

## Role Modelling in Medical Education

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### Abstract

Forming professional and humanistic physicians for the 21st century is a great challenge for medical educators worldwide. Role modelling by the medical teachers can be positive or negative and the challenge for us is to reduce the influence of negative role modelling. Positive role modelling has been defined as the process whereby faculty members exhibit knowledge, attitude, and skills; demonstrate and articulate expert thought processes; and manifest positive professional behaviour and characteristics. Role modelling is undoubtedly important in professional character formation and enhancing moral values among medical students, interns and residents who will serve the nation in future. In medical colleges and higher medical institutions of our country, some of the faculties from basic sciences and mostly clinical teachers consciously or unconsciously become positive and influential role models for the students, interns and residents. It is imperative that we as medical teachers and our institutions will come forward so that the educational environment in both undergraduate and postgraduate education supports such positive role modelling in medical education and training. Role modelling takes place in three interrelated educational environments which are the formal, informal, and hidden curriculum. Formal curriculum is the planned and structured part of medical education, including lectures, textbooks, and assessments, as we teach and train medical ethics and professionalism in regular curriculum. The informal curriculum is defined as an unspecified, predominantly ad hoc and highly interpersonal form of teaching and learning that takes place among and between faculty and students. The hidden curriculum has been defined as a set of influences that function at the level of organizational and culture, influenced by its people and environment. In this review, we tried to explore the impact of role modelling as well as the characteristics of positive role models and how role modelling could be integrated in our curriculum.

CBMJ 2025 July: vol. 14 no. 02 P:208-213

**Keywords:** Role model, professional behaviour, professional competence, medical education

### Introduction

In recent times, medical education are increasingly criticized for failing to meet the healthcare needs of the patients and the society in Bangladesh, which ultimately impacts choosing medicine as future career among young students.<sup>1</sup> One cause of this shortcoming may be a relative lack of positive faculty models shown by the senior doctors which could be influential among current medical students, residents and junior faculties.<sup>1,2</sup> Since recent literature supports the importance of role models in medical education, many physicians who teach do not seem to know how to effectively carry out this facet of their responsibilities.<sup>2,3</sup> Truly speaking, in day to day practice in the field of medicine, especially to uphold ethics and professionalism, role modeling is a crucial factor.<sup>2,4,5</sup> Role modelling refers to the admiration of an individual's observed behaviour or attitude and the subsequent adoption of that behaviour or attitude by another in practice.<sup>6</sup> However, Reuler & Nardone

(1994) suggested that a role model "teaches primarily by example and helps to shape professional identity and commitment through promoting observation and comparison".<sup>7</sup> They also argued that, in contrast to

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mentoring, role models may have only brief contact with the students or residents in training; however, their professional achievement, personality, power, influence, lifestyle, and values – all together may influence as same as a mentor has on a student”.<sup>7</sup>

In the history of medicine as a profession, we observed that students tend to imitate consciously or unconsciously the skills and behaviour demonstrated by the teachers during teaching in classroom, hospital wards rounds and in private practice both positive and negative; those student experiences facilitate student learning as well as influence their skills and behaviour in later practice life.<sup>2,8</sup> Therefore, there are chances that role modelling can be positive or negative and the challenge for us is to reduce the negative influences.<sup>5,8-10</sup> Irby (1986) defined positive role modelling as “process whereby faculty members exhibit knowledge, attitudes and skills; demonstrate and articulate expert thought processes; and manifest positive professional behaviours and characteristics”.<sup>10</sup> This review paper will explore the impact of role modelling among medical students, interns and residents. Besides, the characteristics of positive role models and how those could be integrated in our curriculum will be highlighted in our discussion.

### Importance of Role Modelling

Medical teachers are role models as they play a substantial part in determining how students handle the transition from being medical college graduates to practicing physicians and how they adopt direct communications with the patients, their families as well as hospital administrators and unit supervisors; in other words, they become socialized into the world of medicine.<sup>10-12</sup> In our undergraduate and postgraduate education, we also experienced that professional achievement, personality, power,

influence, lifestyle and values of medical teachers determine the influence and motivation on students, interns and residents.<sup>2,3</sup> Each year of medical training raises new challenges, beginning with being comfortable to talking and listening to patients, progressing to examining them, and ultimately managing them including the responsibility for life-and-death decisions. In the process of adaptation in such environment, trainees think that the best way out is adopting the strategies followed by the faculties and senior doctors in the hospital wards, which were somehow found effective in their education and training pursuits.<sup>1,3,10,13-15</sup>

