LEARNING FROM LAPSES

How to identify, classify and respond to unprofessional behaviour in medical students

Marianne Mak-van der Vossen

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PREFACE

Education has always been a part of my work: as a general practitioner, guiding clerks and physician assistants in the workplace, and as a medical educator in the department of General practice and elderly care management at the VUmc School of Medical Sciences. In 2010, I was appointed coordinator of the educational theme *Professional behaviour* at this school. I started to conduct conversations with students who were referred to me because they behaved unprofessionally. I worked to help them become professionally acting physicians. In this job, I experienced that medical educators often did not fail students for professionalism, even though they knew they behaved unprofessionally. Also, teachers of subsequent courses and rotations often reported the same behaviours in the same students to me. It became abundantly clear to me that if we did not address the student's behaviour, neither the student nor the organisation would learn. My curiosity was triggered: why did this happen? Being practical, I drew up recommendations for overcoming this reluctance to fail. I concluded that if we support medical teachers in their dealings with professional behaviour and if we involve them in students' remediation, then we help them overcome their reluctance to fail. In November 2012, I presented my observations at the NVMO (*Netherlands Association for Medical Education*) conference, and to my great surprise I walked away with the award for the best 'practice paper' of the conference. I was proud but not wholly satisfied, however; it dawned upon me that even though my conclusions and recommendations might be grounded in practice, they would not hold water in the long term without sound scientific evidence. I saw a need to establish research evidence for what I preached and practiced. Thus, the prize prompted the start of a PhD trajectory which resulted in this dissertation. This book represents my personal journey from physician to educator – to researcher of medical education.

“Wherever the art of medicine is loved,
there is also a love of humanity.”

Hippocrates

CHAPTER 1
General introduction

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Marianne Mak-van der Vossen, Saskia Peerdeman,
Walther van Mook, Gerda Croiset, Rashmi Kusurkar

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Doctors' professional behaviour is a crucial component of the quality of the health care they offer. For a physician, behaving as a professional is not just a desirable condition but also a requirement for patient safety and improved outcomes [1, 2]. Papadakis's study has revealed that students' unprofessional behaviour predicts later unprofessional behaviour after graduation, once they become physicians [3, 4]. This finding has had several consequences for health-care education. Professionalism has been described as an important topic in undergraduate preclinical and clinical curricula ever since [5-7].

While medical professionalism is now widely taught and assessed in medical schools, educators still notice that some students have yet to learn how to behave professionally. Educators often find it difficult to provide professionalism feedback to their students and subsequently do not fail them, resulting in the 'failure to fail' phenomenon [8-10]. The medical education research literature on unprofessional medical student behaviour does not provide sufficient practical guidance to faculty members on how to identify and classify unprofessional behaviours, and subsequently how to guide students who behave in an unprofessional manner. Furthermore, it does not indicate when unprofessional behaviour is truly a concern versus a temporary lapse in a well-intentioned person.

Medical educators would be less prone to the failure to fail phenomenon if they knew (1) how to identify students who behave unprofessionally, (2) what guidance these students would need from them to improve their behaviour and (3) which steps to take if a student persists in displaying unprofessional behaviour. Failing students would then become an opportunity to help them become professionally behaving physicians. Doing so would not only benefit students but would also help educators and their medical schools, and ultimately – and most importantly – better serve future patients and health-care colleagues.

This thesis provides a framework for identifying, classifying and guiding students who display unprofessional behaviour in medical school. The studies, which build on existing knowledge from the medical education literature, advance research on the identification and remediation of unprofessional behaviour through offering medical educators knowledge and tools for recognising and classifying unprofessional behaviour among medical students, and then defining appropriate response strategies.

The introductory chapter of this thesis firstly provides background information on the concept and definition of medical professionalism and on the teaching and assessment of professionalism in undergraduate medical education. The focus then shifts to the practical and theoretical aspects of unprofessional medical student behaviour, thus providing a rationale for the studies that were performed. The introductory chapter ends with an overview of the research questions and studies.

What is medical professionalism?

According to the dictionary, a profession is a 'job that needs a high level of education and training' [11]. Cruess et al. have developed a more expansive description of what the term *profession* encompasses. A profession is:

> An occupation whose core element is work based upon the mastery of a complex body of knowledge and skills. It is a vocation in which knowledge of some department of science or learning or the practice of an art founded upon it, is used in the service of others. Its members are governed by codes of ethics, and profess a commitment to competence, integrity and morality, altruism, and the promotion of the public good within their domain. These commitments form the basis of a social contract between a profession and a society, which in return grants the profession a monopoly over the use of its knowledge base, the right to considerable autonomy in practice and the privilege of self-regulation. Professions and their members are accountable to those served, to the profession, and to society [12].

Medicine is a profession, since it is a field of scientific knowledge in which the members have distinct social roles, a specific nomenclature and understandings, distinctive practices, distinct self-regulation and characteristic manners of behaviour [12].

In addition to knowledge and skills, values have been widely acknowledged as being essential to physicians from Hippocrates's time until today [13]. *Classical values* are virtue-based, meaning that medicine encompasses caring and compassion by a person who has developed a moral character. Around 1970 the focus of attention shifted from character to physicians' attitudes. Starting around 1980, attitudes and values have been described by the term *professionalism* [7]. While there is no universally agreed-on definition of professionalism in the context of medicine [14], all existing outlines of a physician's professional duties, from the Hippocratic oath to the Declaration of Geneva of the World Medical Association (WMA), prescribe that the doctor-patient relationship requires good practice and a focus on patient needs, medical confidentiality, social responsibility and continuing improvement [15, 16]. See Table 1.1 for the Hippocratic oath and Table 1.2 for the WMA's Declaration of Geneva.

The essence of the various definitions of medical professionalism is the necessity for physicians to adhere to high ethical and moral standards to gain the trust of their patients [17, 18]. For medical students, professionalism necessitates that they gain the trust of their peers and teachers and, if applicable in the context, (simulated) patients. Showing professional behaviour requires knowledge, skills and judgement in order to manage dilemmas that occur in specific situations. Professional identity formation is the process of acquiring such knowledge, skills and judgement qualities and then integrating those qualities into a

I swear by Apollo the Healer, by Asclepius, by Hygiea, by Panacea, and by all the gods and goddesses, making them my witnesses that I will carry out, according to my ability and judgement, this oath and this indenture.

To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers, and to teach them this art, if they want to learn it, without fee or indenture; to impart precept, oral instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils who have taken the physician's oath, but to nobody else.

I will use treatment to help the sick according to my ability and judgement, but never with a view to injury and wrongdoing. Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course. Similarly I will not give to a woman a pessary to cause abortion. But I will keep pure and holy both my life and my art. I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen therein.

Into whatsoever houses I enter, I will enter to help the sick, and I will abstain from all intentional wrongdoing and harm, especially from abusing the bodies of man or woman, bond or free. And whatsoever I shall see or hear in the course of my profession, as well as outside my profession in my intercourse with men, if it be what should not be published abroad, I will never divulge, holding such things to be holy secrets.

Now if I carry out this oath, and break it not, may I gain forever reputation among all men for my life and for my art; but if I break it and forswear myself, may the opposite befall me.

Table 1.1 The Hippocratic oath (translation by James Loeb)

developing professional identity. Thus, unprofessional behaviour may be a sign of a student's need for guidance in this process of professional identity formation.

Many definitions exist for *profession*, *professionalism* and associated terms. The definition of medical professionalism we believe is most applicable for this thesis is by Van Luijk, who argues that professionalism means 'having medical knowledge and skills acquired through extensive study, training and experience, being able to apply this within the rules that have been drafted by the medical profession itself, the medical organisations and the government, in which one can be held accountable for actions by all parties involved. This needs to be placed within the cultural context and time frame in which the term is used' [17]. Because the value of professionalism is difficult to measure in an individual, the medical education field has introduced the term *professional behaviour* for assessment purposes [19]. Professional behaviour is the practical, relevant aspect of professionalism, through which a learner's professionalism becomes observable [7, 20-22]. When we only look at behaviour, however,

As a member of the medical profession:

I solemnly pledge to dedicate my life to the service of humanity;

The health and well-being of my patient will be my first consideration;

I will respect the autonomy and dignity of my patient;

I will maintain the utmost respect for human life;

I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I will respect the secrets that are confided in me, even after the patient has died;

I will practice my profession with conscience and dignity and in accordance with good medical practice;

I will foster the honour and noble traditions of the medical profession;

I will give to my teachers, colleagues, and students the respect and gratitude that is their due;

I will share my medical knowledge for the benefit of the patient and the advancement of health care;

I will attend to my own health, well-being and abilities in order to provide care of the highest standard;

I will not use my medical knowledge to violate human rights and civil liberties even under threat;

I make these promises solemnly, freely, and upon my honour.

Table 1.2 The World Medical Association's Declaration of Geneva: the Physician's Pledge [15]

becoming a physician is not always clearly a developmental process, influenced by time and context. As a result, those in the field have recently shifted their attention to *professional identity formation*, which acknowledges the developmental process of becoming a physician [23-27]. Irby states that each of these discourses on professionalism, whether classical values, professional behaviour or professional identity formation, has its own purpose, as well as pros and cons, in daily practice [28]. Professionalism and professional behaviour may be thought of as two sides of the same coin [29]; using the same figure of speech, professional identity formation might be thought of as representing the third side of the coin. All three – professionalism, professional behaviour and professional identity formation – are intrinsically connected [28, 30].

Apart from the nomenclature of professionalism, professional behaviour and professional identity formation, the term *profession* originated from (and in part paralleled) the discourse as well. As Cruess's definition of a profession indicates (see Glossary of definitions and terms, p. 213), a profession has a 'social contract' with society, which means that the profession and its members have privileges, but they also have duties to the public [31, 32]. The social

contract between physicians and the public demands that members of the profession itself prevent potential breaches and act on obvious unprofessional behaviour. Regulations from governments or external institutes are also required to ultimately protect the safety of the public. The balance between external and internal regulations can cause tensions between the medical profession and its regulatory bodies regarding the autonomy of the profession [33]. Too much external regulation threatens the autonomy of physicians. If the medical profession values its autonomy, then it should ensure that the profession's self-regulation is effective.

The importance of self-regulation in medicine implies that educators must prepare students for a future role in which they, as members of the medical profession, will be held responsible, not only for their own professional behaviour but also for the trustworthiness of the medical profession as a whole. Reasons for medical claims and healthcare complaints are often based on physicians' unprofessional behaviour [34, 35]. Papadakis's finding that unprofessional behaviour during medical training is predictive of unprofessional behaviour as a physician makes clear that having a permissive approach towards unprofessionalism in undergraduate education is not acceptable [4].

Teaching professionalism in medical school

Professionalism is generally not thought of as an innate trait but as a quality that can be learned and must be taught [32, 36, 37]. Becoming a professional is a process that starts in medical school and continues during further training and practice as a physician. To be retained, professionalism must be made practical and applicable in the medical undergraduate curriculum [14]. The professionalism outcomes of an undergraduate programme that will stimulate students' professional development include interpersonal skills, understanding of roles, capacity for teamwork, cultural competence, collegiality, respect for patients and colleagues, and ethical conduct [7, 20, 38].

To achieve these professionalism outcomes in medical school, the teaching of professionalism must comprise different aspects. First, the cognitive base of professionalism has to be taught. This means that the expected competences of a physician should be made clear to incoming students [7, 39]. These expectations must be apparent in the institute – not only to students but also to faculty [40]. Then, by practicing in the learning environment as well as in authentic situations, and subsequently reflecting on their experiences, students will be stimulated to develop their professionalism skills and values [21].

The formal medial curriculum ideally includes all the teaching of professionalism in an integrated way [40, 41]. Teaching is mainly explicit at the onset of the curriculum, in the form of a transfer of the experiences of others who speak about values, truths and meaning [36].

This teaching informs students about the expectations and provides them with the necessary cognitive base of professionalism. During the course of the curriculum, teaching becomes more implicit through role modeling [42]. Practicing can take place both in small-group sessions and in practical sessions. Alongside this in-school practice, medical schools should create opportunities to practice in an authentic environment with physicians and patients alike. Early practical experiences in hospitals or community-based health-care facilities can also offer students the possibility of learning from subjectively experienced primary events that they experience in person [43]. Performing in authentic situations will contribute to the student becoming a professional physician [44]. Students are thus taught that professionalism is not only a matter of what they do but also of how they do it; they learn that becoming a professional is a process [41].

Besides the formal curriculum, the informal curriculum is influential for teaching and learning in medical school. In fact, most of the teaching and learning of professionalism in medical schools takes place informally, through what Hafferty describes as the 'hidden curriculum' [45]. The informal messages of educators and other role models, positive or negative, influence students and will have an impact on their professional development. What educators perceive as normal, students will adopt as normal, too. An informal curriculum is not always consistent with a formal curriculum, which can be either negative or positive.

Assessing professionalism in medical school

Professionalism can be assessed, among other methods, through observing behaviours in clinical or teaching settings [41, 46]. Assessing professional behaviour in medical school serves an individual, institutional and societal purpose [38, 47]. The individual purpose is examined through formative assessment, which refers to assessment *for* learning, i.e. feedback provided to the student mid-course that should highlight steps for improvement and enable the learner to learn. Summative assessment, which is the assessment *of* learning (i.e. the evaluation and formal judgement at the end of the course), confirms that a student has achieved the required goal. Summative assessment thus serves another goal in addition to formative assessment: it aims to ensure quality. In a few rare cases, remediation or even disciplinary action will be needed to ensure this quality and to show accountability to society. The third purpose of assessment is to acknowledge that not only individual factors influence a student's professional behaviour; institutional culture also plays a role. The use of assessment can reveal the contextual causes of unprofessionalism that may indicate gaps in the institutional system. An additional institutional goal of assessment is thus to search for any gaps in the system, which will then need to be sent back to curriculum developers [21].

Types of instruments that are recommended for assessment of professionalism, both

formatively and summatively, are rating forms, OSCE's (*Observed Structured Clinical Observations*), moral reasoning assessments, and behavioural assessments. Early and often evaluating a student's professionalism based on performance in context can create a reliable picture by incorporating information using different methods, by different assessors, in different settings [48].

Although numerous researchers have theoretically described methods for assessing professional behaviour, assessing professional behaviour has still proven to be difficult for medical educators [49]. The literature suggests that educators often do not fail students even after they have displayed unprofessional behaviour [8, 50]. Many observations, especially observations of unprofessionalism, appear to go undocumented [51]. This *failure to fail* phenomenon was initially characterised in nursing education as a teacher's dilemma [9, 10]. The dilemma is not difficult to understand: by giving a student a negative grade, the educator admits to having failed to teach, motivate or create a learning environment in an effective manner for a particular student. By unjustly giving a student a positive grade, however, the teacher fails to ensure the quality of future patient care. More recently described reasons for the reluctance to fail are a lack of conceptual clarity about expectations, concern for the subjectivity of one's judgement, fear of harming a student's reputation, lack of appropriate faculty development, and uncertainty about the remediation process and its outcomes [8, 52-54]. Educators' reluctance to fail is unfortunate, because when underperforming students are not identified, they cannot be offered assistance to help them improve their performance [7].

