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SOUND HEALTHCARE PROFESSIONALS: DUNDEE READY EDUCATION ENVIRONMENT MEASURE (DREEM) INVENTORY AS AN ASSESSMENT TOOL OF EDUCATIONAL ENVIRONMENT: A CROSS-SECTIONAL STUDY

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Abstract:

Background & Objectives: *There is a vast influence of the environment in the teaching and learning process especially when it is targeting the production of sound healthcare professionals. It is concerned about what, how and why students are learning. As it is important, so we aimed to measure the perception of the students about the environment of teaching and learning process.*

Methods: *We conducted a cross-sectional research on 82 students from March 2016 to April 2017 at Allied Hospital, Faisalabad. We employed a fifty items inventory known as DREEM (Dundee Ready Education Environment Measure) in order to assess the public healthcare and professional's educational environment and perception. We included all the students of MSc (Masters of Science) and MPH (Masters in Public Health) programs including both the shifts.*

Results: *Because of multiple reasons the response rate was not cent percent, it was observed as 93%. An average mean score of DREEM was observed as (143.44 ± 8.4). This score was positive in nature. There were differences in the weaknesses and strengths identification as students responded to the items asked of them about various learning environments. On nine items the score was under two the item numbers were (3, 4, 8, 14, 27, 29, 35, 39 & 50); negative expression was observed about five which are (4, 8, 35, 39 & 50). These items had a low score which means a positive inclination. Negatively directed and above two score items were (9, 17, 25 & 48).*

Conclusion: *Perception of the students about the environment of the education was positive in almost all the batches which indicate an adequate satisfaction level in various areas of the prevalent syllabus.*

Keywords: *Educational Environment, DREEM (Dundee Ready Education Environment Measure) and Perception.*

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INTRODUCTION:

There is a vast influence of the environment in the teaching and learning process especially when it is targeting the production of sound healthcare professionals. It is concerned about what, how and why students are learning [1]. It is all in the medical field and curricula immensely influence the behaviour of teachers and students in a medical teaching institute [2]. There is an impact of educational environment on the academic achievement, aspirations and perceived well-being [3].

The curriculum aims at the students as they are the primary stakeholder. Teaching goals are set to meet the needs of the student's learning experience. Institutional climate assessment and weak areas identification is mandatory for the achievement of excellence [4]. World Federation for the Medical Education is focused on the learning objectives [5]. Successful training is only possible because of the conducive learning environment. Wider aspects are involved in the environment of the university learning [6]. The educational environment is being assessed by DREEM inventory all over the world, which is a fifty items inventory that assesses the healthcare professional and learning environment [7, 8]. It is a multipurpose inventory such as identification of the weaknesses and strengths of a learning environment, comparison of the learning program outcomes etc. [9, 10].

No such research work has been completed till now as per the literature review. Regular assessment of the educational environment of healthcare institutions is mandatory. There was a need for the assessment of the perception of the student about the learning environment. Steps are required to enhance the product quality in the public health sectors. As it is important, so we aimed to measure the perception of the students about the environment of teaching and learning process.

METHODS:

We conducted a cross-sectional research on 82 students from March 2016 to April 2017 at Allied Hospital, Faisalabad. We employed a fifty items inventory known as DREEM (Dundee Ready Education Environment Measure) in order to assess the public healthcare and professional's educational environment and perception. We included all the students of MSc and MPH programs including both the shifts. Few students' remained absent because of various reasons such as sickness or other related reasons which affected the overall response rate of the research. After the delivery of lectures, inventory was managed in the students and data was documented. We ensured the confidentiality and ethical considerations. During research ethical protocols were made intact. Inventory holds a total score of two hundred with five-point Linkert Scale from (4 – 0) that varies from Strongly Agree to Strongly Disagree.

Outcomes analysis was made on SPSS software. Score interpretation guidelines are distributed on individual items, subscales and overall DREEM. It is validated for the developed and under-developed countries such as Pakistan [12 – 14].

