Lived Experiences of Undergraduate Medical Students About Hidden Curriculum: A Phenomenological Study

Shoaleh Bigdeli[1,2], Hamid Reza Koohestani[3], Seyed Kamran Soltani Arabshahi[1,2], Mohammad Hasan Keshavarzi[4]

[1] Center for Educational Research in Medical Sciences (CERMS), Iran University of Medical Sciences, Tehran, Iran

[2] Department of Medical Education, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

[3] Department of Medical Education, School of Medicine, Saveh University of Medical Sciences, Saveh, Iran

[4] Clinical Education Center, Shiraz University of Medical Sciences, Shiraz, Iran

Abstract- The hidden curriculum refers to student experiences that occur outside the formal structure of the curriculum, and especially the messages provided by the education system concerning values, perspectives, behaviors, and attitudes which has a strong influence on students' professional development. This study aimed at explaining the lived experiences of undergraduate medical students about the "hidden curriculum." This was a qualitative phenomenological study. Participants were medical students of Iran University of Medical Sciences and they were chosen by purposive sampling method based on the inclusion criteria. Semi-structured interviews with open-ended questions were conducted with 10 students until data saturation, and 7-step Colaizzi's method was utilized for the purposes of analyzing the study findings. In the process of analyzing data from medical students' lived experiences about hidden curriculum, the following three themes were extracted: 1. Conflict in value beliefs (sub-themes: not giving priority to students education, applicability to the clinical practice of basic sciences, attitude towards discipline, professional ethics, justice in evaluation") 2. Modeling teacher's communication skills patterns (sub-themes: "teacher-patient relationship," "teacher -student relationship and professor-colleagues relationship) 3. Effective teaching (sub-themes: "clinical teaching" and "theoretical teaching"). Based on the results of the study, the hidden curriculum has both positive and negative impacts on various aspects of learning, especially the attitudinal domain. Consequently, paying specific attention to hidden curriculums is an absolute need.

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Introduction

The curriculum discusses what is happening in a teaching plan, the teacher's goals, and the methods used to achieve these goals (1). Formal and overt curriculum refers to what is being developed by designers and planners at the macro level that is designed upon specific elements to achieve educational goals (2). A set of learning materials and experiences that learners attain are not confined to the overt curriculum; and there are inevitable factors along with formal curriculum that, in many aspects, act more widely, steadily and pungently in shaping learners' experiences, transferring thoughts, attitudes, values, and behaviors (3). Hidden curriculum refers to informal learning of the students which is different from what is formally taught; it is what is learned by students, which was not supposed to be taught based on the planned curriculum and is not related to the proposed program of the study (1). In other words, the hidden curriculum reflects what is being taught at the university, without any intention of doing so and no one is conscious of its ongoing flow, but learners experience it due to their presence in educational systems, for example, how the students should communicate and interact with peers, educator, and other adults; or what opinions, behaviors, and manners are considered acceptable or unacceptable (4,5). These learned lessons include knowledge, beliefs, values, and views that are learned informally and randomly by the students in the university, affecting their professional skills (6). Hidden curriculum affects the education process effectively and influences objectives of the overt curriculum, even many

experts believe that the hidden curriculum is more important than the formal one, as learners learn it implicitly through non-academic aspects of the educational environment and social relationships under the influence of power, population, and encouragement (7,8). The importance of examining the effects of the hidden curriculum is due to its impact on the persistence and sustainability of learning process (9). In explicit learning, the learner is aware of the existing rules for acquiring a skill and tries to learn accurately and precisely, which involves conscious learning; but, in implicit learning, the mind is not active, and the learner is not attuned to specific rules (10). Informal, unwritten rules, habits, codes, and formalities that occur in the hidden curriculum may later function as factors affecting the success of learners at work (11,12). Generally, the curriculum is dynamic and lacks a structural process; yet, medical instructors are able to recognize its existence and assess its effects (5). There is a fundamental difference between what is taught to medical students in educational settings and what they learn, which implies a hidden curriculum and results from it (13). Attempts to portray learning outcomes or learning experiences of students regardless of the hidden curriculum are futile and ineffective and does not lead to a comprehensive or complete portrayal of this field (4).

