DETERMINATION OF MEDICAL EDUCATION ENVIRONMENT IN PUNJAB PRIVATE AND PUBLIC MEDICAL COLLEGES AFFILIATED WITH UNIVERSITY OF HEALTH SCIENCES, LAHORE-PAKISTAN

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Background: The main purpose of this study was to identify differences, if any, in the Medical Education Climate between the Private and Public Medical Colleges in the Province of Punjab affiliated with the University of Health Sciences, Lahore and to gather recommendations from students on measures that need to be taken to improve the environment. **Methods:** This Mixed Quantitative and Qualitative Prospective Study was conducted in 2008. The population of the study consisted of 1612 MBBS Final Year Medical Students of both Private and Public Medical Colleges. Stratified Random Sampling was done to ensure representation of both Sectors. Dundee Ready Education Environment Measure (DREEM) was used to assimilate Quantitative Data and a Questionnaire consisting of 10 items was used to accumulate Qualitative Data. To analyse Quantitative Data, *t*-test and *Chi-square* tests were used. Common themes were identified in the Qualitative Data. **Results:** All the SIX Research Hypotheses were rejected and Null Hypotheses were upheld. Analysis of Qualitative Data indicated a number of Examination, Curriculum, Teaching Methodology, Teacher and Peer related Stressors without discrimination in students of both Private and Public Sectors. Solutions by students focused on improving co-ordination between Institutions and University of Health Sciences as well as developing and delivering Clinically-Centred, Community-Oriented and Problem-Based Education through development of appropriate Teaching Methodologies. **Conclusions**: Even though there is no difference in the Medical Education Climate between the Private and Public Medical Education Sectors, the Environment is less than Ideal. However, this can be improved through shifting the onus of Education from Teacher-Centred Didactic Approach to a more Student-Centred Self-Learning Strategy. In this paradigm shift the UHS, Lahore needs to play a pivotal role in order to effectively train the Trainers and standardise this change throughout Punjab.
Keywords: Medical Education Environment, Private Medical Sector, Public Medical Sector, DREEM, Problem-based Education, MCAT, COME, PBL

INTRODUCTION

The University of Health Sciences (UHS) was established through the Government of Punjab Act 2002 on July 24, 2002 with a charter of being the sole Degree Awarding University in the Province of Punjab in Medical Education. From a very humble beginning the University now has nearly 50 Medical and Paramedical Institutions affiliated with it. There are in total 19 Medical Colleges affiliated with the UHS, 11 private and 8 public sector colleges are involved in MBBS education. All these Institutions are spread far and wide in the province of Punjab but the UHS regulates Medical Education and conducts examinations at all of these affiliated institutions. The University strives to improve the quality of Medical Education in all its affiliated Medical Colleges in line with developments taking place all over the world and in conjunction with local needs of the community in order to produce Community-Oriented, Clinically-Based Doctors for the larger benefit of our public.

Students aspiring to become hospital doctors sit in the Pre-Medical F. Sc. examination and successful candidates are required to sit in a Medical Colleges Admission Test (MCAT) before Merit Lists are issued for Public Medical Colleges in Punjab. Those students failing to get admission in Public Medical Colleges try to get admission in Private Medical Colleges which charge fee from anywhere between PKR 400,000 to 800,000 in certain cases. Medical Education in the public Medical Colleges is subsidised by the Government.

Once students gain admission in the Medical Colleges they follow a detailed curriculum over the next 5 years with yearly university examinations called Professional Examinations. If found successful in the Final Examination at the end of the 5th Year of Education, the student is awarded the Degree of MBBS and, following registration with Pakistan Medical and Dental Council (PMDC), is eligible to practice Medicine in Pakistan.

Each year from the University through the affiliated colleges, nearly 2,000 students graduate as MBBS doctors alone. The main focus of the University is to ensure that wherever the students spend their 5 years of education at, the product of

the education in all these institutions is similar. To that end the University ensures a uniform curriculum and evaluation system throughout Punjab. Nevertheless, the curriculum and evaluation forms a small albeit a significant component of the wider education climate.

The climate of Medical Education is an all-encompassing term that recognises the influence of various factors in the personal and professional development of the students in an institution. It includes amongst others, learning and teaching methodologies, social and psychological support, teacher-student relationship, student-student relationship, self and peer development, general atmosphere of the institution, facilitation of extra-curricular activities, assessment techniques, etc.

