RESEARCH ARTICLE

Dealing with negative role modelling in shaping professional physician: an exploratory study

Ita Armyanti[1], Rita Mustika[1], Diantha Soemantri[3]

Abstract

Objective: To explore negative role modelling by medical teachers in developing professionalism.

Methods: The qualitative study using a transcendental phenomenology design was conducted at at Tanjungpura University, Indonesia, from December 2017 to February 2018, and comprised of 6 medical students from academic phase, 6 medical students from clinical phase, 8 medical teachers, 4 clinical teachers, 6 alumni and 5 programme managers. Data was collected through 5 focus group discussions and 5 in-depth interviews. Thematic analysis was applied to explore negative role modelling in the pre-clinical and clinical phase of the learning process. Data was analysed using the steps for coding and theorisation method.

Results: There were 30 respondents in five focus group discussions and 5 interviews were held with programme managers. There were three themes identified: medical teacher as a role model, process of role modelling, and nurturing medical professionalism. The presence of negative role modelling was evident in the discussions. Both positive and negative role modelling could influence the medical professionalism. Negative role modelling of medical teachers is a phenomenon often found in medical professionalism development.

Conclusion: Negative role modelling requires a more active process to develop professionalism.

Keywords: Negative role modelling, Medical professionalism, Medical teacher.

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Introduction

Role modelling is considered a unique teaching method because it can be used to teach cognitive skills and moral values.[1] This is in accordance with Bandura's statement that observational learning is a process that forms behaviour through the observation of individuals who have been selected as role models.[1,2] Bucher and Stelling divided role models into several types:[3,4] These included a partial role model, which is the most common type, has a behaviour/characteristic that is partially followed according to the observer's wish; a complete/charismatic role model may inspire the observer to imitate/simulate the model's behaviour (often based on admiration); a stage role model is selected and followed because of his/her capability in a certain position; and a negative role model is considered a variation of some of the other types because each type of role model can also have negative influences.

Teaching through role modelling has become an important aspect of medical education, as it is the most effective method to develop medical students' and physicians' professional attributes.[3,4] Professionalism is an essential competency for physicians and is formed through a learning and training process to provide the best medical service.[5] Role models are the core of learning professionalism because professional behaviour is learnt through experienced or observed events.[2,6,7] Medical teachers serve as role models who will be imitated by students as examples of professionalism.[8] This process may occur in a formal, informal or hidden curriculum.[3] Teachers may display positive or negative role modelling in professionalism learning, both of which have equally important roles in professionalism development.[4] Negative role modelling may have a positive impact on professionalism learning by illustrating behaviour that should be avoided in medical practice.[9] Negativity bias theory states that negative attitudes will elicit more attention than positive ones; thus, it will be easier for students to remember unprofessional behaviour by their role models than professional behaviour.[10,11]

Papadakis et al. stated that learning professionalism during medical education has a significant influence on a physician's professional attitude.[12] However, studies that examine negative role modelling by medical teachers are quite limited, particularly those related to teaching professionalism. The current study was planned to explore negative role modelling by medical teachers in developing professionalism.

Subjects and Methods

The qualitative study using a transcendental phenomenology design to understand the essence of human experience.[13] was conducted at Tanjungpura University, West Kalimantan, Indonesia, from December

[1]University of Tanjungpura, Indonesia; [2,3]Department of Medical Education, Universitas Indonesia

Correspondence: Rita Mustika. e-mail: ritakobe@gmail.com

2017 to February 2018, and comprised medical students, medical teachers, alumni and programme managers. After obtaining permission from the institutional ethics review board, purposive sampling with maximum variation was used to gather subjects from a population of medical students, teachers, alumni and programme managers. Respondents were invited to participate in several focus group discussions (FGDs), which were divided according to the type of respondents. The first FGD invited 6 students from academic phase, the second FGD with 6 students from clinical phase. Students were chosen based on gender, GPAs, and origin. Eight Medical teachers were invited in the third FGD and 4 Clinical teachers were invited in the fourth FGD. Medical and Clinical teachers were chosen based on age, gender and length of working. The last FGD was attended by 6 alumni who are working in various institution and vary in age and gender. In addition to the FGDs, in-depth interviews were held to obtain data from programme managers which were the Dean, the academic manager, the coordinator of study programme, 2 heads of module in academic and clinical phase (Table 1)

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Table-1: Data collection.

