Learning from lapses

Mak-van der Vossen, M.C.

2019

document version
Publisher's PDF, also known as Version of record

Link to publication in VU Research Portal

citation for published version (APA)
Mak-van der Vossen, M. C. (2019). *Learning from lapses: How to identify, classify and respond to unprofessional behaviour in medical students.*

CHAPTER 10
General discussion

Through the studies described in this dissertation, we have contributed to the understanding of the complexity of unprofessional medical student behaviour by investigating the experiences of the people who are involved in handling such behaviour. The aim of the dissertation was to construct a detailed picture of unprofessional behaviour among medical students, based on the literature and on the researchers' interactions with representative samples of various stakeholders who shared their perspectives and personal experiences with identifying, classifying and responding to unprofessional medical student behaviour.

This chapter will present answers to the three main research questions. We will provide an interpretation of the findings and consider their implications, which will then lead to several conclusions. After a discussion of the strengths and limitations of the research, we will then present recommendations for all stakeholders as described in Figure 1.1, including suggestions for future research by education scientists.

Main findings

The dissertation's three main research questions, all related to medical student behaviour, are as follows: (1) How can medical educators identify unprofessional behaviour? (2) How can medical educators classify unprofessional behaviour? (3) How should stakeholders respond to unprofessional behaviour? The main findings are summarized in Table 10.1.

Identifying unprofessional behaviour

The first main research question of the dissertation was: How can medical educators identify unprofessional behaviour? This question is addressed in chapters 2 and 3. Chapter 2 describes a system in which the teaching and monitoring of professional behaviour are both integrated into all formal parts of a medical school's curriculum [1-4]. *Professional behaviour* is defined as having the skills to (1) manage tasks, (2) manage others and (3) manage oneself [5]. Formative assessments of student performance are used to drive learning, and summative assessments are used to ensure quality [6]. This chapter describes how the teaching and assessing of professional behaviour can be embedded in the medical curriculum.

Chapter 3 reports on a study that explored, described and categorised medical students' unprofessional behaviours, as witnessed by educators or students. This systematic review generated an overview of 30 descriptors for unprofessional behaviours, categorised into four themes. The descriptors that are often used for unprofessional medical student behaviour in medical education research papers were categorised into the 4 I's, which pertain to a lack of *involvement* (failing to engage, such as by being late, having poor initiative and avoiding patient

Aim	Finding	Chapter(s)
Identifying unprofessional behaviour	The teaching and assessment of professional behaviour can be embedded in a longitudinal manner in the medical curriculum.	2
	Unprofessional medical student behaviour pertains to concerns in *involvement, integrity, interaction* and *insight*; this finding has led to a new model of unprofessional behaviours we call *the 4 I's*.	3, 7
Classifying unprofessional behaviour	A new model for classification of medical students' unprofessional behaviour was generated that specifies four behavioural patterns: *accidental behaviour, struggling behaviour, gaming-the-system behaviour* and *disavowing behaviour*.	5
	If frontline educators fail students for *professional behaviour*, their concerns are mainly based on a lack of *involvement, integrity* and/or *interaction with others*.	3, 4
	Expert professionalism educators primarily pay attention to students' *insight*, especially to their *reflectiveness* and *adaptability*.	5, 6
	Unprofessional medical student behaviour can be attributed to *personal circumstances, factors in the educational context* and *cultural differences*.	6, 7
Responding to unprofessional behaviour	Professionalism supervisors respond to medical students' unprofessional behaviour in a three-phase process: (1) *explore and understand*, (2) *remediate* and (3) *gather evidence for dismissal*.	6
	Medical students respond to professional behaviour lapses in both peers and faculty in four different ways: *avoiding, addressing, reporting* and/or *initiating a policy change*.	7
	Simulated patients would like to contribute to the teaching and training of speaking up about unprofessional behaviour.	8

Table 10.1 Overview of the main findings of the dissertation

contact); a lack of *integrity* (exhibiting dishonest behaviours such as lying, cheating on exams or falsifying data); poor *interaction* (showing disrespectful behaviour such as discrimination, disrespectful communication and poor *insight* (having poor self-awareness, indicated by not accepting feedback or blaming external factors rather than one's own shortcomings).

The four domains identified in this systematic review confirm as well as expand on earlier work that determined the following domains of behaviours as being problematic: *poor reliability and responsibility, lack of self-improvement and adaptability*, and *poor initiative and motivation* [7]. Our findings are partly consistent with another previously published framework describing domains in which evidence of professionalism may be expected from undergraduate students and residents: *responsibility for actions, ethical practice, respect for patients, reflection/self-awareness, teamwork* and *social responsibility* [8]. In our study we also found the first four of these six domains, as well as poor teamwork, which we categorised in our *involvement* domain. We did not find examples of student behaviours that could be regarded as *poor social responsibility*, which suggests that current curricula do not ask for *social responsibility* from undergraduate students. One explanation for this finding is that, although students enrolled in undergraduate medical education interact with patients, they

Involvement

• absent or late for assigned activities
• not meeting deadlines
• poor initiative
• general disorganisation
• cutting corners
• poor teamwork
• language difficulties

Integrity

• cheating in exams
• lying
• plagiarism
• data fabrication
• data falsification
• misrepresentation
• acting without required consent
• not obeying rules and regulations

The 4 I's of unprofessional behaviour among medical students

Interaction

• poor verbal/non-verbal communication
• inappropiate use of social media
• inappropiate clothing
• disruptive behaviour in teaching sessions
• privacy and confidentality violations
• bullying
• discrimination
• sexual harassment

Introspection

• avoiding feedback
• lacking insight in own behaviour
• being insensitive to another person's needs
• blaming external factors rather than one's own inadequacies
• not accepting feedback
• resisting change
• not being aware of limitations

Figure 10.1 The 4 I's, comprising 30 descriptors for unprofessional behaviours among medical students

have no genuine tasks in the health-care process and thus have no responsibility for patients or the public from the communities they serve.

Professionalism is dependent on time and place [9, 10]. Interestingly, the domains of the 4 I's seemed to be fairly consistent among research papers from different parts of the world. We may conclude from our study that similar domains of concern exist globally. While behaviours may differ across cultures [11], the domains that comprise the behaviours appear to be fairly

consistent in different parts of the world. But historically, medical researchers have not paid the same level of attention to each domain at the same time. The temporal trend we discerned is that, around 1980, when North American researchers started to study unprofessional medical student behaviour, they first emphasized *integrity* [12-16], followed by *interaction* [17-19] and *involvement* [20-22]. From 2000 on, researchers in other parts of the world also started to investigate *integrity*-related problems [23-33]. Around 2000, North American researchers moved on to study *insight* [7, 34] and were quickly followed by their colleagues in Europe and Australia [35-37].

A culture which lacks the habit and practice of providing negative feedback is known to exist in medical education [38]. Furthermore, if feedback is given, the narrative feedback on the evaluation forms often lacks clarity [39]. Despite these disappointing findings, it should however be underscored, that educators must be attentive to unprofessional behaviour, embrace subjectivity, and speak up for the sake of patient safety and effective patient-centred care [40]. Unprofessional behaviour can be a sign of underlying student problems that require attention [41]. The 4 I's model can help educators to determine which student behaviours they especially must pay attention to, and how they can document those behaviours. Doing so can help educators begin an information exchange about students' unprofessional behaviour, which can then clarify any differences between students' intentions and educators' perceptions [42]. The descriptors provide a vocabulary to discuss unprofessional medical student behaviour.

The studies included in our systematic review did not report any descriptors for combinations of unprofessional behaviours. This lack of combinations appeared to be a gap in the literature, which prompted further study to find such combinations.

In conclusion, a continuous educational theme, including formative and summative assessments, can be put in place to identify unprofessional behaviour. Educators can also use the 30 descriptors within the 4 I's model to clearly articulate their concerns about any unprofessional student behaviours they encounter.