'Failure to fail' is unfortunate for two reasons: (1) the student involved does not receive help to improve and (2) because the powerful 'hidden curriculum' noted above signals to all other students that it is not worth their effort to act upon unprofessional behaviour [55]. We can conclude that, although professional behaviour is important for future physicians, acknowledging students' unprofessional behaviour in medical schools is problematic. Educators would be more willing to report professionalism lapses if policies regarding the management of professionalism lapses and the effects it has on the learner were clearer to them [52].

Unprofessional behaviour among medical students

Because schools pay attention to the teaching and assessing of professionalism, medical educators will inevitably be confronted with students who do not measure up to the school's expectations for professionalism. The literature is not clear on how common unprofessional behaviour actually is among medical students. Percentages indicating professional behaviour lapses range from 3% to 20% of all students [4, 56-62]. These differences may be attributed to the differences in defining unprofessional behaviour, differences in reporting methods

(self-reported versus solicited), differences in assessment (limited to critical incident reports versus a scheme of scheduled assessments), the culture of the institute and possibly other reasons. Some speak of unprofessional behaviour as an 'iceberg' phenomenon, in which only the top of the iceberg is visible [21].

How do medical educators define unprofessional student behaviour? Unprofessional behaviour of physicians may be described as instances in which physicians fail to gain the trust of their patients or colleagues [17, 18]. Building on the definitions introduced earlier, unprofessional student behaviour could be described as failing to gain the trust of students' educators or peers and, if applicable in the context, their patients. While professionalism and professional behaviour have been described extensively in the literature, what actually constitutes unprofessional behaviour among medical students has yet to be investigated [14, 63, 64]. No agreed-on vocabulary exists to talk about medical students' professional behaviour lapses. When educators fail a student because of unprofessional behaviour, they often fail to provide sufficient qualitative information about the breaches [8, 64]. The language we use to make sense of the world directs both our perceptions and our actions [65, 66]. Educators thus need guidance on what to detect and how to describe what they detect.

The nature of professional behaviour lapses has been reported by several researchers. Three domains of unprofessional medical student behaviours that relate to later disciplinary action once these students have become practicing physicians include (1) *poor reliability and responsibility*, (2) *lack of self-improvement* and (3) *poor initiative and motivation* [67]. One study's categorisation of unprofessional behaviours during exam situations related these domains to impaired relationships with patients [68]. Other authors describe the nature of professional behaviour lapses by focusing on the egregiousness of the behaviours [69], on attributions for behaviours [70], on underlying problems [71], on predictors of poor academic outcomes [72], and on students' demographic characteristics as risk factors for professional misconduct [73, 74]. In these studies, the unprofessional behaviours are mostly approached as isolated events. It would be interesting to investigate if any further important determinants or patterns of unprofessional behaviour could be identified. This could help to detect students who need remedial teaching and support.

Unprofessional behaviour might occur for various reasons. The triggers are often a combination of individual influences, such as deficits in cognition, skills and attitude [68, 69], and contextual influences such as procedures, culture, situational factors or organisational policies [21, 70-72]. Unfortunately, trainees may not recognise these triggers in time [73]. Most of the time, people with good intentions temporarily lack the skills or attitudes they need to manage the professionalism challenge they face, or they may fail to realise that their adopted style is unprofessional [20]. How can we discriminate those temporarily lapses from persistent professionalism problems?

Responding to observed unprofessional behaviour is not always easy. The lack of clarity about how to remediate a student's behaviour once the student has been given an unsatisfactory evaluation is an additional problem for medical educators [75]. Practical knowledge has become available, but evidence from the medical education literature is not yet clear [76]. Without clear directions from research evidence, the proper guidance of such students takes a toll on the resources, time and effort of medical schools and their faculties.

Some of the stakeholders who are involved in managing medical student unprofessionalism include basic science educators, clinician educators, deans, directors, members of progress committees and educators involved in educational management, as well as peer students and patients. These stakeholders all have their own perspectives and goals in preventing and handling unprofessionalism. Elucidating these perspectives might help to understand the personal, contextual and institutional factors that might contribute to unprofessional student behaviour and to determine the challenges to unprofessional behaviour that each stakeholder faces.

Theories used in this thesis

The two theoretical frameworks that are used for the conceptual understanding of the work in this thesis are the *communities of practice* framework and the *expectancy-value-cost* model of motivation.

Communities of practice framework

The process of learning professionalism can be theorised by Wenger's *communities of practice* framework. 'Communities of practice' are groups of people who share a concern or passion for something they do, and they learn to do it better during the course of regular interactions [66]. According to this concept, learning takes precedence in interactions with others. In the case of medical schools, these 'others' include medical/clinician educators, peer students and patients. Students, being newcomers in the community of practice, are allowed to function at the periphery of the community; the teaching and learning of how to become a professional both take place through social interactions with others, whose ultimate aim is to incorporate the newcomer into the core of the community by moving him gradually from the periphery to the centre [66].

Expectancy-value-cost model of motivation

The use of the *expectancy-value-cost* model of motivation, an update of Eccles's expectancy-value model, can help to understand educators' and students' choices in how and why they

should respond to any professional behaviour lapses they observe among students and faculty [77]. According to this model, a person's motivation to engage or not engage in a certain task is based on the balance of the *expectancy* of being successful in that task ('Can I do it?'), the perceived *value* of engaging in the task ('Do I want to do it?') and the *costs* of engaging in the task ('What barriers might prevent me from doing it?'). The model divides *value* into three qualities: the first is intrinsic value, which reflects the enjoyment an individual experiences from engaging in the task for its own sake; the second is extrinsic value, which reflects the usefulness of engaging in the task for achieving another end, e.g. complying to ethical values of socializing agents such as peers or educators; the third is attainment value, which reflects individual identity factors such as relatedness, competence and esteem [77].

Methods for researching unprofessional behaviour

Certain aspects of unprofessional behaviour may be researched quantitatively, such as how many students display such behaviour, how often this occurs and what relationships exist between determinants, but qualitative research methods should also be used. Such methods can help to understand people's personal experiences and why unprofessional behaviours occur in the complex setting of medical education [78]. The combination of qualitative and quantitative methods can offer important insights into the problems described in this introduction.

The epistemological belief systems, or paradigms, that underpin qualitative and quantitative methods differ. Quantitative research is based on the *positivist* belief that there is one value-free, objective truth that can be discovered using methods that are usually applied in the natural sciences. Qualitative research, in contrast, uses paradigms that allow for other viewpoints. The common view in the *post-positivist* paradigm is that the truth is never entirely objective. In the *constructivist* paradigm, researchers believe that there is no single overarching truth but that the truth is in a constant state of revision. Constructivist researchers clarify the perspectives about reality of those who are involved in the phenomenon under consideration; they then construct knowledge during interactions with these people [79].

Methods used in this thesis

The studies in this thesis describe attempts to understand the complexity of unprofessional medical student behaviour by investigating the experiences of the people who are involved in handling such behaviour. The aim of this thesis is to build a detailed picture of unprofessional behaviour among medical students, based on the literature and on the researchers' interactions with representative samples of various stakeholders. These stakeholders shared

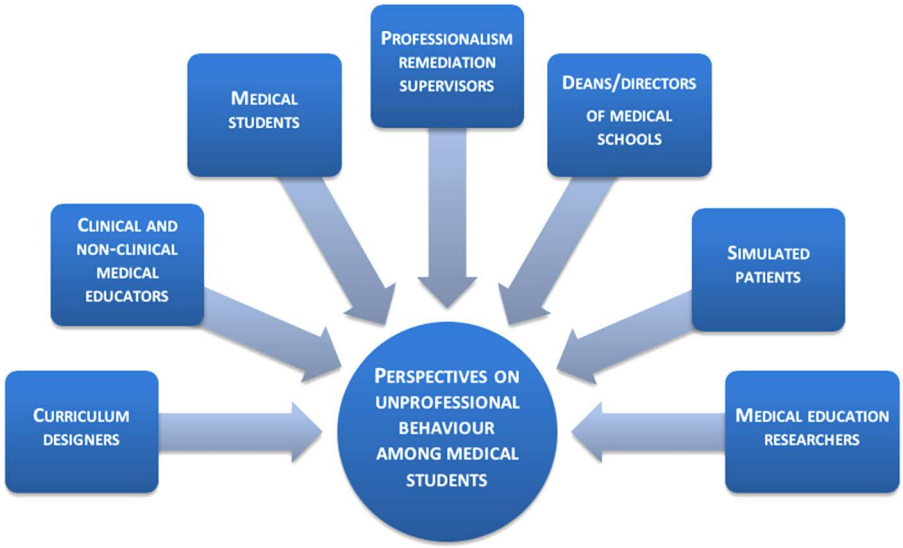

Figure 1.1 Stakeholders' perspectives on unprofessional behaviour among medical students

their perspectives and personal experiences with identifying, classifying and responding to unprofessional behaviour among medical students. The thesis provides a framework for attending to unprofessional medical student behaviour in order to offer medical educators the support and tools they need to recognise, classify and remediate such behaviour.

Main research questions of the thesis

The three main questions to be explained in this thesis are as follows.

First, *how can medical educators identify unprofessional behaviour*? **Chapter 2** describes an illustrative case example of a system of professional behaviour assessments in a medical curriculum. Which aspects educators could take into account to identify students' unprofessional behaviour is addressed in **chapter 3**.

Second, *how can medical educators classify unprofessional behaviour*? **Chapters 4 and 5** describe two studies that reveal patterns of unprofessional behaviour among medical students.

Third, *how should stakeholders respond to unprofessional behaviour*? **Chapters 6, 7 and 8** describe the opinions and experiences of medical educators as well as of other stakeholders, such as peer students and simulated patients. These chapters examine the various stakeholders' responses and strategies when confronted with medical students' unprofessional behaviours.

Specific research questions

Several specific research questions flow from the three main questions, as follows.

1. *How were teaching, training and the assessment of professional behaviour designed and implemented at VUmc School of Medical Sciences Amsterdam*? This question is addressed in a descriptive way in **chapter 2**.

2. *Which descriptors are used for unprofessional medical student behaviours within medical education research papers*? **Chapter 3** addresses this research question through a systematic review study of the medical education literature.

3. *Which patterns of behaviour can be distinguished among students who behave unprofessionally in medical school*? **Chapter 4** presents an investigation of this research question through an empirical study using latent class analysis.

4. *How can the profiles model* (as described in **chapter 4**) *be refined to make the model usable for medical educators in different contexts*? **Chapter 5** describes the investigation of this research question through an empirical study using a triangulation of the nominal group technique and thematic analysis.

5. *Which strategy of remediation can be determined based on the final profiles model*? **Chapter 6** describes this research question, which is investigated through an empirical study in which a grounded theory approach has been applied.

6. *How do medical students respond to unprofessional behaviour of peers and faculty*? This research question, described in **chapter 7**, is addressed through an empirical study using a thematic analysis of interviews with students.

7. *What perspectives do simulated patients have on the teaching of responding to unprofessional behaviour in medical school*? **Chapter 8**, a perspective paper, addresses this question based on data from interviews with simulated patients.

8. *What can medical educators do to define, classify and respond to unprofessional behaviour*? In chapter 9, this question is addressed based on the performed studies, the literature and the authors' personal experiences.

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“Educating the mind without educating
the heart is no education at all.”

Aristoteles

CHAPTER 2

How we designed and implemented teaching, training, and assessment of professional behaviour at VUmc School of Medical Sciences Amsterdam

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Johanna Kleinveld, Rashmi Kusurkar

How we designed and implemented teaching, training,
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ABSTRACT

Behaving as a professional is not just a desirable trait but a clearly stated requirement for doctors and medical students. Training of doctors seeks to develop clinical competences including professional behaviour.

We designed an educational theme, 'Professional Behaviour', as a longitudinal thread throughout our six-year curriculum after defining professional behaviour as 'The observable aspects of practising professionalism'. This definition was translated into a set of practical skills that can be observed: 'The ability to deal with tasks, to deal with others and to deal with oneself'. We assess professional behaviour 29 times in the course of the medical curriculum. Students with an unsatisfactory evaluation of professional behaviour do not get their degree irrespective of their medical knowledge. We train teachers to identify and report unprofessional student behaviour, and we offer these students interventions and support.

With the educational theme 'Professional Behaviour' we have defined professional behaviour for our institute and firmly embedded it in the medical curriculum. We use workplace learning and role models for teaching professional behaviour. Different teachers carry out multiple formative and summative assessments, using standardised assessment scales. With these measures we intend to promote a culture of excellence in professional behaviour in our institute.

Introduction

Unprofessional behaviour during medical training has been found to be predictive of unprofessional behaviour as a medical specialist [1, 2]. In the Netherlands, 32% of the times reasons for considering filing a medical claim are because of unprofessional behaviour of doctors [3]. The vast majority of unsolicited healthcare complaints are related to professionalism aspects of care [4]. Training in professionalism has, therefore, been recommended as an integral part of the medical curriculum [5]. 'Blueprint Training of Doctors 2009' elaborates general clinical competence for doctors, which includes Professional Behaviour [6]. Thus, behaving as a professional is not just a desirable trait, but also a clearly stated requirement for doctors and medical students.

Medical education in the Netherlands is outcome-based [6] and outcomes are defined according to the CanMEDS roles and competencies. At VUmc School of Medical Sciences Amsterdam, the Netherlands, the medical curriculum consists of a three-year bachelor programme and a three-year master programme (BaMa-curriculum) [7]. See Figure 2.1. The BaMa-curriculum has three domains: medical knowledge, practical/clinical skills and professional development. The courses in medical knowledge and practical/clinical skills are time-based. Professional development is meant to be enmeshed with the medical knowledge and practical/clinical skills domains and has, therefore, been arranged as a longitudinal thread throughout the six-year medical curriculum.

Within the domain Professional Development we created various longitudinal structured themes (see Figure 2.2): 'Career choice and Planning', 'Patient Safety', 'Communication', 'Intercultural Training', 'Academic Development', 'Ethics and Law', 'Reflection', and 'Professional Behaviour'. In every theme, several CanMEDS competencies are addressed. In the current paper we focus on the theme 'Professional Behaviour', which in our curriculum is based on the principle that professional behaviour must be taught explicitly [8]. In this paper we describe how we designed and implemented teaching, training, and assessment of professional behaviour at VUmc School of Medical Sciences Amsterdam.