Data Obtaining Method	Respondents	Description
Focus group discussion (FGD)	Preclinical stage Students (PCS)	● 1 FGD (12 students) ● Sampling variation: o gender o GPA o Grantee/non-grantee o Active/not active in the organization ● Conducted outside the campus area
	Clinical stage students (CSS)	● 1 FGD (8 students) ● Sampling variation: o gender o GPA o Grantee/non-grantee o Active/not active in the organization ● Conducted outside the campus area
	Preclinical teachers (PCT)	● 1 FGD (6 PC teachers) ● Sampling variation: o Gender o Work period (0-5 years and 5-10 years) o Education background ● Conducted outside the campus area
	Clinical teachers (CT)	● 1 FGD (2 CT) ● Sampling variation: o Gender o Person in charge of the clinical o clerkship rotation o Working period ● Conducted in the clinical education area
	Alumni (A)	● 1 FGD (2 Alumni) ● Conducted outside the college area
In-depth interviews	Programme manager (PM)	● In-depth Interview (5 Programme managers: the dean, the head of the medical department, the head and the secretary of quality assurance unit, and module chair) ● Conducted inside the college area

Table-2: The Interview Protocol.

	Topics	Questions
1	Teaching and learning medical professionalism	What do you think about teaching and learning medical professionalism? Tell me your experience in teaching and learning medical professionalism.
2	Role model and role modelling	What do you think about role model and role modelling in medical school? From your experience, who do you think could become a role model and do the role modelling?
3	Role modelling in teaching professionalism	Do you think the role modelling play role in teaching professionalism? How does role modelling contribute to teaching professionalism? What is your experience in teaching and learning professionalism through role modelling?
4	Attributes of Positive and negative role model	What kind of role model you experience in your setting? What do you think their attributes are? What do you learn from those role models?
5	Positive and negative role modelling process	How do you think you can learn from positive and negative role model? Tell me the process that you experience (for students) How do you think you can teach through role modelling? Tell me the process that you experience (for teachers)
6	Medical teacher as a role model	What kind of medical teacher could become a role model? Why do you think those kinds of medical teacher could become a role model? What do you think about yourself as a role model and role modelling? (for teachers)
7	Faculty development for medical teacher as a role model	What do you think are the necessary skills to be develop by medical teacher to do role modelling? How do you think they could develop those skills?

Table-3: Themes, concept and quotation.

No	Theme	Concept	Quotes	Code
1	The medical teacher as a role model	The meaning of medical teacher as a role model	"A teacher is expected to be an exemplary figure, especially for positive values, such as discipline, integrity, how they treat students, colleagues or others according to the norms in our society"	CT2, FGD4
			"Being a role model means being an example, [in] the way of teaching and communicating when giving lectures and within daily activities as a teacher"	MT2, FGD3
		The positive role model	"Well, doc, in our opinions, the teachers that we would completely follow are only 11 out of [the] total [of] 34 pre-clinical teachers that have taught us, and the rest two (of the teachers) we would never want to follow, and there are around 21 people that we would like to follow, but only partly. Our parameter is [that] a role model should be somebody that can be followed or imitated."	PCS2, FGD1
		The negative role model	"Probably around 60% of pre-clinical teachers are the negative role models, but, in my opinion, it is mostly caused by the lack of time and discipline"	MT3, FGD2
			"The relationship[s] between teachers are not good now; for example, yesterday I saw Dr X met [a] staff [member] from the logistics department, he did not smile, even they both turned their face[s] away from each other. We could not make them an example"	PCS3, FGD1
			"I feel like the school atmosphere is uncomfortable; we do not know where to share or tell about our feelings, even the relationship among teachers is not good, so what we can do is to maintain the relationship of our own class. We feel like we do not collaborate with teachers on running the modules. Even our juniors are surprised that the teachers used to be that close with the students. If the teachers create gaps between them and us, how can we be close and learn from them?"	PCS4, FGD1
2	Expanding the learning process through negative role modelling	The process of Identification	"For me, going through these seven semesters, probably from each teacher I tend to consider his/her good side and bad side. Thus, I still take the bad side as a warning not to behave like that"	PCS5, FGD1
			"A role model should be an exemplary figure [of] whom we see his/her daily behaviours; the behaviours that can be followed or become an example are only the good ones. The behaviour [that] we know is negative, we should not follow. Thus, we should be better than him/her"	CS5, FGD2
		The process of articulation	"There is this doctor, Dr Y. When we make a mistake, we will be scolded in front of the patient, and it happens often, but right after the practice, he will tell [us] why he got angry, and we will get an explanation on what we did wrong [and] why it was a mistake. He is strict [and] bad-tempered, but he is willing to guide us so we understand what he is angry for. When we interact with the patient, we should never make mistake."	CS3, FGD2
			"Actually, when teachers get angry, they should explain to students that they do that to make students more diligent. If the student makes [a] mistake and it causes [the teachers] to be mad, they should explain what part their student did wrong, for it is also a learning point for the students"	PCS3, FGD1
3	Developing medical professionalism	The meaning of Professionalism	"Professionalism can be learned, formed and used when someone works based on his or her professional demands with responsibility based on their competency. A teacher should accomplish their tasks. A general practitioner should follow Indonesian medical doctor standard competency and a medical specialist should follow the guidelines"	CT1, FGD4
			"Professionalism is something that can be learned and practiced in our professional work, both as [a] teacher and [a] doctor. In my opinion, it contains knowledge, skill, and attitude components"	PCS2, FGD1
		Role modelling to develop medical professionalism	"For me, professionalism can be learned through events and phenomena that we [have] experienced. As an example, when we are in class, we could observe that teacher A is not discipline or not on time. Teacher B's way of teaching makes us tense, while we actually need to be relaxed when learning. We may take lesson[s] [from] that. The point is, as a student or a future doctor, we should see the positive side: oh, when I become a doctor, I should not do that. If I became a teacher, I would not let this happen. I [would] feel bad [for] the students [if I treat[ed] them badly]. The point is, we should learn from the positive side and just leave the negative side to make us a professional person."	PCS6, FGD1
		The clinical phase	"In my opinion, the clinical stage is my time to learn. Starting from observing the doctor's attitude, the way of talking, gesture, language, and how to behave toward the patients, [and] the communication. For example, when there is a patient that wants to be hospitalized but there is no indication for hospitalization, we can learn how [the doctor would] explain [this to] the patient. Through that experience, we can learn how a doctor behaves daily. Not only the good ones but also the bad ones; for example, when a doctor did not explain a treatment to a patient completely, it also makes me learn that when I become a doctor, later, I should do better."	CS1, FGD2

