

Students' Perceptions of the Educational Environment of a Private Medical College in the post COVID - 19 ERA

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ABSTRACT

Introduction: COVID - 19 and its associated lockdowns caused a major disruption in the education sector leading to closure of educational institutes globally. After two years of intermittently on and off campus education, 2022 finally brought some semblance of normalcy back in terms of on campus education. In the (almost) post COVID era, it is more important than ever to measure students' perceptions of the educational environment.

Objective: To measure the students' perceptions of the educational environment of a medical school, and to identify specific problem areas.

Methods: The cross-sectional study was conducted at University College of Medicine and Dentistry, The University of Lahore from May 2022 until September 2022 using HELES Proforma, which is a pre-validated questionnaire. Data was collected from 605 undergraduate medical students of all five years of MBBS. Results were analyzed using SPSS v23.

Results: A total of 605 undergraduate medical students participated in the study out of which 58.84% were females. The overall mean score was 3.51 (± 0.63 SD). The highest mean score (3.71 ± 0.73 SD) was attributed to the subscale of "Educational settings and Resources" while the lowest mean score (2.87 ± 1.06 SD) was attributed to the "Clinical Skill and Development" subscale.

Conclusion: The perception of students regarding the educational environment was more positive than negative. However, as expected post COVID, students require more opportunities to work with patients and develop clinical skills.

Keywords: Educational environment, Medical students, Perception, HELES.

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INTRODUCTION

Educational environment refers to the physical locations and the sociocultural spaces in which the students learn. It plays a pivotal role in the life of a medical student as it has a strong influence on what and how students learn (Al-Mohaimeed, 2013; Bassaw et al., 2003). A positive educational environment is said to have a positive effect on student achievement and the absence of a positive educational environment may lead to stress, burnout and problems with learner's behavior and wellbeing (Fakunle and Ale., 2018; Saiyad and Ethics., 2020). Considering the stressful life of a medical student, it is imperative for them to have a positive educational environment that is conducive to learning and helps them to achieve their full potential.

COVID-19 and associated lockdowns lead to closure of educational schools globally. According to a report published by Unicef, 150 countries completely closed down schools displacing about 168 million students (Gambi and De Witte., 2021). Medical education was no different, as almost all medical colleges remained closed during COVID-19 associated lockdowns. Many emergency measures were taken to shift to digital platforms for teaching and learning to ensure minimal disruption to medical education. After months of virtual learning, regular on campus classes resumed in 2022 and students finally returned to lecture halls and hospital wards. However, the burnout of both educators

and learners during distance learning cannot be ignored (Saiyad.S., 2020). Hence, now, more than ever it is imperative to look into the educational environment of institutes to ensure it remains positive and to explore if any problem areas exist so necessary remediation can be made with minimal impact on the well-being of both educators and learners.

Since the educational environment plays a vital role in health professions education, a number of instruments have been developed and validated that can be used to evaluate and in turn improve the educational environment at undergraduate and postgraduate level. These include, but are not limited to: Dundee Ready Education Environmental Measure (DREEM), Surgical Theatre Educational Environment Measure (STEEM) and Postgraduate Hospital Educational Environment Measure (PHEEM) (Arja et al., 2021). To explore students perceptions regarding the educational environment at UCMD, Health Education Learning Environment Survey (HELES) was used which is a pre validated, 35 item scale (Rusticus, Wilson, Casiro, Lovato, and professions., 2020).

One of the most used tools to quantify the educational learning environment is the Health Education Learning Environment Survey (HELES). This was founded on the widely established 'Moos' theoretical framework, which emphasizes the value of the human environment, regardless of the type of setting, and may be described by three basic aspects. The development of HELES was based on the Integrated System Approach, which was used as a theoretical framework for the evaluation of the learning environment in medical schools (Rusticus et al., 2020).

The significance of these three aspects can be exemplified by their subscales. The first dimension is the "Personal

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Development', which is an educational environment, alludes to accomplishing objectives of education. Thus, high scoring of an educational environment means that the learning objectives and content are clearly spelled out. The subsequent dimension focuses towards Relationship, which recognizes the degree to which students are engaged with setting, support, helping one another, and communicating their thoughts, straightforwardly, and openly. A positive second aspect, 'Relationship' alludes to an environment with collaboration, open correspondence, social help, and friendliness. A positive relationship alludes to student contribution, connection, teacher support, and profound stability. The third aspect, 'System maintenance' gauges the degree to which the climate is efficient and clear in its expectations (Schönrock-Adema, Bouwkamp-Timmer, van Hell, and Cohen-Schotanus., 2012).