RESULTS:

Because of multiple reasons the response rate was not cent percent, it was observed as 93%. An average mean score of DREEM was observed as (143.44 ± 8.4). This score was positive in nature. There were differences in the weaknesses and strengths identification as students responded to the items asked of them about various learning environments. Total 76 / 82 participants (93%) responded to the inventory. On nine items the score was under two the item numbers were (3, 4, 8, 14, 27, 29, 35, 39 & 50); negative expression was observed about five which are (4, 8, 35, 39 & 50). These items had a low score which means a positive inclination. Negatively directed and above two score items were (9, 17, 25 & 48). Mean SPL was observed as (35.2 ± 2.71) reflects a positive trend about the learning. Positive items reflected a mean score of the items more than 2, which indicates further chances of the improvement. Factual learning and teacher-centered approach were scored above 2 in the negative direction that requires a correction. Mean SPT score (32.25 ± 4) that indicates the right direction movement. As per the DREEM teacher were sound in their subject knowledge (4.02 ± 0.65) and students thought that teacher was well conversant in their communication skills. They provided good examples and prepared well for the classes. DREEM also indicated the strong areas of the learning environment. Negative scores were obtained about the ridiculing behaviour of the teachers and their anger as well. An improvement can be made in the authoritative behaviour of the teachers. Feedback quality was ineffective and required specific attention. Further assessment of the outcomes can be made with the help of outcomes given in the tabular data and it can be compared with the help of given graphical representation.

Table – I: Mean Scores of the DREEM

DREEM Subscales	Mean	±SD
Students' Perception of Learning (SPL)	35.2	2.71
Students' Perception of Teachers (SPT)	32.25	4
Students' Academic self-Perceptions (SAP)	23.79	2.256
Students' Perception of Atmosphere (SPA)	35	5.891
Students' Social Self- Perceptions (SSP)	17.2	3.092

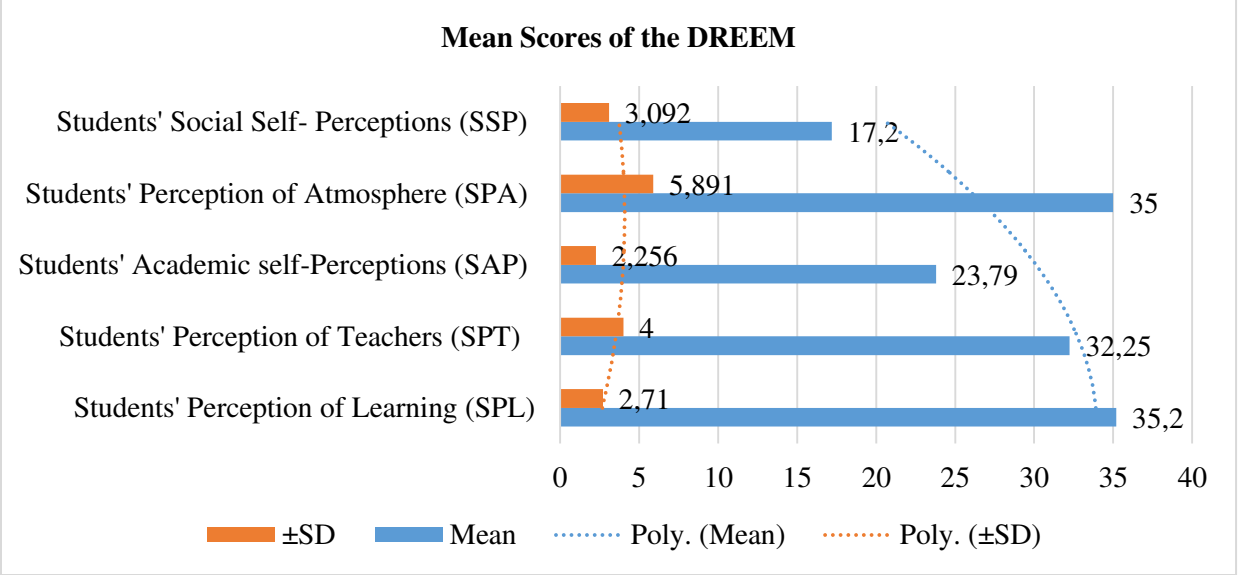


Table – II: Mean Scores Under 2 (< 2)

