

Intellectual wellness awareness: a neglected area in medical universities of Pakistan

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Abstract

Objective: To compare the presence of intellectual wellness awareness in students of public and private sector medical colleges in a metropolitan city.

Methods: The cross-sectional questionnaire-based survey was conducted from March to November 2011 at Bahria University Medical and Dental College, Karachi, and overall covered five private and 3 public sector medical colleges of the city. The study randomly selected 800 medical students. The responses – never, sometimes, mostly and always (numbered 0-4) - were analysed in terms of frequency, proportion and percentages using Predictive Analysis Software version 18.

Results: Of the 800 forms distributed, 736(92%) completed forms were analysed. Among the respondents, 526 (71.5%) were females. Besides, 450(61%) belonged to private medical colleges and 236(39) were from public medical colleges. The participants of private medical colleges had taken part in intellectual discussions actively compared to those from public colleges ($p < 0.001$). Habit of reading books to acquire knowledge was found in 126(44%) private college students compared to 149(33%) in public colleges ($p < 0.004$). The importance of creative mental activities ($p = 0.954$) and current information about local and international affairs ($p < 0.564$) was deficient in both sets of students.

Conclusion: Students of private medical colleges were better in terms of presence of intellectual wellness awareness, took active participation in class discussions, had good reading habits and carefully selected television programmes and movies.

Keywords: Intellectual wellness, Private sector medical colleges, Public sector medical colleges, DREEM score. (JPMA 64: 993; 2014)

Introduction

The history of medical education in Pakistan dates back to 1860 when the foundation of King Edward Medical College, the second oldest medical school of the subcontinent, was laid in Lahore. The medical education system of Pakistan has flourished in the recent past and currently there are 129 medical colleges in Pakistan, of which 81 are private and the rest are public medical institutions.¹ The possible reasons for this astounding rise of private sector medical education is to meet the shortage of doctors in the country as recommended by the World Health Organisation (WHO), public sector financial constraints, and to accommodate the bright students who fail to get admissions due to limited seats in public sector medical colleges (Public MC).^{2,3}

The admission criteria for the two different sets of medical schools may further explain the differences between these institutions. Admission into a Public MC is based on merit and residence, while socioeconomically privileged classes have access to private sector medical colleges (Private MC).⁴ The domicile criterion limits admissions of students of a particular

province to Public MCs whereas any student (including those from outside the province) can study at Private MCs.

Intellectual wellness (IW) can be defined as discovering the hidden talents of artistic, inspiring and thought-provoking activities to enhance one's mental capabilities and flourish one's own personality.⁵ The educational environment of any medical school can be assessed by the Dundee Ready Education Environment Measure (DREEM) scoring system and studies have revealed Private MCs have better DREEM scores compared to Public MCs.⁶

Medical educationists have always attempted to develop integrated curricula with an aim to bring about improvements in learning and teaching approaches.⁷ The information about IW of students can help in transition from "organ systems-based model" to "problem-based model", culminating in the "clinical presentation model". The transition keeps an individual: engaged in meaningful informed conversations on an on-going basis, make full use of the offered medical teaching, obtain the appropriate scientific and clinical knowledge, alongwith practical, procedural and communication skills, i.e. all the three domains of learning — cognitive, affective and psychomotor learning.⁸

IW of medical students in this regard provides a self-directed behaviour developed on the basis of constant

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expansion of knowledge, creative compliance, critical thinking, communicative skills and abilities. These promote a commitment to lifelong learning. It can be applied by medical students in a number of ways; reading, listening, observing, learning skills, taking part in hobbies, and becoming creative.⁵ The need for evaluation of IW is important for medical educationists since it helps them to identify learning needs, approaches and preferences of students^{9,10} and an improvement in DREEM scores. This DREEM scoring system is yet to be introduced and applied in our medical education system. If implemented now, it would be inappropriate, as we have been unable to promote self-learning in the national health education system. Nevertheless, the future is bright as the nascent medical educationists in Pakistan have started to identify and explore similar areas in their research publications, and this study on the neglected topic of IW is an example of this statement. Research supports IW as important for human success. A literature search showed very limited work on the wellness of students in our country, where it has been primarily done by the present authors.¹⁰ The objective of this study was to find the awareness of IW among Pakistani students of private and public MCs of Karachi city.