Hidden curriculum in medical students is a crucial factor to transfer professional commitment, and the most important factor to transfer professional values (14). The results of the quantitative research conducted by Taghvaye *et al.*, (2016), showed that the components of the hidden curriculum in Kashan University of Medical Sciences were relatively favorable according to the obtained averages. Furthermore, there was no significant difference between the viewpoints of students of different disciplines over the significance of the hidden curriculum (15). Lempp and Seale (2004) undertook a qualitative study to explore medical students' perspective and experiences about the quality of the teaching they receive during their undergraduate education, especially in view of the hidden curriculum. The four main themes obtained in this study were The four main themes extracted from this qualitative study were personal encouragement, haphazard teaching, the importance of hierarchy, and getting ahead by being competitive (16). Despite the importance of hidden curriculum, unfortunately, in Iran, the ultimate attention of the authorities and medical instructors is on the formal curriculum which means that a significant portion of the in-use curriculum to which students are exposed, especially the hidden curriculum is underestimated or neglected.

Experiences of students as the main customer of the university about the hidden curriculum serves as a valuable criterion for evaluation of the hidden curriculum. Consequently, the present qualitative study was an attempt to explore the experiences of undergraduate medical students about the hidden curriculum. Through identifying these influential factors, effective steps can be taken to understand the unknown effects of the hidden curriculum and to promote this dimension that is emphasized in formal education.

Materials and Methods

This qualitative study was performed through a phenomenological method of inquiry. Participants of the study were selected through purposeful convenience sampling. The criterion for selection was studying as medical students in the 4th year and upward, and willingness to participate in the study. The sampling continued until data saturation when codes and classes were completed, and no new code emerged. To collect data, semi-structured interview with open-ended questions was used and was performed on the university campus (classrooms, offices, and anywhere that the participants felt more comfortable). Since in qualitative research, the researcher is the instrument of research, guided questions were designed prior to the study, and interviews began with these questions. After some interviews, a number of questions were derived from the interview texts and used in the subsequent interviews. Based on the information provided by the participants, probing questions were used to shed more light on the issue.

Each interview lasted for about 50 minutes as general questions were asked about the students' experiences. We did not want to define the students' perspective by asking about what the hidden curriculum was during their program. Instead, open-ended questions about medical students' experiences were asked in the hope that participants would speak about experiences that may be an aspect of a hidden curriculum. The sample questions from interview were as follows: (1). In general, how do you describe your experience in the undergraduate medical program so far", (2) please describe your training journey up to this point "(3). Can you explain a positive experience in the medical education program so far?" Data analysis was performed both during and after data collection in order to answer the following study Question: How do undergraduate medical students experience the hidden curriculum?

To enhance data trustworthiness and rigor, the

methods presented by Guba and Lincoln (1994) were used, including four criteria for credibility, transferability, confirmability, and trustworthiness (17,18). In this research, to ensure credibility, the researcher tried to have a close interaction with the study participants, allocated sufficient time for data collection, and succeeded in attracting the participants' confidence by creating a relaxed and unstressed environment, so that the participants could express their experiences without tension. Furthermore, through field notes, memos, member-check, and reviewing codes and themes by external reviewers (External Check), the credibility of the data was confirmed. To confirmability, the details of research steps, including data collection, analysis, and extraction of codes and themes were described so that others could judge it easily by reading the report. To dependability, all the stages of the research were described extensively for the purpose of being easily audited by others. Correspondingly, to pursue transferability, a rich description of the location of the research, the interactions, and processes observed during the study was provided to enable the readers to easily judge the transferability of the study. The results of this study were analyzed using 7-step Colaizzi's method (19).

In the first stage, the statements of the participants were transcribed verbatim. Then, the transcriptions were read and re-read several times and to gain a common sense with the participants; the transcriptions were carefully studied. In the second stage, significant meanings and concepts were extracted, and important points were identified. In the third stage, important meanings were formulated, and attempts were made to determine the meaning of each of extraction and related concepts. In the fourth stage, the formulated meanings were clustered, and the concepts were carefully studied

and classified according to the similarity to the subject categories or the main concepts. In the fifth step, the results were integrated into a comprehensive description of the subject. At this stage, different subject categories with the same meaning were placed in larger subject categories to identify concepts of the main description. In the sixth stage, the description of the intrinsic structure of the phenomenon under study was presented as an explicit statement of its basic structure And in the final stage, the final validation of the findings was performed through conducting an individual interview with each participant; each participant was asked about the findings, and then, the findings were finalized. In order to observe ethical considerations, at the beginning of the interview, participants were informed about the research purposes, interview method, the confidentiality of information, and their right to participate in or withdraw from the study and their informed consent were obtained. The interview time was adjusted in coordination and willingness of the participants, so that it did not interfere with their daily routines and educational programs.