DREEM Subscales	Mean	±SD
Teachers are good about the feedback process (SPT)	1.92	1.091
I can memorize all I need to learn (SAP)	1.97	1.118
This course is rarely boring (SSP)	1.55	1.227
The good supporting system is available for the boring situation (SSP)	1.04	0.799
Students are ridiculed by the teachers (SPT)	1.96	1.052
Angry teachers are in the class (SPT)	1.58	1.102
Teachers are irritated by the students (SPT)	1.36	1.21
This course cannot be enjoyed (SSP)	1.63	1.086
Disappointing experience (SPA)	1.48	1.102

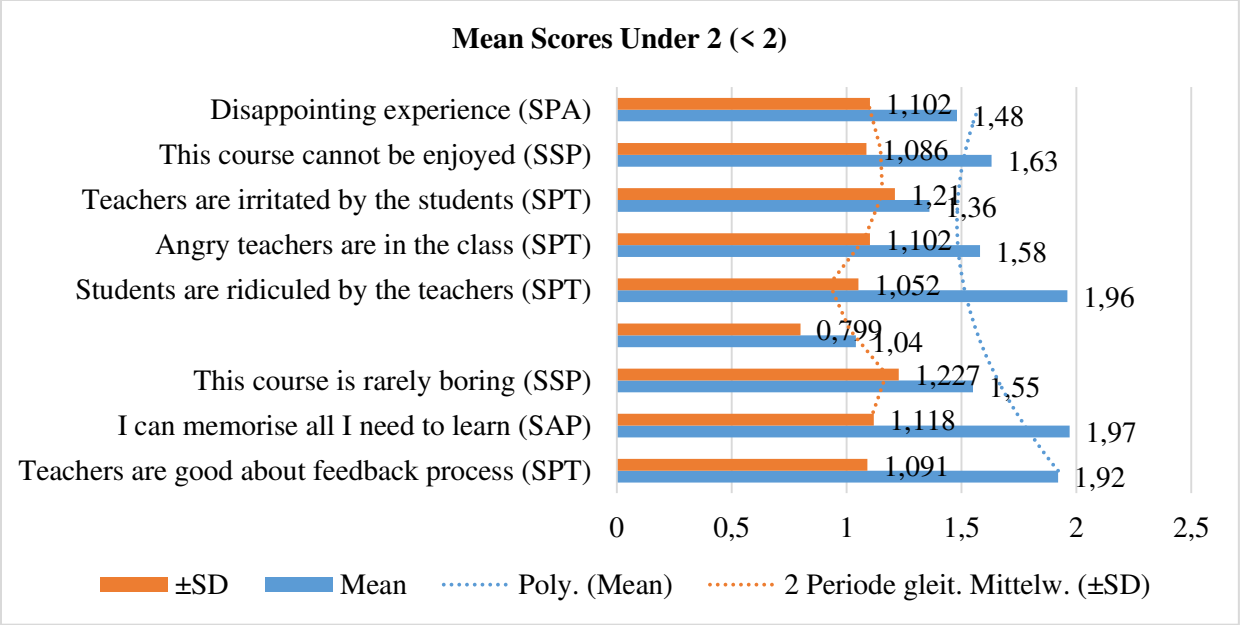


Table – III: Mean Scores above Three (> 3)