Classifying unprofessional behaviour

The second main research question related to student behaviour was: How can medical educators classify unprofessional behaviour? Chapters 4 and 5 aim to answer this question by reporting on two studies that have revealed patterns of unprofessional behaviour among medical students. Chapter 4 describes an empirical research study that uses latent class analysis based on the opinions of frontline educators from one medical school [43]. Three unprofessional medical student behaviour profiles were identified in this study: (1) *no reliability,*

Figure 10.2 Initial model of profiles of unprofessional behaviour among medical students

(2) *no reliability and no insight*, and (3) *no reliability, no insight and no adaptability*. These profiles seemed to indicate the extent to which a student's *self-reflection and adaptability* had been diminished. Students who showed the profile *no reliability, no insight and no adaptability* did not sufficiently address underlying personal causes for their unprofessional behaviour. See Figure 10.2.

Chapter 5 provides a complementary study in which the findings from chapter 4 were refined. The pre-existing profiles were further examined through an empirical research study using a triangulation of the nominal group technique and thematic analysis [44, 45]. Experts in the education of professionalism – from different schools – validated and generalised the findings to different contexts. According to these experts, the distinguishing factor between the initial profiles, *reflectiveness and adaptability*, should not be adopted as one single dimension but should instead be replaced by two distinct dimensions: one is *reflectiveness*, and the other is *adaptability*. This suggestion led to a revised model consisting of two dimensions and four profiles.

The experts viewed the pre-existing profile *no reliability* as being normal behaviour, which reflects the notion that unprofessional behaviour can accidentally befall anyone. In the final model, this profile is described as *accidental behaviour*. The pre-existing profile *no reliability and no insight* was divided into two separate profiles: (1) student behaviour that indicates a student's insight but without the capability to adapt, which is described in the final model as *struggling behaviour*; and (2) student behaviour that shows improvement despite a lack of insight into professionalism values, which is described in the final model as *gaming-the-system behaviour*. Expert educators clearly recognised the pre-existing profile *no reliability, no insight and no adaptability*, which describes a student who displays unprofessional behaviour without showing reflectiveness or adaptability over time. This profile was not changed, but in the final model this profile was labeled *disavowing behaviour*. See Figure 10.3.

The expert professionalism educators in our study stressed that students might temporarily lack the skills or attitudes necessary to act professionally. They expressed that the profiles are fluid, not fixed, which allows students to migrate from one profile to another over time. These findings build on earlier studies in which the *capacity to improve* was found to be an essential aspect of professionalism [46, 47]. The research described in this dissertation identified the same categories, and added the category of *reflectiveness* to the professionalism discourse. In addition, the dynamic nature of unprofessional behaviour indicated by the potential for movement between profiles and thus improvement, was not previously identified, and resulting from the research herein described.

We also found that while frontline educators typically fail students based on a lack of *involvement, integrity* and/or *interaction*, expert professionalism educators primarily pay attention to students' *insight*, especially medical students' reflectiveness and adaptability, when determining if they should pass or fail a student.

How can these findings be used in practice? As identified in this dissertation, our remediation experts stressed that the behavioural profiles we described in chapter 4 are not static, yet dynamic, and that students can move from one profile to another. This notion points to a determination of the behavioural patterns as *phases* in the development of professionalism.
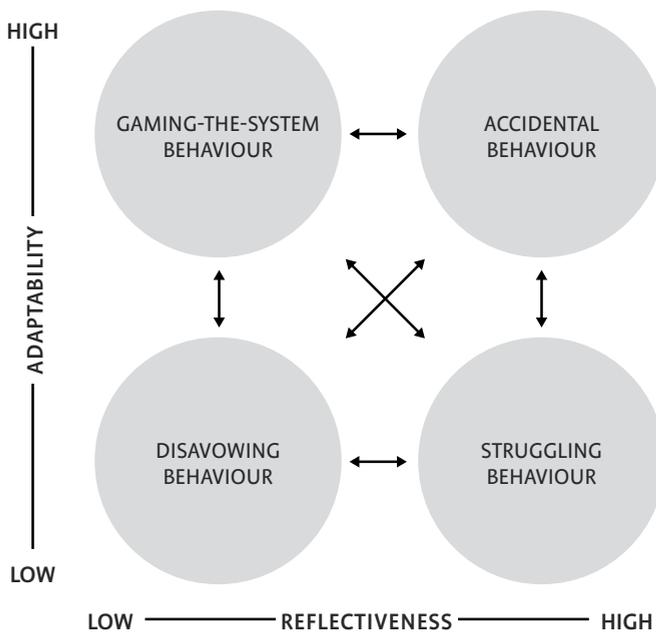

Figure 10.3 Final model of profiles of unprofessional behaviour among medical students

While all students can go through these phases, the four behavioural patterns are often seen among students who show unsatisfactory development and thus need more educational support than the standard curriculum provides. In the following paragraphs, we discuss the four patterns and the two distinguishing dimensions.

Accidental behaviour is normal behaviour, according to expert professionalism educators, which the simulated patients and the students (chapter 7 and 8) agreed with. Lapses are a part of learning, so any student might eventually display accidental unprofessional behaviour due to personal circumstances, factors in the educational context and/or cultural differences. Generally, the student acts professionally, but unfortunately his or her behaviour is accidentally perceived as being unprofessional. Students who display the behavioural profile of *accidental behaviour* need to learn that anyone can make a mistake. If educators and students could accept that accidentally lapsing is normal, then speaking about such lapses would become less difficult. Discussing such lapses serves the goal of individually learning from mistakes, supporting each other in doing so, and collectively learning from accidental unprofessional behaviours [50, 51].

Struggling behaviour is widely acknowledged in the medical education literature on burnout and its prevention [52]. In this case, the student has the knowledge and knows how it can be applied, but is unable to show professional behaviour in practical settings or the workplace. This behaviour is often seen among students who, despite showing insight into their own behaviour, do not improve because of personal circumstances, health issues or perceived difficulties within the educational context or institutional culture. Educators must take this *struggling behaviour* seriously and see what individual support and/or changes in the educational context might be made to help the student succeed. This support might include guidance from resources outside the medical school.

Gaming-the-system behaviour was an intriguing finding from the studies described in chapters 5 and 6. Gaming-the-system behaviour occurs when a student displays desirable behaviours for the sake of passing a professional behaviour assessment without having accepted the underlying professionalism values. The student does intentionally not accept these values. The student pretends to reflect on behaviour, but on further investigation appears to lack adequate insight into own unprofessional behaviour or how others perceive that behaviour. This approach may be acceptable in preclinical situations, but not in authentic situations in which students collaborate with health-care workers to serve patients. Frontline educators do not always recognise this behaviour, possibly because of limited direct observation of students' actions [53, 54]. Several of the professionalism experts in our study, who said that they found this type of behaviour worrisome, described this behaviour as *faking*. They believed that such behaviour is not sustainable and could lead the student to experience problems once contextual circumstances become difficult. These experts' worst-case scenario would be

a student who only behaves professionally when others are watching. If this feared behaviour continues after graduation, then patient safety would suffer.

How does gaming-the-system behaviour arise? Rather than the worst-case scenario educators fear, gaming-the-system can often be explained as a temporary phase in the learning process in which the '*fake it till you make it*' strategy can lead to insight and growth [55]. Another explanation for gaming-the-system behaviour could be that during medical school, students are not responsible for patients or for society at large and thus do not feel the need to act professionally. In our review study of unprofessional behaviours (chapter 2), we did not find the descriptor *lack of social responsibility* among undergraduate medical students, which might indicate that *social responsibility* does not receive enough attention within undergraduate medical education. For students who display gaming-the-system behaviour, the relevance of professional behaviour may need to be better clarified, for example through authentic student-patient encounters [56, 57].

The study participants recognised *disavowing behaviour* in the studies described in chapters 4, 5, 6 and 7. This profile characterises those students who relate lapses of professional behaviour to external causes rather than to their own inadequacies and deficiencies. In the study described in chapter 4, we found that students who showed this behavioural profile more often received additional unsatisfactory professional behaviour evaluations than students who displayed one of the other patterns. Students who show a pattern of disavowing behaviour seem to be the most challenging to remediate. Educators initially need to verify if such students have acquired the knowledge base of professionalism. Students who show this behavioural pattern also need to learn reflective skills and develop their motivation to try alternative behaviours based on the feedback they receive.