The climate of an institution determines the product, its quality and quantity as well as forges it into its own. Researchers over the years have tried to identify the factors that contribute to the overall environment and to what extent. These, in order to be able to measure the climate, compare it with the product and then improve the product through improving the climate.

Over the years the Medical Education in Pakistan has been blindly following the changing trends in the West albeit with at least a decade's delay. The UHS over the last 5 years has been trying to set down the Medical Education in Pakistan into its local roots. To that end the University has completely changed the evaluation process into an objective, valid, reliable, transparent, problem-based, clinically-oriented, community-based system.

Through bringing a change in the evaluation process the University redefined the learning/ teaching methodologies and revised the curriculum based on the same ideologies. However the University as yet had failed to gather any data on the Climate of Education in its various affiliated Medical Colleges. It was being argued that this climate varied considerably between colleges and between the private and public institutions.

The purpose of this study was to determine the Medical Education Environment in various Private and Public Medical Colleges affiliated with the UHS in the Province of Punjab in Pakistan.

Specifically this study addressed the following questions:

1. Is there a significant difference between the Mean Scores of the Education Climate in Private and Public Medical Institutions?
2. Is there a significant difference between the Mean Scores of 'Perceptions of Learning' (PoL) by students in Private and Public Medical Colleges?
3. Is there a significant difference between the Mean Scores of 'Perceptions of Teachers' (PoT) by students in Private and Public Medical Colleges?
4. Is there a significant difference between the Mean Scores of 'Perceptions of Atmosphere' (PoA) by students in Private and Public Medical Colleges?
5. Is there a significant difference between the Mean Scores of 'Academic Self-Perception' (ASP) by students in Private and Public Medical Colleges?
6. Is there a significant difference between the Mean Scores of 'Social Self-Perceptions' (SSP) by students in Private and Public Medical Colleges?

SUBJECT AND METHODS

The population was limited to all the students of the Final Year (5th Year) MBBS in the Medical Colleges affiliated with the UHS, Lahore. At the time of the study there were 8 Public and 5 Private Medical Colleges offering MBBS affiliated with the University. Studies had not advanced up to the 5th Year in 2 Public and 3 Private Medical Colleges and therefore they were excluded from this study. Thus, the research study was based on in total 6 Public and 3 Private Medical Colleges. There were in total 1,612 students in Final Year MBBS in these institutions, 1,406 in Public and 206 in Private. Stratified Random Sampling was used to ensure the representation of both Private and Public Sectors. During the sampling process three Public Medical Colleges were excluded from the study. A pilot study was conducted to estimate the volume of sample.

In this study a standardised, validated instrument to measure the Medical Education Environment was used (Appendix-I). This instrument developed by the Department of Medical Education, University of Dundee, called the Dundee Ready Education Environment Measure (DREEM) has been validated all over the world including in the Medical Colleges of the developing countries.

Qualitative Data was collected concurrently using a standardised questionnaire developed at the Department of Examinations, UHS, Lahore and validated in the pilot study.

The DREEM Questionnaire consists of 50 items, each scored 0-4 on a 5-point scale. For weightage of Questionnaire Item No. '4' was allotted to Strongly Agree (SA) and number '0' to Strongly Disagree (SDA). Negative Statements (numbers 4, 8, 9, 17, 25, 35, 39, 48 and 50) are scored in reverse, so that high scores on these items indicate Disagreement, i.e., a Positive Result. The

statements of the Questionnaire may also be subdivided to provide an indication of student perceptions of 5 separate elements of the Education Environment:
• 'Perceptions of Learning' (PoL)
• 'Perceptions of teachers' (PoT)
• 'Perceptions of Atmosphere' (PoA)
• 'Academic Self-Perception' (ASP)
• 'Social Self-Perceptions' (SSP)

DREEM has a maximum score of 200 indicating an Ideal Education Environment as perceived by the student. The following is an approximate guide to interpreting the overall score:
0–50   Very Poor
51–100   Plenty of Problems
101–150 More Positive than Negative
151–200 Excellent

Qualitative Data were collected simultaneously using a separate Questionnaire.