What we did

We initiated the process by defining professionalism in a way that is valid in our cultural context, is in line with the aims of the institution, and can be assessed [5, 9]. 'Professionalism' and 'Professional behaviour' are terms used to describe the attitude of medical professionals. Professionalism was defined as: 'Having specialised knowledge and skills, acquired through extensive study, training and experience, being able to apply this within the rules that have been drafted by the profession itself, the organisation and the government, in which one can

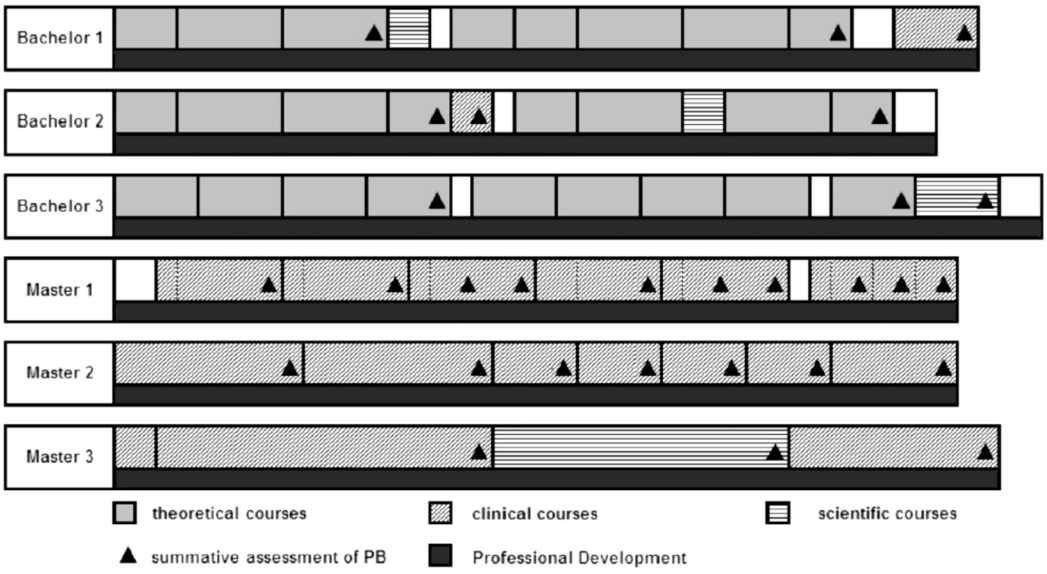

Figure 2.1 Scheme of training and assessment of professional behaviour in the medical curriculum of VUmc School of Medical Sciences.

be held accountable for actions by all parties involved. This needs to be placed within the cultural context and time frame in which the term is used' [10]. This definition elaborates the definition of the Royal Dutch Medical Association, which is 'The total of values, behaviour and relationships, that supports and justifies the trust of people in doctors' [11]. Professional behaviour was then defined as 'The observable aspects of practising professionalism'. Subsequently, the definition of professional behaviour was translated into a set of practical skills that can be observed, and has been described as a tool for assessing professionalism [12]. Thus, in our setting, professional behaviour is defined as having the skills to (1) deal with tasks (2), deal with others and (3) deal with oneself [12].

In the year 2010 a coordinator (MM) was appointed specially for professional behaviour education.

Details of implementation of the elements in the educational theme 'Professional Behaviour'

To structure the teaching, training and testing of professional behaviour during medical education, we developed a training programme based on yearly recurring elements.

(1) Teaching and training in the bachelor and master programmes

PRINCIPLES

- Teaching and training of professional behaviour is integrated in the basic medical training of six years. See Figure 2.1.
- Professional behaviour training is given to all students and is not limited to those who display unprofessional behaviour.
- Formal training of professional behaviour is explicit in the bachelor programme in structured study groups. During the master programme formal training of professional behaviour is gradually diminished. See Figure 2.3.
- In the clinical courses during the bachelor programme, training of professional behaviour is carried out implicitly during daily work, and that is also the case in the clerkships of the master programme. This informal and hidden curriculum is one of the most powerful ways of transferring professional behaviour [5, 13-15].
- All faculties, doctors and other teachers in formal and informal education play a role in teaching professional behaviour.
- The expectations in terms of professional behaviour are clearly communicated to the students at the beginning of both programmes [5, 12, 14].

Figure 2.2 Cross-sectional view of the domain 'Professional Development' with its interlinked educational themes, including 'Professional Behaviour'.

STRUCTURE

- In the bachelor programme, one teacher conducts teaching and training for a small group (8–12) of students for a period of several months to allow time for building close contacts among teacher and students and also for observing the students' professional behaviour over a longer period of time. In these study groups several tasks around basic medical education need to be addressed in teams of three students.
- In the bachelor programme, tutors are instructed to create opportunities for the student to get feedback from his/her peers on performance of his/her task within the group. Afterwards the tutor adds his/her own feedback.
- Every semester the tutor writes the most important feedback points on a standardised feedback form [12].
- During the first master year, the study group format continues to be used for training of professional behaviour. In the second master year, the number of contacts in a study group format is diminished and in the last master year, this format ceases to exist.
- During the master programme, teaching professional behaviour is carried out using the daily work during clerkship as an implicit training tool. This is the phase of experiential or workplace learning [14]. See Figure 2.3.
- In the master programme, an annual survey of multisource feedback is carried out. Every summative judgement is preceded by a formative assessment, to give the students an opportunity to improve behaviour.
- At the end of every study year, during both bachelor and master programmes, the student writes a Personal Development Plan (PDP) that is discussed with the teacher. Students address their personal qualities and reflect on possibilities to improve their competencies in a structured manner. Self-reflection is the most important part of the professional behaviour training in our institution. In addition, the students receive guidance and encouragement for self-reflection from the teacher who is assigned to them.

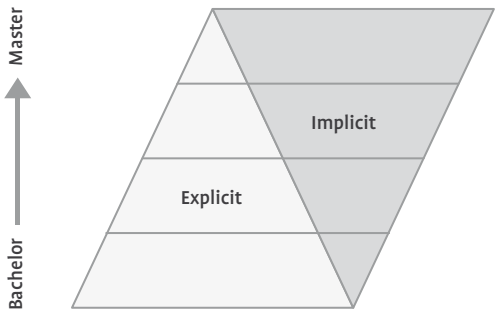

Figure 2.3 Scheme of implicit and explicit training of professional behaviour during the bachelor and master phases in our medical curriculum.

(2) Assessing and judging professional behaviour in the bachelor and master programmes

One of the greatest challenges in designing a curriculum that integrates teaching and training of professional behaviour is the assessment of professional behaviour. Most schools carry out trainings, but are found wanting in the number and structure of assessments of professional behaviour [5, 12]. In order to create as much objectivity as possible in assessing professional behaviour, we pay special attention to the following: [12, 16, 17]

- Professional behaviour is integrated in the assessment of all clinical courses and clerkships during the bachelor and master programmes.
- During the bachelor programme professional behaviour is also assessed in study groups in which students work together for a period of several months supervised by one tutor.
- Different teachers assess each student to bring objectivity and reliability into the judgements.
- A structured assessment scale is used for the assessments.
- The teacher judges all three aspects of professional behaviour: dealing with tasks, dealing with others and dealing with oneself, in both formative and summative assessments. See Table 2.1.
- The result of each assessment is either 'satisfactory' or 'unsatisfactory' and not a mark.
- Unsatisfactory professional behaviour can never be compensated by good medical knowledge.
- The assessment also contains an open-ended explanatory statement for feedback apart from the structured grading, to give positive reinforcement [18].
- The assessments take place nine times during the bachelor programme and 20 times during the master programme. See Figure 2.1.
- Besides the regular assessments, any person involved in medical education can report an incident of unprofessional behaviour at any time. This is called 'critical incident reporting' [18].

Assessment of Professional behaviour	UNSATISFACTORY	SATISFACTORY
Dealing with tasks	From:	To:
	is regularly absent (without cancellation and/or a valid reason)	is always present
	is regularly late (without a valid reason)	is on time
	does not participate or only in an irrelevant manner	participates in a relevant way
	seems absent, has passive posture, or dominates	is involved and active
	behaves inappropriately (eating, texting, newspaper reading)	behaves appropriately
	does not take responsibility, leaves tasks to others	is accountable, takes responsibility
	comes unprepared	prepares well
	repeatedly violates executional guidelines	knows and respects existing guidelines
	does not fulfill agreements	works according to agreements made
Dealing with others	From:	To:
	is aloof, goes his/her own way	involves others in tasks, discusses
	is unwilling to help others, does not inform team members	is helpful, shares knowledge and information with others
	does not coordinate task execution with others	participates in task distribution, collaborates
	does not behave respectfully towards others	is polite and respectful,
	spends much time speaking, often inappropriately	keeps professional distance
	frequently criticizes others	listens to and supports proposals from others
	speaks with disdain about others	appreciates others' views and ideas
	does not make eye contact during conversations	makes proper eye contact
	has insufficient mastery of the Dutch language	has sufficient mastery of the Dutch language
	disengages after his/her own contribution	stays alert even after obtaining his/her own goal
Dealing with oneself	From:	To:
	has either no self-criticism, or too much of it	has appropriate self-criticism
	avoids discussion of difficult subjects and emotions	discusses difficult subjects and emotions open-mindedly
	does not properly respond to others' criticisms	adequately responds to others' criticisms
	overestimates his/her knowledge and skills	realistically assesses his/her knowledge and skills
	does not grasp his/her personal behaviour	has insight in his/her strong and weak points
	does not react to, or reacts defensively to feedback	is receptive to feedback and is willing to learn from it
	cannot admit mistakes, or frequently trivialises them	admits mistakes and is willing to discuss them

Table 2.1 Explanation for assessing the three aspects of professional behaviour

(3) Consequences of the assessments

- After a judgement of unsatisfactory professional behaviour, the student is given a first intervention for improvement.
- In the bachelor programme a student can compensate this unsatisfactory judgement by a subsequent satisfactory judgement.
- If professional behaviour is graded unsatisfactory during a clerkship in the master programme, the student does not pass the clerkship irrespective of his/her medical knowledge.
- After a second unsatisfactory professional behaviour assessment during the bachelor programme a second intervention is carried out, and the Examination Committee decides the consequences for continuation of the programme.
- After a second unsatisfactory professional behaviour judgement during the master programme, the Examination Committee will give the student a temporary break from the study, and a second intervention is carried out.
- Ultimately, if students fail to show improvement even after interventions by the Examination Committee, the 'Iudicium Abeundi' procedure can be followed. Iudicium Abeundi is a binding decision to bar a student from continuing the medical programme [19].

(4) Interventions and support for students judged to have unprofessional behaviour

- After the first assessment of unprofessional behaviour the Professional Behaviour coordinator invites the student along with the teacher who did the assessment for a discussion and reflection on the cause of his/her unprofessional behaviour. Goals to improve behaviour are formulated and written down by the student. This report is sent to the assessing teacher. The student is invited to discuss these goals with the next teacher.
- If the student has proven to meet the formulated goals and is judged 'satisfactory' in the next assessment, the negative judgement is compensated and the student is allowed to continue the remainder of the study. However, if this happens during a clerkship (second and third master year), the student has to repeat the clerkship.
- If a second judgement of unprofessional behaviour is awarded, a second discussion with the coordinator takes place to analyse the problems. The coordinator then drafts a plan to support the student within the regular training programme along with the Examination Committee of the institute. The goals of this plan are communicated to the next teacher. This is called forward feeding [20, 21]. If deemed necessary, students can be advised or compelled to contact the student counselors, psychologist or Centre for Study and Career.

What to do next:

O'Sullivan and colleagues identified that the definition of professionalism used in most countries is abstract and does not translate into an objective assessment of behaviour [5]. The definition of Professional behaviour we use, identifying the three skills (dealing with tasks, others and oneself), is a practical tool for implementation and is easy to use as a guideline for all teachers to assess professional behaviour. We find that the assessment scale designed to measure these three aspects can be used reliably to judge professional behaviour in all phases of the curriculum.

By structuring 'Professional behaviour' within and throughout the curriculum as a continuous educational theme, the awareness and knowledge about professional behaviour is improving and addressing of unprofessional behaviour is increasing. Students know at the outset that professional development, including professional behaviour, is important in their curriculum. We believe this to be an important step in sensitising our students to the commitment of our institute towards developing professional behaviour.

Having a coordinator for 'Professional Behaviour', for addressing students' and teachers' questions, training of teachers and supporting students with unprofessional behaviour, improves the quality of the educational theme as this coordinator acts as a linking pin between the students, the teachers and the institute. Management of stakeholders helps in ensuring the efficiency of this system.

Many teachers find it difficult to give an unsatisfactory judgement for professional behaviour. We plan to sensitise and train more teachers to feel competent in identifying unprofessional behaviour and awarding unsatisfactory grades through workshops on assessments and professional behaviour. The summative assessment of our 'Professional Behaviour' theme functions as a filter for students who demonstrate obvious unprofessional behaviour. However we suspect that there are students in the 'grey zone' who are very close to getting an unsatisfactory grade, but just manage to get through. Examples of such cases are students who show timidity or sloppiness. We are currently stressing the importance of identifying these students and giving them unsatisfactory grades by a special focus on this issue during our faculty development trainings for teachers.

We recommend that a system of awarding marks for professional behaviour should not be used and only the option of a satisfactory or unsatisfactory grade should be available. This will encourage teachers to be clear about their viewpoint and give unsatisfactory grades if they observe unprofessional behaviour even if this is in the 'doubtful' zone. Unsatisfactory formative assessments will make students aware of their behaviour and stop students in the safe zone from feeling that they do not need to improve. Improving self-awareness and reflection in our opinion is the key to correcting unprofessional behaviour.

We aim for a system that encourages professional behaviour and puts it in a positive light. Having professional behaviour training as an educational theme is the first step in this direction. We plan to train our teachers to use the open-ended feedback portion of our formative assessment form to give positive comments to the students on their professional behaviour. This would be synonymous with celebrating good professional behaviour. We expect the effect of this to be twofold: it enhances the intrinsic motivation of our students to engage in professional behaviour because of the feelings of competence evoked, and it inspires a culture of high professional behaviour standards within the institute [22].

Conclusion

With the educational theme 'Professional Behaviour', we have defined professional behaviour for our own institute and firmly embedded it in the medical curriculum, with multiple formative and summative assessments by multiple teachers, using standardised assessment scales, working place learning and role models for teaching professional behaviour. With these measures we intend to promote a culture of excellence in professional behaviour in our institute.

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“Morality, like art, means
drawing a line some place.”