Results

A total of 10 students (6 females and 4 males) participated in this study. In terms of the academic semester, the students were in: semester 8 (two students), semester 9 (one student), semester 10 (two students), semester 11 (two students), semester 12 (one student), and semester 13 (one student). In analyzing the data obtained from medical students' experiences on hidden curriculum, the following 3 themes and 10 sub-themes were extracted (Table 1).

Table 1. Themes and sub-themes

Theme	Sub-themes
Conflict in value beliefs	• Not giving priority to students education • Applicability to the clinical practice of basic sciences • Attitude towards discipline • Professional ethics • Justice in evaluation
Modeling teacher's communication skills patterns	• Teacher-patient relationship • Teacher-student relationship • Teacher-colleagues relationship
Effective teaching	• Clinical teaching • Theoretical teaching

Conflicts in value beliefs

One of the most important extracted themes was conflict in value beliefs, with 5 sub-classes of not giving

priority to students education, applicability to the clinical practice of basic sciences, attitude towards discipline, professional ethics, and justice in evaluation. Many

students encountered challenges and conflicts between their previous values and imaginations and the present reality.

In this study, most contributors had a critical view on the educational performance of faculty members and the curriculum of medical sciences; this critical thinking and attitude were due to their many years of experience in the university environment.

Applicability to the clinical practice of basic sciences

The most important criticism of the participants was the breakdown between basic and clinical sciences. Basic sciences were perceived as the subjects with the low applicability to clinical practice.

Participant 9, female, semester 9: *"I believe that basic sciences are means to achieve the goals and not the goal by itself. But in the current situation, it seems to me that basic sciences have turned to goals and the fact that whether or not these issues are related to clinical subjects is not taken into account."*

Participant 2, male, semester 11: *"I do not remember much about basic sciences courses, but what comes to my mind is that it was such a hard period, with no flexibility. There was no relationship between what we were studying, and we were supposed to do later."*

Participant 4, female, semester 10: *"The time we were studying basic sciences, most of the subjects were theory-based and most of the courses that were based on basic sciences were that practical."*

Not giving priority to students education

One of the subjects over which students had critical points of view was the performance and role of clinical professors. In medical education system, complex and numerous roles have been assigned to clinical faculty members simultaneously in the context of increasing demands of the clinical environment, in a way that the tension-raising role on the one hand, and the multidimensional nature of the role of clinical faculty members on the other, together with maintaining multiple expectations of the roles might lead to an imbalance in the tasks involved in each of the roles and cause more problems. This led to the fact that a group of students had a critical view at the teaching performance of professors and criticized the fact that due to their careers in clinical fields, teaching and education was not their priority or the quality of instruction was not desirable; their attitude was more towards the fact that the issue of medical education

has been marginalized in health and medical education systems.

Participant 7, male, semester 13: *"Some of the professors do not care about student education at all. As far as I know, according to the rules, the first duty of a faculty member is education, and everything related to the clinical setting, services, and research should be of the second priority to them. But what I see is that most of my clinical professors are more concerned with therapeutic tasks, and a number are more into research. Of course, there are some compassionate professors who are thinking of teaching and education as their first priority, but they are rare."*

Participant 2, male, semester 11: *"Education is somehow sacrificed here! I know our professor's only role is not being a teacher, and they do have other responsibilities, but really how important is education? Some professors are not concerned with their students at all."*

Attitude towards discipline

Differences in student's views on the field of study and career prospects after entering university and lack of satisfaction of their expectations in the environment made the students face some value conflicts.

Participant 2, male, semester 11: *"My thoughts about the major change after entering university. The first thing you will encounter in the educational and clinical settings is the professors' comments on the life problems and future of the job. You will come to know that after 7 years of study, you have to go for specialty, or else, you have neither a job nor a position in the future."*

Professional ethics

The patient rights charter contains rights for patients that health care personnel is required to enforce and comply with the experience of some students indicate that these rights were ignored in some centers.

Participant 4, female, semester 10: *"I faced instances in which rights of patients are not respected, and the teaching materials are at the level of books and are not followed. In many cases, the rights of patients are trespassed, and he is treated in a wrong manner, and no answer is given to him. These things are so irritating to me".*

Justice in evaluation

Some students stated that failure to observe justice in assessing students also creates conflicts of values and thoughts.

Participant 9, female, semester 9: *"It seems to me that in some cases the method of scoring of some professors is not fair, and the reason is that some professors do not care for the clinical assessment as much as needed. The result is that an outspoken student with little knowledge gets a better score compared to a knowledge*
able shy student. This is not understandable to me."