The DREEM can also be used to pinpoint more specific strengths and weaknesses within the Education Climate. To do this one needs to look at the responses to individual items. Items that have a mean score of 3.5 or over are real positive points. Any item with a mean of 2 or less should be examined more closely as they indicate problem areas. Items with a mean between 2 and 3 are aspects of the climate that could be enhanced.

The Qualitative Survey focused on the Academic and Social Stressors and Recommendations of the students on how to reduce them and improve the Medical Education Environment.

Both Questionnaires were administered and collected maintaining complete anonymity of the students.

Total Score of every Questionnaire was derived. This was entered into MS Excel. Then Statistical Techniques were used to analyse the data using t-test and Chi-square tests.

For the analysis of Qualitative Data, all the Questionnaires collected were scrutinised and common themes were identified which are presented.

RESULTS

Analyses of the data show:
1. No significant difference between mean scores of the Education Climate in Private and Public Medical Institutions ($p>0.05$)
2. No significant difference between mean scores of 'Perceptions of Learning' (PoL) in Private and Public Medical Institutions ($p>0.05$)
3. No significant difference between mean scores of 'Perceptions of Teachers' (PoT) in Private and Public Medical Institutions ($p>0.05$)
4. No significant difference between mean scores of 'Perceptions of Atmosphere' (PoA) in Private and Public Medical Institutions ($p>0.05$)
5. No significant difference between mean scores of 'Academic Self-Perception' (ASP) in Private and Public Medical Institutions ($p>0.05$)
6. No significant difference between mean scores of 'Social Self-Perceptions' (SSP) in Private and Public Medical Institutions ($p>0.05$)

The results are shown in detail in Tables 1–6.

Table-1: Response Rate of Candidates who were distributed the Questionnaires

Sector	College	Total Candidates	Candidates Who Gave Response	Response Rate	Average Response
Private Sector	FMH	74	62	83.78	88.48
	LMDC	132	123	93.18	
Public Sector	SIMS	42	37	88.10	79.22
	AIMC	78	50	64.10	
	NMC	172	147	85.47	
	TOTAL	498	419	84.14	

Out of the 498 candidates that were sent the Questionnaires, 419 responded. The response rate was higher in the Private Sector (88.48%) when compared to the Public Sector (79.22%).

Table-2: Gender Distribution of the Sample Population

Gender	Private Medical Colleges	Public Medical Colleges	Overall
Female	119	100	**219**
Male	63	130	**193**
Not Mentioned	3	4	**7**

Out of the 419 candidates who responded to the questionnaire, there were 219 females and 193 males. Seven Candidates failed to mention their Gender.

Table-3: Age Distribution of the Sample Population

Gender	Private Medical Colleges	Public Medical Colleges	Overall Average
Female	23.7	22.6	**23.2**
Male	24.4	23.3	**23.9**
TOTAL	**24.1**	**23.0**	**23.5**

The average age of female respondents was 23.2 and that of the male respondents was 23.9. The average age of respondents of Private Medical Colleges was higher (24.1) when compared to that of Public Medical Colleges (23.0).

Table-4: Question-wise comparison of Respondent Trends between Private and Public Medical Colleges of the Punjab Province