METHODS

This was a cross-sectional survey study, conducted at the University College of Medicine and Dentistry (UCMD) at The University of Lahore (UOL), between May 2022 to September 2022 after approval from the Institutional Ethical Review Board (ERC 04/21/34). Through consensus sampling, the survey was distributed to all five years of MBBS students (using Google Forms). Both male and female students were invited to participate. The data was collected using "HELES Proforma". The subscale reliabilities of HELES ranged from 0.78 to 0.89 and the overall reliability is 0.93, which indicates it can provide a reliable and valid assessment of the educational environment (Rusticus et al., 2020).

The questionnaire has a total of 35 items that are grouped together into 6 subscales. Each item is measured on a 5-point Likert scale. The first dimension was of 'Personal development' with two subscales of Work-life balance (7 items) and Clinical skill development (4 items). The second dimension was the 'Relationship dimension' with two subscales of Faculty relationship (6 items) and Peer relationship (4 items). The third dimension was 'System maintenance' with two subscales of Expectations (4 items) and Educational setting and resource (6 items). The total HELES score is calculated as the sum of all item scores for the 35 items in the survey and the scores for each subscale are calculated in the same way, as the sum of all item scores for the respective subscale. Higher scores indicate more positive perceptions of the learning environment, while lower scores indicate more negative perceptions. Incomplete response forms were excluded from the analysis of the study. Informed consent was taken, and the anonymity of data was maintained.

The data was analyzed using the statistical software "Statistical Package for Social Sciences v23". Descriptive statistics were applied and the mean value along with the standard deviation for each item as well as for each subscale was calculated. Three questions were negatively worded and hence were reverse coded.

RESULTS

A total of 605 responses collected from all years of MBBS were included, where 58.84 % of them were females. The demographic variables are listed in Table 1.

Table 1. Demographics (n=605)

Variable	Frequency (Percentage)
Year of Study	
1 st year MBBS	120 (19.83)
2 nd year MBBS	128 (21.16)
3 rd year MBBS	117 (19.34)
4 th year MBBS	123 (20.33)
Final year MBBS	117 (19.34)
Gender	
Male	249 (41.16)
Female	356 (58.84)
Residential Status	
Day-Scholar	317 (52.4)
Hostelite	288 (47.6)

The mean score for HELES that depicts the overall perception of the learning environment was 3.51 ± 0.63 SD. The score indicates that the MBBS students were satisfied with their learning environment, as measured through HELES. The subscale of "Educational settings and Resources", that depict the overall perceptions of the physical learning environment, student diversity and learning resources had the highest mean score of 3.71 ± 0.73 SD. It was followed by the subscales of "Faculty Relationships" (Nature and Degree of support from faculty), "Peer Relationships" (Nature and Degree of support from peers), and "Expectations" (Self and Faculty knowledge of the student expectations), all with a mean score of 3.57 ± 0.77 SD. The subscale of "Clinical Skill and Development", that depicts the perceived opportunities to work with patients and develop skills, had the lowest mean score of 2.87 ± 1.06 SD. The mean scores of all subscales are listed in Table 2.

Table 2. Summary of subscales and mean scores

Subscale	Description	No of Items	Mean $\pm$ SD
Work- Life Balance	Perception of Work-load and Stress	7	3.25 ± 0.65
Clinical Skill and Development	Perceived opportunities to work with patients and develop skills	4	2.87 ± 1.06
Faculty Relationships	Nature and Degree of support from faculty	8	3.57 ± 0.77
Peer Relationships	Nature and Degree of support from peers	4	3.57 ± 0.77
Expectations	Self and Faculty knowledge of the student expectations	4	3.57 ± 0.76
Educational settings and Resources	Overall perceptions of the physical learning environment, student diversity and learning resources	8	3.71 ± 0.73
Total HELES Scores	Overall perceptions of the learning environment	35	3.51 ± 0.63

whereas the individual item scores for all subscales are listed in Table 3.

