Cultural Issues in Medical Learner Evaluation

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Abstract: To benefit from the broad range of perspectives and approaches brought by our increasingly diverse medical learner population, medical educators need to ensure that their efforts are designed to address the predictable complexities that diversity brings. This article considers the role that cultural factors might play in medical learner evaluation by describing how cultural differences can affect evaluation accuracy and by illustrating some of specific ways such differences might play an underlying role in performance problems. Cultural factors that might affect evaluation accuracy include issues related to language comprehension, evaluator bias, and learner anxiety. To mitigate these effects tests should be written and reviewed carefully, overall evaluation strategies should include multiple methods and tools, and any potential or eventual discomfort with the evaluation process should be openly discussed with learners. Cultural factors might also contribute to unfair judgments, particularly when poor performance that actually stems from a discrepancy between learning expectations and cultural norms is mistakenly attributed to a lack of ability or willingness. To prevent this, medical educators should ensure that learners clearly understand, and are comfortable with, the learning objectives and evaluation methods being used. In addition, evaluation data should be reviewed regularly to look for systematic differences in performance between culturally distinct groups of learners. A more thorough investigation into cultural characteristics that have the most potential for conflict with evaluation methods and learner performance could ultimately lead to more specific and tested recommendations for addressing and correcting these problems.

Keywords: Cultural differences, medical education, evaluation, assessment.

INTRODUCTION

A significant amount of effort has been devoted to addressing psychometric factors that affect the accuracy of medical learner evaluation through the development of better assessment tools and strategies [1, 2] and the training of evaluators to improve their cognitive recall and observation skills [3]. However, there has been little investigation into the personal and social factors that might undermine accuracy in medical learner evaluation or contribute to poor performance in medical learners.

Mitchell *et al*. recently proposed a theoretical model to describe the broad range of social, psychological and socio-economic factors that might affect medical learner performance, including factors related to learning style and personality, practice preferences, personal health, social/financial factors, and response to the job environment [4]. Since many of these factors are encompassed within the concept of cultural differences, it might be helpful to consider them in the context of a cultural model.

Culture has been described by Hofstede as "the collective programming of the mind which distinguishes the members of one group or category of people from another" [5]. Although Hofstede focused his attention on groups defined by nationality, cultural differences are also thought to exist among other groups as defined by categories such as race, age, sexual preference, gender, and socio-economic status. In terms of these groups the medical learner population is becoming increasingly diverse and brings with it a broader range of perspectives and approaches that will significantly strengthen and enrich the medical profession. But medical educators need to ensure that their educational efforts – including learner evaluation – are designed to address the predictable complexities that diversity brings. Just as medical learners and practitioners need to develop the cultural competence to understand and address the various culturally-related factors that can undermine effective patient care [6,7], medical teachers need to be aware of cultural factors that can negatively impact their ability to accurately and effectively evaluate medical learners.

The goal of this article is to consider the role that cultural factors might play in medical learner evaluation by describing how cultural differences can affect evaluation accuracy and - using two conceptualizations of national cultural differences - illustrating some of the more specific ways such differences might play an underlying role in performance problems.

The cultural frameworks proposed by Hofstede [5] and Trompenaar [8] have received considerable attention in terms of research and application and provide a good basis for illustrating the role of cultural dimensions in medical learner evaluation. Hofstede has identified five psychologically-based dimensions for describing and understanding cultural differences and defined these as "broad tendencies to prefer certain states of affairs over others." Trompenaar viewed culture in terms of the various ways in which a group of people solve problems related to relationships with others, time, and the environment. He has proposed seven dimen-

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sions to describe these differences. Table **1** presents some of the specific characteristics related to each dimension proposed by Hofstede and Trompenaar. These are from their original works and were purposefully selected for their potential relevance to medical learner evaluation.

THE ROLE OF CULTURAL FACTORS IN MEDICAL LEARNER EVALUATION ACCURACY

It is important to understand how the existence of differences between a given evaluator and a given learner in areas such as nationality, race, and gender can contribute to inaccuracy. Language is the first, and most apparent, factor that could affect evaluation accuracy. Scores on knowledge tests - written or oral - may be lower if the learner is not able to understand the intended meaning of a given question or formulate a clear response. To address this issue test questions should be written as clearly as possible and reviewed for words, concepts and meanings that might be misinterpreted or culturally biased. Some problems might be obvious but some might not be. Language-related problems could also have an impact on the accuracy of scores and ratings obtained through direct observation of learners in a real or simulated context. Observers should be trained to recognize and account for these problems.

