual appears to be disinterested. It also explores the issues of privacy and empathy in the interaction between physicians and patients.

**Discuss and reflect on the following questions after watching the video clip:** (Refer to PM&DC code of ethics: 18; pg12)

**What did the doctors do well in their interaction with the patient?**

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**What messages are conveyed by the consultant's body language to the assistants and the patient?**

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**What do you think about the way the consent was taken?**

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**What would you recommend to the doctors to improve their interaction with the patient in this situation?**

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**Facilitator's Remarks/ Feedback:**

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### Discuss & Reflect

#### Discuss and answer the following questions

You are an intern in the hospital. An old friend calls you to ask about the prognosis and treatment options of a patient in your hospital. He says to you: "Can you please check the patients file and find out and let me know about this patient's condition and treatment plan? No one seems to tell the relatives what is going on. They have asked me to find out exactly what is happening". You can easily access the files and all reports.

**Can there be any ethical issues in your going through the patient's file and sharing the information with his relatives?**

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**What possible harm can you do to the patient by sharing his information with your friend?**

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**What will you do in this situation?** (Refer to PM&DC code of ethics: 12; pg9)

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**What are the possible situations when a patient's confidentiality can be breached by the doctor?**

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**Facilitator's Remarks/ Feedback:**

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Figure 4

Sample learning activities in the Workbook, using case scenario/ video clips with reflective writing and feedback