The four profiles are distinguished by two distinct dimensions: *adaptability* and *reflectiveness*. Both are described below.

The *adaptability* dimension encompasses 'the ability to change in order to be successful in new and different situations' [58]. Adaptability is only visible if professional behaviour is assessed across different circumstances, which necessitates *programmatic assessment*, i.e. an assessment programme that allows the integration of multiple assessments from different assessors over time. The use of programmatic assessment makes it easier for frontline educators to provide their evaluations, as they will then know that their own subjective evaluations will be combined with those of others, thus becoming a reliable end evaluation. By synthesising different evaluations, the professionalism supervisor – or, even better, a 'professionalism competence committee' – will obtain an overview of different evaluations from several assessors, thereby triangulating data from different sources [59]. This triangulation will increase the reliability of the final assessment and allow for following a

student's development. Based on this integrated information, the assessors can then evaluate if students are able to adapt to new and different situations and have shown improvement in their professional behaviour [40].

Reflectiveness, the second dimension that may be distinguished between the profiles, encompasses the ability to reflect, or 'to think quietly about something' [58]. In this regard, the relation between the descriptors for unprofessional behaviours and the behavioural profiles is interesting: the display of any of the behaviours from the *involvement, integrity* or *interaction* domains leads to one of the profiles *accidental, struggling* or *gaming-the-system*; only when behaviour from the *introspection* domain is displayed, the *disavowing* profile will be seen. We can conclude that in medical education, failure to behave professionally is not decisive. Yet, failure to show the behaviours from the introspection domain, i.e. failure to reflect on own behaviour is seen as crucial. Having insight into one's performance, which is created by reflection about the same, is essential for making a change. This creates a dilemma for medical educators: how can we assess *reflection*, which is intrinsically something that takes place within the person. The aim of reflection is to change 'the attitudes, values, beliefs and assumptions of learners' [60]. Clearly, interaction with students about the reflective process is necessary to gain insights into their reflectiveness [61, 62]. In the case where a student has received an unsatisfactory evaluation for a professional behaviour assessment, educators will ask the student to 'reflect' on what happened and how the student performed in that situation. The educator should allow the student to communicate his or her own attitudes, values, beliefs and assumptions towards the event. This communication can inform the educator about the student's metacognitive process, which will then create a greater understanding of situations and one's self in order to inform future actions [61]. Students who perform poorly must show awareness of how their performance compares with accepted professional practice. When teaching reflectiveness, the aim should not be to teach a specific language but to guide an authentic search for meaning. This process of reflecting does not always need to be assessed [63]. Teaching reflectiveness requires that educators do not tell students how to reflect; rather, they should foster a reflective environment [64].

The relevance of our classification of unprofessional student behaviour may be formulated differently for frontline educators and professionalism supervisors. Frontline educators, for example, generally do not observe students long enough to gain a good picture of a student's *reflectiveness* and *adaptability*. Thus, they need to focus on actual behaviours and openly discuss with their students their observations and perceptions. They might note a gap between students' intentions and the behaviours they display. By discussing these factors, educators can make students aware of their performance, induce reflection on their behaviour and, ideally, foster professional growth. For frontline educators, the classification of behaviours into behavioural patterns is also relevant for enhancing the recognition of medical students who must be referred for further remediation. Remediation can generally only be mandated if

a 'fail' mark is given. Because frontline educators do not easily recognise gaming-the-system behaviour, such behaviour deserves further investigation. Possibly, gaming-the-system behaviour could be recognised by combining observations from people (e.g. nurses, residents, peer students) who work with the student in situations that are not assessed. The profiles indicate when a student definitively must be failed, namely when *disavowing behaviour* is observed.

For professionalism supervisors, the classification of behaviours into profiles can be useful to determine specific remediation strategies. Professional supervisors need to pay attention to the causal factors for unprofessional behaviours, whether from personal, contextual or cultural origins [50, 65]. Remediation might consist of measures to improve the students' knowledge of professional values (and their importance for health care), measures to foster reflectiveness, or support to overcome barriers to growth. To determine the success of professionalism remediation, the professionalism supervisors participating in our study paid attention to the determinants *reflectiveness* and *adaptability*. By using the unprofessional behaviour profiles, both frontline educators and professionalism supervisors can contribute to early recognition of students' unprofessional behaviour. The main aim is to recognise students who could benefit from extra guidance and to offer them remediation at an early stage of their education in order to overcome any concerns before they graduate.

Responding to unprofessional behaviour

The third main research question related to student behaviour was: How should stakeholders respond to unprofessional behaviour? We explored this question by researching three different stakeholder groups: professionalism supervisors, medical students and simulated patients. Each group is described in turn below.

Professionalism supervisors' responses to unprofessional behaviour

In the study described in chapter 6, several professionalism supervisors were interviewed to investigate if specific remediation methods could be applied to students who showed a certain behavioural profile. This question was investigated through an empirical research study that applied a grounded theory approach. The study revealed that the guidance of professionalism concerns takes place as a three-phase process. Phase 1 is called *Explore and understand*, phase 2 is *Remediate* and phase 3 is *Gather evidence for dismissal*. The threshold between phases 1 and 2 consists of the student's *reflectiveness*, while the threshold between phases 2 and 3 consists of the student's *adaptability*, and ultimately from educators' concerns about *patient safety*. We will discuss these ideas in more detail in the following paragraphs.

In phase 1, the professionalism supervisor meets with the student to explore and understand

what has happened. In the meantime, the professionalism supervisor collects information about the way the evaluation was established, thus defining any possible gaps in the system. If necessary, frontline educators in the regular curriculum will then be asked to provide further guidance. We found that most unprofessional behaviour was corrected through normal teaching in the regular curriculum.

Phase 2 starts when the unprofessional behaviour appears to be repetitive, or when both the student and the professionalism supervisor acknowledge that additional teaching will be necessary to fill in certain deficiencies in order to prevent future unprofessional behaviour. The term *professionalism remediation* is only applied in phase 2. The remediation is provided by specialists either inside or outside the regular curriculum (e.g. competency educators, study advisors, psychologists or career advisors) and is guided by the student's individual needs, based on the underlying causes for the lapse in professional behaviour. The approach is pedagogical rather than punitive. The aim is to accept incidental failure, overcome shame, learn to cope with underlying causes and eventually grow into one's professional identity [66]. The professionalism supervisor oversees individual teaching, supporting, coaching and mentoring, with the aim of correcting unprofessionalism. Some students seem to *game-the-system* and *fake* that they understand what is expected of them regarding professional behaviour. These students are typically sent back into the normal curriculum, where they may fail to acquire the intended growth, without this lack of growth being visible. As a consequence, their unprofessionalism is not detected, and the professionalism supervisor thus does not follow their development, which is unfortunate.

If individual remediation does not lead to improvement, then phase 3 commences. It is not the severity of the unprofessional behaviour, but the student's lack of *reflectiveness* and *adaptability*, that forms the grounds for entering phase 3 in order to *gather evidence for dismissal*. While adaptation is also important, the minimum required competency is ultimately the *safety to practice*. This safety might refer to patient safety, but it can also apply to educators, peer students or the learning environment in general. In exceptional cases of unprofessional behaviour, phase 2 is skipped. This takes place when a student shows *intended* unprofessional behaviour that cannot be attributed to inadequate competence, such as fraud or unlawful behaviours. These cases require punitive action from the medical school, such as probation or even dismissal.

We used the communities of practice framework, as introduced in chapter 1, to understand the aim of the different phases. If we view medical practice as a community of practice, then the student's journey within the medical school progresses from legitimate peripheral activities to full participation and membership that gradually draw closer and closer to the core of the community. Professional behaviour may be thought of as a common value of the community, practiced by those in the core – that is, competent physicians. But unprofessional

behaviour, which is not the standard in the community, could be a signal that a student needs help in his or her journey into the community. The aim of the actions in phases 1 and 2 is to pull the student into the community of practice; in phase 3, the aim is to guide the student *out* of the community of practice.

