

## How medical undergraduates prepare for university examination: Lesson from a teaching medical institution in South India

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### Abstract

**Background:** Medical colleges in India conventionally follow a curriculum overfed with large volume of information expecting students will imbibe such curriculum unquestionably overlooking what and how they progress. There have been many attempts to improve the learning process of medical students, neglecting the process which students adopt towards such learning and prepare for their exams aiming better performance.

**Objective:** To explore qualitatively the way medical undergraduates prepare for their university examination.

**Methods:** Present qualitative research was undertaken among medical interns during Nov-2011 to March-2012. FGDs were conducted by trained moderator using semi-structured guidelines and note taker recorded each FGD. Content analysis of FGDs was primarily oriented towards behaviour of medical undergraduates during preparatory phase before their university examinations like study pattern, study material, eating behaviour, level of stress, addiction etc. Qualitative content analysis of textual level of data was undertaken using Atlas.ti.5.0 software package.

**Results:** Students are serious about studies just before examinations and refer to notes prepared by seniors, small books with important topics, and self-made notes. Girls depend predominantly on self-made notes. Students primarily focus on important topics in each subject. Time-in-hand decides what they study and try to remember before exams. They become casual about their diet, clothing and self-care. Stress, fear and high academic expectation often drive them towards addictive substances. They often suffer from loneliness and seek empathy from opposite sex batch mates, seniors, teachers and family members and start believing in their fortune and examiners' will rather than actual preparation.

**Conclusion:** Students' psychology and culture should be addressed in harmony with curriculum reform for better learning by medical undergraduates.

**Key words:** Content analysis, curriculum, examination, medical undergraduate, education reform

### Introduction:

Indian education system resembles colonial legacy: educational structure, curriculum design, and pattern of examinations<sup>1</sup>. The medical colleges in India conventionally follow a curriculum overfed with large volume of information pertaining to basic and clinical science<sup>2</sup>. It is however predicted that our students will imbibe such curriculum unquestionably and pass examinations overlooking what they are achieving and most importantly how they are achieving. Once qualified, our medical graduates are expected to perform immediately and competently with application of their scientific and practical knowledge.

It is now a fact that stress and depression is common among medical undergraduates especially during examinations regulated by academic pressure with a

compulsion to succeed and an uncertain future<sup>3,4</sup>. There has been many attempts as to how we can improve the learning process of medical students, like interactive teaching, group discussion and problem base learning etc. However, less attempts has been made to know how our students are preparing for their examinations with an aim to understand student mind-set prior to exams aiming for better learning and performance. Thus, exploration and possible explanation of how students learn and prepare for their university examinations might be a useful basis for modifying and improving our medical curriculum.

### Objective

To explore the way medical undergraduates prepare for their university examination.

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**Methodology:**

**Study setting:** The present qualitative research consisting of focus group discussions (FGDs)<sup>5</sup> was conducted at Urban Health Center (UHC), Ariyankuppam attached with Department of Community Medicine of Mahatma Gandhi Medical College and Research Institute, Pondicherry. The study was undertaken among medical interns posted at the center as part of their compulsory rotatory residential training. Medical interns were purposefully selected as they have experienced the research issue in immediate recent years. The study was undertaken during November 2011 to March 2012 among two successive batches of medical graduates. The study was designed to encourage scientific exam preparation among medical undergraduates in a participatory manner.

**Information collection and data analysis:** After obtaining verbal consent, FGDs were conducted with groups of purposely selected medical interns (5-6 participants in each FGD) posted at the UHC who were willing to participate and talk freely. Both male and female interns were selected in each FGD and total 5 such FGDs were undertaken. The number of FGDs was determined based on saturation point; where it stopped yielding new information. The trained moderator facilitated FGDs using semi-structured guidelines and note taker recorded and transcribed each FGD.

Hermeneutic units were created for each text data for the FGDs. Textual level content analysis included segmenting and organizing data files and coding various data segments. Conduct and content analysis of FGDs was primarily oriented towards behaviour of medical undergraduates during the preparatory phase before their university examinations like study pattern, study material, eating behaviour, level of stress, addiction etc. The qualitative content analysis of textual level of data was undertaken manually and finally using Atlas.ti.5.0 software package<sup>6</sup>. The reliability of study findings was cross-checked with a senior qualitative research expert. Subject confidentiality was maintained during and after information collection.

**Results:**

**Preparation process**

The medical students remain reluctant about studies throughout entire semester and are serious about studies just before examinations. During this phase they refer to various other sources of information apart from recommended books like notes prepared by their seniors, published small books with important topics in each subjects (famous as 'Gutkha' among students), class-notes and self-made notes. They seek support from their seniors, batch mates and faculties also. Girls depend predominantly on self-made notes.

