Non-Academic Attributes of Hidden Curriculum in Medical Schools
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ABSTRACT
Objective: To identify the non-academic attributes developed during 5 years of training in medical school.
Study Design: Sequential mixed method.
Place and Duration of Study: The study was conducted on final year medical students of four medical colleges in the city of Lahore, from March to September 2010.
Methodology: Probability random sampling was employed to identify public sector medical colleges for inclusion in the study through Lottery method. In the first phase, survey was done with the help of questionnaires, distributed amongst 280 students, selected on the basis of convenience sampling. It was triangulated with data collected by in-depth structured interviews on 46 students selected using purposive sampling after formal informed consent. For quantitative data percentages of the categorical variables were calculated through SPSS version 10. For qualitative data, themes and patterns were identified using Content Analysis technique.
Results: Majority of the medical students (80%) learn the attributes of integrity, self-reliance, tolerance and independence during their schooling. Sixty five percent students thought that the values of humanity, forbearance, righteous attitude in face of adversities and sympathetic behaviour towards peers and patients helped them in being better medical students. Thirty five percent said they faced the negative influences of gender bias and gender discrimination which has led to their impaired professional growth. Eighty percent of the students believe that the teaching methodology employed is teacher centric which does not let them become problem solvers, team players, reflective learners and hampers development of effective communication skills.
Conclusion: Medical schooling in our part of the world helps in developing untaught attributes such as integrity, self-reliance, tolerance, independence, sympathetic attitude and good communication skills which are the same as are developed in the medical students of advanced countries, which can be fostered further by formally addressing them in the curriculum.

Key words: Hidden curriculum. Undesirable attributes. Positive attributes.

INTRODUCTION
Curriculum planning and development is more than a syllabus or statement of intent. In addition to a formally planned course, students at the medical schools experience an unwritten, unstudied curriculum that includes values, norms, beliefs and intergroup relations. This refers to the hidden curriculum. Although seldom publically announced, the hidden curriculum is intuitively recognized by the parents, students and teachers. As salient and pervasive features of schooling, these may be the most important lesson a student learns. Hidden curriculum also includes dispositions, social and behavioural expectations that helps in the development of a students socialization process.1 Durkhian observed that more is taught and learned at school than specified in established curriculum of textbooks and teachers' manual.2 Vallence describes these attributes as the “by products of schooling”.3 Attributes such as learning to wait quietly, exercising restraint, trying to complete work, keeping busy, being neat and punctual and conducting oneself courteously may be inculcated in students during medical school life.4,5 Hidden curriculum is in operation at all times and serves to convey unspoken messages to students about values, attitudes and principles.6,7

No research has been conducted in Pakistan on the topic of “Hidden Curriculum” in Medical Schools. There is a need to explore this particular area so that one can pinpoint the areas where some deficiencies have been identified in development of certain attributes which are required for the nurturing of students socialization process and in making them better professionals. This study may also sensitize the medical educators in general and the health policy makers in particular about the importance of hidden curriculum and the part it plays in building the socialization process of the medical students in our country.

The objective of this study was to identify the non-academic attributes developed during 5 years of medical schooling.
METHODOLOGY

A sequential mixed method research strategy was employed. This qualitative study was conducted from March to September 2010. These attributes were selected after conducting literature search. Quantitative data in the first phase was obtained from a survey questionnaire distributed amongst the students. Responses obtained in the form of yes and no were further explored through in-depth interviews containing open ended questions in order to dig out reasons for yes and no options.

The target population for this particular study was 1000 final year medical students in the four Medical Colleges of the city of Lahore.

The statistically calculated sample size was 280 participants with 95% confidence level and 55% absolute precision for the survey. Access to the participants of the research was facilitated by taking prior permission from the Principals of the medical schools followed by taking informed consent from the participants of the study. Probability random sampling was the sampling strategy to identify public sector medical colleges for inclusion in the study through lottery method.

Non-probability purposive sampling was employed for the qualitative phase wherein 46 students who volunteered were interviewed from all the four medical colleges. Qualitative data was analyzed through content analysis by identifying themes and patterns from open ended responses and determining percentage of occurrence of pattern accordingly.

Close ended questionnaire through a survey was distributed amongst 280 medical students of the four medical colleges. A total of 234 medical students returned the questionnaire. Simple percentages of each response were calculated using Statistical Package for Social Sciences (SPSS) version 10. These questions alongwith their analysis are given in Table I. Forty six students were interviewed. Interviews were tape-recorded and detailed field notes were taken. The following questions which were analyzed by Content Analysis were asked:

Q1. What did you learn from your medical school in addition to actually taught subjects?
Q2. What do you know about the cultural values of an Islamic society?
Q3. How many of these cultural values in your opinion have become a part of your medical schooling?
Q4. Which of these cultural values have helped you out as a medical student and how?
Q5. Which ones have affected you negatively as a medical professional and why?
Q6. What methods of information transfer are used in the medical schools and how they foster certain desirable and undesirable qualities in you as a doctor?