Educators fulfill different roles depending on the phase of the remediation process. Initially (phase 1) they have the role of a *concerned teacher*, and later (phase 2) that of a *supportive coach*; finally (phase 3) they become *gatekeepers of the profession*. The philosophy of the model is that students are growing and developing, and sometimes failing in which case they need help. Students need pedagogical support, in which a balance between personal accountability and emphasis on contextual causes must be sought. The focus is on remediating and helping – instead of being judgemental – and thus the main aim is to let the student benefit. Even with this approach, a small minority of students will show no reflectiveness and will display insufficient growth. This situation will necessitate sanctions and disciplinary actions if the behaviour threatens current or future patient safety. Patient-safety concerns form the ultimate standard below which a student cannot graduate. When this is the case, educators and professionalism supervisors refer the student to others within the school, such as the director or dean, or a progress committee or judicial board. A decision to dismiss a student from medical school is not an easy one to make. Following an example of decision-making in patient care, a so-called *moral case deliberation* among stakeholders could be worthwhile to consider in order to weigh all aspects that play a role in such a decision. After the decision has been made, the school should be prepared to defend itself against lawsuits [67].

In conclusion, this study has clarified expert professionalism educators' response strategies once a student has been given an unsatisfactory evaluation for professional behaviour. Through this study, practical knowledge has been provided to determine clear directions for the guidance of a student who displays unprofessional behaviour. This knowledge is relevant for the medical education field, as it can help medical schools and their faculties make efficient use of their resources, time and effort. The study may also stimulate the medical education community to consider the way in which medical students are guided or dismissed from the community of practice. Whereas we found that much research has been conducted on *entering* a community of practice, we were unable to find literature about *exiting* a community of practice, whether voluntarily or forced.

Medical students' responses to unprofessional behaviour
The way in which medical students respond to the unprofessional behaviour of their peers and faculty was clarified through an empirical research study using thematic analysis of interviews with student representatives, as described in chapter 7. Medical students often witness professional behaviour lapses – not only lapses in their peers but also among their educators. Interestingly, educators' lapses can also be identified by using the 4 I's described in chapter 3.

Students respond to such lapses in four different ways: *avoiding, addressing, reporting* and/or *initiating a policy change.* Unfortunately, few students experience encouragement from the school to respond to unprofessional behaviour among their peers and faculty staff members. Their motivation to respond or not respond can be effectively explained using the *expectancy-value-cost* model of motivation.

The expectancy of success, value and cost all appear to be influenced by various factors on personal, interpersonal and systemic levels. We found evidence of *avoiding*, which means that a student is not motivated to respond. But *avoiding* does not mean that nothing happens at all; on the contrary, we found that all instances were discussed among students. *Avoiding* takes place if the student feels insufficiently competent to address the behaviour and insufficiently supported by the system to report. We found that when students chose to *address*, their motivation to do so was primarily driven by personal or interpersonal factors. We found that when students chose to *report*, their motivation mostly arose from systemic factors. In general, students are more willing to report something if the system will support them in doing so. *To initiate a policy change*, students appear to need both personal or interpersonal and systemic motivating factors. Students who become active in order to change institutional policies may change the factors that originally contributed to their lapses in professional behaviour; they will thus realise the prevention of future student lapses.

The goal of most medical students is to become members of a profession in which autonomy and self-regulation are crucial [68, 69]; being able to respond to unprofessional behaviour hence is highly relevant to them. The students observed in this study were representatives of their student group and thus were likely to be eager to help in creating policy changes. To do so, they needed both individual competence and support from the system. See Figure 10.4.

Students indicated that their peers initially helped students who showed unprofessional behaviour, but if that help did not lead to change, then their peers tended to *avoid* the further unprofessional behaviour of the student. In this way, the student who has displayed the unprofessionalism becomes isolated. This situation is problematic according to the communities of practice framework, which shows that learning takes place in interactions with others, through social interactions. By becoming isolated, students can no longer interact with others or learn about others' opinions and therefore will not be aware that their behaviour is perceived as unprofessional. The findings of this study are relevant for medical educators, since some of the interpersonal/personal and system factors are modifiable and can be used to enhance students' motivation to respond to the professional behaviour lapses they observe when in medical school. In this way, the whole student body can be moved in the direction of becoming active, in order to foster professionalism in medical school.

The expectancy-value-cost framework is also applicable to educators' motivation to respond

System factors influencing motivation to respond

	Strong	REPORT	INTIATE POLICY CHANGE
	Weak	AVOID	ADDRESS
		Weak	Strong

Personal/interpersonal factors influencing motivation to respond

Figure 10.4 How personal/interpersonal and systemic factors determine student responses to unprofessional behaviour

to unprofessional behaviour. Educators' failure to fail may be equivalent to students' *avoiding* that we found in this study. We extrapolated the findings of this study to medical educators and, based on the literature, formulated several measures that can be taken to motivate educators to respond. These measures are described in chapter 9.

Simulated patients' responses to unprofessional behaviour

Chapter 8 described two simulated patients' opinions about the teaching of responding to unprofessional behaviour. In workshop sessions, these simulated patients encourage students to embrace their failure and to role-play alternative behaviours, thus learning from their previous failures. In this perspective paper, the simulated patients expressed that they would have liked to further contribute to the teaching and training of *speaking up* about unprofessional behaviour, not only for students but also for educators. Just like other stakeholders, they believed that failure is an inevitable part of the learning process. They promoted trainings on how to address concerns, both for students and for educators.

The results from the three studies that aimed to answer the question of how stakeholders respond to students' unprofessional behaviour reveal that all stakeholders advocate pedagogical responses to unprofessional behaviour: their aim is to create awareness and to improve competence. Many stakeholders felt that underlying personal and/or institutional factors were causes of underperformance. Elucidating such causes could be helpful for creating support for the lapsing person as well as in the formation of policy change.
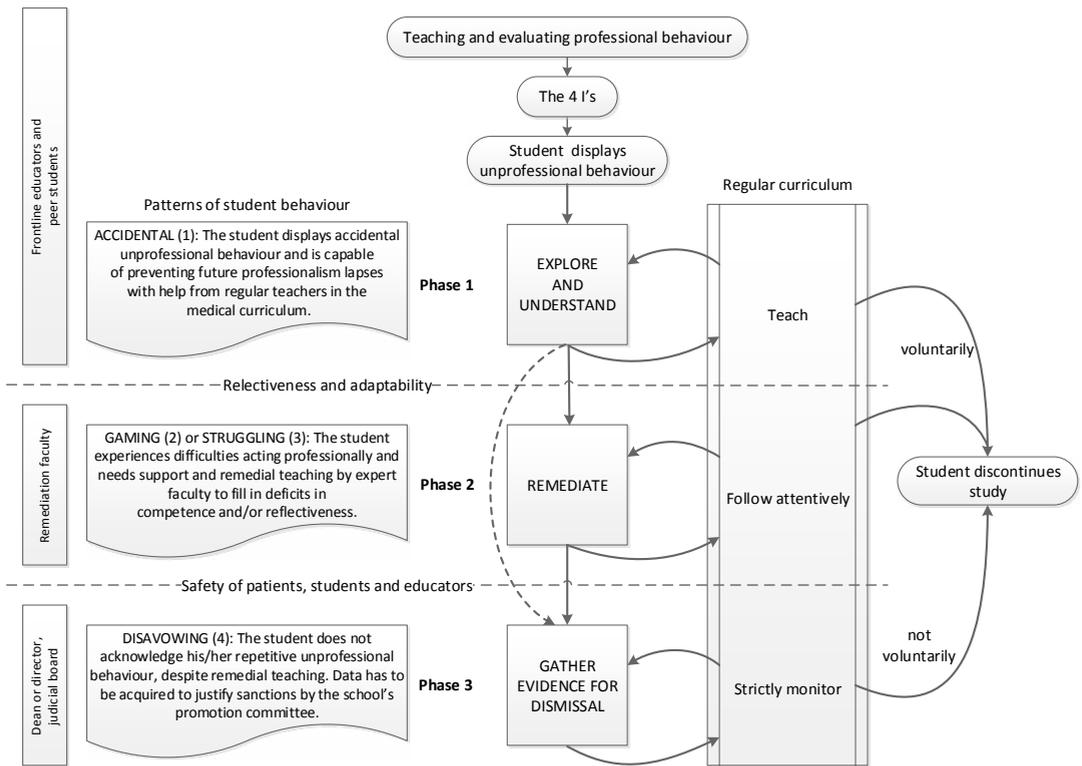
Figure 10.5 Model for handling medical students' unprofessional behaviour

Synthesis of findings

The findings from this dissertation provide a framework for attending to unprofessional medical student behaviour. This model is depicted in Figure 10.5.