Subjects and Methods

The cross-sectional questionnaire-based survey was

conducted from March to November 2011 at Bahria University Medical and Dental College (BUMDC), Karachi, and overall covered five private and 3 public sector medical colleges of the city after approval from the institutional Research and Ethics Committee. Permission was also obtained from the selected medical colleges and universities. Students of both genders, between 18-24 years, belonging to all ethnic groups who gave consent were randomly selected. Students with acute or chronic illnesses were excluded. The close-ended structured questionnaire was tailored from the "Wellness wheel" and evaluated aspects of IW on four points: "never, sometimes, mostly, always" (Annexure) (numbering 0-4 from lowest to highest)¹¹ Computation of frequencies and percentages were executed for categorical variables with the help of PASW version 18. The sample size was based on a population of 3,000 with e (margin of error) of 5% and z (confidence interval) of 95%.¹² Mean and standard deviations (SD) were computed for continuous variables. For measuring consistency among the responses, the reliability of scores was measured using Cronbach's Alpha. For the comparison of categorical variables of IW, chi-square test was used. P less than 0.05 was taken as significant.

Results

Of the 800 forms distributed 736 completed forms were

Table: Comparison of Intellectual wellness in public and private medical colleges.

		Public Medical College (n = 236, 39%)	Private Medical College (n = 450, 61%)	Total	P-value
I try to take active part in class discussions	Always	56 (20%)	141 (31%)	197 (27%)	<0.0001
	Usually	88 (31%)	151 (34%)	239 (32%)	
	Sometimes	103 (36%)	129 (29%)	232 (31%)	
	Never	39 (13%)	29 (6%)	68 (10%)	
I search books, internet and other aids to acquire knowledge	Always	109 (38%)	162 (36%)	271 (37%)	0.851
	Usually	87 (30%)	145 (32%)	232 (31%)	
	Sometimes	74 (26%)	122 (27%)	196 (27%)	
	Never	16 (6%)	21 (5%)	37 (5%)	
I try to keep abreast of local and international current affairs.	Always	73 (25%)	97 (22%)	170 (23%)	0.564
	Usually	70 (24%)	125 (28%)	195 (27%)	
	Sometimes	99 (35%)	154 (34%)	253 (34%)	
	Never	44 (15%)	74 (16%)	118 (16%)	
I am interested in creative and mental activities	Always	151 (53%)	231 (51%)	382 (52%)	0.954
	Usually	82 (29%)	130 (29%)	212 (29%)	
	Sometimes	41 (14%)	71 (16%)	112 (15%)	
	Never	12 (4%)	18 (4%)	30 (4%)	
I enjoy reading all kinds of books	Always	126 (44 %)	149 (33%)	275 (0.37)	0.004
	Usually	64 (22%)	118 (26%)	182 (0.25)	
	Sometimes	52 (18 %)	123 (27%)	175 (0.24)	
	Never	44 (15%)	60 (13%)	104 (14%)	
I carefully select movies and television programs	Always	176 (61%)	221 (49%)	397 (54%)	0.007
	Usually	53 (18 %)	121 (27%)	174 (23%)	
	Sometimes	30 (11 %)	64 (14%)	94 (13%)	
	Never	27 (09%)	44 (10%)	71 (%10)	