RESULTS

Survey questionnaire having 10 questions in the context of attending a medical school which were triangulated for confirmation and explanation with indepth interviews analyzed through content analysis revealed the following results.

Tape recorded interviews were transcribed and themes were identified. Content analysis revealed following results.

In interviews, students were first asked about the untaught attributes which they learnt in addition to actually taught medical subjects. Eighty percent of the interviewers learnt the attributes of integrity, self reliance, tolerance, independence, good communication skills and to face stresses and hardships. The quantitative analysis of question no 3,5,6,7 and 8 of the survey questionnaire validate the responses under the above theme as evident in the Table I.

The second question explored their knowledge of cultural values in Islamic society. Ninety five percent of them replied that respect of elders and opposite gender, justice, honesty of work, tolerance, compassion, empathy, modesty and kindheartedness were the cultural values in our society.

Third question was related to the cultural values which got polished during the medical schooling. Sixty five percent of students replied that the values of sympathy towards patients, sharing and helping peers, as well as compassion were polished. Thirty five percent of them thought that none of the values got polished during their 5 years training in a medical school. This interview question was supported by question no. 6, 7 and 8 in the survey questionnaire with similar responses as evident in the Table I.

The content analysis of question referring to their knowledge about the cultural values that have helped them in being a better medical student showed that 80% students replied by mentioning that the values of humanity, tolerance, righteous attitudes in face of wrong influences and sympathetic behaviour. This interview question was supported by question 5 and 6 of the survey questionnaire. Quantitative analysis of these questions validate the responses under the above theme as shown in Table I.

Responses concerning the negative influences developed/faced during the medical schooling showed that 35% of the students responded in terms of facing gender bias which was related both to the patients and peers along with gender discrimination which led to their impaired professional growth. Twenty percent students responded that they developed attributes of jealousy and back biting during their stay. Quantitative analysis of Q1 and Q2 of the survey questionnaire confirmed the responses under the above theme as shown in Table I.
Content analysis of the sixth interview question concerned methods of information transfer. Eighty percent students responded that it is in the form of lectures, ward sessions and presentations by multimedia/slides. These students mentioned that because of passive transfer of knowledge they do not develop the attributes of problem solving, becoming team players and developing good communication skills. However, responses in this context obtained through Q.10 of survey questionnaire negates it to some extent as 167 students said that educational experience in a medical school does make them problem solvers in the end.

Forty-five percent students also mentioned small group discussions, clinicopathological conferences and tutorials as methods of information transfer during their medical schooling. These instructional strategies promote collaborative learning and attributes of developing more understanding of each others problems and tolerance. Analysis of Q4 and Q9 of the survey questionnaire validate the responses under the above theme as shown in Table I.

## DISCUSSION

This study showed that students in our medical schools develop the untaught attributes of integrity, tolerance, self-reliance and selflessness. These findings are supported by both qualitative and quantitative data of our study. A study conducted in Saudi Arabia by Bawardy and Blatt also showed that students develop tolerance and integrity in medical schooling. A study conducted by Murakami and Kawabata in one of the medical schools in Japan supported our findings that similar untaught attributes are developed in medical students. Lempp and Seale who conducted study at Guy’s, Kings and St. Thomas School of Medicine in U.K. and Fitz and Homan at Illinois in U.S.A. mention that medical students do develop sympathetic behaviour towards patients and become more compassionate.

The analysis from this study support that values polished during medical schooling are sympathetic behaviour towards patients, sharing and helping peers, mutual respect, selflessness and being compassionate. This is again supported by the studies mentioned above. The studies conducted by Lempp and Seale at Guys, King’s and St. Thomas School of Medicine in U.K. and Fitz and Homan at Illinois in U.S.A. mention that medical students do develop sympathetic behaviour towards patients and become more compassionate. The students in the western world do not think that the values of sharing and helping peers and mutual respect are polished during medical schooling. However, further research is needed to examine changes in empathy among students during medical schooling in Asian civilizations.

This study supports the fact that the students in our medical school believe that the cultural values such as tolerance, humility, righteous attitude in the face of adversity and morality in general has helped them in being a better medical student. This is also supported by above mentioned studies. The studies conducted in U.K. and U.S.A. also emphasize upon the role of cultural values helping students in becoming better professionals.