Frontline educators initially teach students how to behave professionally, and they can identify any unprofessional behaviour. They provide feedback within a formative assessment to foster learning, and if the student's performance does not improve during the course, then the educator fails the student for lack of professional behaviour. After this unsatisfactory summative assessment, the student is generally referred to a professionalism supervisor. Professionalism supervisors apply a phased approach: the phases of attending to unprofessional student behaviour are *explore and understand, remediate,* and *gather evidence for dismissal.* Professionalism supervisors promote a pedagogical approach to support students' behavioural change and professional development by creating awareness about causes and solutions, as well as by offering new opportunities to display growth.

While using the phased approach, professionalism supervisors can distinguish four different profiles of unprofessional behaviour: *accidental behaviour, struggling behaviour, gaming-the-system behaviour* and *disavowing behaviour*. Understandably but unfortunately, students who show gaming-the-system behaviour often succeed in dodging remediation. A structural pattern of unprofessional behaviour despite remedial teaching – i.e. disavowing behaviour – prompts a punitive approach that can ultimately result in dismissal from the school. Note that failure to behave professionally in itself is rarely a reason for dismissal. Ultimately, next to knowledge and skills, *reflectiveness* on their own performance related to professionalism values, and *adaptability* of their own professional behaviour, will determine if students can graduate.

Conclusions

The main conclusions of this dissertation are as follows:

- Medical educators can identify unprofessional behaviours among medical students using the 4 I's model. This model comprises 30 descriptors, which indicate a deficiency in four domains: *involvement, integrity, interaction,* and/or *introspection*.

- Medical educators can classify unprofessional student behaviour into four profiles (*accidental behaviour, struggling behaviour, gaming-the-system behaviour and disavowing behaviour*), distinguished by two dimensions (*reflectiveness and adaptability*).

- Medical educators can respond to unprofessional student behaviour in three consecutive phases: *understand and explore, remediate,* and *gather evidence for dismissal.*

Implications

Given that researchers have extensively theorized about the 'failure to fail' phenomenon and have proposed numerous practical recommendations (including those in this dissertation) to address each of the causes of such failure [1, 70-76], the time has come to act and effect the change that we would like to see in practice. We need to enable a blame-free handling of underperformance in order to address the causes of such underperformance more effectively, discuss both personal and institutional causes, and support each other in modifying such circumstances [51]. This approach aligns with the way another quality issue in medicine has been handled: the making of medical errors [77]. The medical community has accepted the fact that medical errors will inevitably occur and that both individual and institutional factors play a role in this error making [78]. This outlook has enabled the effective blame-free handling of medical errors, in which all stakeholders learn from these errors and ultimately prevent

them from being made again. The time has come to acknowledge as well that professionalism lapses will inevitably occur and that they also influence patient safety [79-81].

Lapses are a part of learning, and discussing professionalism lapses among teachers and students can enhance students' professional identity formation [49, 82-84]. Thus, responding to unprofessional behaviour in order to prevent future lapses should be part of the regular medical curriculum. It is the frontline educators who initially need to respond to any concerns in professional behaviour. They have to overcome their tendency to 'fail to fail' and be aware that responding to these lapses can benefit the student and will improve the quality of patient care. Assessing performance and providing feedback are essential tasks for medical educators. All clinical educators must be willing and able to discuss unprofessional behaviour to make their students aware of their performance [51]. If they do so openly, with a focus on the student's benefit, then their feedback will not only benefit the student in question but will also benefit all other students [76, 85, 86]. They will see how educators – their role models – handle underperformance, and they will ultimately follow their example.

Professionalism discourses range from the classical professional virtues to observable professional behaviour to recent discourses of professional identity formation [87-89]. One important finding of our studies is that is that a reliable picture of a student's professionalism can only be built over time, and all three discourses (values, behaviour and growth) are needed to obtain a full picture of a student's professionalism. Although actual behaviours can be observed in a short timeframe, reflectiveness and adaptability are only visible over a longer time. Mostly, it is the students with good intentions who temporarily lack the skills or attitudes to manage the professionalism challenges they face [85]. Structural unprofessionalism, which is far less common, can be revealed when assessing students over longer periods of time using a framework of triangulated assessment. Triangulation to synthesise assessment data can be performed by a competence committee (i.e. a committee of educators who supervise professional development). An idea worth considering is to allow educators access to past assessments, or to provide them with education handovers, to ensure safety for patients and students, especially in phase 3.

Failing students on their lack of professional behaviour is less difficult for educators with effective follow-ups. Providing a follow-up strategy implicates that an institutional remediation programme be put in place. Such a programme includes overseeing the remediation process, and providing faculty development for medical educators in the specific outcomes learned in this dissertation. Having a clear system in place will reduce the frontline educators' costs of failing students. Yet, it has to be acknowledged that professionalism remediation is not an easy task: professionalism remediation takes far more faculty time and effort than the remediation of academic knowledge and skills deficits [90]. Thus, it calls for specific training for remediating faculty. Everyone involved in the remediation process will ideally form a community of practice in order to share their experiences and support each other.

Another implication of our findings is related to student involvement. Students' potential impact seems to be currently underused in the teaching of professionalism. Students clearly want to contribute to promoting professional behaviour at medical schools, but most feel inhibited in responding to any lapses they observe because of limited personal competence and various contextual barriers. By teaching students how to respond to unprofessional behaviour, and by offering them institutional support to do so, they will become empowered to speak up and will be stimulated to contribute to policy changes. Their involvement in system change is highly relevant for the medical profession, as self-regulation of the profession would thus be initiated in medical schools.

Methodological considerations

Qualitative research methods were used in this dissertation to understand people's personal experiences, how and why unprofessional behaviours occur in the complex setting of medical education, and what this means to various stakeholders in the medical setting. In qualitative research, the researcher is the main data collection instrument. The researcher examines why events occur, what happens and what those events mean to the study participants. This kind of research requires reflexivity: the awareness of the role that the researchers themselves play in the research process. In this research, the authors have tried to clarify the perspectives on the reality of those who are involved in the phenomenon and to construct knowledge during interactions with these people. This approach aligns with the constructivist paradigm, in which knowledge is thought of as being actively constructed, based on the lived experiences of participants and researchers alike, and cocreated as the product of their interactions and relationships [91-93]. The final results thus arise from the interactions and discussions with the participants about our shared knowledge and day-to-day experiences.

This research setup has consequences for the findings, both in terms of strengths and weaknesses. The PhD student's experiences as a general practitioner and her prolonged engagement as a physician-educator have influenced the research. As a coordinator of the educational domain of *professional behaviour* since 2010, she has had multiple interactions with educators and students. This experience has influenced the formation of the research questions, as well as the collection and analysis of the data. To overcome any limited views, she collaborated with co-authors who were diverse in their knowledge, practical experience and medical school backgrounds. She carefully considered her contribution to the research by writing audit trails, which were regularly discussed with co-researchers and members of the Research in Education team at VUmc School of Medical Sciences. This consideration has hopefully helped to choose the right perspectives and to prevent potential sources of bias.

Further strengths of this dissertation are its relevance, the structured line of research, the methodological rigour due to the diversity of research methods and the covering of the perspectives of all stakeholders. The dissertation is relevant because unprofessional medical student behaviour predicts unprofessional behaviour as a physician. Thus, unprofessional behaviour requires attention in medical school. The efficient use of resources, time and effort from medical schools and their faculty necessitates clear guidance in how to manage unprofessional medical student behaviour.