Q. No.	Private SA (4)	Public SA (4)	Private A (3)	Public A (3)	Private U (2)	Public U (2)	Private DA (1)	Public DA (1)	Private SDA (0)	Public SDA (0)
1	75	68	85	98	14	33	9	23	2	12
2	126	116	52	99	6	15	1	2	0	2
3	37	13	58	24	36	32	34	54	20	111
4*	31	34	52	38	30	36	51	81	21	45
5	38	35	91	69	40	76	13	37	3	17
6	68	37	78	97	27	46	10	37	2	17
7	55	24	93	98	26	46	7	53	4	13
8*	23	35	43	60	59	51	47	57	13	31
9*	5	12	20	20	39	44	79	101	42	57
10	87	119	74	77	22	27	2	8	0	3
11	62	33	92	98	13	21	11	45	7	37
12	76	60	71	86	19	22	9	39	10	27
13	43	23	84	72	38	52	12	62	8	25
14	22	40	50	63	43	31	47	68	23	32
15	90	115	69	73	16	21	4	8	6	17
16	59	35	83	78	22	38	18	58	3	25
17*	29	47	46	59	38	32	42	49	30	47
18	80	57	84	101	12	24	5	39	4	13
19	74	80	84	105	14	15	10	24	3	10
20	69	28	89	82	17	54	8	55	2	15
21	53	31	93	70	24	52	10	50	5	31
22	58	20	79	76	23	37	19	59	6	42
23	62	41	93	114	13	28	15	31	2	20
24	57	32	91	96	23	49	10	46	4	11
25*	3	15	19	47	52	64	78	84	33	24
26	42	33	93	98	34	43	15	44	1	16
27	32	27	95	86	36	37	19	63	3	21
28	35	49	72	89	29	19	37	49	12	28
29	56	32	88	84	26	37	10	52	5	29
30	49	29	88	91	30	35	15	52	3	27
31	60	43	81	105	37	52	7	24	0	10
32	32	27	78	92	48	25	23	59	4	31
33	61	48	85	116	27	23	9	27	3	20
34	70	54	79	112	27	19	9	32	0	17
35*	48	32	43	67	50	33	28	75	16	27
36	46	30	97	118	28	40	8	36	6	10
37	71	45	78	117	24	33	9	28	3	11
38	60	49	88	103	28	31	9	35	0	16
39*	13	26	47	76	48	17	54	79	23	36
40	74	69	77	109	28	19	5	22	1	15
41	49	31	85	88	35	42	9	53	7	20
42	40	40	60	77	45	40	31	41	9	36
43	46	29	91	98	36	34	8	55	4	18
44	55	30	85	100	32	40	10	48	3	16
45	59	52	92	106	26	32	6	30	2	14
46	54	55	92	111	28	20	6	24	5	24
47	55	42	71	102	43	43	13	32	3	15
48*	7	7	26	39	69	61	58	93	25	34
49	43	39	79	81	32	17	23	54	8	43
50*	17	55	35	52	57	33	46	63	30	31

*Negative questions scored in reverse

Table-5: Findings of Item Analysis

Item No.	Findings
1	Majority of the students agree that they are encouraged to participate in the class.
2	Majority of the students agree that the teachers are knowledgeable.
3*	Majority of the students disagree that there is a good support system for students who get stressed.
4**	Majority of the students agree that they are too tired to enjoy this course.
5	Majority of the students agree that learning strategies which worked for them before continue to work for them now.
6	Majority of the students agree that the teachers are patient with patients.
7	Majority of the students agree that the teaching is often stimulating.
8**	∞Majority of the students agree that the teachers ridicule the students.
9**	† Majority of the students disagree that the teachers are authoritarian.
10	Majority of the students agree that they are confident about passing this year.
11	Majority of the students agree that the atmosphere is relaxed during the ward teaching.
12	Majority of the students agree that the school is well timetabled.
13	Majority of the students agree that the teaching is student centred.
14	Majority of the students agree that they are rarely bored on this course.
15	Majority of the students agree that they have good friends in this school.
16	Majority of the students agree that the teaching is sufficiently concerned to develop their competence.
17**	∞Majority of the students agree that cheating is a problem in their school.
18	Majority of the students agree that the teachers have good communication skills with patients.
19	Majority of the students agree that their social life is good.
20	Majority of the students agree that the teaching is well focused.
21	Majority of the students agree that they feel they are being well prepared for their profession.
22	Majority of the students agree that the teaching is sufficiently concerned to develop their confidence.
23	Majority of the students agree that the atmosphere is relaxed during lectures.
24	Majority of the students agree that the teaching is put to good use.
25**	† Majority of the students disagree that the teaching is over-emphasises factual learning.
26	Majority of the students agree that the last year's work has been a good preparation for this year's work.
27	Majority of the students agree that they are able to memorize all they need.
28	Majority of the students agree that they seldom feel lonely.
29	Majority of the students agree that the teachers are good at providing feedback to students.
30	Majority of the students agree that there are opportunities for them to develop interpersonal skills.
31	Majority of the students agree that they have learned a lot empathy in their profession.
32	Majority of the students agree that the teachers provide constructive criticism there.
33	Majority of the students agree that they feel comfortable in class socially.
34	Majority of the students agree that the atmosphere is relaxed during seminars / tutorials.
35**	∞Majority of the students agree that they find the experience disappointing.
36	Majority of the students agree that they are able to concentrate well.
37	Majority of the students agree that the teachers give clear examples.
38	Majority of the students agree that they are clear about the learning objectives of the course.
39**	∞Majority of the students agree that the teachers get angry in class.
40	Majority of the students agree that the teachers are well prepared for their class.
41	Majority of the students agree that their problem solving skills are being developed here.
42	Majority of the students agree that the enjoyment outweighs the stress of studying medicine.
43	Majority of the students agree that the atmosphere motivates them as learners.
44	Majority of the students agree that the teaching encourages them to be active learners.
45	Majority of the students agree that much of what they have to learn seems relevant to a career in medicine.
46	Majority of the students agree that their accommodation is pleasant.
47	Majority of the students agree that long term learning is emphasized over short term.
48**	† Majority of the students disagree that the teaching is too teacher-centred.
49	Majority of the students agree that they feel able to ask the questions they want.
50**	∞Majority of the students agree that students irritate the teachers.