DREEM Subscales	Mean	±SD
The course provided me good friends (SSP)	4.08	0.889
Teaching consultation is relaxed	3.11	0.99
The knowledgeable faculty is available	4.02	0.65
Clear examples are provided by the teachers	3.09	0.69
Teacher's preparation is good	3.21	0.92
Good social life is available	3.85	1.009

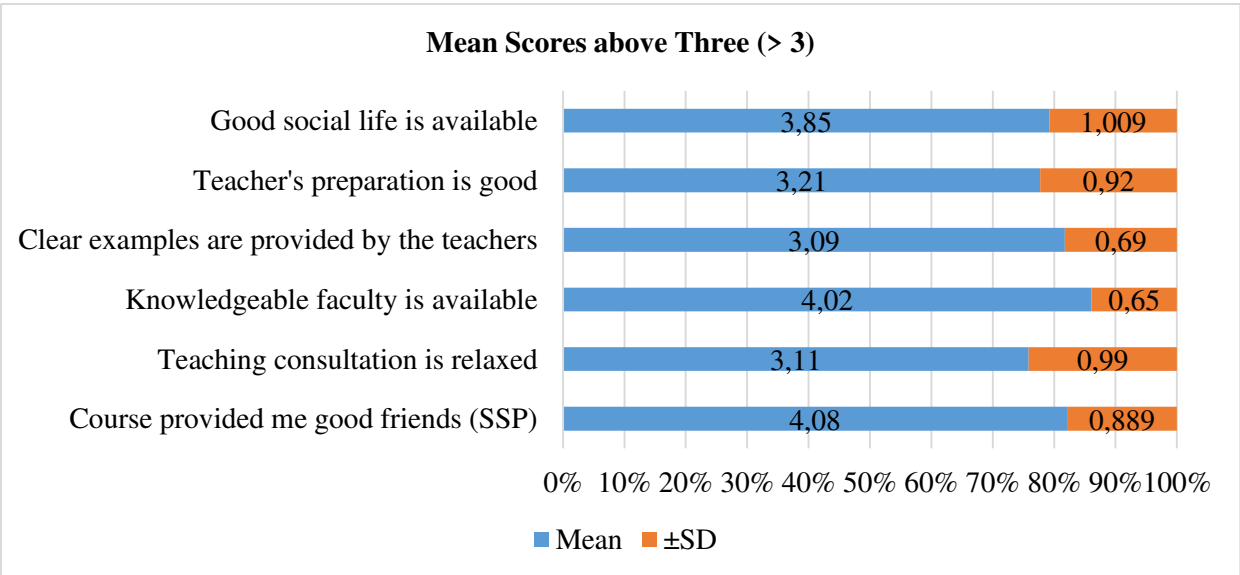
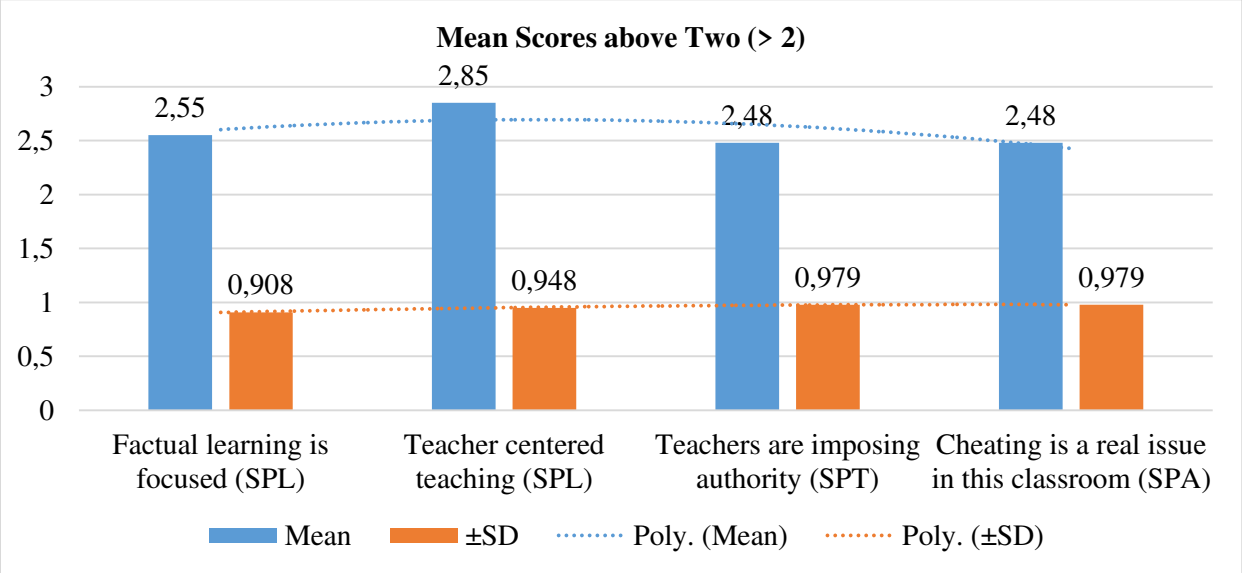