The studies in this dissertation build on each other and thus comprise a small programmatic research project for which findings from the literature and the personal experience of the authors were used as input. We used a number of different research methods (both qualitative and quantitative), as well as different groups of participants from all stakeholder groups, to answer the research questions. These methods jointly generated outcomes grounded in the combined practical perspectives of people who actually experience the phenomenon of unprofessional medical student behaviour. These aspects all contribute to the strength of the research as well as enhancing the chances that medical educators will be able to apply these findings in their actual educational contexts.

The research studies described in this dissertation also have several important limitations. We have already discussed the influence of our personal involvement on the research. A second limitation of our personal involvement in the object of study was that we had limited possibilities to research the students themselves, who are the main focus of our research: those students who exhibit unprofessional behaviour. Clearly, most students who receive unsatisfactory professional behaviour evaluations would not be interested in contributing to research, but they might feel pressure to participate, which would be ethically unacceptable. Instead of speaking to the students themselves, we chose to study their evaluation forms as well as the perspectives that other relevant people had of the students.

A third limitation is that the reality of attending to professionalism lapses is complex, since many serious professionalism problems involve uncertainty and differences of opinion, which can be difficult to unravel. Our findings are the result of an attempt to extract useful information from stakeholders in the field in order to develop a model for handling professionalism lapses. This extraction might not be 100% correct, but it should be useful for those who must attend to professionalism lapses among medical students.

A fourth limitation is that we cannot claim that our research can produce generalisable results. Professionalism and professional behaviour are defined differently in different contexts. A variety of perspectives exist between cultures, between countries, and even between universities within one country. We conducted the research in the Netherlands and the United States. Even between these two countries, crucial differences exist in their

views on the judicial and financial aspects of studying medicine, to pick two examples. In the interview studies, we asked our participants to speak about their own personal perceptions of professional or unprofessional behaviour. We aimed to uncover how general educators, expert educators, students and simulated patients would respond to behaviours that they themselves see as being unprofessional. For the review study, we sought real-life behaviour as reported by educators and students. One limitation of this approach is that some instances of unprofessional behaviours may have gone unrecognised or unreported by educators and students alike. These still-hidden behaviours may become revealed once speaking about professional behaviour lapses becomes more commonly accepted. We therefore acknowledge that the findings are specific to the countries in which the research took place and thus must be tested in other contexts to make them generalisable to other parts of the world.

Recommendations for stakeholders

The findings of the research studies described in this dissertation may have implications for various stakeholders, including frontline educators, professionalism supervisors, members of promotion committees, curriculum developers, faculty educators and medical students. Our recommendations for each group follow.

Frontline educators, the 4 I's model might facilitate you in seeing and clearly describing unprofessional student behaviours. Tell your students what you have observed, and why you find that behaviour unprofessional. Be curious, and ask for explanations. Having early and transparent discussions with your students about your observations can make them aware of their often unintended unprofessional behaviours and could inform you about any underlying personal, interpersonal or institutional causes for the behaviour. Do not blame the student, but offer help. Create direct and explicit feedback; take care to provide in the evaluation form exactly the same feedback as you have in your conversations. Do not be afraid of subjectivity, since your evaluation will be combined with those of other educators to form a reliable picture of the student. You can create positive learning experiences for all students by acting when an individual student displays unprofessional behaviour. The way you respond to unprofessional behaviour will serve as an example for all who witness your response.

Professionalism supervisors, the road map presented in this dissertation may help you to guide students who are referred to you by frontline teachers. Explore, and try to understand, any underlying causes for the unprofessional behaviour. Define learning goals in collaboration with the student and create a remediation plan that is tailored to the supposed cause as well as to the student's capacities. Clearly set out your expectations and provide strong advice on how to attain them. Refer the student for specific remediation to a faculty member or specialists outside the school who can create an individual relationship with the student.

Also, pay attention to the need for connection with other learners and educators to prevent the student from becoming isolated. Monitor the student's progression across courses and consider the disclosure of any learner needs to future teachers. Feed your experiences back to the frontline educators and inform them about your actions so that they can see the effect of their efforts. You may also inform curriculum developers about any gaps in the system you have discovered. Discuss the nature of the threshold between phases 2 and 3 in your own institution. Refer the student to the dean or progress committee if he or she passes that threshold.

Deans, directors and members of promotion committees, the road map provided in this dissertation asks you to take over responsibility from educators when remedial teaching appears to be ineffective in changing behaviour. Accept that not every student will be able to graduate as a physician. Fulfil your role as a gatekeeper of the medical community. Gather strong evidence for dismissal from summative evaluations – especially evaluations from authentic situations. *Poor reflectiveness* and *poor adaptability* point to a pattern of disavowing behaviour, which is a predictor of future professionalism problems. Take concerns about patient safety very seriously. Treat students fairly, through very clear processes that are specified in institutional policy documents. Offer the students in question an escape route, such as to non-clinical work. Be ready to weather lawsuits, and learn from these procedures.

Curriculum developers, the findings from this dissertation could help you to introduce educational interventions that will promote students' professional behaviour. Start the programme by defining the standards of professionalism within the institution among educators and students alike. Accept that professional behaviour lapses will eventually happen to good students because of difficult circumstances. Install a competence committee that will combine several assessments across the educational continuum to create an integrated picture of each student's professional development. Design professionalism remediation to be part of the normal curriculum. Aim for a curriculum that encourages students' authentic participation in health care at an early stage. Create institutional support in responding to any complaints about unprofessional behaviour. Give students the responsibility to handle any unprofessional behaviour themselves, such as by installing a student honour council.

Faculty educators, you could use the findings from this dissertation to define how to strengthen medical educators' personal skills and qualities through faculty development. Develop trainings for educators in how to respond to unprofessional behaviour. You can enhance frontline educators' motivation to respond to unprofessional student behaviour by improving the educators' personal competence and by informing them about the processes that will take place after they have failed a student. You could also support professionalism supervisors by setting up a remedial teacher community to share experiences and provide mutual support.

Medical students, listen to feedback and take it seriously. Ask questions about your evaluations in order to understand the message your educator or peer student wants to give you. Be eager to learn from your failures, because doing so will determine if you can become (and remain) a professional physician. Use the resources your school offers, such as study advisors, psychologists, student councils and additional courses. Socialize with other students and with educators within the medical curriculum to advance your learning and to become a member of the medical community. Observe how role models handle instances of unprofessionalism, and be prepared to do this yourself. Provide support to your peers if they experience any difficulties. Be purposefully active to change anything that might happen. Know that insiders cannot uncover the 'hidden curriculum', but fresh eyes can.

Future research

Professionalism is a complex construct, and opinions about unprofessional behaviour can differ widely. Working from a constructivist stance, we acknowledge that the truth is in a constant state of revision. We encourage further translational research on the implications of our findings. Thus, we invite other researchers to use our models, test their applicability and develop them further within other contexts. It would also be interesting to learn if our findings are applicable to groups other than medical students, such as residents, attending physicians or educators.

Our research has suggested distinct behavioural patterns that can be revealed in a three-phase approach of responding to unprofessional behaviour. Future researchers should focus on the aspects that constitute the thresholds between these phases. In particular, the description of the threshold between phases 2 and 3 deserves attention in order to underscore the evidence to dismiss (or not dismiss) a student from medical school. We found that a great deal of research has been conducted on *entering* a community of practice, but we were unable to find literature about *exiting* such a community, whether voluntarily or by force. This situation necessitates further research.

The translation of our findings into practice, as well as further research of the findings, could also lead to insights into the nature, intensity, duration and likelihood of success of remediation activities. Behavioural profiles may possibly be a means to determine remediation measures. It would be worthwhile to include the opinions and experiences of the students in question, perhaps using ethnographic research methods to do so. Such research could focus on the effectiveness of the remediation of unprofessionalism.