Annexure: Questionnaire on Intellectual Wellness.**Intellectual dimensions**

1	I add variety and interest in my teaching skills.	1	2	3	4
2	I keep myself well informed in updates of researches.	1	2	3	4
3	I have the ability to adapt to changes & accept challenges	1	2	3	4
4	I am well versed in conventional and problem based learning	1	2	3	4
5	I am involved in research projects	1	2	3	4
6	I never hesitate to clarify unclear concepts even from my juniors	1	2	3	4
7	I accept healthy criticism on my presentations	1	2	3	4
8	I think am given work more than I can perform	1	2	3	4

analysed. The response rate was 92%. Among them, 526 (71.5%) were females and the remainder were males. The reliability of the responses was 85.3%. Awareness of IW was found different in both medical colleges (Public v/s Private 11.66 ± 3.28 v/s 11.75 ± 3.37 , $p < 0.492$). The participants of Private MCs (31%) had taken part in class intellectual discussions actively as compared to 20% Public MCs ($p < 0.001$). Habit of reading books to acquire knowledge was found in 44% Public MCs students compared to 33% in Private MCs students ($p < 0.004$). Only one quarter of the participants in both sets always tried to keep themselves abreast of local and international current affairs. Half of the participants were interested in creative and mental activities. Sixty one percent medical students of Public MCs and forty nine percent of Private MC carefully selected movies, $p < 0.007$ (Table).

Discussion

As soon as excited and vibrant medical students enter their first year, they are exposed to an entire new academic campus and environment, exposing them to medical jargon, lab work, lectures, assignments, tutorials, on-going tests and assessments. In addition, these medical students also have to manage their personal and family lives. For students, all this may pose a new adventure and a challenge, but as soon as the examination season starts, the majority, especially the females, become trapped in a cycle of anxiety. Most of them are unable to create a balance and harmony between their academic life and other areas of life at large.⁵

Well-being of medical students is a pre-requisite for them to become better and more competent agents of the healthcare delivery system.¹³ In order to achieve this sound psychological poise amongst medical learners, a student-friendly, relaxed, congenial and robust atmosphere for students should be provided so that the academic and extra-curricular activities may flourish together. The disharmony of learning approaches and learning environment, if continued adversely for a long

time, may affect the academic performance, and well-being of these students, leading to anxiety and depression.¹⁴

IW is like a rainbow having in its spectrum the seven essential colours of reading books, magazines and newspapers, creative pastimes, educational programmes, internet surfing, ambition to acquire new skills, watching movies and a multitude of other activities which enhance the wellness of an individual. The awareness of this type of wellness is all about exploration of the mental capabilities of these students with an attempt to expand the horizon of intellectual learning and finding the key to success.⁸ Students read books, and participate in extra-curricular activities, which also have a positive impact on their academics and overall well-being¹⁰ This unique capability can also help students to recall and apply knowledge of Basic Sciences whenever they come across difficulties in patient management. Thus, wellness facilitates learning.

Educational leaders try their level best to pay attention to the scholastic climate, acquire feedback and ensure the satisfaction of students with their learning environment.¹⁵ It has been found that class discussions facilitate analytical thinking as well as communicative skills among students who come from different educational and cultural backgrounds.¹⁶ Studies have proven that students feel comfortable with those teaching methodologies that encourage discussions with their peers and facilitators.⁹ In our study, students studying in Private MCs were keen to acquire knowledge by generating group discussions on selected topics with the habit of questioning and answering as compared to the ones who were in Public MCs. In another study, class discussions among female medical students helped in developing their intellectual capital more than in male students who were not as interested in group discussions.⁸

Reading books act as an instrument for intellectual development, a higher intelligence quotient (IQ), improved grades, confidence to take part in discussions and the self-assurance to appear in viva voce examination. Books act as keys that unlock the doors of the author's ideas and perspectives.¹⁷ Book reading safeguards one from stress and the risk of deterioration of the brain later in life with a lower ensuing risk of dementia.¹⁸ Studies have also authenticated the association of happiness with reading habits.¹⁹ In our study reading habits were found more in Public MC students, however were not ready to transmit this knowledge by taking part in group discussions. Medicine is the empress of sciences which has a strong nexus with

arts hence doctors aspiring to be at the top in humanity sciences need to become empathetic to existing situations. An admirable solution to it could be book reading that broadens the horizon of medical students, makes them understand to cope with real life situations, improve communication skills and empathize with patients in a better manner.²⁰