Modeling professor's communication skills patterns

Regarding the pattern of communication skills of professors, most of the students stated that the behavioral characteristics of professors, especially in relation to patients and their colleagues and students had a great influence on their behavior, and they repeatedly mentioned the points "following the pattern of professors and modeling of their characteristics and personality traits".

Participant 4, female, semester 10: *"What came to my mind was the psychology ward, specifically for the stagers. I learned how I have to speak as a physician. Of course, I was lucky to have a class with two of the professors, though the norm was to have one. And I learned how to speak effectively from the professors ..."*

Participant 6, female, semester 8: *"During the time, the behavior of the professors affected me to a great extent: the way they treated us and the patients, or the residents and their inferiors (interns and stagers)."*

Participant 10, t, male, semester 12: *"I learned how to communicate with patients or to get a brief history and to talk mostly from what I learned from my professor rather than the theoretical courses I passed. Of course, there are differences among the professors, which is quite inevitable."*

Effective teaching

One of the themes extracted from the data was effective teaching. During the course of their study, students expressed their ideas about methods of teaching in clinical and theoretical classes. Participants believed that the use of active teaching methods and paying attention to student's understanding of content reflects the value that a professor gives to students and the teaching.

Participant 2, male, semester 11: *"We had some classes which were held as team-work. They were much more effective than lecture-based classes. It had an educational point for me as it not only taught me the materials but also taught me how to teach."*

Participant 3, male, semester 9: *"One of the professors used the case method to teach us that is a wonderful method. This sort of education is much closer to reality."*

Participant 5, female, semester 11: *"One of our classes was held in team-work format; it was a very good method. Of course, back then, many disagreed this method we had to work by ourselves, but now I know all that I learned in team-work is deeply rooted inside me. I believe it was such an effective method."*

An effective clinical teaching method was also one of the issues that were expressed by a group of students.

Participant 1, male, semester 8: *"Clinical education was very informative in many ways, in my opinion. One of the teaching methods used by professors was a model for me. For instance, the importance he would give to the patient's comfort before and after education, getting permission from the patient before starting the educational process, introduction manner, correct use of scientific words, and assigning someone to answer the patient's questions. He believed in the participation of students in the teaching and learning process, and it was very important for him."*

Participant 8, female, semester 10: *"Professors also use clinical teaching techniques at the bedside which, apart from teaching scientific materials, taught us the relevant methods in this regard. I mean, in case I have some students working with me, I know I can do the same."*

Discussion

This study attempted to explain the experiences of undergraduate medical students about the hidden curriculum. Reflection over these cases shows that extracted points from the experiences of students' of the hidden curriculum are both positive and negative. Learning experiences influenced by the hidden curriculum in medical students were mainly based on a set of expectations and values in basic sciences' education and the teaching role of faculty members in justice in evaluation, professional ethics and attitude towards the

field of study as well as learning psycho-motor skills that include effective teaching and communication skills. Few studies have been conducted on experiences of medical students of the hidden curriculum, some of which are in line with this study; however, some of the features obtained in this study have not been reported before. For example, Lempp and Seale (2004) conducted a qualitative study on the content of the hidden curriculum from the viewpoint of medical students. The four main themes extracted from this qualitative study were personal encouragement, haphazard teaching, the importance of hierarchy, and getting ahead by being competitive (16) that is not consistent with the results of the present study. Of course, in this research, researchers have specifically examined the teaching topic from the hidden curriculum perspective, which, in contrast to the present study, covers a smaller range of hidden curriculum. Another study was conducted by Mosalanejad *et al.*, (2014) with the aim of examining students' experiences of the hidden curriculum of medical and paramedical students of Jahrom University of Medical Sciences. The results of this study were categorized in 6 themes of the value of teachers, errors management, value and cultural conflicts, teachers' role model, social interaction and learning, and routine tasks (10). Some of the results of this research, including the teachers' role model and the value of teachers, were somewhat consistent with the results of the present study.

The results of our study indicate that the multiplicity of the roles of clinical professors led to inconsistency between their educational, therapeutic, research and executive roles and as a result, it led to the negative attitude of medical students towards the teaching role of faculty members. The results of this part of the study can be considered by the authorities and medical education planners who by understanding the circumstances and sensitivity of the subject can develop efficient support and strategic plans through providing executive solutions to reduce or eliminate the stresses of clinical professors.