Oscar Wilde

CHAPTER 3

Descriptors for unprofessional behaviours of medical students: a systematic review and categorisation

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ABSTRACT

Aim

Developing professionalism is a core task in medical education. Unfortunately, it has remained difficult for educators to identify medical students' unprofessionalism, because, among other reasons, there are no commonly adopted descriptors that can be used to document students' unprofessional behaviour. This study aimed to generate an overview of descriptors for unprofessional behaviour based on research evidence of real-life unprofessional behaviours among medical students.

Methods

A systematic review was conducted searching PubMed, Ebsco/ERIC, Ebsco/PsycINFO and Embase.com from inception to 2016. Articles were reviewed for admitted or witnessed unprofessional behaviours among undergraduate medical students.

Results

The search yielded 11,963 different studies, of which 46 met all inclusion criteria. We found 205 different descriptions of unprofessional behaviours, which were coded into 30 different descriptors, and subsequently classified in four behavioural themes: *failure to engage*, *dishonest behaviour*, *disrespectful behaviour*, and *poor self-awareness*.

Discussion

This overview provides a common language to describe medical students' unprofessional behaviour. The framework of descriptors is proposed as a tool for educators to denominate students' unprofessional behaviours. The found behaviours can have various causes, which should be explored in a discussion with the student about personal, interpersonal and/or institutional circumstances in which the behaviour occurred. Explicitly denoting unprofessional behaviour serves two goals: (1) creating a culture in which unprofessional behaviour is acknowledged, (2) targeting students who need extra guidance. Both are important to avoid unprofessional behaviour among future doctors.

Introduction

Medical educators who observe professionalism lapses in their students do not always denominate these lapses directly and clearly in professionalism evaluations [1]. Evaluating professionalism is difficult, partly because educators are afraid to be subjective, but also because a commonly adopted language to describe *un*professionalism does not exist. Professionalism guidelines sometimes describe *normative* unprofessional behaviours, but these are not based on systematic empirical research on students' *actual* unprofessional behaviours, as witnessed by medical educators, physicians, other health personnel, patients and students [2]. Should educators learn which behaviours are seen as unprofessional by peer educators and by students themselves, it might be easier for them to recognise and denominate unprofessional behaviours, and they might feel supported in acknowledging them [3].

Medical education must lay the foundation for the professional development of students through teaching and evaluating professionalism [4, 5]. Teaching professionalism is complex, as it requires strategies that explicitly as well as implicitly develop a learner's knowledge, attitudes, judgement and skills [6]. Explicit teaching of professionalism includes the decisive actions taken by the medical school, while implicit teaching includes supervisors' tacit modeling. This tacit modeling, the hidden curriculum, reinforces and promotes the socialization of students in the medical profession [7]. Beside teaching, educators also have to evaluate their students' professionalism. Approaches to do this are theoretically well-described, yet in practice medical educators experience difficulties when evaluating professionalism [8].

The dominant framework to evaluate professionalism is behaviour-based [6, 9]. Behaviour is the practical, relevant aspect of professionalism through which a learner's professionalism becomes observable [10-12]. Through their behaviours most medical students show that they gradually develop a professional attitude, but some students display behaviours that raise concerns with their teachers and peer-students [13, 14]. Such behavioural lapses can originate from personal, interpersonal or institutional causes. Discussing these causes among teachers and students can make clear which actions have to be taken, e.g. extra individual guidance for the student, or any other measures at the institutional or organisational level [13].

The evaluation of performance is difficult for several reasons. Firstly, medical educators experience challenges in labeling unprofessional performance. They are reluctant to label students' behaviours as unprofessional, partly because they do not know which behaviours can be assigned this label [15]. Secondly, educators not only struggle with the uncertainty of the expected standards for students, but also do not know how to articulate their concerns: *what* to document and *how* to document it [3]. As a result educators' language in assessment forms is vague and indirect [16]. Furthermore, educators are advised to provide behaviour-based comments in formative or summative *In Training Evaluation Reports* (ITERs), but a definition of

unprofessional behaviour is lacking [17, 18]. Finally, what is seen as unprofessional is dependent on time and cultural context, which has led to the use of a plethora of terms describing poor professional performance in the medical education literature [19]. All these hurdles complicate the evaluation process, and attribute to a reluctance in denominating unprofessionalism. This results in a lack of supporting documentation for poor performance in assessment forms [3].

As a result of their reluctance in denominating unprofessionalism, educators do not always make students aware of their unprofessional behaviour. Consequently, they miss the opportunity to *explicitly* teach professionalism by revealing underlying causative personal, interpersonal and/or organisational factors. Another result of this reluctance is that by not acknowledging unprofessional behaviour, educators *implicitly* create the impression that this behaviour is acceptable. This way, educators give rise to an undesirable culture [6, 8, 20].

What could help to overcome these difficulties in the evaluating process is a shared mental model across assessors of what a student should be able to do. With clear expectations of desired professional performance, it may be easier for supervisors to report behaviour that does not meet standards. This implies that we also need clear descriptions of what a student is expected not to do. To discover the unprofessional manifestations of desired behaviours, it could be helpful to look at what has been perceived as unprofessional in the lived experience of educators and students. Which terms are used by educators to express their concerns about students' unprofessionalism? Which themes of unprofessional behaviours are seen by them? [18]. A common understanding among educators about the denomination of unprofessional behaviours could lead to a greater consistency in observing, describing and evaluating it.

The current integrative, systematic review study uses the behaviour-based professionalism framework [6, 9]. It aimed to explore, describe and categorise results of studies describing medical students' unprofessional behaviours, witnessed by stakeholders or admitted by students themselves, to create an overview of descriptors for these behaviours. The research question that guided this review was: Which descriptions are used in medical education research studies to describe medical students' behaviours that have actually occurred and were identified as unprofessional, and how can we categorise these?

Methods

General methodology

We conducted a systematic review, in which content analysis was used, a qualitative method to analyse text-based data, to identify descriptions of unprofessional behaviours of preclinical and clinical medical students, admitted by students or witnessed by stakeholders [21]. We developed a review protocol based on the Preferred Reporting Items for Systematic Reviews

and Meta-Analysis (PRISMA)-statement [22]. Due to the diversity of the methodologies in the included articles, we did not perform a meta-analysis. The review protocol is available upon request.

All authors are researchers in medical education. MM, WM, GC and RAK are medical doctors, JMK is a midwife. All are experienced in the guidance of students who display unprofessional behaviour. SEB is a sociologist and a PhD student in medical education, and JCFK is an information specialist.

Data sources and search strategy

MM and JCFK systematically searched the databases PubMed, Embase.com, Ebsco/ERIC and Ebsco/PsycINFO from inception to May 2016, using the following search terms as index-terms or free-text words: 'medical students' OR 'medical education' AND 'professional misconduct' OR 'malpractice' OR 'dishonesty', and related terms. All languages were included, and duplicate articles excluded. Articles in languages unknown to the authors, were read by a native speaker, who explained the content to the first author.

Study selection

Articles that described quantitative and/or qualitative original studies reporting witnessed or admitted unprofessional behaviours of preclinical and clinical medical students were eligible for inclusion. In absence of a commonly accepted definition of 'unprofessional behaviour', articles were included if the authors described the behaviours as *unprofessional*, or used the descriptions *misconduct*, *malpractice*, *lapse*, *underperformance*, *nonprofessional*, *adverse*, *negative*, *problematic*, *professionalism issues*, *professionalism dilemmas*, *professionalism challenges*, *professionalism problems* or *professionalism concerns*. These terms were chosen based on the literature and the set was finalised in the research team in consensus. Articles were excluded if they described unprofessional behaviours of residents or physicians, or if they described hypothetical behaviours, or behaviours that occurred outside the educational context. Two authors (MM, and either WM, SEB, JMK, or RAK) independently reviewed each abstract to identify articles that were considered relevant for possible inclusion in the review. In case of doubt, the full article was screened. Disagreements about search terms or eligibility were discussed in the research team until consensus was reached.

Data extraction and synthesis

Data were extracted using a coding sheet based on the Best Evidence Medical Education (BEME) collaboration [23], including the following BEME coding items: the administrative item, the evaluation methods, and the context. Based on the content analysis review method the following 'unit of analysis' was added to the coding sheet: descriptions of medical students' unprofessional behaviours that were witnessed by stakeholders or admitted by students themselves. Reported findings were extracted onto the coding sheets.

The methodological quality of the articles was assessed by answering the following five quality questions: (1) Is the research question or purpose clearly stated?, (2) Is the method used suitable for answering the research question?, (3) Are the methods and results clearly described?, (4) Is the method of analysis appropriate?, and (5) Is the research question answered by the data? [24] Studies were considered to be of higher quality when more questions could be answered positively.

The first author and one of the co-authors independently performed data extraction, coding, and quality assessment, a third author being involved if necessary to reach consensus. Coding was completed inductively during the analysis. The researchers also drafted written notations about the data during the coding process, the so-called 'memos' [21]. The research team reflected as a group on identified codes and memos, and used these as aids in organising the content, an categorising it into themes. A constant comparative approach was used, meaning that the researchers brought their ideas together in a cyclic process of reading, writing, reflecting and revising [21]. Differences of opinion about quality assessment, data extraction and classification of findings were discussed until consensus was reached.

Results

Search results

The search yielded 11,963 different articles: 202 were identified as relevant after initial screening of titles and abstracts and 46 were included after reviewing the full texts. See Figure 3.1 (next page).

Study characteristics

The review included studies from a wide range of countries, from January 1977-May 2016. (An additional file that shows an overview of the 46 included studies can be provided on request). We included 30 quantitative studies, 11 qualitative and 5 mixed-methods studies. Three of the articles were not written in the English language: two were written in Spanish and one in Greek. From the included articles, 29 described single-institution studies and 17 described multi-institution studies, varying from 2 to 78 institutions. In 28 articles a surveys was described, and 16 other articles reported case-studies using interviews, essays, or students' records from the university administration. Two additional articles reported observational studies. From the 46 articles, 29 were of good quality. For some articles not all quality questions could be answered positively due to a low response rate.

Attention for professional behaviour in medical school started in the United States around 1980, firstly emphasised on fraudulent behaviours, followed by attention for disrespectful behaviour and failure to engage. We did not find any articles coming from the other continents

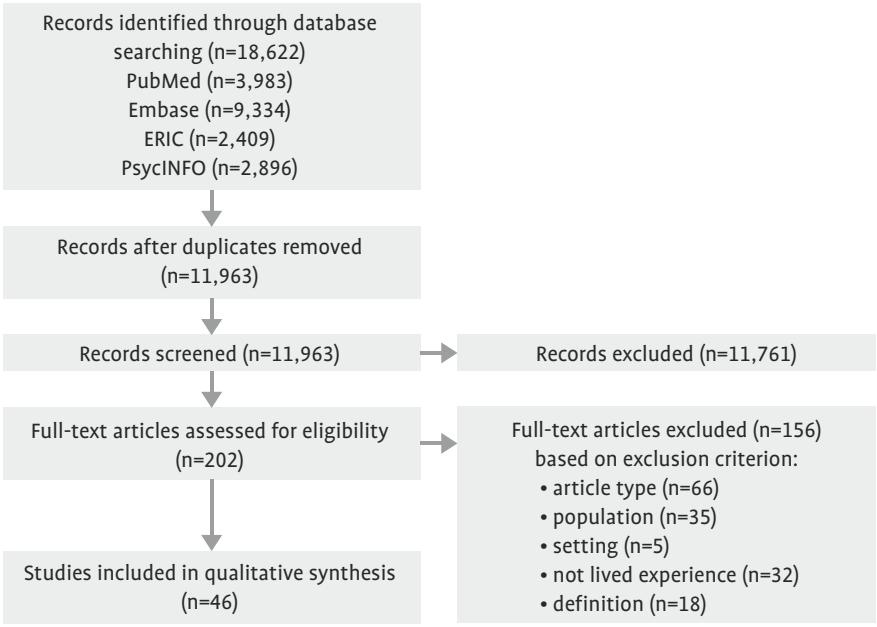
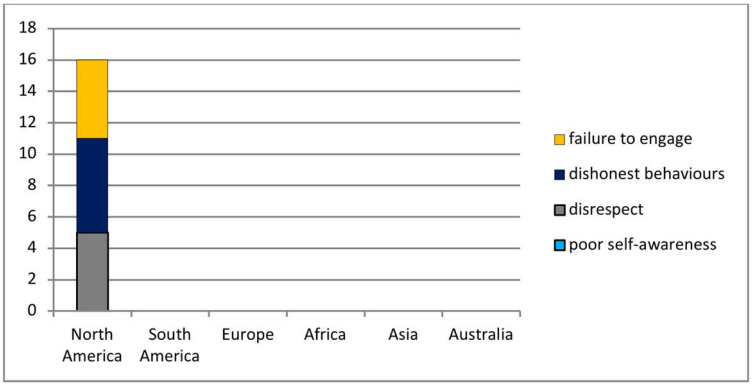


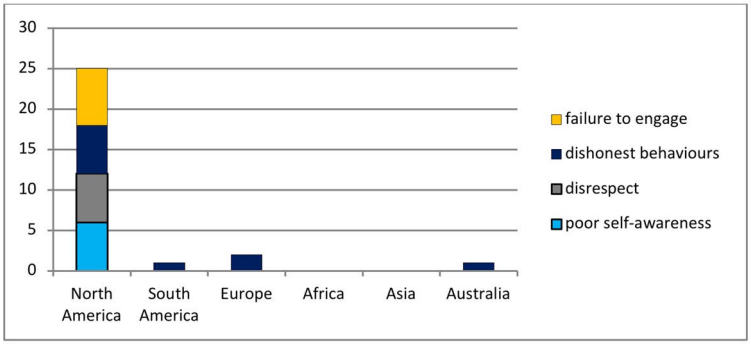
Figure 3.1 Flow diagram of literature search and study selection

that were published before 2000. Around 2000, North-American researchers started to focus on poor self-awareness, while in other continents only dishonest behaviour was described, later followed by other themes. Recently, attention was paid in the literature to unprofessionalism originating from the use of the internet, which can lead to privacy violations and other disrespectful behaviour, as well as to dishonest behaviours. See Figure 3.2 for global trends in three time periods.

Until 1999:



2000-2007:



2008-2016:

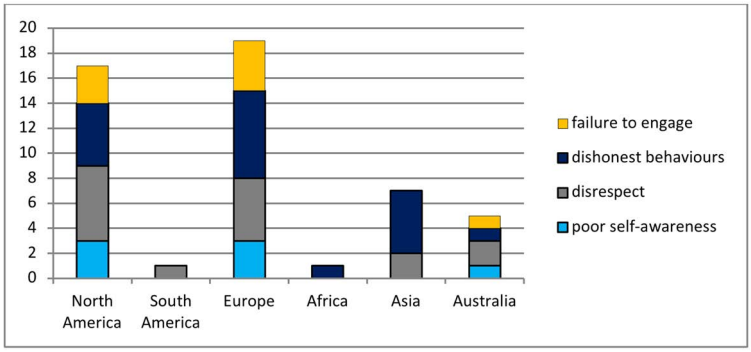


Figure 3.2 Occurrence of descriptions of behaviours categorised in each of the four themes, in three different time periods

Themes of unprofessional behaviour

The included articles yielded 205 different descriptions of unprofessional behaviours, which were coded into 30 different descriptors, and subsequently classified into four behavioural themes: failure to engage, dishonest behaviour, disrespectful behaviour, and poor self-awareness. See Figure 3.3.