**Table 1: Content analysis: How do medical undergraduates prepare for their university examinations?**

Category	Students behaviour
Study pattern	Are serious about studies 2 month prior to exams and study regularly average 8-12 hrs/day. Study during night hours increases. Both boys and girls often remain absent from lectures (30-40% remain absent in lectures before exams) and even go home to study. Visit outside college premises for entertainment decreases. Their interest in games and sports, movies, watching TV and chatting with friends also decreases. Often college functions and celebrations disturb preparation.
Study materials	Concentrate more on notes, last 5-10 year question banks and important topics from examination point of view. Boys prefer book, class notes whereas girls prefer self made notes. Few visit library regularly considering easy access to washroom and refreshments and also seek support from faculty. They start studying in groups to get benefit of cross learning. They ask for additional tutorials classes. They refer various other books and consult seniors and teachers to enrich their knowledge. Use various pocket books and use underlining, highlighting on books and pneumonics to remember difficult topics.
Eating behaviour	Visit to canteen and food mess decreases and often consume meals in rooms. Occasionally visit to Dhaba and restaurants for food. They are careless about their health and room before exams.
Stress	Stress level increases before exams. They sleep very less during night hours (40-50% students). Parents often visit them to look after and care them. Students close to teachers seek their support before exams to get relieve from pre-exam stress and often even consume sleeping pills. They visit temples regularly for stress relieve and boost up self-morale (60-65%).

Category	Students behaviour
Addiction	Addiction level among boys increases before exams and consumption of tea, coffee, tobacco and smoking increases especially among those who study late night. However, conflict and quarrel among students before exams is not significant.
Others	Expect support and empathy from parents, teachers and seniors. They become more sensitive to stress. More confident as a medical student and develop insight about upcoming exam. Mobile usage increases especially with parents (2-3 times); however internet usage goes down substantially (down by 75%).

They focus on important topics in each subject and overlook less frequently asked topics in exams. Time-in-hand before exam becomes crucial and decisive factor as what they will study and try to remember during this phase. Another important finding was that some students are mostly busy in MCQ pattern pre-PG entrance exam preparation throughout the whole year and focus on their university examination which remains narrative in nature only prior to exam dates only.

#### Student psychology:

Students turn obedient and spend more time inside rooms. They become casual about their diet, clothing and self-care. Preparation stress, fear and anxiety associated with university examination and high expectation often invite them towards smoking and other abusive substances as a coping measure. They suffer from loneliness and seek empathy from opposite sex batch mates, seniors, teachers and family members. They become more spiritual and visit to respective temples nearby resident hostels increases dramatically. They come closer to their families seeking support and avoid other routine recreational activities like surfing internet and chatting with friends. They start believing in their fortune and examiners' will more, as compared to their actual exam preparation.

#### Discussion:

The findings of the present study demonstrate a mismatch between how medical undergraduates in India should and are preparing to become future doctors. Stress among medical students has been accepted by various researchers on multiple occasions, with 42.6-49.1% students reporting depressive symptoms during various occasions<sup>7-9</sup>. 'High parental expectation', 'frequency of examination', 'vastness of curriculum', 'worry about future', 'loneliness' and 'performance in periodic examinations' has been identified as major stress inducing factors among Asian medical undergraduates<sup>10</sup>. However, medical education should also address and explore how our students can adjust

to the present curriculum academically and more importantly psychologically, the various stages and occasions where they undergo immense academic pressure and identify their solution.

Curriculum reform by Medical Council of India in favour of students and in context of growing number of private medical colleges with limited resources could be a major step in this regard. The major academic initiatives could be reduction of factual burden, defining the core curriculum, developing system-based and integrated curriculum, developing appropriate learning systems, developing appropriate assessment mechanism and introducing special study modules in view of public health medicine<sup>11,12</sup>. Creating an student friendly environment at the institution level like reducing and modifying number of periodic exams, identifying faculties as mentors for particular group of students, exposing students to various stress buster and preparing them mentally for their future, developing support group for students among friends, and frequent interaction with faculty can encourage their morale towards better preparation and performance. Further, the psychological adjustment of the student with the curriculum and examination should be addressed at institution, individual and family level. Preparing medical students to monitor their own health by improving their diet, sleep, psychological encouragement and participation in sports and other recreational activities in concordance with academic curriculum could be another feasible agenda<sup>13</sup>. Reducing the duration of medical course, trimming the curriculum as per health needs of the country will not only encourage and support the students to accept the medical career willingly and prepare well during exams but will also receive admiration from teaching faculty as has been documented by previous researchers<sup>14</sup>.

Various attempts have been made to adjust the student with the curriculum through principles of adult learning like introduction of problem based learning, OSPE,

integrated learning, group discussion etc. However, medical education and learning process of students still today remains vague, objective, overlooking the expected beneficiaries of such action and thus remained ineffective as documented by Olupeliyawa et al<sup>15</sup>. Subjective behavior and psychology of students should also be considered in accordance with curriculum reform and application of improved teaching/learning methods if we really want a better outcome from our inputs in the arena of medical education.

At present, in order to address the doctor-patient gap in developing countries, most of the existing medical institutions are mechanically preparing doctors to execute the expectations of the society, to cope with ever growing scientific knowledge, to guarantee mastery in technology, and to adjust to changing health care delivery system. Although there is lot of effort towards adjusting the future doctor with the curriculum and available scientific information, less attempts are being made to address the issues raised by the students.

#### Conclusion

Medical undergraduates prepare for their university examination in very unique yet contemporary manner. Students' behavioral psychology and current trend of student culture should be addressed in harmony with advanced teaching method and curriculum reform towards better learning, performance and achievement by medical undergraduates in Indian medical colleges.

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