With regard to negative influences fostered through hidden curriculum during medical schooling, our studies does mention the presence of gender bias and male
dominance leading to impaired professional growth of females as supported by both qualitative and quantitative data of our study. Bawardy and Blatt support the findings of the study that an element of gender bias, gender discrimination leading to impaired professional growth does exist in medical schools.8 However, the studies from Japan and U.S.A. show that the medical students do not face the negative influence of gender bias and gender discrimination.9,11,16 A study from the U.K. does mention the negative influence of ethnic discrimination and class discrimination faced by the medical students.10 Students in Japan and U.S.A. do not think that class and ethnic discrimination was a big problem during their medical schooling.16,17 Females do not have any particular inhibitions and they get equal opportunities of professional growth. Patients and peers are not shy of interacting with female medical students. Negative influences such as gender discrimination and gender bias faced by medical students in Islamic countries have cultural, ethnic and regional taboos to be blamed rather than religion of Islam which allows equal opportunities for females to grow.8

This study shows that didactic teaching and promoting rote memorization was the main approach towards transfer of knowledge in medical education. When learning is teacher centered, there is passive transfer of knowledge. Students do not develop attributes of problem solving, becoming good team players and understanding each others problems. Results obtained through in-depth interviews confirm this assumption whereas survey responses on the other hand revealed that medical schooling as a whole did promote problem solving. On further discussion during the interviews, students said that in their opinion responding to questions in exams was problem solving. However, when problem solving was discussed in detail during interviews they realized that it was far beyond just responding to examination questions. When the learning is independent and self-directed, it has a problem centered approach and it is collaborative. This makes the learner a problem solver, a team player, develop good communication skills and become more tolerant.18 These attributes can be effectively fostered through hidden curriculum in medical schools. This finding is supported by both qualitative and quantitative analysis of this study. This is also supported by studies from other Asian countries such as Saudi Arabia and Japan to a lesser extent.8,16 Students from U.S.A. and Europe suggest that students believe that medical schooling makes them a team player and a problem solver.18,19 They become independent learners. This difference is because the learning is not teacher centered rather it is patient centered in the western world.20,21 Principles of adult learning are practiced and followed in their true spirit. The learning is self-directed whereby the students develop the attributes of collaborative learning and problem solving.22,23

These findings can be used by policy makers in our country for reforms in the medical educational system. The curriculum committee of Pakistan Medical and Dental Council should look into the possibility of including hidden curriculum in the operational curriculum. The development of positive attributes can be fostered further by addressing them in the curriculum.

A multi-centre trial should be conducted in all the medical institutions of the country to identify positive attributes developed due to hidden curriculum. The findings of these trials should be established by a national committee. This committee should have medical educationists as its members. They should plan a series of seminars and workshops, which should be attended by medical teachers from all over the country. They should be sensitized about the importance of hidden curriculum. They should also be trained to inculcate positive attributes through various educational activities among their students.

At the institutional level, learning outcomes of the curriculum should be revisited. Development of positive attributes of hidden curriculum should be made an essential component of learning outcomes. Instructional strategies and educational activities should be clearly defined to achieve these goals. These changes will influence character building of future physicians more effectively. Nevertheless, such changes and initiatives cannot be materialized without faculty development.

There were certain limitations to this study, some of which were inherent in the methodology used to carry out the research. These include participants being included from only four medical schools, so the results could not be generalized as to rest of the medical schools in the country. Interviews with open ended questions may have resulted in relatively less flexibility and standardized responses which might have curbed spontaneity of respondents, an important requisite for true reflection. Conducting a survey questionnaire may have resulted in inability to give prompts and probes. Due to closed ended questions there may have been variation among the respondents in interpretation of forced choice answers.

Analysis of qualitative data is almost inevitably interpretive. So data analysis is less than a completely accurate representation but more of a relative reflective and reactive interaction and is influenced by researcher’s own social and academic background.

The author looks forward to explore this topic further by comparing differences in non-academic attributes developed in all public and private sector medical institutions of the country.

CONCLUSION

The results indicate that the most untaught attributes of hidden curriculum developed in our part of the world have positive influences on the development of a
promising doctor and are common with advanced countries despite differences in their demographic background, culture and philosophical beliefs. However instead of didactic teaching using interactive and collaborative modes of information transfer such as small group discussions, case based discussions, PBL etc. would result in enhancement in acquisition of those attributes which are desired in a competent and caring physician.

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Annexure 1:

Non-academic attributes of Hidden Curriculum in Medical Schools
I am conducting this study to gain in-depth information about students views regarding development of non-academic attributes developed during five years of medical schooling in order to recommend ways to handle negative attributes and strengthen positive attributes.

You as a participant have the right to withdraw from this study anytime without any consequences. Your identity shall never be revealed & your opinion will not be discussed at any platform with your reference.

Informed Consent:
I am participating in this study with my own free will. I allow the researcher to use information obtained through this study for publication.

Signature of participant

REFERENCES