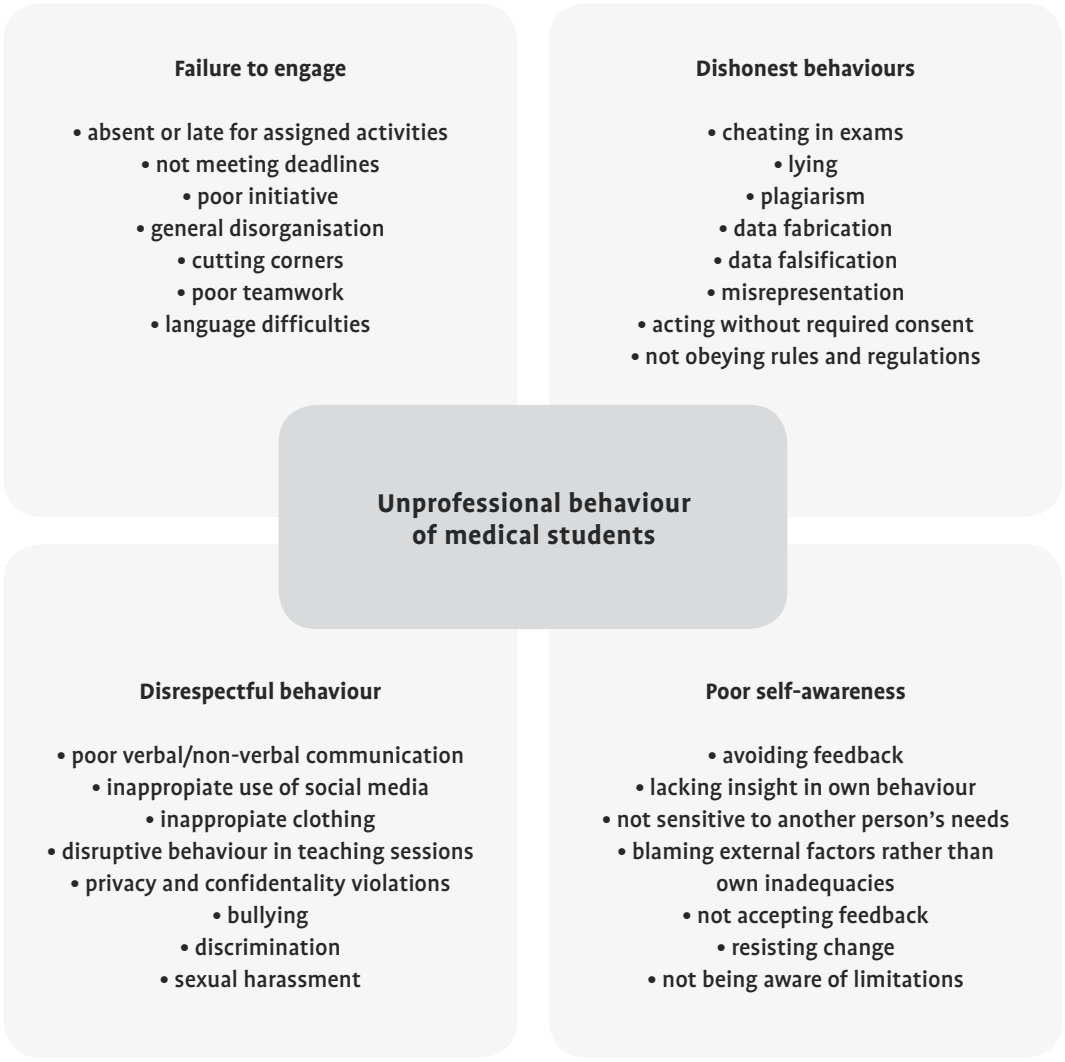


Figure 3.3 Four themes including 30 descriptors for unprofessional behaviours among medical students

The next paragraphs present the primary findings for each of the four themes.

Failure to engage

The first theme can be described as failure to engage, which was defined as insufficiently handling one's tasks. Failure to engage [25-27] included descriptions as *being late or absent for rounds or other assigned activities* [28-32], *poor reliability and responsibility* [25, 31, 33, 34], *poor availability* [32], *lack of conscientiousness* [35], *tardiness* [32] and *poor initiative and motivation* [31, 32, 36-38], *cutting corners* [39], and *accepting or seeking a minimally acceptable level of performance* [25]. *General disorganisation* was mentioned [26, 27], examples of which were *illegible handwriting*, *poor note keeping* and *not meeting deadlines* [32]. Behaviours indicating failure to engage leading to poor teamwork were described as *avoiding work* [27], *escaping teamwork* [40], *language difficulties* [37] and *not giving feedback to others* [30].

Failure to engage in the clinical phase of medical school was seen in the form of *avoidance of patient contact* [27, 37], *failing to contribute to patient care* [26, 37, 39], *leaving the hospital during a shift* [41], and *unsatisfactory participation* [33; 36].

Dishonest behaviours

This theme describes students' integrity problems. It includes cheating, lying, plagiarism and not obeying rules and regulations.

CHEATING AND LYING

Cheating and lying took place in class by *forging signatures* [40, 42, 43], or giving *false excuses when absent* [40, 43-47], *asking a colleague to sign in on an attendance list* [26, 41, 43, 45, 48], *asking other students to do your work or doing work for another student* [40, 41, 43]. *Cheating in exams* [32] was extensively described, and consisted of: *gaining illegal access to exam questions* [40, 43-47], *letting someone else take your exam* [43, 46, 47], *using crib notes* [43, 44, 46-49], *exchanging answers during an exam* [43-49], *exchanging answers by using mobile phones* [43, 45, 48] and *passing an exam by using help from acquaintances* [43, 48, 50]. Cheating in clinical or research context took place in the form of *data fabrication* [26, 40, 41, 43-46, 49, 51-53], and *data falsification* [25, 31, 32, 37, 40, 41, 43, 51-54] sometimes to disguise mistakes [43], e.g. when a student had forgotten to order a laboratory test or omitted a part of the history taking or physical examination [40, 41, 44, 46, 49, 51, 55]. Also, not asking consent for clinical examination of a patient was mentioned [56, 57]. One study reported cheating in using the hospital's electronic health record documentation (EHRD): *copy/pasting a colleague's notes, using auto-inserted data, or documenting while signed in under someone else's name in the EHRD* [58].

Already in 1978, a law scholar, Simpson, emphasized the phenomenon of *deceptive introduction* [59]. Students being introduced as 'doctors' to patients is a form of lying that directly influences patient care. This type of misrepresentation has also been described more recently [35, 57].

PLAGIARISM

Plagiarism consisted of *self-plagiarism* [43], *work of seniors or peers* [46, 52], and *from other sources without acknowledging the reference* [40, 42, 47, 60]. *Copying text directly from published books or articles* was seen as unprofessional even when the source was included in the reference list [43].

NOT OBEYING RULES AND REGULATIONS

Unprofessional activities mentioned were: *acceptance of failing to obey rules and regulations* [26], for example by *not following infection control procedures* [43, 57], and *using phones in restricted areas* [61]. Unlicensed activities that were mentioned in the included articles were: *significant misconduct* [32, 42], *stealing* [62], *damaging another's property* [62], or *physically assaulting a university employee or fellow student* [43].

Disrespectful behaviour

Another theme was found to be *disrespectful behaviour*, which was defined as behaviour that has a negative effect on other people. Behaviours in this theme vary widely in severity.

Disrespectful behaviour was described as poor verbal or non-verbal communication: *inappropriate spoken language* [25, 26, 32, 56, 63], *inappropriate body language* [26-28, 32], *disrespectful communication by email* [32], and also *ignoring emails or other forms of contact from teaching or administrative staff* [26, 36]. Recent articles mentioned unprofessional behaviour on Facebook or other social media, for example *discussing clinical experiences with patients* [64], *discussing a clinical site or the university in a negative light* [64] and *posting compromising pictures of peer students* [63, 65]. Other disrespectful behaviours that are exemplary for the lack of sensitivity to others' needs were *cultural and religious insensitivity* [35], *discrimination* [33, 35], and *sexual harassment* [35, 43, 63]. These disrespectful behaviours can affect all persons with whom these students interact: teachers and other staff or health personnel, patients and their families, or fellow students.

Teachers can be treated disrespectfully by *negative responses or disruptive behaviour in teaching sessions* [26, 34, 36, 66], *writing rude/inappropriate comments on exam papers* [26], or other *failure to show respect for the examination process* [28].

Patients can be affected by a student's disrespectful behaviour when the student shows *a lack of empathy* [26, 28]. *Insensitivity to the needs of others* [25, 26, 62], and *abrupt and non-empathetic manner with patients* [26], *referring to patients in a derogatory way* [29, 30, 39, 56, 57], *placing own learning above patient safety* [57], *making a patient feel uncomfortable during an exam* [56], or *treating simulation patients as passive objects rather than as people with feelings and concerns* [28] were examples of behaviours that were seen as a lack of empathy. Also, overly *informal behaviour* [27], and *failure to maintain professional appearance and attire*

[25, 26, 28, 30, 37] and *poor condition of white coats* [29, 30] belong to this theme. Furthermore, *discussing patients in public spaces* [29] and therefore *failing to respect patient confidentiality* [25, 30, 35, 56, 63] or *using Google to research patients* [67] were described as unprofessional.

Fellow students can be treated disrespectfully through *bullying* by peers, which consist of *verbal*, *written*, *physical or behavioural abuse*, which is the *ignoring of someone's existence* [43, 62, 68, 69]. Students can also be affected by their peers' unprofessional behaviour by *reporting a peer's improper behaviour to faculty before approaching the person individually* [29, 30].

Poor self-awareness

The last theme is *poor self-awareness*, which was defined as inappropriately handling one's own performance. Poor self-awareness was described as *avoiding feedback, inability to accept and incorporate feedback* [30, 31, 38], and *resistant or defensive behaviour towards criticism* [25, 34, 37], *lack of insight into behaviour* [26, 28], *blaming external factors rather than own inadequacies* [28], and *failing to accept responsibility for actions* [25, 28]. Furthermore, *not being aware of limitations* [32], *acting beyond own level of competence* [56, 57], or *not respecting professional boundaries* [26, 63] was categorised in this theme. These behaviours seem to indicate a *diminished capacity for self-improvement* [32, 34, 37, 70].

Discussion

There is a need for consistent terminology to describe unprofessional behaviours, and therefore the purpose of this systematic review was to create an overview of descriptions of real-life unprofessional behaviours of medical students. Based on the included articles, 205 found descriptions of unprofessional behaviours were summarised as 30 descriptors, and categorised into four themes: *failure to engage, dishonest behaviour, disrespectful behaviour* and *poor self-awareness*. The descriptors of the behaviours belonging to these themes could prompt medical educators to better recognise, denominate and acknowledge these behaviours in daily practice.

Search results and study characteristics

Most studies came from a single institution, which often resulted in a limited number of students, and limited diversity in cultural context. Collaboration across institutions and countries would add greatly to the research of unprofessional behaviour.

Professionalism is a concept that varies in time and place, which becomes clear from the subjects that were investigated in the included articles. Surprisingly, the descriptions of behaviours that were seen as unprofessional did not differ largely between the continents, although in Asia and Africa the focus seems to lay on dishonest behaviours. Probably, the

research on unprofessional behaviour starts with a focus on fraudulent behaviour because it is seen as a serious problem that is easy to detect. Recently described topics in the medical education literature are self-awareness and reflection, and the person of the doctor him/herself [2, 71]. This trend, representing a more positive approach to unprofessional behaviour, seems to have come over from North America to Europe and Australia, and it will be interesting to see if this trend will spread to South America, Africa and Asia in the coming years.

Only two studies described bullying, while the report of the Expert Advisory Group to the Royal Australasian College of Surgeons describes that the culture of bullying is widespread among physicians [72]. This could either mean that researchers do not pay attention to bullying, or that teachers and students need to be trained in recognising and reporting bullying.

Themes of unprofessional behaviour

The behaviours found in this study are specific for students in undergraduate education and have not been described extensively in existing guidelines [73-75]. The themes found in this study resemble the domains from guidelines, although in this study not all guideline domains were found, which indicates that some of these domains seem to be specific for physicians and are not applicable to students.

A recent review revealed that unprofessional behaviours in future physicians are seen in the theme of fraud and dishonest behaviour [76]. The current study extends these findings with three additional themes by including additional articles. This was a result of a broad search strategy using a comprehensive range of terms used in the international literature on unprofessional behaviour, and inclusion of quantitative as well qualitative studies.

Previous research proposed six domains in which evidence of professionalism can be expected from doctors-in-training: *responsibility for actions*, *ethical practice, respect for patients, reflection/self-awareness, teamwork,* and *social responsibility* [77]. Current findings are partly consistent with this framework, although only four themes were distinguished. Examples of students' behaviours that can be regarded as *poor social responsibility* were not found. This domain might be more relevant for residents than for undergraduate students. Furthermore, from this study *poor teamwork* seems to be a result of behaviours that indicate a failure to engage. The currently found behaviours can be seen as a practical addition to this framework.

The General Medical Council (GMC) recently published an updated professionalism guidance for medical students, in which domains of concern are described. We mapped our findings to these normative descriptions and found many similarities, but also some differences. We did not find concerns that indicate a cause for unprofessional behaviour, such as drug abuse, since we searched for behaviours that teachers would see in the educational environment,

and not for underlying causes. Our findings add to the GMC domains by including some new descriptors. (An additional file showing in detail how our findings were mapped to the GMC's domains of concern can be provided on request).

Engagement, integrity, respect and self-awareness matter in medical school, as they do in physician life. By exhibiting these behaviours students can gain trust of faculty and peers, just as doctors gain trust of colleagues and patients. A crucial question is whether the behaviours found in students relate to future unprofessional behaviours as a physician. This has been shown for *poor initiative, irresponsibility* and *diminished capacity for self-improvement*, but it is not yet known whether the other behaviours found in this study also predict future performance as a physician [25, 70].

Failure to engage

When poor engagement is a consequence of physical or mental illness, students have to be supported in acknowledging this, and offered possibilities to continue and complete their studies [78]. Engagement problems related to the quality and quantity of student motivation could be addressed by using Self-determination Theory, which offers possibilities to enhance engagement by fostering student motivation by paying attention to three key elements: autonomy, relatedness and competence of the learners [79]. This method has been described in twelve practical tips that medical educators can apply in class [80].