In general, positive role models are individuals who have achieved outstanding success, are widely expected to inspire others to pursue similar excellence in their specific field. We also often showcase their accomplishments in an attempt to enhance others’ goals and aspirations.<sup>16</sup> Medical education is not an exception to this. Through positive role modelling, we can inspire our students and trainees by illustrating “an ideal, desired self, highlighting possible achievements that one can strive for, and demonstrating the route for achieving them”.<sup>16</sup> In contrast, the risk of imparting negative influence by their attitude, called as negative remodeling, which is more often practiced by many of our medical teachers and senior doctors, either informally or as part of the hidden curriculum, also affects norms and behaviours as well as the choice of future field.<sup>17,18</sup> For instance, negative role models can inspire one by “illustrating a feared, to-be-avoided self, pointing to possible future disasters, and highlighting mistakes that must be avoided so as to prevent them”.<sup>16</sup> However, this is crucial for us as well as for the students and trainees when and how the become differently receptive to positive and negative role models. The presence of positive role model

among us can influence the students and trainees in several ways. Role models can significantly influence students' decisions about which medical specialty to pursue. Students are more likely to choose a specialty if they have positive role models who embody the qualities they admire and aspire to.<sup>17-22</sup>

Role models play a pivotal role in classrooms, hospital wards and other engaging occasions, which ultimately influence values, behaviours, and decision-making processes among students and trainees. These individuals serve as beacons of integrity, guiding us toward principled actions and inspiring us to uphold ethical standards in our profession.<sup>3,4,8,23-25</sup>

They also help students and trainees shape their professional identity, values, and attitudes towards medicine as well as personal enhancement through further education and training. Moreover, they contribute to the the informal learning or hidden curriculum that occurs through observation and interaction with teachers and senior doctors, which can also have a powerful impact on students' personal development.<sup>4,14,23,26</sup>

### Optimum Qualities of Role Models

Physicians cum medical teachers who are considered excellent role models differ from their other colleagues in a variety of ways. Training in teaching, teaching style and methods, attitudes toward teaching, building relationships with students and residents, and career-related characteristics and achievements – all of these included attributes associated with excellence as a role model.<sup>4,6,8-10,26-30</sup>

Literature suggests that many of the attributes represent skills that can be acquired or modifiable behaviour that is under the control of individual faculty members (e.g., showing empathy, compassion, and a genuine interest in their patients' well-being, fostering positive patient-physician relationships as well as embodying high ethical standards and integrity

in their professional conduct).<sup>1,4,6,8-10,26-30</sup> However, some of the qualities, such as the extent of assigned teaching responsibilities and faculty development (e.g., demonstrating expertise in their field and effectively conveying knowledge and skills to students) can be influenced by departmental or institutional actions. Moreover, enthusiasm and passion for their chosen field can be contagious and inspire students to explore it further. Other positive factors include self-criticism, assuming responsibility, recognizing limitations, humility, respect, and sensitivity for patients and trainees, and a wholesome sense of humour.<sup>1,6,24-26</sup> On the other hand, the observed negative role model aspects that should be avoided included out-of-date teaching, compromising patient safety, discrimination, unhealthy competitive behaviour and conflicts of interest.<sup>7,13,26</sup>

Medical teachers should reaffirm the enormous influence role models have on medical education. Positive role models pass on perspectives that may have broad and long-term effects for both patients and junior physicians.<sup>4,9,10</sup> We must be constantly aware that our behaviour and attitude influence students and trainees at all levels and that only through concerted effort, demonstrated either in classroom or at the bedside, we can achieve an optimum change on their behaviour and attitude.

### Integration of Role Modelling in Medical Education

Bangladesh Medical & Dental Council (BM&DC) stated that through developing and ensuring competency standards all medical doctors must uphold the honour and dignity of the medical profession.<sup>31</sup> Besides, it is expected that all medical colleges will ensure that their students, interns and residents will receive sufficient education and training concerning the importance of ethics and