**Negative Items of the Questionnaire, †Trend of Opinion is in Disagreement to the Negative Item Statement, ∞Trend of Opinion is in Agreement to the Negative Item Statement, *Positive Item of the Questionnaire for which the Trend of Opinion is in Disagreement to the Item Statement

Table–6: Findings of Qualitative Survey

Q. No.	Findings
1.	Examination, Teaching, training, Learning, Curriculum and Syllabus related Stresses were identified.
2.	Through Selective Self-learning according to the UHS examination pattern and through Group support and extracurricular activities.
3.	Through better UHS-Institution coordination and teaching/ training according to the UHS examination pattern.
4.	Time-management, Examination preparation and development of Clinical and Problem Solving Skills apart from presentation and communication skills.
5.	By shifting the paradigm to student-centred education with UHS playing a pivotal role through workshops and seminars for training both students and faculty.
6.	Improvement in student-teacher relationship. Improvement in co-ordination between UHS and Institutions. Problem-based Clinically-oriented small-group teaching / learning.
7.	Teacher-training workshops organized by UHS for all teachers. Small-group teaching. Open friendly interactive (discussion-type) teaching / training.
8.	Emphasis on problem-based learning. Practical and Clinically-oriented Curriculum, Teaching and Examination. Teacher-training to change current teaching methodologies from factual to critical and analytical thinking.
9.	Task-based Problem-based discussions and tutorials. Hands-on practical and clinical training. Role of teachers shifted to facilitators.
10.	Exposure of Private Colleges' students to Government Teaching Hospitals. Review of Curriculum and Examination System. Representation of students in Decision Making Bodies/Authorities of UHS and Parent Institutions. Establishment of departments of Medical Education and Student Affairs in each Institution.

DISCUSSION

The free online dictionary defines climate as '**A Prevailing Condition or Set of Attitudes in Human Affairs' or 'A Prevailing Trend'**. Climate is therefore the attitudes, behaviour, interpersonal relationships, mood and focus of an area, group or spatial organization. It also includes the relationship with innate objects and boundaries. It is important to dwell on this definition since it points to an important aspect of the concept behind the word 'CLIMATE'. It defines it as a trend. Not something that is temporary, neither something that does not effect or leave a mark as a result of its occurrence but a phenomenon that is both self-perpetuating and self-propagating. A cyclical process, nay a spiral process, since the product or the influence of this 'CLIMATE' in turn influences itself. Climate is not a single entity, like the world climate affected by wind, rain, snow, sunshine, etc., here too it encompasses numerous factors that have an overall effect on the learning/ teaching and development outcomes.

Over the last few years Pakistan has seen rapid expansion of the Medical Education into the Private Sector. This has followed the expansion of Medical Care into Private Institutions. The key factor has been the establishment of large Private Hospitals that could rival their Government counterparts in the services offered under one roof.[1] Previously the Private Medical Sector consisted of individual doctors practicing on their own.

As these individual establishments combined to form large multi-storied constructions offering a range of medical services across the entire medical spectrum including diagnostic and therapeutic laboratory facilities it was only a matter of time before the Government already under pressure to expand the medical teaching and training facilities allowed Private Medical Schools to set up and attach to these Private Hospitals[2]. All that was required was to set up functioning departments of Basic Sciences to complete the process to a comprehensive Medical Teaching Environment… or was it?