Dishonest behaviour

Dishonest behaviours are rarely isolated events and individuals involved in cheating are more likely to be involved in other dishonest behaviours [81]. Failing to complete required course evaluations and failing to report immunisation compliance were found to be significant predictors of students' unprofessional behaviours in subsequent years [82]. Thus, it seems necessary to raise faculty's awareness for students not obeying rules and regulations and committing dishonest behaviours [52]. Software to detect plagiarism can help to unveil some of these behaviours [83].

Disrespectful behaviour

Although disrespectful behaviour might be experienced differently in different time-periods, and in different parts of the world, the terms that are used to describe disrespectful behaviour are surprisingly consistent over time and place.

Disrespect towards colleagues inhibits collegiality and teamwork, and disrespect towards patients inhibits empathic relations with patients [84]. Disrespectful behaviour, of which bullying and racism are extreme examples, is often tolerated and even reinforced by others [85]. As disrespect is mostly a learned behaviour, it is possible to tackle it with positive role modeling and formal education [85]. However, unfortunately, students are sometimes

exposed to very negative and problematic role models who at times are disrespectful [86]. Fear of retaliation can lead a student to act unprofessionally him/herself too [87]. Students should have the opportunity to report unprofessional behaviour of their teachers and supervisors to the school management. Furthermore, educational interventions to maintain and enhance empathy in medical students could be applied [88].

Compromising privacy is also a form of disrespectful behaviour. According to this study, new challenges for maintaining privacy of patients, but also of students and physicians, come from the use of digital media and electronic health record documentation systems. Professionalism thus is a dynamic concept [89], and it seems that new values and standards for students as well as for physicians have to be developed regarding 'digital professionalism' [90-92].

Poor self-awareness

Behaviours in this theme are displayed by students who are insufficiently aware of their own poor performance: the student thinks to perform better than the external evaluation indicates. If we want to measure insight, reflective ability and capacity to change, we have to combine different measurements to come to a judgement [93]. A diminished reflective ability is related to professionalism lapses [94], and forms a challenge for remediation, since insight into one's behaviour is regarded necessary to change it [82, 95]. For students struggling with this aspect of professionalism, educators need to clearly set expectations based on the performance of peers [96].

Context of unprofessional behaviour

Personal, interpersonal and institutional circumstances have to be taken into account when evaluating a student's professional behaviour [97, 98]. This list of behaviours indicates which behaviours should be a reason to have a discussion with the student, aiming for an interpretation in the context that could reveal if the behaviour was indeed unprofessional. Since we want to prepare students for a challenging work environment, it is crucial to teach students how to effectively handle certain difficult contextual conditions that are likely to happen in their future work, like unprofessional behaviours of others, stressful conditions and time constraints [3, 84, 99]. Students and teachers have to discuss and negotiate what behaviours could be adequate in difficult circumstances. Role modeling is not enough; formal teaching when these difficult conditions occur (in the clerkships) is deemed necessary [100].

Limitations

The terminology that is used in the literature on professionalism varies widely. A broad range of search terms was applied, restricted to negatively formulated terms based on admitted or witnessed behaviours by stakeholders. A limitation of this method is that there may be some unprofessional behaviours which go unrecognised or unreported by teachers and students.

These — still hidden — behaviours might be revealed when speaking about lapses becomes more commonly accepted using the terminology that we propose.

Some relevant articles could not be included because the researchers used an integrated description of behaviours of students, faculty and physicians from which the students' behaviours could not be separated [90, 98]. However, after checking it was verified that including these articles would not have changed the results.

We aimed to describe real-life behaviours, and chose to use content analysis of research articles to capture these. Consequently, our method could not reveal behaviours that were not described in research articles. It has to be acknowledged that potentially some parts of the world are underrepresented due to the limited number of original research papers originating from some regions, which consequently could have led to an underreporting of certain behaviours.

Furthermore, generalisations in this review are based on a wide variety of types of studies, coming from different parts of the world and from different time periods. Although we designed the review purposefully in this way, we acknowledge that the differences in study design and participating stakeholders might limit the generalisability of the results. Further research should reveal the applicability of the proposed framework in different contexts.

Practical implications

The results of this review provide medical educators and researchers in medical education with a common language for the description of unprofessional behaviour in preclinical and clinical undergraduate medical education. Knowledge of the nature and extent of students' unprofessional behaviours could prompt teachers, and facilitate the acknowledgment and discussion of these behaviours among teachers and students. See Table 3.1. The list might facilitate teachers to see and report unprofessional behaviours, and thus help to solve the problem of *failure to fail*. Yet, only giving a fail is not enough: it is necessary that educators conduct a conversation with the student about observed behaviours. Such a conversation, in which explanations are given and context is discussed, can lead to a fair assessment and to a valuable formative learning experience for the student, or to other actions needed to improve interpersonal or institutional causes for unprofessional behaviour [101, 102].

Further research

Further action is desirable to reach consensus among stakeholders all over the world to endorse language as proposed in this study, and reach agreement about descriptors for unprofessional behaviours. A common language is needed not only for teaching, assessment and remediation, but also to provide a common ground for further research.

Implications	
Common language	Facilitates the acknowledgment and discussion of unprofessional behaviours among teachers and students
	Could prompt researchers to reach agreement about descriptors as common ground for research
List of unprofessional behaviours	Facilitates teachers to see and report unprofessional behaviours
	Could add to existent frameworks on professionalism

Table 3.1 Implications

This study addressed one reason for educator's reluctance to fail students, but other reasons require further exploration as well. Furthermore, research about remediation of unprofessional behaviour is deemed necessary [103]. Failure to engage could be related to insufficient student motivation. Empirical study of this issue might generate interesting findings, especially because student motivation is dynamic and can be influenced [79].

Another subject that needs investigation is students' accountability for their peers. Recently, a US nation-wide study found that a significant majority of students said that they feel obligated to report unprofessional behaviour of their peers [104]. This leads to the question: How can we educate these students to change their intentions into actions?

Conclusions

Descriptors for 30 unprofessional behaviours have been categorised in four themes: *failure to engage, dishonest behaviour, disrespectful behaviour* and *poor self-awareness*. In medical school these behaviours have to be acknowledged, addressed, evaluated, and discussed between students and teachers. This is beneficial for *all* students: students who behaved unprofessionally can profit from timely offered remediation, and students with satisfactory professional behaviour will learn how to respond to unprofessional behaviour when they see their teachers take these problems seriously. Such a policy would contribute to a culture of professionalism excellence, which is ultimately beneficial for all stakeholders, including patients.

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“You can’t let your failures define you,
you have to let your failures teach you.”

Barack Obama

CHAPTER 4

Distinguishing three unprofessional behaviour profiles of medical students using Latent Class Analysis

The study described in this chapter has been published as:

Marianne Mak-van der Vossen, Walther van Mook,
Joyce Kors, Wessel van Wieringen, Saskia Peerdeman,
Gerda Croiset, Rashmi Kusurkar

Distinguishing three unprofessional behaviour profiles of medical students using Latent Class Analysis.

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ABSTRACT

Aim

Since unprofessional behaviour of physicians is associated with unprofessional behaviour in medical school, identifying unprofessional behaviour in medical school is critical. Although teachers observe unprofessional behaviour in up to 20% of all students, they only report 3-5%, reflecting the difficulty in assessing professional behaviour. Instead of identifying *isolated behaviours* it could be more helpful to recognise *behavioural patterns* to evaluate students' professional behaviour. The authors aimed to identify patterns in the unprofessional behaviours of medical students, and to construct descriptions based on these patterns.

Methods

Content analysis of research articles yielded a template of unprofessional behaviours for coding student evaluation forms indicating unsatisfactory professional behaviour, collected from 2012 to 2014. Latent Class Analysis was used to identify classes of students with a high chance of displaying comparable unprofessional behaviours. Teachers' feedback of prototype students was summarised to generate profile descriptions.

Results

A template of 109 behaviours was used to code 232 evaluation forms of 194 students (3.9% students/year). Latent Class Analysis identified three hypothetical classes of students: class 1 (43%) was labeled as 'Poor reliability', class 2 (20%) was labeled as 'Poor reliability and poor insight' and class 3 (37%) was labelled as 'Poor reliability, poor insight and poor adaptability'.

Discussion

These profiles of unprofessional behaviour might help to improve the evaluation of unprofessional behaviour in medical school. Further research should provide evidence for confidently accepting or rejecting the profiles as an instrument to identify which students are expected to benefit from remediation trajectories.

Introduction

Promoting professional development of medical students is an important goal of medical education because unprofessional behaviour in medical school is associated with unprofessional behaviour in medical practice [1, 2]. Most students are able to develop a physician's professional identity without meeting significant difficulties, but a limited number of students encounter problems in this process [3]. Because such problems are often reflected in behaviours, medical educators should be able to identify these behaviours to define which students could benefit from extra guidance. As behavioural change takes time, it is crucial to detect students with problems early in the course of their medical school career, to start adequate remediation activities in time [4].

Unprofessional behaviours are seen in up to 20% of medical students [5]. However, formal unsatisfactory professional behaviour evaluations only report 3-5% of all students, reflecting the difficulty educators experience in identifying medical students with lapses in professionalism [6, 7], despite the availability of guidelines for the evaluation of students' professional behaviour provided by several physician organisations [8-10]. These guidelines often describe behaviours *categorically*, using descriptions of isolated behaviours, but behaviours could also be described *dimensionally*, using combinations of behaviours, i.e. behavioural patterns [11].

Preliminary evidence of studies performed among residents suggests that educators show more consistency in defining problematic professional performance in residents when using narrative descriptions of behavioural patterns than when using traditional ways of evaluation based on descriptions of isolated behaviours [12]. Like in residency training, descriptions based on behavioural patterns could also benefit educators in undergraduate education. However, it has not yet been investigated if distinct unprofessional behaviours of medical students cluster into patterns. The aim of this study was to identify patterns in behaviours of medical students who received an unsatisfactory professional behaviour evaluation in medical school.

Individual, interpersonal and social/institutional factors are vital for the professional development of students [13], but the latter two are unfortunately difficult for individual teachers to influence. The present study focused on students' individual behaviours in order to determine which students are expected to benefit from early remediation interventions and additional guidance from their teachers to improve their professional behaviour.

Methods

Design

This study comprised three parts. Firstly, we conducted a review of the medical education literature to provide an overview of medical students' unprofessional behaviours reported in the literature. Next, we used these results to retrospectively examine professional behaviour evaluation forms of students in undergraduate preclinical and clinical medical education. Finally, we identified patterns in these behaviours, and drafted profile descriptions for frequently occurring patterns. For this study the researchers chose a post-positivist view, in which quantitative and qualitative methods can be combined to systematically gather and analyse data from representative samples to seek to establish a probable truth [14].
The Ethical Review Board of the Netherlands Association for Medical Education (NVMO-ERB) approved the study (dossier number 390).

Part 1: Content analysis of medical education research papers

Selection of the papers

This study included a focused literature review to investigate which actual unprofessional behaviours of medical students have been described in the literature. The researchers searched PubMed to identify relevant articles by using combinations and alternative descriptions of the search terms 'professional misconduct' and 'medical education'. Quantitative and qualitative studies describing unprofessional behaviours of medical students were eligible for inclusion. Reference lists of retrieved articles were manually searched to identify additional articles. Articles reporting desired professional behaviours, perceptions of professional behaviour, unprofessional behaviours of students other than medical students, or behaviours of residents or practitioners were excluded.

Data extraction from papers

Three researchers (MM, WM and RAK) independently screened the articles for descriptions of unprofessional behaviours using content analysis, a qualitative method to analyse text-based data.

We established results by assigning codes (e.g. descriptions of unprofessional behaviours of medical students). During data collection and analysis the researchers drafted written notations about the data, the so-called 'memos', in which they acknowledged their roles in the interpretation of the findings. Subsequently the researchers reflected on these memos and on the identified codes in the research team [15]. A constant comparative approach was used and emerging themes were discussed until consensus was reached. Based on this review we constructed an initial template for use in part two of this study.

Part 2: Latent Class Analysis of behaviours mentioned in professional behaviour evaluation forms

Setting

The study was conducted at VUmc School of Medical Sciences Amsterdam, the Netherlands. This school has a bachelor-master curriculum consisting of three years of preclinical undergraduate education (bachelor), followed by three years of clinical undergraduate education (master) [16]. The curriculum consists of three educational domains: medical knowledge, practical skills, and professional development. Within the longitudinal domain of professional development professional behaviour is taught explicitly [6]. Professionalism is defined as: '*Having specialised knowledge and skills, acquired through extensive study, training and experience, being able to apply this within the rules that have been drafted by the profession itself, the organisation and the government, in which one can be held accountable for actions by all parties involved. This needs to be placed within the cultural context and time frame in which the term is used*'. Professional behaviour is defined as '*the observable aspects of practicing professionalism*'. This definition of professional behaviour has been translated into a set of observable practical skills, described in the Dutch national guideline on professionalism as a tool for evaluating professionalism. In this guideline professional behaviour is defined as '*Having the skills to deal with tasks, deal with others and deal with oneself*' [17]. At VUmc School of Medical Sciences students' professional behaviour is evaluated using In Training Evaluation Reports (ITERs) based on directly observed behaviours. These evaluations take place in formative (not included in the formal grade) and summative (included in the final grade) evaluations in bachelor study groups and in bachelor and master clerkships. Teachers provide all students with evaluation forms that contain a pass/fail decision for professional behaviour in terms of satisfactory and unsatisfactory grades, and include a narrative description of the observed (un)professional behaviour [6]. Besides these formal evaluations, faculty can report critical incidents of unprofessional behaviour. Teachers are trained intensively and guided in teaching and evaluating professional behaviour [18]. After an unsatisfactory professional behaviour evaluation students are referred to the progress committee on professional behaviour to define remediation options.

Sample

We analysed professional behaviour evaluation forms describing an unsatisfactory outcome, and critical incident reports from the preclinical and the clinical phase of undergraduate medical education, from September 2012-September 2014. These evaluation forms and reports had been collected as part of the standard students' individual progress administration. A research assistant anonymised all forms for analysis, and collected information about study phase and number of unsatisfactory evaluations for each student.

Data extraction from evaluation forms

Using the list derived from the literature review as an initial template, two independent researchers (MM and JMK) coded the anonymised evaluation forms and critical incident reports for 'unprofessional behaviours'. They documented the behaviours per student, sometimes coming from more than one evaluation form, as binary response data (present/absent). In an iterative manner, they added behaviours to the initial template and ultimately scored all forms using the final template. Finally, the researchers independently categorised the behaviours to obtain a meaningful set of behavioural themes for further statistical analysis. These behavioural themes were finalised through discussion and consensus in the full research team.