Guidelines for FGDs and interviews were developed beforehand (Table 2). FGDs and interviews were conducted until data saturation was reached. All FGDs were moderated by a medical teacher from the same institution. Data was analysed using the steps for coding and theorisation (SCAT) method.[14] The process began with verbatim transcriptions, which the participants then checked. The thematic analysis stage was conducted first by a couple of authors and then by the rest of the authors. The next step was reading and re-reading the data and arranging the summary for each transcription. This step was completed to familiarise the authors with the data obtained and identify the data that suited the study's objective. Each transcript was then reviewed and coded. Elements with similar or related coding were put into the same category. The developed theme was then defined based on the study's objective.[14]

The school has a total of 87 medical teachers, all of whom are medical doctors, and 697 students. A competency-based curriculum with problem-based learning has been used as the main teaching method there since 2005. Professionalism teaching is conducted spirally, beginning in the first year of studies.[15] The assessment of professionalism is integrated into the basic clinical skills examination and the Objective Structure Clinical Examination (OSCE). The learning methods used include small/large group discussions, community-based activities and role-playing.[15]

Results

There were 30 respondents in five FGDs and 5 interviews were held separately with programme managers. Three themes were identified (Table 3).

The first theme was the medical teacher as a role model. All respondents defined role modelling as teachers' behaviours, which can be observed, learned or followed and can be categorised according to the good model (positive role model) or to the bad model (negative role model). A role model is an admired person, and role modelling can be consciously and unconsciously performed by teachers. Students imitate their teacher's roles as both a teacher and a physician. According to a student respondent, negative role modelling tends to be identified in pre-clinical years.

The respondents identified several reasons behind the negative role modelling phenomenon: the existence of teachers who display negative behaviour, lack of integrity or poor time management; heavy workloads; poor interpersonal relationships; and the lack of a forum for teachers and students to share their feelings.

The second theme was expanding the learning process through negative role modelling. A medical teacher may display positive and negative role modelling attributes on different occasions; students identify the nature of their teacher's behaviour and decide whether to imitate it. Students typically choose to imitate positive role modelling. However, negative role modelling could be a learning model if the teacher articulates the reason behind the negative attribute.

The third theme was developing medical professionalism. Respondents defined professionalism as a behaviour that can be learned, consisting of three components: knowledge, skills and attitude. This behaviour is practised based on professional standards for teachers and physicians since, according to the respondents, medical school teachers play both roles simultaneously.

Furthermore, professionalism learning is conducted by medical teachers through role modelling. Respondents from the student group explained that they learn through observing their teachers' professional/positive and unprofessional/negative behaviours and make it as a learning objective. The role model also motivates students to develop professionalism.