Table – IV: Mean Scores above Two (> 2)

DREEM Subscales	Mean	±SD
Factual learning is focused (SPL)	2.55	0.908
Teacher centered teaching (SPL)	2.85	0.948
Teachers are imposing authority (SPT)	2.48	0.979
Cheating is a real issue in this classroom (SPA)	2.48	0.979



DISCUSSION:

The educational environment can objectively be measured with the help of DREEM inventory. It is commonly used for the assessment of the undergraduate medical students. It is capable of a comprehensive assessment of postgraduate students and educational environment. We held a cross-sectional research to assess the students of MSc and MPH. Numerous courses have been added in the public health sector which needs the development process in the courses, DREEM may be of valuable help in order to improve the syllabus and curriculum [11].

Our research is among the few in the that aims at the assessment of the undergraduate students through DREEM inventory having fifty items. The overall mean score was 143.44, which is not excellent but it is more positive. Our outcomes can be compared with a research held in India [11]. Both negative and positive features were reported in the outcomes of the research. Every item of DREEM was responded because these items were relevant and friendly and response-oriented. Performance can be amended and sustained through outcomes. Improvement can be brought through the periodic employment of the DREEM for the regular evaluation of various domains and shades.

Academic gains, motivation and behaviour of the student's perception significantly influence the educational environment [2]. Concerning areas can better be highlighted by DREEM especially about the failure of comprehension and related reasons. Student's dissatisfaction can better be handled through qualitative inventory and data to improve overall understanding [15]. DREEM can differentiate among the didactic environment, activity-based learning and perception of the students among various institutes [12].

A conducive institutional environment helps in the motivation, better engagement, enhanced performance and skill improvement [2]. Higher order skill attainment is a complex and interconnected process which is affected by various educational aspects and learning environment as well [2]. Personal interpretation of the educational environment is known as the self-perception of any individual [16]. Numerous analysis levels have been reported in the latest reviews about varying domains and positive results are moderately interrelated with the positive individual's self-concept [16]. However, in the absence of meeting the expectations of the

individual experience becomes disappointing and it leads to discomfort in the shape of affected academic achievement quality and degraded learning experience [16].

Gains are effective and more in the optimized educational environment. Learning styles, behaviour and motivation are those factors which govern the academic gains, there is a close relationship between the deep approach and attitude and they are directly associated with the student's progression [17, 18].

CONCLUSION:

Perception of the students about the environment of the education was positive in almost all the batches which indicates an adequate satisfaction level in various areas of the prevalent syllabus. We suggest that student supporting programs should be established in the Universities. Emphasis is to be put on the regular evaluation of the learning environment. Improvement can be brought through the periodic employment of the DREEM for the regular evaluation of various domains and shades. DREEM can differentiate among the didactic environment, activity-based learning and perception of the students among various institutes.

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