Convergence between basic and clinical sciences in medical education is of vital importance. One of the sub-themes of this research was the students' critical view of basic sciences education, and most of them believed that the contents of basic sciences courses were not presented according to their needs and clinical issues appropriately. Medical education is deeply rooted in basic sciences, and previous research has shown that general practitioners in clinical practice do not have a good performance in recalling the methods and practices of various basic sciences courses (20). The inconsistency in the timely delivery and appropriateness of lessons makes the

problem more complicated. Studies show that there is no logical relationship between the content of basic sciences courses and topics discussed in internship courses (21). The results of Abdollahi *et al.*, also indicated a relative separation and lack of coordination between basic sciences courses and clinical lessons that led to confusion among students (22). To solve this problem, various methods have been proposed and implemented. One of these methods is the integration of basic and clinical courses that have been considered in our country in recent years. Some authorities consider the integration process as an important educational strategy (23). Teimouri *et al.*, in a study to assess the effectiveness of basic sciences curriculum modifications from students' point of view in the Faculty of Medicine of Isfahan University of Medical Sciences, concluded that although some changes can affect student's viewpoints, the modification of the syllabus is not enough and the continuous modification of the curriculum with respect to the new approaches, including the integration of lessons based on body systems, and the study and modification of other dimensions affecting student satisfaction such as content change, educational method, and learning environment is recommended (24). According to the results, it is recommended that the practical and clinical aspects of basic sciences courses be emphasized in medical education, which is achieved by reviewing the current methods of teaching basic sciences courses in medicine.

According to other themes extracted in this study, including the pattern of communication skills of professors shows that most of these cases are the result of observing the professor's behaviors and interactions with patients and students, as well as placement of interns in educational environments, especially the clinical education environment. In other words, learners implicitly learn the values, norms, and specific patterns of thought from their professors, which are interpreted and internalized. Communication with patients is a basic clinical skill and the most important characteristic for those working in health care professions (25,26). During clinical courses, students learn the mentioned characteristics from clinical rounds dialogues, informal learning sessions, and observing behaviors of their professors as a model for interaction with patients (27,28). Glicken and Merenstein also emphasized the implicit foundations of professors' performance and their educational implications, suggesting that students' observation of behaviors in different parts of the hospital have far more impact than theoretical content that teaches the correct behavior in the classroom (13).

In terms of components of teaching methods, most

students, while familiarizing with theoretical and clinical teaching methods, assessed the new and active teaching methods as desirable and were keen on teaching through active methods. Past research has also confirmed the effectiveness of active teaching and participatory teaching methods (16,29,30).

Another issue extracted in this study was attitudes towards the field of study and career prospects. If a person faces any conflicts between what he experiences in reality and his expectations, experiences, and training, he will definitely be confused. Any conflict between the individual's value beliefs and the environment causes stress and psychological insecurity in the individual that endangers psychological health (31). Obviously, the medical student's view of his field of study and the future of the profession is one of the factors affecting the quality of educational services. Since one of the important factors in learning is to suffer anxiety and to have an interest in learning, attention to these factors should be placed at the top of planning priorities of medical education centers. Having a better understanding of academic disciplines before choosing a field and getting good advice can help improve students' attitudes. Students' view about lack of respect to patients' rights by some staff created another conflict for students. Research has also shown that compliance with the patients' rights charter is not at the optimum level (32,33). Student evaluation should be considered as an integral part of the teaching-learning process rather than its final point. However, some students were in conflict with a lack of attention paid by some of the professors to this category, especially in clinical settings.

Given the crucial role of the hidden curriculum, it is suggested that basic and theoretical concepts, the existence, nature, and effects of this informal, non-documented educational aspect be fully communicated to practitioners of medical education through workshops and media. Professors should identify the factors affecting the hidden curriculum and consider them logically designing and implementing an education plan. Human communication is an important aspect of the hidden curriculum since students learn the skills, norms, and the way of thinking through teachings rendered by their professors. As a result, professors and educational planners of universities should pay special attention to the vital point of the hidden curriculum.

Learning experiences' influenced by hidden curriculum among medical students were mainly based on a set of expectations and values in the field of basic sciences' education and the teaching role of faculty members of justice in evaluation, professional ethics, and

attitudes towards the field of study as well as learning psychomotor skills including effective teaching and communication skills. According to the results and analysis of the data obtained from medical students' experience from hidden curriculum, and the themes of the study including 1. conflict in value beliefs, 2. modeling teacher's communication skills patterns, 3. effective teaching, it seems that hidden curriculum has both positive and negative impacts on different dimensions, especially in the field of learning attitudes. Therefore, along the formal aspect of curriculums, it is absolutely necessary to take the hidden curriculum into account.

Acknowledgments

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