We also suggest that researchers should pay attention to the development of motivation during the curriculum, as well as the relationship of this motivation to *professional behaviour*

and *professional identity formation*. Longitudinal research could reveal which factors in the educational context influence the development of motivation. The findings could then lead to insights into which motivational factors lead to professional behaviour and professional identity formation, and they might reveal the reasons why *gaming-the-system behaviour* takes place.

In further research, the contextual and cultural factors of unprofessional behaviour should also be taken into account. Educators should know how they might be able to help prevent unprofessional behaviour from happening by bringing about changes in the educational context. Gaming-the-system behaviour in particular requires further research. Is the behaviour a phase in the learning process? Or is such behaviour evoked by systemic issues?

Final remarks

With this dissertation, we hope to facilitate medical students and educators alike in attending to unprofessional behaviour in medical schools by providing them with guidance on how to identify and classify unprofessional behaviours, and then respond accordingly. Professional behaviour lapses are inevitable. Any student can experience a professional behaviour lapse due to personal or contextual circumstances. Learning from these lapses is key, both for students and for educators. Acknowledging unprofessional behaviour – and changing its underlying causes – will promote a culture of excellent professionalism in medical schools. This acknowledgement will be beneficial for the professionalism of aspiring doctors and their future colleagues, and ultimately for the safety of their future patients.

REFERENCES

1. O'Sullivan, H, et al. Integrating professionalism into the curriculum: AMEE Guide No. 61. *Med Teach*, 2012; 34(2):p.e64-77.

2. Van Mook, WNKA, et al. Training and learning professionalism in the medical school curriculum: current considerations. *Eur J Intern Med*, 2009; 20(4):p. e96-e100.

3. Swick, HM, et al. Teaching professionalism in undergraduate medical education. *JAMA*, 1999; 282(9):p. 830-2.

4. Cruess, SR and Cruess, RL. Professionalism must be taught. *BMJ: British Medical Journal*, 1997; 315(7123):p.1674.

5. Project Team Consilium Abeundi. 2005. Professional behaviour: Teaching, assesing and coaching students. Final report and appendices. Maastricht: Mosae Libris.

6. Van Mook, WNKA, et al. Combined formative and summative professional behaviour assessment approach in the bachelor phase of medical school: A Dutch perspective. *Med Teach*, 2010; 32(12):e517-e531.

7. Teherani, A et al. Domains of unprofessional behavior during medical school associated with future disciplinary action by a state medical board. *Acad Med*, 2005; 80(10 Suppl):S17-S20.

8. Hilton, S.R. and H.B. Slotnick, Proto-professionalism: How professionalisation occurs across the continuum of medical education. *Med Educ*, 2005; 39(1):58-65.

9. Eva, KW. On the generality of specificity. *Med Educ*, 2003; 37(7):587-588.

10. Ginsburg, S, et al. The anatomy of the professional lapse: bridging the gap between traditional frameworks and students' perceptions. *Acad Med*, 2002; 77(6):516-522.

11. Helmich, E, et al. Becoming a doctor in different cultures: toward a cross-cultural approach to supporting professional identity formation in medicine. *Acad Med*, 2017; 92(1):58-62.

12. Sierles, F and And, O. Cheating in Medical School. *J of Med Educ*, 1980; 55(2):124-125.

13. Simpson, CL. Misrepresentation of medical students in teaching hospitals. *Med. Trial. Tech. Q*, 1977; 23(3):233-270.

14. Anderson, RE and Obenshain, SS Cheating by Students: Findings, Reflections, and Remedies. *Acad Med*, 1994; 69(5):323-332.

15. Dans, PE, Self-reported cheating by students at one medical school. *Acad Med*, 1996; 71(Suppl 1):S70-S72.

16. Baldwin, DC, Jr. and And, O. Cheating in Medical School: A Survey of Second-Year Students at 31 Schools. *Acad Med*, 1996; 71(3):267-273.

17. Hunt, DD, et al. Types of problem students encountered by clinical teachers on clerkships. *Med Educ*, 1989; 23(1):14-18.

18. Phelan, S and And, O. Evaluation of the Noncognitive Professional Traits of Medical Students. *Acad Med*, 1993; 68(10):799-803.

19. Papadakis, MA, et al. A strategy for the detection and evaluation of unprofessional behavior in medical students. *Acad Med*, 1999; 74(9):980-990.

20. Ainsworth, MA and Szauter, KM. Medical Student Professionalism: Are We Measuring the Right Behaviors? A Comparison of Professional Lapses by Students and Physicians. *Acad Med,* 2006; 81(10,Suppl):S83-S86.

21. Hauer, KE, et al. Student performance problems in medical school clinical skills assessments. *Acad Med*, 2007; 82(10 Suppl):S69-S72.

22. Reddy, ST, et al. Third-year medical students' participation in and perceptions of unprofessional behaviors. *Acad Med*, 2007; 82(10 Suppl):S35-S39.

23. Hejri, SM, et al. Academic disintegrity among medical students: A randomised response technique study. *Med Educ*, 2013; 47(2):144-153.

24. Shukr, I and Roff, S. Prevalence of lapses in academic integrity in two Pakistani medical colleges. *Med Teach*, 2014;1-6.

25. Babu, TA, Joseph, NM and Sharmila, V. Academic dishonesty among undergraduates from private medical schools in India. Are we on the right track? *Med Teach*, 2011; 33(9):759-761.

26. Hafeez, K, et al. Academic misconduct among students in medical colleges of Karachi, Pakistan. *Pak J Med Sci*, 2013; 29(3):699-702.

27. Kukolja, TS, et al. Students come to medical schools prepared to cheat: a multi-campus investigation. *J Med Eth*, 2010; 36(11):666-670.

28. Hrabak, M, et al. Academic misconduct among medical students in a post-communist country.

Med Educ, 2004; 38(3):276-285.

29. Bazoukis, G and Dimoliatis, IDK Cheating in medical schools in Greece: Quantitative evaluation and recommendations for resolving the problem. *Arch of Hell Med*, 2011; 28(3):390-399.

30. Aderounmu, AO, et al. Examination malpractice in our medical schools: prevalence and import on tomorrow's doctors. *Niger. Postgrad. Med. J*, 2011; 18(3):191-196.

31. Bilic-Zulle, ., et al. Prevalence of plagiarism among medical students. *Croat Med J*, 2005; 46(1):126-131.

32. Vengoechea, J, Moreno, S and Ruiz, A. Misconduct in medical students. *Dev World Bioeth*, 2008; 8(3):219-225.

33. Coverdale, JH and Henning, MA. An Analysis of Cheating Behaviors during Training by Medical Students. *Med Teach*, 2000; 22(6):582-584.

34. Hodges, B, Regehr, G and Martin, D. Difficulties in recognizing one's own incompetence: novice physicians who are unskilled and unaware of it. *Acad Med*, 2001; 76(10):S87-S89.

35. Hays, RB, et al. Is insight important? Measuring capacity to change performance. *Med Educ*, 2002; 36(10):965-971.

36. Roberts, C and Stark, P. Readiness for self-directed change in professional behaviours: factorial validation of the Self-reflection and Insight Scale. *Med Educ*, 2008; 42(11):1054-1063.

37. Parker, M, et al. The "pyramid of professionalism": seven years of experience with an integrated program of teaching, developing, and assessing professionalism among medical students. *Acad Med*, 2008; 83(8):733-41.

38. Ramani, S, et al. About politeness, face, and feedback: Exploring resident and faculty perceptions of how institutional feedback culture influences feedback practices. *Acad Med*, 2018; 93(9):1348-1358.

39. Ginsburg, S, et al. Hedging to save face: a linguistic analysis of written comments on in-training evaluation reports. *Adv Health Sci Educ Theory Pract*, 2016; 21(1):175-88.

40. Ten Cate, O and Regehr, G. The Power of Subjectivity in the Assessment of Medical Trainees. *Acad Med*, 2018 (published ahead of print)

41. Hays, RB, Lawson, M and Gray, C. Problems presented by medical students seeking support: a possible intervention framework. *Med Teach*, 2011; 33(2):161-164.

42. Ginsburg, S, Regehr, G. and Mylopoulos, M. From behaviours to attributions: further concerns regarding the evaluation of professionalism. *Med Educ*, 2009; 43(5):414-25.