Critical thinking and creativity are the essence of IW which inculcates problem-solving abilities and leads towards fresh learning approaches. The development of higher order cognitive skills in students²¹ makes possible demonstration of views, thoughts, ideas and dreams. Being creative and having insight of critical thinking expands their intellectual horizon and inspires them to be productive for society. The creative and problem-solving skills in the classroom can help to cope with challenges in every walk of life. Researchers have found that medical students do not respond well to creative activities that emphasise the need of introduction of revised teaching methodologies to construct and develop IW through creativity.²¹

It has been proven that watching movies is not only a relaxing past-time, but it also gives an insight into psychosocial and health-related issues. Selection of movies alters the intellectual component of wellness, has positive influence on learning, and modifies behaviour of individual accordingly.^{22,23}

Authentication of features and impacts of effective teaching have repeatedly been validated and documented by numerous studies. Orthodox, didactic teaching is "teacher-centred" and only offers passive learning, whereas good, innovative, healthy teaching styles are thought to be "student-centred", which promote active learning by provoking students to interact with each other, make use of learning resources like using models, internet surfing. It also promotes the teachers to adopt the interactive communicative styles, having an insight to give constructive and effective feedbacks. Studies reflect that health education systems in Private MCs put extra efforts in order to cater to the private sector. The revelation of better IW in the Private MC students may also be attributed to this fact.^{23,24}

Herophilus, father of the present day wellness mode, was able to appreciate the importance of wisdom being dependent on normal health and its relationship to art, strength, wealth and intelligence.¹⁴ Various studies depict differences in the overall learning atmosphere of the Private MC and Public MC, and according to DREEM scoring, Private MC seem to have a statistically higher DREEM score^{5,25} and thus have a more student-friendly

learning environment. This can be developed by self-exploration, reading habits and awareness of other mental capabilities which can build knowledge-based confidence to take part in discussions, articulate, analyse and take part in vigorous mental activities for a balanced healthy living.²⁶ Awareness can be built into an intangible structure with proficiency in analytical thinking, evidence-based reasoning, problem-solving approaches and higher-order cognitive skills.

Every time a medical student, whether from private or public sector, progresses toward wellness goals, he/she will feel better and have a healthier existence. Students who understand the importance and philosophy of wellness are able to balance their educational, social and personal lives and sports activities well during their academics, and subsequently they can handle complex situations in life. IW, being a proactive approach, can help to achieve optimum levels of mental health which can accelerate other aspects of social and emotional wellness, and help make choices toward a more successful existence.¹⁰

This study was on IW awareness, as a neglected area that is not adequately addressed in our medical education system, but can serve as a stepping stone to addressing vast and wide gaps present in our current medical education system, bring some change in our conventional teaching strategies with subsequent outcome of a change in learning environment, examination system, creativity. It can also address important student-related domains which are neglected in Pakistan.^{6,8,14} The knowledge of Herophilus' wisdom can be employed in research perspectives to bring about a positive change in teaching strategies learning environment, communication skills, stress management and creative approaches in teaching institutions. IW is not strongly addressed in our medical system. Though little data is available from Sindh, it represents only a small segment of Pakistan. As such, more work needs to be done at the national level on the issue. Similarly, IW awareness related to dentistry in Pakistan is also lacking.

We suggest construction of better learning environments in both sets of medical colleges to explore and develop IW. Also we need to develop a good congenial learning atmosphere with innovative teaching methodologies in medical schools to reduce stress and anxiety levels by sharing views and participation in group discussions. Educational programming shall include at least half-an-hour specifically for reading, and there should be introduction of extracurricular and sports activities, as part of the curriculum. The introduction of DREEM criteria

for evaluation and grading in medical colleges would also help and so will be training of faculty to enable them to understand the importance of IW.

Conclusion

Stepping into medical education brings along great psychological distress due to new atmosphere, stressful curriculum and high demands of parents and peers. This calls for some remedy which lies in searching the wide spectrum of IW. Students of Private MC were found to be off in this regard.

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