A second cultural factor affecting evaluation accuracy is related to evaluator bias. Evaluators' judgments are often

Table 1. Dimensions and Related Characteristics and Behaviors of Medical Learners (Grouped by Similarity)

Hofstede	**Individualistic***	**Collectivistic**
	Task prevails over relationship	Relationship prevails over task
Trompenaar	**Individualist***	**Collectivist**
	Singular decision-making	Consensual decision making
Hofstede	**Short term orientation***	**Long term orientation**
	Respect for tradition	Adapt tradition to modern context
	Quick results expected	Patience and perseverance
Trompenaar	**Sequential (toward time)***	**Synchronous (toward time)**
	One activity at a time	Multiple activities at once
	Time is measurable. Precise	Time is approximated by significance
	Recent performance most important	Entire work record most important
Hofstede	**Low uncertainty avoidance***	**High uncertainty avoidance**
	Tolerant of innovation	Restrict innovation
Trompenaar	**Universalist***	**Particularist**
	Rule-based behavior	Tendency to embrace exceptions
Trompenaar	**Affectivist***	**Neutralist**
	Feelings are openly expressed	Feelings are carefully controlled
	Offer and seek direct responses	Offer and seek indirect responses
	Physical contact and gestures common	Physical contact and gestures taboo
Hofstede	**Small power distance***	**Large power distance**
	Subordinates expected to be consulted	Subordinates expected to be told
Trompenaar	**Achievement***	**Ascription**
	Decisions can be challenged by subordinates	Decisions challenged only by superiors
	Need to do better than expected	Need to do what is expected
Hofstede	**Masculinity***	**Femininity**
	Strength resolves conflict	Negotiate and compromise conflicts
	Men and women have separate roles/careers.	Men and women should occupy same roles/careers.
Trompenaar	**Specific***	**Diffuse**
	Criticism considered constructive	Criticism often devastating

*Dimensions more strongly associated with U.S. culture.

influenced by their general perceptions of learners [9]. Since people tend to have more favorable perceptions of individuals who are more like themselves [10] there is a risk that the evaluations of those learners might be slanted in a more positive direction while the evaluation of learners who are culturally different might be more negative.

To address evaluator bias, medical educators should develop comprehensive evaluation strategies that incorporate multiple methods and tools and avoid the common reliance on a single recall-based evaluation tool. Holmboe *et al.* recently described a structured portfolio that can serve as a framework for medical educators and training institutions to improve the rigor, efficiency, and effectiveness of their formative and summative evaluations of medical learners [2]. They maintain that the global ratings from monthly evaluations should still serve as a foundational element but that those ratings, and other evaluation-related decisions, should be based on performance information gathered through other methodological means including direct observations from multiple observers, practice and data-based learning such as medical record audits and self-assessments, and multi-source evaluations that include the perspectives of patients and other members of the health care team.

Learner anxiety is a third factor affecting evaluation accuracy particularly if it involves the direct observation of performance [11]. According to the Yerkes-Dodson law, the relationship between anxiety level and performance is curvilinear. At lower levels, performance will improve as anxiety rises but, at a certain point, the relationship reverses and performance declines with increasing levels of anxiety [12]. The cultural preferences and backgrounds of some learners might contribute to debilitating levels of stress and anxiety that will undermine their performance. For some, that anxiety might stem from a simple lack of familiarity with the method. Others, however, might experience increased anxiety because the method itself conflicts with their cultural preferences and beliefs. For example, learners who possess a more *synchronous* (in contrast to *sequential*) attitude towards time (see Table **1**) might believe that the evaluation of performance should be based on one's entire record. The process of being observed and rated in a single setting might conflict with this belief and increase their anxiety in the situation.

To mitigate the affect of anxiety on performance in observation-based evaluations, medical educators should meet with learners well in advance of conducting the evaluation to clearly describe how it will be conducted and discuss any aspects that might cause anxiety or discomfort. This could be part of a broader learner contracting process that will be described more fully in the next section.

Some learners might not be able to predict the anxiety or discomfort they will experience being observed in an evaluative context. For this reason medical educators should also make an effort to assess anxiety after observation-based evaluations through some type of debriefing process. Debriefing, in the context of medical learner evaluation, could essentially be any dialogue between the medical teacher and learner to discuss the results of an evaluation and gain mutual insight into the factors that contributed to those results. Rudolph *et al.* recently described potentially useful stepwise process for conducting debriefing discussions in medical education that aligns well with standard principles of providing effective feedback and engaging in performance improvement discussions [13]. They suggested that debriefings should include a discussion and clarification of the performance gap, an investigation into the factors – including emotional factors – that might have contributed to the performance gap, and a discussion of how to close the performance gap. Assuming appropriate levels of trust and safety are established, this type of post-evaluation discussion should reveal any specific discomfort or anxiety-related issues that might have contributed to a given learner's poor performance.