43. Vermunt, JK and Magidson, J. Latent class cluster analysis. Applied latent class analysis, 2002; 11:89-106.

44. Humphrey-Murto, S, et al. The Use of the Delphi and Other Consensus Group Methods in Medical Education Research: A Review. *Acad Med*, 2017; 92(10):1491-1498.

45. Braun, V and Clarke, V. Using thematic analysis in psychology. *Qual Res in Psy*, 2006; 3(2):77-101.

46. Teherani, A, et al. Categorization of unprofessional behaviours identified during administration of and remediation after a comprehensive clinical performance examination using a validated professionalism framework. *Med Teach*, 2009; 31(11):1007-1012.

47. Papadakis, MA, et al. Disciplinary Action by Medical Boards and Prior Behavior in Medical School. *NEJM*, 2005; 353(25):2673-2682.

48. Miller, GE, The assessment of clinical skills/competence/performance. *Acad Med*, 1990; 65(9 Suppl):S63-7.

49. Cruess, RL, et al. Reframing medical education to support professional identity formation. *Acad Med*, 2014; 89(11):1446-1451.

50. Levinson, W, et al. Understanding medical professionalism. 2014: McGraw Hill Professional.

51. Lucey, C and Souba, W. Perspective: the problem with the problem of professionalism. *Acad Med*, 2010; 85(6):1018-24.

52. Dyrbye, LN, et al. Relationship between burnout and professional conduct and attitudes among US medical students. *JAMA*, 2010; 304(11):1173-1180.

53. Boscardin, CK, Wijnen-Meijer, M and Cate, OT. Taking Rater Exposure to Trainees Into Account When Explaining Rater Variability. *J Grad Med Educ,* 2016; 8(5):726-730.

54. Daelmans, HE, et al. What difficulties do faculty members face when conducting workplace-based assessments in undergraduate clerkships? *Int J Med Educ*, 2016; 7:19-24.

55. Patel, P, et al. Fake it 'til you make it: Pressures to measure up in surgical training. *Acad Med*, 2018; 93(5):769-774.

56. Cohen, JJ, Viewpoint: linking professionalism to humanism: what it means, why it matters. *Acad Med*, 2007; 82(11):1029-1032.

57. Littlewood, S, et al. Early practical experience and the social responsiveness of clinical education: systematic review. *BMJ*, 2005; 331(7513):387-391.

58. Longman, Longman dictionary of contemporary English. 1995: Longman.

59. van der Vleuten, CP, et al. A model for programmatic assessment fit for purpose. *Med Teach*, 2012; 34(3):205-14.

60. Fragkos, K, Reflective practice in healthcare education: an umbrella review. *Educ Sci*, 2016; 6(3):27.

61. Sandars, J, The use of reflection in medical education: AMEE Guide No. 44. Med Teach, 2009; 31(8):685-95.

62. Whitehead, C, et al. The missing person in roles-based competency models: a historical, cross national, contrastive case study. *Med Educ*, 2014; 48(8):785-795.

63. De la Croix, A. and Veen, M. The reflective zombie: Problematizing the conceptual framework of reflection in medical education. *Perspect Med Educ*, 2018.

64. Hodges, BD, Sea monsters & whirlpools: Navigating between examination and reflection in medical education. *Med Teach*, 2015; 37(3):261-6.

65. Hodges, BD, et al. Assessment of professionalism: recommendations from the Ottawa 2010 Conference. *Med Teach*, 2011; 33(5):354-63.

66. Bynum, WE, Assessing for learner shame should be a routine part of remediation for unprofessional behavior. *Acad Med*, 2017; 92(4):424.

67. David, TJ. and Ellson, S. Medical student fitness to practise hearings: ensuring procedural fairness. *Clinical Risk*, 2010; 16(1):14-18.

68. Cruess, SR and Cruess, RL. The medical profession and self-regulation: a current challenge. *Virtual Mentor*, 2005; 7(4).

69. Berwick, DM. Postgraduate education of physicians: professional self-regulation and external accountability. *JAMA*, 2015; 313(18):1803-4.

70. Dudek, NL, Marks, MB and Regehr, G. Failure to fail: the perspectives of clinical supervisors. *Acad Med*, 2005; 80(10 Suppl):S84-7.

71. Yepes-Rios, M, et al. The failure to fail underperforming trainees in health professions education: A BEME systematic review: BEME Guide No. 42. *Med Teach*, 2016; 38(11):1092-1099.

72. Ziring, D, et al. Silent Witnesses: Faculty Reluctance to Report Medical Students' Professionalism Lapses. *Acad Med*, 2018.

73. Korszun, A, et al. Assessment of professional attitude and conduct in medical undergraduates. *Med Teach*, 2005; 27(8):704-708.

74. Arnold, L, Responding to the professionalism of learners and faculty in orthopaedic surgery. *Clin. Orthop. Relat Res*, 2006; 449:205-213.

75. Burack, JH, et al. Teaching compassion and respect. Attending physicians' responses to problematic behaviors. *J Gen Intern Med*, 1999; 14(1):49-55.

76. Cleland, JA, et al. Is it me or is it them? Factors that influence the passing of underperforming students. *Med Educ*, 2008; 42(8):800-809.

77. Wong, BM and Ginsburg, S. Speaking up against unsafe unprofessional behaviours: the difficulty in knowing when and how. *BMJ Qual Saf*, 2017; 26(11):859-862.

78. Institute of Medicine Committee on Quality of Health Care in, A., in *To Err is Human: Building a Safer Health System*, Kohn, LT Corrigan, JM, and Donaldson, MS Editors. 2000, National Academies Press (US) Copyright 2000 by the National Academy of Sciences. Washington (DC).

79. Martinez William, W. Speaking up about traditional and professionalism-related patient safety threats: a national survey of interns and residents. *BMJ Qual and Saf*, 2017.

80. Cooper, WO, et al. Use of Unsolicited Patient Observations to Identify Surgeons With Increased Risk for Postoperative Complications. *JAMA* Surg, 2017.

81. Dupree, E, et al. Professionalism: a necessary

ingredient in a culture of safety. *Jt Comm J Qual Patient Saf*, 2011; 37(10):447-55.

82. Stern, DT and Papadakis, MA. The developing physician--becoming a professional. *N Engl J Med,* 2006; 355(17):1794-9.

83. Jarvis-Selinger, S, Pratt, DD and Regehr, G. Competency is not enough: integrating identity formation into the medical education discourse. *Acad Med*, 2012; 87(9):1185-1190.

84. Kalet, A, et al. Measuring professional identity formation early in medical school. *Med Teach*, 2017; 39(3):255-261.

85. Lesser, CS, et al. A behavioral and systems view of professionalism. *JAMA*, 2010; 304(24):2732-7.

86. Van Mook, WNKA, et al. Bad apples spoil the barrel: Addressing unprofessional behaviour. *Med Teach*, 2010; 32(11):891-898.

87. Irby, DM and Hamstra, SJ. Parting the Clouds: Three Professionalism Frameworks in Medical Education. *Acad Med*, 2016.

88. Van Mook, WNKA, et al. The concepts of professionalism and professional behaviour: conflicts in both definition and learning outcomes. *Eur J Intern Med*, 2009; 20(4):e85-9.

89. Barnhoorn, PC and Mook, WNKA. Professionalism or professional behaviour: no reason to choose between the two. *Med Educ*, 2015; 49(7):740-740.

90. Guerrasio, J, Garrity, MJ and Aagaard, EM. Learner deficits and academic outcomes of medical students, residents, fellows, and attending physicians referred to a remediation program, 2006-2012. *Acad Med*; 2014. 89(2):352-8.

91. Corbin, J and Strauss, A. Basics of qualitative research. *2008.* Thousand Oaks: Sage Publications

92. Bunniss, S and Kelly, DR. Research paradigms in medical education research. *Med Educ*, 2010; 44(4):358-366.

93. Teherani, A, et al. Choosing a Qualitative Research Approach. *J Grad Med Educ*, 2015; 7(4):669-70.