Analysis

We conducted Latent Class Analysis (LCA) to search for patterns in the data, using the software program 'R' [19]. LCA is an exploratory statistical technique that aims at forming of subgroups (classes) of individuals in a population, based on the observed categorical variables of these individuals. In the current study this means that students are clustered based on the chance that they display a combination of behaviours. LCA is a probabilistic method, which means that there is no one-to-one relationship between a class and the occurrence of a variable in an individual within that class, but that each class is composed of individuals that are more likely to display a certain combination of variables than individuals in a different class [20]. A similar classification process is applied in diagnosing a disease: the presence or absence of a certain symptom (variable) does not always lead to one specific diagnosis (class), but a certain pattern of symptoms makes this diagnosis more likely.

LCA can be used when it is assumed that there exists a still unknown, so-called 'latent' variable that can be used to make categories in the population under investigation. This newly emerging variable can be identified as a distinguishing factor regarding the content of the subgroups. Ultimately, the researchers have to determine whether the distinguishing factor has practical relevance, and attribute a meaningful description and name. The properties and the number of the subgroups are determined through consensus clustering, which evaluates the stability of clusters found for a specified number of groups [21]. (A supplemental appendix explaining this process can be provided on request).

LCA is a more subtle method than other clustering methods, as certain variables can occur in more than one class, albeit with a different chance of occurrence. This makes LCA especially applicable to the research of human behaviour, as it can reveal hypothetical patterns that cannot easily be detected by other clustering methods. The method could therefore be very useful in medical education research, but is unfortunately not often applied [22, 23].

A regular latent class model, with various choices for the number of latent groups, was fitted to the binary response data. A latent class model is usually fitted by means of an Expectation-Maximization (EM) algorithm. Since the large number of traits in this study (in comparison to the number of individuals) caused instabilities in the estimation procedure — technically hampering the definition of the appropriate cluster —, the researchers used an adaptation of the EM-algorithm, in which the parameters are estimated in a penalised fashion.

Part 3: Profile descriptions

The researchers provided each class with a narrative description based on the narrative feedback provided on the forms, for which reports of representatives or 'prototypes' (the top ten students with the highest probability to belong to that class) were used [20]. Two researchers (MM and JMK) independently summarized teachers' feedback to these students and finalised profile descriptions through discussion and consensus.

Results

Part 1: Content analysis of medical education research papers

Based on 23 papers describing actual unprofessional behaviours of students we constructed an initial template, containing 93 descriptions. Using an iterative approach we completed the template by adding 16 more behaviours that were derived from the evaluation forms during the coding process. (Detailed search terms and a supplemental appendix that gives an overview of papers included in the literature review are available on request.)

Part 2: Latent Class Analysis of behaviours mentioned in professional behaviour evaluation forms

The derived sample consisted of 232 evaluation forms from students with unsatisfactory professional behaviour (120 forms of 89 preclinical undergraduate students and 112 forms of 105 clinical undergraduate students), representing 7.9% of 2460 students (3.9% per year). Twenty seven students (1.1% of total student population) received multiple unsatisfactory professional behaviour evaluations.

We did not find all behaviours from the template in the evaluation forms. Ultimately, thirty seven behavioural themes were identified and formed the basis for the LCA. The initial and final template, and behavioural themes are displayed in Table 4.1.

Behaviours from the literature **Initial (n=93)** ***Added during coding (n=16)***	**Behavioural themes described in evaluation forms (n=37)**
Drug abuse Alcohol abuse Physical health problems Mental health problems *Other personal circumstances*	Student mentioned personal circumstances to teacher
Insecurity *Cannot work independently*	Insecurity and inability to work independently
Working pace too low *Work is too detailed*	Work too detailed and working pace too low
Inadequate relationships with patients Inadequate relationships with peers Inadequate relationships with faculty Inadequate relationships with other health professionals	Inadequate relationships
Poor collaboration with patients Poor collaboration with peers Poor collaboration with faculty Poor collaboration with other health professionals Hiding behind student role	Poor collaboration
No self-improvement	No self-improvement
Lack of commitment Lack of motivation	Lack of commitment
Late or absent for assigned activities	Late or absent for assigned activities
Unprepared for activities	Unprepared for activities
No accountability to patients No accountability to peers No accountability to faculty No accountability to other health professionals	No accountability
Not keeping their word Not meeting deadlines	Not meeting deadlines
Not following up on activities related to patient care	Not following up on activities related to patient care
Poor initiative	Poor initiative
Avoiding feedback	Avoiding feedback
Casual behaviour Sloppy dress Sloppy work *Other failure to engage*	Failure to engage
General disorganisation Poor planning Illegible writing	General disorganisation

Table 4.1 Initial and final template, and behavioural themes reported in evaluation forms

Behaviours from the literature Initial (n=93) *Added during coding (n=16)*	Behavioural themes described in evaluation forms (n=37)
Poor academic skills Poor note keeping	Poor academic skills
Lying Does not act in a truthful and trustworthy manner	Does not act in a truthful and trustworthy manner
Plagiarism Self-plagiarism	Plagiarism
Does not obey rules and regulations No compliance to values	Does not obey rules and regulations
Writing a piece of work for another student Lending work to other students to copy Buying or selling hospital shifts Forging signatures Fraud in attendance list Cheating in an examination Helping others to cheat in examinations Gaining (illegal) access to examination questions Copying from another in an exam Not reported witnessed copying Influencing the teacher to get better marks Data fabrication/falsification in research Data fabrication/falsification in clinical context Misrepresentation Other unlicensed activities	Cheating and fraud
Brusque-hostile or argumentative communication to patients Brusque-hostile or argumentative communication to peers Brusque-hostile or argumentative communication to faculty Brusque-hostile or argumentative communication other health professionals	Brusque-hostile or argumentative communication
Unprofessional non-verbal communication	Unprofessional non-verbal communication
Not listening	Not listening
Ignoring emails or other contacts from teaching or administrative staff	Ignoring emails or other contacts from teaching or administrative staff
Inadequate communication with patients Inadequate communication with peers Inadequate communication with faculty Inadequate communication with other health professionals *Gossiping*	Inadequate communication

Table 4.1 continued

Behaviours from the literature **Initial (n=93)** ***Added during coding (n=16)***	**Behavioural themes described in evaluation forms (n=37)**
Inadequate mastery of Dutch language	Inadequate mastery of Dutch language
Inadequate written communication (including email) *Inappropriate use of social media*	Inadequate written communication (including email and social media)
Not acknowledging mistakes Inability to accept feedback	Does not accept feedback
Does not incorporate feedback	Does not incorporate feedback
Does not share emotional experiences *Does not ask for help*	Does not share emotional experiences and does not ask for help
No insight in own behaviours *Other lack of insight into behaviour*	No insight in own behaviours
No insight in emotions of others *No insight in provoked emotions in others*	No insight in emotions of others
No empathy Does not show sensitivity to patients needs	Does not show sensitivity to patients needs
Does not show respect for patients Does not show respect for peers Does not show respect for faculty Does not show respect for other health professionals	Does not show respect
Self-driven behaviour Offensive display of superiority and self-importance	Self-driven behaviour
Not respecting professional boundaries Privacy and confidentiality violations Conducting patient care beyond own skill level	Not respecting professional boundaries
Immaturity Inappropriate or unnecessary pain or harm to patients Failing to contribute to patient care Writing rude/inappropriate comments on exam script Failing to establish rapport Not reporting unprofessional behaviour of colleagues Reporting an impaired colleague to faculty before approaching the individual Not aware of doctors privileges Sexual misconduct Discrimination No positive interest in cultural differences Does not balance multiple perspectives Does not balance ethical dilemmas	These behaviours were not found in the evaluation forms

Table 4.1 continued

Latent Class Analysis of the data yielded 3 classes of students who received unsatisfactory professional behaviour reports: class 1 (43%), class 2 (20%) and class 3 (37%). Based on the relevance of the content of the classes a 2-class solution was rejected in favour of the 3-class solution. Solutions with 4 or more classes were rejected because the chances that behaviours occurred in classes 4 or higher were very low.

Table 4.2 shows that students in all three classes have similar chances to display certain behaviours that thus are not distinctive for the classes: *being late or absent for assigned activities, not keeping deadlines and inadequate communication*. Specific behaviours for a student in class 1 are marked light grey, and specific behaviours for a student in class 2 are marked medium grey in Table 4.2. A student in class 3 has the same chance to display several similar unprofessional behaviours as a student in class 2, but the class 3 student has a higher chance to display these behaviours combined with certain distinctive behaviours, which are thus specific for class 3 (marked dark grey in Table 4.2). Many of the behaviours of students in class 2 and 3 have far lower chances to occur in a class 1 student.

	BEHAVIOURAL THEMES	CLASS 1	CLASS 2	CLASS 3
Common behaviours	Personal circumstances	16	16	16
	Late or absent for assigned activities	17	17	17
	Not meeting deadlines	17	16	16
	Inadequate communication	17	17	17
	Lack of motivation and commitment	3	16	17
	Poor planning and disorganisation	9	15	16
	No insight in own behaviour	1	16	17
	Poor initiative	4	16	17
	Poor collaboration	3	13	16
	No self-improvement	1	14	17
	Does not incorporate feedback	1	14	16
	Does not accept feedback	2	15	17
	No accountability	2	15	12
	Unprepared for activities	1	12	16
	Failure to engage	1	15	16
	Insecurity and inability to work independently	2	6	12
	Does not share emotional experiences and does not ask for help	1	6	11
	Dutch language unsatisfactory	1	7	11
	Does not show sensitivity to patients needs	1	5	9
	Plagiarism	1	7	5
	Ignoring emails or other contacts from teachers/ faculty	13	15	7
Distinctive behaviours	Does not obey rules and regulations	15	7	7
	Does not show respect	3	7	17
	No insight in others emotions	1	2	16
	Inadequate relationships	2	3	16
	Self-driven behaviour	2	2	14
	Brusque-hostile or argumentative communication	1	2	15
	Poor academic skills	1	3	16
	Not listening	1	1	12
	Avoiding feedback	3	3	11
	Unprofessional non-verbal communication	1	2	9
	Not following up on activities related to patient care	2	3	9
	Work too detailed and working pace too low	3	1	9
	Not respecting professional boundaries	1	1	5

Table 4.2 Class-specific rates (%) for each behavioural theme
(**Light grey**: behaviours for profile 1, **medium grey**: behaviours profile 2, **dark grey**: behaviours profile 3)

Based on the content of the three classes the latent variable was described as 'capacity for self-improvement and adaptability'. Consequently, the classes were labeled as profiles: class 1 was labeled as 'Poor reliability', class 2 as 'Poor reliability and no insight', and class 3 as 'Poor reliability, no insight and poor adaptability'.

We explored the data for differences between the profiles in terms of number of unsatisfactory evaluations. Students in profile 3 more often received *multiple* unsatisfactory professional behaviour evaluation than students in profile 1 and 2. See Table 4.3.

Number of unsatisfactory behaviour evaluations and/ or critical incident reports that the student received	Number of students			
	CLASS 1 n=83 (43%)	CLASS 2 n=39 (20%)	CLASS 3 n=72 (37%)	Total n=194 (100%)
1	80	32	55	167
2	2	7	10	19
3	1	0	4	5
4	0	0	3	3

Table 4.3 Occurrence of unsatisfactory professional behaviour evaluations and/or critical incident reports (n=232) per student (n=194) and per class

Part 3: Profile descriptions

We summarized teachers' feedback of 10 prototype students per class to yield profile descriptions. See Table 4.4.

Class	1	2	3
Capacity for self-improvement and adaptability	HIGHEST ←		→ LOWEST
Difficulty of remediation	LOWEST →		← HIGHEST
Profile	**poor reliability**	**poor reliability + poor insight**	**poor reliability + poor insight + poor adaptability**
Profile description	A student from class 1 does not obey rules and regulations of the school. The student does not inform teachers and peers about his/her activities. When receiving feedback the student admits that his behaviour was unprofessional. The student often asks for help to improve.	A student from class 2 does not actively participate in study groups or clerkships, and is often late or absent. Communication with peers and teachers is inadequate. The student relies on peers, sometimes resulting in plagiarism. When this behaviour is addressed this student does not recognise the feedback, but is willing to accept a different viewpoint. In coaching conversations a student from class 2 exhibits good intentions and willingness to change.	A student from class 3 seems to have problems in interpersonal communication and teamwork. This student often does not understand information given by others, which leads to misunderstandings. Peers and teachers — sometimes patients — feel that they are not always treated respectfully by this student, but the student does not recognise their feelings. A student from class 3 does not accept the teachers' feedback and does not improve. The student is not able to formulate learning goals and often does not accept an offered coaching trajectory.

Table 4.4 Profile descriptions based on behaviours of student prototypes for each class

Discussion

The main purpose of this study was to identify patterns in the behaviours of medical students who received an unsatisfactory professional behaviour evaluation or critical incident report in medical school, and to define a variable that could be used for the categorisation of these patterns. The results suggest that students might be distributed among three classes of distinctive behavioural patterns: 'Poor reliability' (profile 1), 'Poor reliability and poor insight' (profile 2), and 'Poor reliability, poor insight and poor adaptability' (profile 3). The variable for categorisation of unprofessional behaviours into these three student profiles appeared to be 'Capacity for self-reflection and adaptability'.

Papadakis identified a diminished capacity for self-reflection and adaptability during medical school as crucial, since it tends to continue in residency and medical practice, with consequences for future patients [1]. The present study relates this factor to *patterns* of observable behaviours of medical students. These patterns of behaviours seem to indicate to what extent the students' capacity for self-reflection and adaptability is diminished.

The most frequently observed behaviours reported by supervisors in this study were *poor communication, not meeting deadlines* and *being late or absent*. All students displayed these behaviours, which are thus non-distinctive for the profiles. Students with profile 3 ('Poor reliability, poor insight and poor adaptability') displayed distinctive behaviours, such as *not showing respect, not showing insight in the emotions of others, not maintaining adequate relationships* or *showing too much self-driven behaviour*. Furthermore, students with this profile more often received *multiple* unsatisfactory professional behaviour evaluations than students with the other profiles, perhaps indicating that they had not benefited from remediation trajectories. The findings of this study could imply that profile 3 behaviours predict the future professionalism of the students more accurately than the common, non-distinctive behaviours most supervisors seem to note and report, which is consistent with Ainsworth's findings [47].