The Government Sector could, as it always has, guaranteed that its end product is what the consumer wants (the Government Hospitals and the Community of Pakistan and Asia). What then can the Private Sector Guarantee?

The argument is that since the Government and Private Sector students undergo the same assessment, the final product of the two systems is essentially the same.[3]

In the primary and secondary/higher secondary education, the Private Education Institutions enjoy a higher success rate and greater prestige when compared to their Government Sector Counterparts in Pakistan unlike some other countries.[4] In the undergraduate Medical Education, the Private Sector has failed to enjoy the same success.

The problems are not difficult to understand. Providing Medical Education is an expensive business. In the Government Sector the whole system is heavily subsidized unlike the Private Sector. This allows the Government to select

on the basis of merit the top scoring students. The Private Schools, to educate students have to be run as a business like any other corporate.[5] This produces a system in which only the rich can afford Private Medical Education regardless of merit.

The Government Sector also has the capability to employ a large number of resources and staff to set up an appropriate education delivery system, develop curricula, and validate its teaching and assessment procedures and to grow.[6] Again, the Private Institutions, in order to lower the cost of delivery of services and thereby, the fees for education have to be limited in the number of staff and resources available to them. The staff also favours the Government Sector for better support and career opportunities.

In the clinical years the exposure of the students to patients is limited to the type and nature of patients presenting to their institutions.[7] Whereas large teaching hospitals receive patients throughout the entire pathological spectrum and therefore can boast to reflect the community exactly, the same cannot be said of the private hospitals to which only a select group of private patients present.[8,9]

The objective therefore is to understand the areas in which the Private Education System in Pakistan can be improved. This could provide the opportunity in later years to develop the system to its full potential.

Moos characterized several dimensions of a learning environment including the relationship dimension.[10] Brekelmans, Wubbels, and Levy in their study elaborated that the teacher-student relationship is associated with teacher instructional strategies.[11] The study by Stern et al. and Griffith showed that ratings of the teachings by the inpatient attending physicians predicted student's knowledge gain as measured by the National Board of Medical Examiners (NBME) and United States Medical Licensing Examination (USMLE).[12,13] Improvements in the student's performance based on teaching behaviours over a clerkship was demonstrated by Roop and Pangaro.[14] Excellent teachers demonstrate sound clinical skills, are good role models, and encourage students' professional growth.[15–18]

Student's perceptions of teaching and teachers therefore have a direct and lasting psychosocioeconomic effect on the students and the Medical Education Climate.

Bassaw et al. and Genn in their studies on learning environments debated it as one of the most important factors determining the success of an effective curriculum.[19,20] The study by Reem Abraham et al[21], revealed problematic areas of learning environment in medical college (as the

mean score of most of the items were between 2 and 3). This allowed them to adopt some remedial measures.[21] Learning environment affects student motivation and achievement. Therefore, it is important to get feedback from the students on how they are experiencing their learning environment.

Academic self-perceptions of students is defined as their self-concepts in terms of perceptions of their academic difficulties, effort, and strategy use, and how good they feel as students about themselves. Marsh et al and Marsh and Yeung, in their extensive work on academic self-concept, provided evidence for a model of reciprocal pathways between academic self-concept and academic achievement.[22,23] In a National Survey by Bradley et al[24], they found that lack of leisure time, procrastination, meeting faculty expectations for workload, and feeling powerless in the system were the students' top concerns about their academic programs. Another study found that the amount of active classroom involvement, level of faculty concern for student development and teaching affected students' perceptions of their academic growth and development.[25] Students' self-perceptions of control over their academic and developmental progress affected their willingness to become actively involved in the classroom and to seek contact with faculty members outside of class. Humphris et al, found that contact with patients was perceived as positive by students and resulted in lower levels of psychological distress and that the students who lived with their families exhibited a lower level of stress.[26]

Sanders and Lushington, found that perceptions of stress were due to an underlying tendency toward perfectionism based on an academic history of high achievement and powerful expectations of excellence in academics.[27]

The UK Standing Committee on Postgraduate Medical Education (SCOPME 1991) highlighted the importance of the Educational Environment in their statement that 'A working environment that is conducive to learning is critically important to successful training'.[28] In 1997 Roff et al developed a questionnaire called the Dundee Ready Education Environment Measure (DREEM) that has been used in a number of global settings in both Medical and Allied Health Sciences' settings and has to date provided consistent results in measuring and analyzing Medical Environments.[29–31]

There is growing recognition of the importance of Educational Climate/Environment in underpinning effective student learning. Till notes that the Instrument has been used mainly to compare different medical schools, and that reports

in the literature 'gave no indication of what institutions do after they get the results of a climate study'.[32]

In this study concrete recommendations shall be based on the outcome in order to standardise and improve the M.edical Education Environment in Pakistan and reduce the Medical Education related psycho socioeconomic stress of the Students, the Faculty, Administration and the Community.