THE ROLE OF CULTURAL FACTORS IN POOR PERFORMANCE BY MEDICAL LEARNERS

While accurate and unbiased evaluation of medical learner performance is important to medical schools to maintain their standard of excellence in education, it is equally important to the learner for the evaluation process to include an attempt to understand the underlying factors contributing to their knowledge and performance, especially when that performance is below standard. Research in organizational settings has revealed that cultural beliefs and preferences can play a role in employee performance is such areas as problem solving [14], communicating with others in the organizational hierarchy [15], responding to feedback [16].

Although these issues have not been investigated formally in the medical training setting, Bates and Andrew described a number of situations in which cultural factors were discovered to be underlying issues in performance problems [17]. For example, they described one learner who was receiving poor evaluations on her ability to make decisions in the clinical setting. Further investigation showed that her poor performance was not due to a lack of knowledge; rather, it was the result of her discomfort in offering her opinion to a male senior physician.

To further illustrate some of the potential performance issues that could arise in any medical training setting, I will describe how some of the specific cultural characteristics described by Hofstede and Trompenaar might interact with and impact medical learner performance in each of the six general competency areas defined by the Accreditation Council on Graduate Medical Education (ACGME) [18]. Table **2** provides a description of each general competency area. Specific descriptors, particularly those that might vary among learners based on cultural norms, preferences, and expectations, have been included under each general competency. The discussion that follows addresses these specific descriptors and cross-references them with Table **1** to indicate cultural characteristics that might be pertinent.

Patient Care and Medical Knowledge

The specific descriptors for the patient care core competency included in Table **2** represent some of the newer learning objectives that go beyond traditional ideas of what physicians are expected to know and do in terms of patient care. The first descriptor (1a) states that medical learners need to work collaboratively with other health care professionals to provide care. This expectation might conflict with a learner whose cultural background favors an *individualist* approach to decision making and problem solving (Table **1**), such as learners who grew up in the U.S. and other western countries

Table 2. ACGME General Competencies* and Examples of Specific Descriptors

1) Patient Care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
a) Work with health care professionals, including those from other disciplines, to provide patient focused care.
b) Demonstrate the ability to appropriately prioritize and stabilize multiple patients and perform other responsibilities simultaneously.
c) Provide health care services aimed at preventing health problems or maintaining health.
2) Medical Knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
a) Identify the most likely diagnosis
b) Synthesize acquired patient data
3) Practice-Based Learning and Improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
a) Analyze and assess their practice experience and perform practice-based improvement using systematic methodology.
b) Facilitate the learning of students, colleagues, and other health care professionals
4) Interpersonal and Communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
a) Demonstrate respect for diversity, cultural, ethnic, spiritual, emotional, and age-specific differences in patients and other members of the health care team.
b) Demonstrate effective listening skills and be able to elicit and provide information using verbal, nonverbal, written, and technological skills.
c) Demonstrate ability to negotiate and resolve conflicts.
5) Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
a) Protects staff/family/patient's interests/confidentiality.
b) Arrives on time and prepared for work.
c) Appropriate dress and cleanliness.
6) Systems-Based Practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
a) Understand different medical practice models and delivery systems and how to best use them to care for the individual patient.
b) Practice cost-effective health care and resource allocation that does not compromise quality of care.

*****Minimum Program Requirements Language *Approved by the ACGME, September 28, 1999.*

where individualism is considered a positive feature. Such learners might struggle to work collaboratively, especially learners who favor group work.

Hierarchy and gender issues are another potential conflict between cultural preferences and working collaboratively with others on the health care team. Medical learners whose cultural preferences favor *larger power distances* or tend toward *ascription* will probably struggle more with collaborative decision making and problem solving because they tend to be less comfortable consulting with, or being challenged by, individuals they consider to be subordinate or only marginally superior to them. Although Hefstede and Trompenaar might argue that individuals from the U.S. would not struggle with this learning expectation, there is some empirical evidence that deference to an explicit or implicit hierarchy is still the norm in U.S. medical training [19].