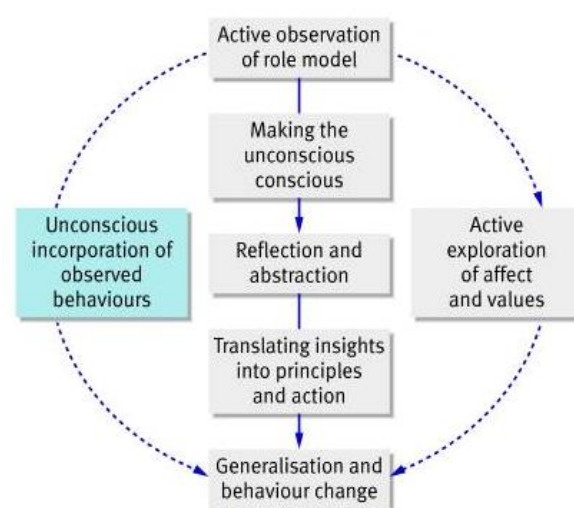
professionalism. As medical teachers, it is one of our privileges and obligations to educate and train our future generations of medical doctors. Therefore, it is important to develop, monitor, and reinforce good professional practices among ourselves.

We have already discussed that role modelling is a powerful form of teaching and learning; it occurs within three distinct yet interconnected educational environment named as formal, informal, and hidden curricula. These environments influence how students develop professional competencies, values, and attitudes.<sup>3,4,11,26</sup>

1. **Formal curriculum:** This is the planned and structured part of medical education, including lectures, textbooks, and assessments, as role modelling can be integrated into the formal curriculum through faculty demonstrating clinical skills, expert thinking, and positive professional characteristics. Faculty can also explicitly discuss their thought processes and decision-making, which can be particularly effective.<sup>2-4,11-13</sup>
2. **Informal curriculum:** This consists of “unspecified, predominantly ad hoc and highly interpersonal form of teaching and learning that takes place among and between faculty and students”, yet remains very powerful in medical educational environment.<sup>25</sup> All role models, from peers to senior doctors, function in the informal curriculum; however, many of the distorting effects of negative role modelling are experienced here.<sup>23,26,32,33</sup>
3. **Hidden curriculum:** This has been defined as “a set of influences that function at the level of organisational and culture”,<sup>23</sup> influenced by its people and environment. Apart from gaining knowledge and skills, those curricula help students introduce and integrate beliefs, values and principles into a future physician’s belief

system and effects upon professional identity formation.<sup>1,10,14,23,26,32-34</sup>

Through this review and discussion among our colleagues, we have learned that the educational value of role modelling depends on how it is defined and processed.<sup>34</sup> Learning from role models predominantly occurs through observation and reflection, and it has a mixing of conscious and unconscious components<sup>3,26,34</sup> (as shown in Fig. 1).



**Fig.1:** The learning process from role modelling (Source: Cruess, Cruess & Steinert, 2008)<sup>26</sup>

Since conscious observation of behaviours is familiar to all of us, determining and clear understanding of unconscious component is critical. Evidence suggests that conversion of an unconscious feeling into a conscious thought by adopting active reflection and abstraction by the students and trainees tends to translate those insights into principles and action.<sup>3,18,26</sup> On the other hand, their belief patterns and behaviours are molded by unconscious assimilation of observed behaviours.<sup>3,18,26,34</sup> However, there is a strong argument against role modelling that it is kind of unconscious adoption of the role models’ attributes by the learners, which encourages imitative rather than active learning.<sup>34</sup>

Last but not the least, teaching and training on ethics and professionalism are the core of medical practice and forms the basis of medicine's contract with society<sup>35</sup> and being positive role models, we can bring changes among our students and trainees incorporating more ethical and professional traits. These will help us pave the way for a high standard of patient care in our current healthcare practice. We also assert that positive role models leave lasting legacies as their impact extends beyond their lifetimes; whether through written works, speeches, or personal interactions, they shape future professionals in the field. Their influence reverberates through time, reminding us many of our medical teachers we came across.

## Conclusion

In medical education, positive role modelling helps our students, interns and residents achieve knowledge, skills and competencies and develop their professional identities as future medical doctors. We, as medical teachers, educationally hold the distinct honour and responsibility of cultivating young students and residents who will carry the torch of medical sciences into the future. Besides, we are also professionally obligated to assist our future colleagues in all aspects of their professional growth and development. Moreover, personally we would find no greater reward than witnessing our current or former students' success being medical teachers. This is the essence of role modelling. This review paper hardly tend to be exhaustive, rather pursuit a modest effort to identify the attributes of medical teachers as role models to help students achieve better teaching-learning experiences as well as shape students' professional skills and behaviour.

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