CONCLUSIONS

There is no difference in the Medical Education Environment of the two Sectors in Pakistan despite perceived differences in resources. Students in both Sectors identified cheating as problem in their respective schools, that teachers ridicule them and get angry in class and that the students irritate the teachers. In both sectors the students were disappointed with their experience.

In the Qualitative Survey, Examination, Teaching, Training, Learning, Curriculum and Syllabus related Stresses were identified. Students through Selective, Self-learning according to the UHS Examination pattern and through Group support and Extracurricular Activities try to overcome these stress factors. It is believed that better UHS-Institution coordination and teaching/training of students according to the UHS Examination Pattern are required.

Students identified improvement in student-teacher relationship, Problem-based, Clinically-oriented, small-group teaching/learning, Time-management, Examination-preparation and development of Clinical and Task/Problem Solving Skills apart from presentation and communication skills as the main areas in which support is required through shifting the paradigm to student-centred education with UHS playing a pivotal role by organizing workshops and seminars for training both students and faculty.

Students were of the opinion that Small-group teaching with open, friendly, interactive (discussion-type) teaching/training sessions and emphasis on problem-based learning with a practical and clinically-oriented Curriculum and Examination would help change current teaching methodologies from factual to critical and analytical thinking.

Representation of students in Decision Making Bodies/Authorities of UHS and Parent Institutions, establishment of Departments of Medical Education and Student Affairs in each Institution and exposure of private colleges' students to Government Teaching Hospitals will help alleviate some of these stressors.

TAKE HOME MESSAGE

Both Private and Public Sectors Medical under-graduates have common problems and perceptions in their respective Medical Education Environments.

RECOMMENDATIONS

Based on the findings of this study the following recommendations are made:

1. Coordination between UHS and its affiliated Institutions regarding all aspects of administrative and academic activities should be improved.
2. Each Institution affiliated with the University of Health Sciences should set up Departments of Medical Education and Student Affairs.
3. Counseling should be available to students at the Department of Student Affairs which should also provide students support regarding personal and professional development.
4. All the stake-holders i.e. UHS, Administrations, Academic Staff, Students and Patients should be involved in the decision making process when changes in teaching methodologies, curriculum and examination are being considered.
5. Students of both Private and Public Medical Colleges should be given representation in various Policy-Structuring and Statutory Bodies/Authorities of Parent Institutions and UHS.
6. The UHS should spearhead the paradigm shift in Medical Education in Punjab from the teacher-centered, authoritarian and didactic lecture-based education to a student-centered, self-learning and teacher supervision / facilitation model.
7. The UHS should organize workshops, seminars and tutorials to train the trainers in developing their skills as facilitators of small-group, problem-based, clinically-oriented, community-centered, hands-on, practically-oriented learning sessions.
8. The UHS should continuously review its Curriculum and Examination System basing changes on current and prospective community needs and these changes should be widely circulated to all concerned well before implementation.
9. Each Institution should hold regular Class-Tests and Practical / Clinical Exams throughout the Academic Session based on the Pattern of Examination of UHS.
10. The UHS should organize workshops and tutorials to educate and train its student population in attempting problem-based examination questions that require critical thinking and evaluative approach. The students should also be helped through seminars in developing skills of self and peer assessment and self-learning.

11. Where exposure to diseases is limited especially in Private Institutions, adequate steps should be taken by the UHS to ensure that equal opportunity is provided to Private Candidates in developing their Clinical Skills through perhaps visiting Government Hospitals at costs agreed mutually by the Two Sectors.
12. The UHS should make its Examination System Structured, Uniform, Objective and Standardized so as to reduce Subjectivity in Assessment and thereby control favoritism and victimization.

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