In addition, learners who come from cultures with norms that align strictly to Hofstede's description of *masculinity* versus *femininity* might struggle to effectively collaborate with women who occupy roles thought to be appropriate for men (e.g., physicians) and men who occupy roles thought to be appropriate for women (e.g., nurses).

Practice-Based Learning and Improvement

The practice-based learning and improvement competency is actually closely aligned with the concept of assessment and evaluation itself since one of its core aspects is that medical learners are expected to evaluate themselves by analyzing and assessing their own practice experience. An example of cultural factors which might conflict with medical learner performance is related to Trompenaar's characteristic of a *sequential* (*vs. a synchronous*) approach toward time. Medical learners with a more sequential attitude toward time might prefer to only move forward in their medical learning and refer back only to their most recent experiences, as op-

posed to using reflection on the collective past experience, to learn.

Another aspect of this competency is the expectation that medical learners facilitate the learning of other students, colleagues, and health care professionals. Medical learners with a *higher power distance* preference, however, might see teaching and learning as a relationship that should conform to a hierarchy and might not be comfortable "teaching" colleagues and others on the health care team. This role might also be more comfortable for medical learners with a more *affectivist* preference since they would probably be more comfortable seeking and offering opportunities to facilitate the learning of others.

Interpersonal and Communication Skills

Cultural factors can play a large role in interpersonal and communication skills. In this competency area medical learners are expected to demonstrate respect for cultural differences and other health professionals; elicit information, listen, and provide information; negotiate and resolve conflicts; and be open and responsive to feedback. These relationship-building behaviors provide the glue for making consensual decisions and would probably be more natural for those with more *collectivistic* preferences. These behaviors also match up naturally with Trompenaar's *affectivist* cultural preference for expressing feelings and offering and seeking direct responses as well as his *particularistic* preference for seeking and embracing exceptions instead of making strictly rule-based decisions.

Professionalism

Professionalism encompasses issues that are similar to those in the interpersonal and communication skills competency and are potentially impacted by some of the same cultural factors. This competency area also includes elements of adherence to ethical principals, particularly those related to patient interests and confidentiality. While certain issues regarding patient confidentiality are written in law (e.g., the Health Insurance Portability and Accountability Act [HIPAA]), there are differences among cultures in terms of what privacy means. These could include issues related to personal exposure of identity, autonomy, physical exposure of body, personal space, and how these ought to differ in a hospital versus a home setting [20].

Behaviors related to punctuality and timeliness are another aspect of professionalism in which there are clear differences among cultures [21]. Expectations regarding these issues must be made clear to medical learners.

Finally, residency programs often have dress and hygiene expectations as part of the professionalism competency. These norms are often culturally based and best managed proactively by describing specifically what is expected in terms of dress and hygiene and why it is considered important.

Systems-Based Practice

Systems-based practice is about being aware of, and responsive to, the larger context and system of health care and using resources efficiently. The specific expectations within this competency area can be quite detailed and will probably vary a great deal among geographic locations, specialty areas, and institutions. Learners should have a clear understanding of the various aspects of the system that are important. Time orientation, as it relates to adherence to tradition, versus adapting to the modern context, might be a factor in some medical learners' performance because a learner with a more *traditionalist* preference might have difficulty accepting and participating in this expanded role for physicians.

RESPONSIBILITIES OF EVALUATORS OF MEDICAL LEARNERS

Those responsible for evaluating medical learners need to understand the root causes of any poor performance before making summative decisions or providing formative guidance. I have provided a few examples of specific cultural factors that might impact a learner's performance in specific residency competency areas. However, different levels of medical education and different training programs have their own specific learning requirements which may affect these cultural issues. Furthermore, I have addressed only cultural differences in the context of ethno-cultural background. Other important cultural dimensions that might raise other issues in evaluation include gender, sexual orientation, and socioeconomic background.

Ideally, these potential cultural conflicts would be identified and addressed before they show up as performance problems, but there is no way to accurately assess the many potential cultural differences that exist among different groups of learners. The precise cultural dimensions that exist between various groups are not that well understood and the available tools for assessing cultural differences are limited in terms of scope and proven validity. But even though cultural dimensions and differences cannot be measured precisely, there are three proactive steps that an institution can, and should, take to address potential conflicts between cultural preferences and learning expectations.