Table 3. Item-wise Mean Scores of Subscales

Subscale	Mean $\pm$ SD
Subscale 1: Work Life- Balance	
I have sufficient time to engage in self-directed activities that support my learning	3.00 $\pm$ 1.29
My workload is often overwhelming	4.07 $\pm$ 1.10
I feel over-stressed in the non-clinical environment	3.73 $\pm$ 1.14
I am able to maintain a healthy work-life balance	2.97 $\pm$ 1.35
I feel over-stressed in the clinical environment	3.11 $\pm$ 1.23
I have sufficient opportunities to pursue scholarly interests in my health profession	3.49 $\pm$ 1.07
I have sufficient time to engage in extracurricular activities	2.43 $\pm$ 1.32
Subscale 2: Clinical Skill Development	
I have sufficient opportunities to practice clinical/procedural skills	2.77 $\pm$ 1.39
I have sufficient opportunities to work with patients	2.53 $\pm$ 1.34
I have sufficient opportunities to engage in meaningful patient care tasks	2.91 $\pm$ 1.28
I have sufficient opportunities for hands-on learning	3.28 $\pm$ 1.17
Subscale 3: Faculty Relationships	
I have sufficient opportunities to meet informally with faculty to support my learning	3.54 $\pm$ 1.17
Faculty provide me with meaningful feedback about my performance	3.36 $\pm$ 1.18
Faculty are supportive when I make mistakes	3.58 $\pm$ 1.19
I have developed connections with faculty	3.13 $\pm$ 1.18
I am treated with respect by faculty/staff	4.02 $\pm$ 0.2
I am in a safe environment for learning	3.93 $\pm$ 0.98
Faculty listens to my feedback	3.35 $\pm$ 1.23
Faculty are willing to take the time to support my learning	3.65 $\pm$ 1.06
Subscale 4: Peer Relationships	
I have developed a strong sense of community with my peers	3.54 $\pm$ 1.29
I have peers who I can turn to when I need help	3.85 $\pm$ 1.08
I make an effort to get to know my peers	3.84 $\pm$ 0.90
I provide support to my peers	4.05 $\pm$ 0.83
Subscale 5: Expectations	
Faculty adhere to the learning objectives	4.00 $\pm$ 0.98
I know what is expected of me in each course/rotation	3.67 $\pm$ 1.02
Faculty/clinical staff know what is expected for my current level of professional training	3.68 $\pm$ 1.08
The expectations for my performance are clearly communicated to me	3.62 $\pm$ 1.03
Subscale 6: Educational Settings and Resources	
A variety of teaching and learning modalities are used to support my learning	3.75 $\pm$ 1.04
The technology used at my program site supports my learning	3.61 $\pm$ 1.16
Faculty are welcoming of diversity	3.66 $\pm$ 1.05
I am in a safe environment for learning	3.93 $\pm$ 0.98
The curriculum content respects diversity	3.81 $\pm$ 0.90

Policies are consistently applied across students	3.69 $\pm$ 1.02
I am in a program that supports diversity	3.78 $\pm$ 0.95
The quality of the physical environment (e.g classrooms, hospitals, study space) is sufficient for my learning	3.51 $\pm$ 1.22

DISCUSSION

The learning environment for health education has a big impact on how students develop and mature. To inspire students to learn, a good learning atmosphere must be established. Numerous tools have been created while taking into account different educational psychologists' perspectives. One intriguing theory for describing how learning happens in a dynamic environment, such as a therapeutic educational environment, is sociocultural theory (Ahmad, Fatima, and Sarwar., 2020).

This study shows that the personal development' with two subscales of work-life balance (7 items) and clinical skill had the least mean score, which means that there is not sufficient time for personal development. There were less opportunities to work with patients and develop skills and students were finding it difficult to maintain a work-life balance. A similar results were reported a study in which there was negative response in the 'Work-Life Balance' factor, showing an apprehension of increased workload and work-related anxiety (Ahmad et al., 2020).

The second dimension explored the "relationship" between faculty and peers. The study shows they had formed positive relationships but the mean score of relationship among peers was higher than the mean score of relationship between faculty and students. The scores in the faculty relationship domain depict an average working relationship between teachers and students. There can be a couple of reasons for that which may include lack of time, interest, and willingness on the part of faculty. One of the studies also identified a similar reason in which the faculty reported that they come to campus just to take the classes (Rusticus et al, 2022).

The mean score among peer relationship was higher because the students were involved in group work in which they solve the problems together and work collaboratively. Literature also shows that students-peer relationships are fostered when they work together in group (Rusticus et al., 2022) but at the same time the group dynamics play an important role and poor group dynamics can lead to negative experiences (Rusticus and Justus, 2019).

The third dimension was "System maintenance" which included expectations and educational setting and resources. This domain had the highest mean showing student's satisfaction. Students reported a safe and ordered learning environment and the faculty had clear goals and they adhere to those goals. Literature says that the educational environment has a significant effect on students. It affects their attitude, level of satisfaction, their course of studies and achievements (Sharkawy et al., 2013).

CONCLUSION

Health education environment greatly influences student learning, and the students can obviously perform better if they

are satisfied with the learning environment provided to them. HELES is a robust and easy to administer tool that can be utilized in identifying the areas (subscales) that require improvement for student satisfaction. In this study, the most overlooked area was “Personal development” with the least mean score. The findings from this study have helped us in identifying the areas that need to be worked upon in order to provide a high quality educational environment.

LIMITATIONS

This was a cross sectional study conducted in one private institute. The same study can be replicated at a larger level including private and public institutes. The results will help in identifying the areas that require attention and we can work on improving those areas.

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AUTHORS CONTRIBUTIONS

- 1 **S.H.R.Z:** Design and write up
- 2 **K.A:** Concept and data acquisition
- 3 **F.Z.Z:** Analysis and interpretation of data
- 4 **T.A:** Critical review