Discussion

The present study found that the respondents can identify and define the roles of their teachers in pre-clinical and clinical stages. A medical teacher who teaches knowledge and skills also becomes the main example of professional values and behaviour for his/her students. This is in line with Maudsley's argument that a role model is an important component in implementing an effective medical education.[16]

The first step of the role modelling process is the selection of a teacher who is considered to be a role model.[2,4]The social learning and the motivation theory, which states that the selection of a role model is based on students' capabilities as observers of their teachers' behaviour,[7,9] is in line with the present findings. The ability to identify a role model is an important component in the role modelling process since the basic principle of learning from a role model is to observe and identify others' positive or negative behaviours.[1,4] The present study has confirmed the aforementioned principle that identification is the first step to learn from role models. The internalisation of professional value/behaviour occurs afterwards. Moreover, the result of this study is in accordance with the basic theory of role modelling, cognitive apprenticeship, which indicates that learning from a role model should be

enhanced by an articulating process in which every action that is done or not done by a teacher in a certain situation has specific objectives that should be explained to the students.[4,17]

The negative role model is defined as an individual with attributes or behaviours that should not be followed.[4] However, a negative role model is considered capable of strong influence, especially in developing the professional behaviour of students.[10,11] A few theories explain the process of learning through negative role modelling. Passi and Johnson's theory about a positive role model learning process included a small amount of detail about negative role modelling; they argued that learning from a negative example will be easier to memorise and has a positive effect for a student because the student, as the observer, is capable of deciding which behaviour he/she would not want to follow.[18] The above process is also in accordance with the negativity bias theory in which negative behaviour is easier to remember and learn.[11] A negative learning experience has a positive effect on learning the behaviour that should be avoided, as long as the students are aware that the experience is a negative one.[11] The negative role modelling should be understood by students and teachers because it can be experienced starting in the first year of studies.[4]

Our study produced two schemes of the negative role modelling learning process: exploration/self-learning and articulation. Students were capable of identifying teachers who were considered examples of negative behaviour (modelling-identification); afterwards, that behaviour was compared to the behaviour that was considered more positive. In the exploration/self-learning, process, continued motivation of the students made them better individuals. While during the articulation process, the students identified a negative behaviour through teacher's explanation, making the learning process more easily understood and internalised. According to the cognitive apprenticeship theory, teachers play active roles when students learn from teachers as role models.[2,17] Our study also showed that medical teachers were aware and capable of performing as role models.[8] One of the important components in improving learning through role modelling is that a teacher should be self-aware of his/her role as a living-model for his/her students. Moreover, the ability of the teacher to self-reflect and provide opportunities for students to get feedback and self-reflect is useful to improve role modelling.4 Most teacher respondents stated that they were already aware of their roles as role models, but still did not put in any effort to actively improve in these roles. Without the teacher's active effort role modelling could be ineffective.[3,18]

Student motivation determines the objective, as well as the effect, of learning through negative role modelling. This finding is in line with the motivation theory, which states that motivation is the main aspect encouraging the observer to attain the learning objective.[7,9] The motivation to become a professional physician will have a positive effect on the learning. Furthermore, teachers should be conscious of negative role modelling because, according to negativity bias and cognitive apprenticeship theories, a learning process using a negative example should be accompanied by an explanation and self-reflection.[2,13]

The existence of negative role models in medical education is unavoidable; negative role models were found in the school being studied. Students should be able to cope with those during their studies. One way to cope and obtain positive impact from the negative role modelling is through self-reflection.[19] Self-reflection provides a chance for students to actively compare the behaviours displayed and not. This self-reflection aims at determining the learning objectives of role modelling.[3] Another measure is through the implementation of feedback-seeking behaviour. This is an active behaviour in which an individual gets feedback from the surrounding environment, which then facilitates adaptation, learning and performance improvement.[16,20] Self-reflection by students and feedback-seeking behaviour were not observed in the present study; thus, the current learning process only relies on the active role of students to identify the attributes of their role models.

A limitation of the present study is that it was conducted in one medical school based in West Kalimantan, Indonesia. However, we were able to unravel the negative role modelling phenomenon, and we believe that a similar situation may occur in other medical schools. We believe that the present study's understanding of how medical students can benefit from negative role modelling is generalisable to other settings.

The negative role modelling phenomenon reveals that a medical teacher may display negative behaviour.[10] Further studies should be undertaken to understand in more detail the learning process that occurs after medical students are exposed to negative role modelling, how they perceive negative role modelling, and how they process and then make use of it to determine a new standard of positive behaviour.

Conclusion

A role model is one of the important roles held by teachers in developing a medical student's professionalism. This role can be effective if each teacher is aware that he/she is serving this function. The challenge of using negative role

modelling to learn professionalism is that students must be able to consciously identify those teachers who display negative role modelling and understand the learning processes that follow. Moreover, teachers also have to understand the learning process that occurs through negative role modelling.

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