1) As a first step medical institutions should work to increase awareness among medical teachers and learners about the concept of cultural differences, the kinds of cultural preferences teachers and learners might possess, and how such differences can be both a benefit and a barrier to learning. Such educational efforts could include brief overviews for teachers and learners so they understand some of the more commonly accepted conceptualizations and frameworks of cultural differences (e.g., Hofstede and Trompenaar), self-assessments so that teachers and learners can reflect honestly on the kinds of cultural preferences they might possess, and case-based discussions so they can understand the potential impact of cultural differences on teaching, learning, and evaluation. Individual institutions would have to identify the most feasible and effective ways to incorporate this type of education into existing faculty and learner education effort; however, timing is important since it lays the necessary foundation for the next step.

2) The second step requires that medical teachers first take the necessary steps to ensure that each learner clearly understands what is expected of them (i.e., the learning objectives), why those expectations are important in the context of providing effective care, and how their performance will be evaluated. With this

mutual understanding and a basic understanding of the existence and potential impact of cultural differences, teachers and learners should then explicitly discuss, identify, and address specific expectations, teaching methods or evaluation procedures that might be different or contrary to the learner's own preferences, assumptions, or customs.

While a seemingly lofty goal, this type of collaborative discussion about learning expectations, learning methods, and evaluation lies at the heart of "contract learning": a concept that is gaining increased attention in the medical education literature as a key component of developing and fostering a more collaborative and individualized learning environment in medical education [22]. Learning contracts, should be developed collaboratively between teachers and learners at the beginning of a learning period (e.g., rotation) but should also serve as a basis for ongoing developmental discussions to occur both during and at the end of the learning period. This is an important aspect since many learners might not initially be comfortable sharing their discomfort or might not even be aware of their own preferences or the potential for conflict until problems arise.

A comprehensive description of learning contracts is beyond the scope of this article. See Challis for additional information about the application of learning contracts in medical education and helpful guidance on their design and use [23].

3) A recommended third step would be a regular review of the evaluation system and results to look for systematic differences in performance between groups of learners with potentially different cultural beliefs and expectations. Uneven ratings between various groups might indicate a "rater effect" that is systematically biasing results in favor of some groups over others. While such unevenness could be detected by "eyeballing" the data, institutions should use one of the many statistical techniques for assessing bias in evaluation data to identify areas of bias that might not be obvious [24].

These suggestions are practical and proactive steps that medical educators can take to prevent problems related to conflicting learning objectives and cultural preferences before they manifest themselves as performance problems. Once cultural issues have become apparent, they must be addressed quickly to avoid worsening performance. In some cases, quick and specific feedback might be sufficient for dealing with performance issues as long as that feedback is focused on a specific description of what the learner did [25] and why the change in behavior is important in the context of effective care [26]. Poorly delivered feedback that is vague or focused on personal characteristics can produce a defensive reaction and have a negative impact on the learner's performance and development [27].

However, learners themselves may not be aware that their own cultural beliefs and preferences are having an impact on their performance so a more formalized approach to dealing with performance issues might be needed. Boisselle describes a comprehensive method of resident evaluation that supplements the rotation evaluation with several additional methods, including a regularly-scheduled faculty "roundtable" discussion of resident performance [28].

The following is a summary of suggestions to ensure appropriate management of cultural issues that impact the evaluation of medical learners and learner performance:

- To mitigate the impact of cultural factors on evaluation accuracy:
  - Write test questions as clearly as possible and review for words, concepts and meanings that might be misinterpreted or culturally biased.
  - Train evaluators to recognize and account for language-related problems in observation-based evaluations.
  - Develop comprehensive evaluation strategies that incorporate multiple methods and tools.
  - Meet with learners prior to conducting observation-based evaluations to discuss any aspects that might cause anxiety or discomfort.
  - Assess anxiety after observation-based evaluations through a debriefing process.
- To ensure that cultural factors are not an underlying factor in poor performance:
  - Step 1: Increase awareness among medical teachers and learners about the concept of cultural differences and how such differences can be both a benefit and a barrier to learning.
  - Step 2: Ensure that each learner clearly understands what is expected of them, why those expectations are important, and how their performance will be evaluated.
  - Step 3: Regularly review the evaluation system to look for systematic differences in performance between culturally distinct groups of learners.

RECOMMENDATIONS FOR FUTURE INVESTIGATIONS

The interplay between cultural factors and medical learner evaluation has not been studied extensively. This paper has identified and illustrated some of the potential problems that can result from cultural differences and has made some general recommendations for addressing them. However, more attention should be given to the role cultural factors might play in the accuracy of evaluation or as an underlying issue in performance problems. The first step would be to identify the cultural characteristics that have the most potential for conflict with evaluation methods and learner performance. This would lead to additional study and ultimately more specific and tested recommendations for addressing and correcting these problems.

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