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The Role of Hidden Curriculum in Medical Education

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Abstract: **"Hidden curriculum" refers to the set of implicit messages about values, norms, and attitudes that learners infer from the behavior of individual role models as well as from group dynamics, processes, rituals, and structures. Hidden curriculum has great influences on the learning outcomes. This paper will define, compare and evaluate different types of curricula in Medical Education. In addition to the effects and consequences of hidden curriculum (intended and unintended), this review will address contextual and environmental; human factors; explicit curriculum; knowledge; and learners themselves to get an overview of all these contributions on the learning.**

We can alleviate the negative effects of the hidden curriculum by using the following strategies: determining the needs of learners who must have passion and input towards learning; multiple learning styles to satisfy all the learners' needs; multiple teaching and learning situations; multiple learning environments including community settings; multiple reading resources including electronic sources; combinations of assessment methods including formative one.

Keywords: **Contextual factors, Explicit curriculum, Implicit messages, Passion, Unintended effects, Values.**

1. INTRODUCTION

Curriculum is "a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, the educational environment and the individual student`s learning style, resources, personal timetable and program of work in addition to assessment and evaluation" [1], [2]. There are at least three interrelated curricula: intended and written formal curriculum; unscripted highly interpersonal informal curriculum; hidden curriculum [3], [4]. Formal curriculum is written, documented and overtly chosen to support the intentional instructional agenda. Thus, the overt curriculum is usually confined to those written understandings and directions formally designated and reviewed by administrators, curriculum directors and teachers, often collectively.

The informal curriculum on the other hand refers to the learning experiences adopted from other agencies outside the formal setting such as parents, peers, media and community. The informal curriculum is sometimes referred to as co-curricular activities. "Hidden curriculum" is defined as the set of implicit messages about values, norms, and attitudes that learners infer from the behavior of individual role models as well as from group dynamics, processes, rituals, and structures [3]. Hidden curriculum is a set of influences that function at the level of organizational structure and culture [4]. It focuses on redesigning the learning environment rather than to reform the curricula [1], [2], [3], [4]. It is about real lessons that are taught informally and usually unintentionally in educational and clinical environment including ethics, behaviors, attitudes and perspectives that the learners can pick.

The "hidden curriculum" refers to medical education as more than simple transmission of knowledge and skills; it is also a socialization process [5]. Wittingly or unwittingly, norms and values transmitted to future physicians often undermine the formal messages of the declared curriculum [3]. The hidden curriculum consists of what is implicitly taught by example day to day, not the explicit teaching of lectures, grand rounds, and seminars [6]. It is a foundation for

communication and influences future interactions with patients, peers, and colleagues. The hidden curriculum can be a negative empathy-disabling curriculum, and its effect upon trainees is felt to be counter to the explicitly stated curriculum goal [7].

2. MAIN BODY

Methods

A widespread relevant literature search to compare, contrast and evaluate different views on hidden curriculum. Different search platforms were searched to identify published works, monograms and workshops that address the management of the hidden curriculum in medical education. Different data bases were used including PubMed, Google Scholar, ERIC, ERA, SCOPUS, Midline, and others.

Context of the review

If we really need to reform and consolidate medical education and training, we must change the moral culture and this will be achieved through implicit and hidden curriculum more than the explicit one. Culture is the context that all practices exist in and it's the organization`s personality [8], [9], [10]. Culture change is not easy and not popular and it needs empowering leaders that lead the change and motivate their institutions toward big pictures in medical education and training. "The culture of medicine impacts students just as much as residents and other learners. It is so bad, because it definitely shapes career choice from the very start- as early as a first year. It also sets examples very early (good and bad) about the way physicians treat allied health workers and patients (role modelling effect). It appears sometimes the students are more aware of the hidden curriculum than the teachers are [7]. We need to change culture of negativity within medicine, and it has to come from both sides – the teacher and the learner [11].

Hafferty (1998) stated that: Not all of what is taught during training is captured in course catalogs, class, syllabi, lecture notes and handouts, or the mountains of documents compiled during accreditation reviews. Indeed, a great deal of what is taught and most of what is learned in medical school takes place not within formal course offerings but within medicine`s hidden curriculum [3]. The impact of the hidden curriculum on four domains including policy development, evaluation, resource allocation and institutional "slang" have been identified [3].

Policy Development

Regarding policy development, it is not only about student-admission or faculty recruitment, but it also implicitly convey message about what is and what is not valued by institutional community itself [3].

Evaluation

Tools of evaluation are not only instruments of assessment, but also vehicles for conveying what is and what is not important within institutions [3], [4], [5], [6], [7]. Maximizing the role of formative assessment-reflection and feedback [12] can convey hidden messages more than the summative assessment [13] and will enhance learning and growth of the students. Hidden curriculum can be discovered from the language used within the institution as new terminology.

Hidden curriculum is not a traditional acquisition and evaluation of knowledge and psychomotor skills in the clinical settings, but it is a comprehensive concept that deal with more values and complex issues like team working, communication skills, professionalism [14], that are necessary for learner`s growth and development. This will improve the quality of education and health service to the patient and the community as a whole. For the above mentioned reasons the hidden curriculum has become an integrated and mandatory part of many undergraduate medical education in many developed countries for several years [3], [7], [11], [15], [16].

Factors influence hidden curriculum and learning [3], [6], [7], [17]

We are concerned mainly with learning more than teaching, and to positively affect learning we need to consider the effect of not only the formal curriculum, but we need to re-address others important factors that seriously have great impact on learning. Reforming in medical education is a total movement act and is not depending only on curriculum reform, but other factors must be fully addressed and managed [17]. We need to reshape the role of the learning environment; formal curriculum; human factors; knowledge and learners themselves [3], [18]. The reform of course will be based mainly on the needs of all stakeholders including the students' involvement.

The learning environment

Regarding the environment and its effects on hidden curriculum and learning, we must reform culture; values and mission of the medical institution and the evaluation and accreditation criteria. The culture should be an empowering and motivating culture leading to big changes otherwise it will hinder the reforming process. Values should reflect the attributes of the learners, staff and all stakeholders. Mission will set the priorities and roles of all stakeholders towards achieving certain vision and how to use the available resources [3], [7], [18]. In fact it is easy to conduct workshops, seminars and lectures to address the concept of hidden curriculum [7].

The Human factor

The human factor will be effective if we: set in advance the expectations regarding the acceptable behaviors and ethics; concentrate on non-cognitive characters like team-working and generic skills during admission interview; support students in this stressful and demanding environment. To improve the formal curriculum, we need to align the learning objectives, teaching methods and course organization with the missions of the medical institutions. Effective congruence between learning objectives and assessment methods is a feature of good curriculum design [19]. Learning objectives will communicate a clear vision to all stakeholders of the curriculum and it will be the foundation for evaluation and accreditation [20].

The Knowledge

Regarding knowledge, creation is the outcome of interaction between tacit and explicit knowledge, and a combination of these two categories yields four reversal patterns. This process involves four components: socialization via mentoring; externalization through reflection; combination pattern via ethical guidelines and psychological guidelines; and internalization where values can be taught implicitly [3], [7], [18]. They are applicable to learning management and hidden curriculum management [7]. Here we can apply principles of learning by integration and structuring of prior knowledge with the new one and to make the learning as contextual, constructural and collaborative process [21]. We need to apply principles of adult learning theory [22] of respect, relevancy, practicality, and self-directed learning. Multiple learning theories can be used to satisfy the learning needs of the learners together with the combination of multiple learning situations can be of help in managing hidden curriculum.

The Learners

Learners will have the freedom, options and capabilities to choose what to learn, how to learn, when and where and with whom to learn activating the concept of interprofessional learning and collaboration and this will be one of the positive effects of hidden curriculum. Beside the formal curriculum, interpersonal interactions and the school governance also send messages to learners that could be sometimes contrary to the intended goals [23]. There is an argument that if these three factors are controlled, the negative effects of the hidden curriculum can be reduced. It is vital to speak collectively about all factors that influence the learning and learning environment. Although many norms and values span learning environments, hidden curricula and their impact are context dependent and should not be viewed as they will affect all settings [24].

Hidden curriculum can play an important role in implementation and expression of the seven competencies-issued by the International Institute of Medical Education (IIME) as global minimal essential requirements (GMER) for the graduates-into operational learning objectives because one of these competencies is about values and behaviors [25]. Although it is very difficult to objectively assess generic skills like team-working, professionalism, but the hidden curriculum is an important confounder factor here, because it may positively or negatively affect these attributes [26].

Finally, hidden curriculum is very active in the grey area between what is taught and what is learned and it is context dependent. So it is about what we learned, when, where and how we learned it?

3. CONCLUSION

Reform in medical education will be achieved not only through reform and design an innovative formal curriculum, but through a comprehensive and holistic approach. Optimizing learning environment is more important than reforming the curriculum; involvement of all stakeholders in learning process together with application of integrated implicit and explicit knowledge is of paramount importance. Controlling all of these factors will lead to better learning outcomes. We

need –as health profession educators- to increase the awareness towards the intended and unintended outcomes of our curricula especially hidden curriculum through more studies and workshops.

We can alleviate the negative effects of the hidden curriculum by using the following strategies: determining the needs of learners who must have passion and input towards learning; multiple learning styles to satisfy all the learners' needs; multiple teaching and learning situations; multiple learning environments including community settings; multiple reading resources including electronic sources; combinations of assessment methods including formative one.

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