Since not all unprofessional behaviours reported in the literature occurred in our study, it is unknown whether these behaviours would also result in the patterns that we found. Replication of this research could determine if the same profiles are found in other settings, and if the profiles might be useful to determine the intensity, duration and likelihood of success of remediation activities. We hypothesize that students with profile 1 ('Poor reliability') are likely to improve with help from their teachers in the regular course of the curriculum and that students with profile 2 ('Poor reliability and poor insight') are likely to need extra individual guidance by specialised supervisors within the medical school. Out of all students in this study, students with profile 3 ('Poor reliability, poor insight and poor adaptability) seem least likely to improve, in spite of remediation activities. Hypothetically, profile 3 behaviours could

be ‘symptoms’ of underlying personal problems, which — besides remediation in medical school — require psychological treatment outside medical school.

Future research focused on our hypotheses could not only lead to specific remediation methods for students from each profile, but also reveal the possibility of screening students during selection for medical school [48]. Since professional behaviour tends to be precipitated in pressure situations, the development of selection methods that make the behavioural pattern visible could be valuable, for example having one station during Multiple Mini Interviews (MMIs) where students are subjected to pressure [49].

Strengths and limitations

The use of LCA is a strength of this study, because the subtlety of the method made it possible to identify behavioural patterns. Transferability is positively influenced by the use of a template based on findings from the medical education literature, since this enabled the researchers to code behaviours that already had been defined as unprofessional in different settings. A disadvantage is the limited sample size and that the study was conducted in only one medical school. Rare behaviours may have occurred too infrequently to allow for analysis, which limits the generalisability of the findings. Furthermore, the cross-sectional design may have led to an underestimation of the number of students that received more than one unsatisfactory professional behaviour evaluation. The relatively high number of behaviours identified in a limited number of students made it difficult to get good estimations of all behaviours. This limitation was partly overcome by theming behaviours before analysis, and by using a modified form of the EM algorithm (which did not influence the outcomes).

Conclusions

A considerable body of evidence now exists that medical professionalism can be evaluated by observing behaviours. Supervisors need to recognise, acknowledge, and address students’ unprofessional behaviours [50]. Although addressing unprofessional behaviours remains difficult, the results of the present study offer a first step by making it easier to recognise and acknowledge behavioural patterns that indicate a diminished capacity for self-reflection. These profiles of unprofessional behaviour might help to improve the evaluation of unprofessional behaviour in medical school. Further research should provide evidence for confidently accepting or rejecting the profiles as an instrument to identify which students are expected to benefit from individual guidance.

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“Failure is not fatal,
but failure to change might be.”

John Wooden

CHAPTER 5

Developing a two-dimensional model of unprofessional behaviour profiles in medical students

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ABSTRACT

Aim

Standardised narratives or *profiles* can facilitate identification of poor professional behaviour in medical students. If unprofessional behaviour is identified, educators can help the student to improve their professional performance. In an earlier study, based on opinions of frontline teachers from one institution, the authors identified three profiles of medical students' unprofessional behaviour: *(1) Poor reliability, (2) Poor reliability and poor insight, and (3) Poor reliability, poor insight and poor adaptability*. The distinguishing variable was *Capacity for self-reflection and adaptability*. The current study aimed to refine these findings by synthesizing experts' opinions from different medical schools, aiming to develop a model of unprofessional behaviour profiles in medical students.

Methods

The study used Nominal Group Technique and thematic analysis. Thirty-one experienced faculty, purposively sampled for their knowledge and experience in teaching and evaluation of professionalism, participated in five meetings at five medical schools in the Netherlands. In each group, participants generated ideas, discussed them, and independently ranked these ideas by allocating points to them.

Results

Experts suggested ten different ideas, from which the top 3 received 60% of all ranking points: (1) *Reflectiveness* and *adaptability* are two distinct distinguishing variables (25%), (2) The term *reliability* is too narrow to describe unprofessional behaviour (22%), and (3) Profiles are dynamic over time (12%). Incorporating these ideas yielded a model consisting of four profiles of medical students' unprofessional behaviour (*accidental behaviour, struggling behaviour, gaming-the-system behaviour* and *disavowing behaviour*) and two distinguishing variables (*reflectiveness* and *adaptability*).

Discussion

The findings could advance educators' insight into students' unprofessional behaviour, and provide information for future research on professionalism remediation.

Introduction

Evaluating medical students' professional performance is a difficult and sensitive activity [1, 2]. It often results in educators' *failure to fail* underperforming students [3]. When underperforming students are not identified, they cannot be offered assistance to help them improve their performance [4]. It would be important for undergraduate medical education to create research-based tools to facilitate identification of poor professional performance of medical students, and help teachers recognise students who may benefit from extra guidance in order to overcome any difficulties [5, 6]. Outcomes of the current study could guide medical educators in identification of those students who are expected to benefit from professionalism remediation activities, and those who are considered unfit for practice.

Early detection and remediation of poor performance in medical students is essential [7]. Current literature has focused on strategies to detect students who behave unprofessionally, aiming to provide feedback to these learners and to identify students who need remediation. Attention has been given to descriptors and categories of students' unprofessional behaviours, which include *poor engagement, lack of integrity, poor interaction with others,* and *poor self-awareness*, including *not responding to feedback*. [8, 9]. Other examples of such detection strategies focus on the egregiousness of the behaviours [10], on attributions for behaviours [2], on underlying problems [11], on predictors of poor academic outcomes [12], and on students' characteristics that form risk factors for professional misconduct [13, 14]. In these studies, the unprofessional behaviours are mostly approached as isolated events, rather than patterns comprising a combination of behaviours and surrounding incidents.

Research evidence shows that standardised narratives or *profiles* can effectively represent faculty opinions of residents with borderline performance [15]. In our earlier work, we generated such profiles for undergraduate students, in an attempt to aid undergraduate medical teachers to identify unprofessional behaviour [16]. This previous study consisted of three methodological steps: firstly, the literature was reviewed to construct a template of unprofessional behaviours. In the second step, students' unprofessional behaviours, as described by frontline (physician) educators on end-of-attachment evaluation forms, were scored using this template, and subsequently grouped using Latent Class Analysis. In the last step, each class was provided with a description based on the narrative information on the evaluation forms of prototypes of that class. We found three different classes or *profiles* that hypothetically describe the behaviours of students who are cited for unprofessional behaviour. The profiles were: *Poor reliability, Poor reliability and poor insight* and *Poor reliability, poor insight and poor adaptability*. Based on the content of the three profiles, the distinguishing variable between the three profiles was described as the *Capacity for self-reflection and adaptability*. (See Figure 5.1)

In the current study, we aimed to refine the pre-existing concept (that was created upon

Figure 5.1 Pre-existent concept of profiles of unprofessional behaviour in medical students

opinions of frontline teachers in one institution) by adding perspectives of expert teachers from several medical schools. Thus, we intended to develop a model of unprofessional behaviour profiles in medical students. Adding expert teachers' perspectives will make it more likely that the final model will be used in practice because of the addition of an experience-based layer to a theoretical concept [17, 18]. An approach to incorporating experts' perspectives is the use of consensus group methods. Consensus group methods offer a systematic means to gather general agreement, and can also be used to strengthen incomplete empirical evidence from research by adding experience of knowledgeable participants [19]. The goal of the current study was to refine our earlier research findings by adding systematically collected and synthesized opinions of dedicated experts who represent valuable expertise and multiple viewpoints from different contexts on the evaluation and guidance of students showing unprofessional behaviour. Thus, we aimed to develop a model of profiles of unprofessional behaviour that could help to identify those students who are expected to benefit, and also those who are expected not to benefit from remediation activities.

Method

Study design

We employed Nominal Group Technique (NGT), also called expert panel method [19, 20], and combined this with thematic analysis of expert panel discussions [21]. In NGT, participants in a meeting share and discuss their perspectives on a certain concept and subsequently independently rank their ideas about this concept. NGT helps to reveal authentic expert opinion without any outside influence, since participants are knowledgeable representatives of the area of inquiry, have practical experience, and come from diverse settings. We selected NGT over other consensus methods (such as a Delphi technique) because it leads to generation of a larger number of ideas [19]. Furthermore, as participants discuss these ideas among each other, each participant can establish their personal opinions about all introduced ideas based

on interaction and discussion with colleagues with similar expertise. A strong facilitator, who should also be a recognised expert in the field, chairs the meeting, mitigating the potential for some participants to unduly dominate the group discussion. The ranking procedure in NGT ensures a democratic result, since final ranking takes place individually and privately.

Using expert panels allowed us to reach our specific aim of refining the pre-existing concept by combining the NGT procedure (leading to generating and ranking of ideas) and thematic analysis of the expert panel meetings (leading to development of a deeper understanding of the ideas). This procedure enhanced our understanding of concepts and terms used, and made it possible to interpret potential differences in contexts between the schools of the participants [22]. Thus, we intended to triangulate quantitative and qualitative data from the expert panel meetings to describe a meaningful whole [23].

Reflexivity

This study was set up using a constructivist paradigm, in which knowledge is seen as actively constructed based on the lived experiences of participants and researchers alike, and cocreated by them as the product of their interactions and relationships [24]. The implication of this choice was that our method had to allow for interaction and discourse between participants, researchers and the studied phenomenon, which led us to choose the NGT and thematic analysis methods, and combine these two [25]. Another implication of using the constructivist paradigm is that we must acknowledge that participants and researchers cocreated the outcomes of this study: the final results originate from the interaction and discussion among participants and researchers about their shared knowledge and day-to-day experiences. To inform the readers about the knowledge and experience that the authors themselves brought into the study, we share the following with our readers: all authors are education researchers and/or medical educators experienced in teaching and guidance of professional behaviour of medical students. MM, WvM, GC and RAK are medical doctors, AT is an education researcher and AdlC is a linguist. The research question for this study was based on findings from our earlier research, as well as originated from our own teaching experience. To consider our own contribution to the interactive study process we kept an audit trail, which we regularly discussed with each other [26].

Procedures and Participants

Between October 2016 and January 2018, we collected quantitative and qualitative data through meetings with panels of experts from different medical schools in the Netherlands. In each school one expert panel meeting was organised with the help of a member of the national Special Interest Group on Professionalism of the Netherlands Association for Medical Education (NVMO). These members invited professional behaviour experts at their school, defined as medical educators who had been responsible for the assessment and/or remediation of students with unprofessional behaviour for at least three years. The member asked them if they could

mention any other names of experts who would be eligible to participate, so called *snowball sampling* [27]. These individuals were additionally invited to participate. The NVMO member organised a meeting based on the availability of the experts. The participants were purposively sampled for their knowledge and practical experience, either or both in preclinical and clinical undergraduate medical education, to include a wide range of viewpoints and expertise perspectives from different settings. These experts had been in contact with students who behaved unprofessionally much more frequently than regular *frontline* educators; the experts are confronted with a selection of students who have shown to behave unprofessionally. Thus, they had developed a specific experience in the guidance of such students. All participants agreed with the procedures, and final scheduling was based on availability. The sample size was not determined ahead of the study. We aimed for sufficiency of the data, meaning that the data should be rich enough to accomplish the aim of the study [25]. The sufficiency of the data was determined by reaching consensus in the full research team.

The expert panel meetings were facilitated by a team consisting of two of the researchers (MM, AdlC, WvM, GC and/or RAK), who performed the data collection process in four phases [19, 20].

Phase 1: Each meeting started with a presentation of the three profiles of unprofessional behaviour as derived from our earlier research. (See Figures 4.1 and 5.1) Participants were not informed about the results of earlier expert panel meetings at other schools.

Phase 2: Participants were asked to independently and privately generate ideas in response to the following question: "What could we do to improve the profiles to enhance their usefulness for your work?" Each participant wrote down their individual ideas on several post-its.

Phase 3: In a Round Robin format, each individual idea for improvement was shared with the whole group by being read out. The ideas were discussed and clarified within the group, one at a time. All ideas were covered and similar ideas were clustered together into 'group ideas' on a flip-over chart. The facilitators ensured that all viewpoints were equally considered, all ideas were discussed and there was agreement about the clustering into group ideas.

Phase 4: The group ideas were given numbers and were written on a new flip-over sheet. Forms with five boxes were handed out so that each participant could write down the five ideas they deemed most important. The boxes were indicated by a five-point Likert type scale, where 5 points = most important and 1 point = least important. Each participant individually and independently (to ensure anonymity) ranked the group ideas into a personal top 5.

Before starting each meeting, participants were informed about the research protocol and ensured of confidentiality, after which their written consent was obtained. All meetings were audio-recorded and transcribed verbatim.

Data analysis

Ranking results

The group ideas and the ranking originating from each expert panel meeting represented the group consensus about refining the pre-existing profiles. (See Figure 4.1 and 5.1) MM and AdlC synthesized the group ideas from all five groups into final ideas, which were confirmed by the full research team. The ranking of the final ideas was established by adding up the rankings from all participants for each group idea, and presented as the percentage of all points.

Qualitative data

Two researchers (AdlC and MM) performed thematic analysis of the qualitative data generated from the expert panel meetings [22], aiming to develop a model that encompassed the attributes nominated by the participants. Using ATLAS.ti, we initially independently coded two transcripts of the group debates in expert panel meetings in an open manner. After several cycles of reading, coding, and discussion, we established a final set of codes and themes. MM coded all transcripts using this set of codes, discussing any difficulties with AdlC. We used memos, diagrams and minutes of research meetings to collect ideas that occurred to us as we moved through the analytic process. By iteratively checking our findings, we ensured that conclusions were grounded in the data. The results were finalised through discussions in the full research team.

Developing the pre-existing profiles concept into a final model

Finally, AdlC and MM implemented the ten generated ideas into the pre-existing concept, closely paying attention to the results from the qualitative analysis of the debates. The complete research team discussed the final model, and reached full agreement on the results.

Member checking

As a last step the analyses were presented to all participants for a final validation of the adaptations that were made to the pre-existing concept [25]. All participants were (by e-mail) asked to give their comments on the results of the study, including the ranking results, thematic analysis and the amended model.

Ethical approval

The Ethical Review Board of the Netherlands Association for Medical Education approved this study (dossier #: 770).

Results

Data sufficiency was reached after performing five expert panel meetings. These meetings took place at five different medical schools in the Netherlands; a total of 31 faculty participated,

including 21 females and 10 males. The backgrounds of the participants were as follows: 9 medical specialists, 6 psychologists, 5 educationalists, 4 general practitioners, 2 registered nurses, 1 psychotherapist, 1 ethics specialist, 1 general physician, and 1 basic medical scientist. The participants had gathered their experience by teaching and assessing students' professionalism as a frontline teacher for at least 5 years, and furthermore by having oversight over students' professional development, or by being active in remediation or being a member of a (professionalism) progress committee for at least 3 years. Each group consisted of five to seven participants. The meetings lasted between 100 and 125 minutes.

Primary results

Four types of primary results will be presented: (A) the NGT process ranking results, (B) the thematic analysis of the transcripts, (C) the development of the final model and (D) the validation of results by member checking.

A. NGT process ranking results

The five groups generated 162 individual ideas. After debating and ranking among the participants, only 37 of these ideas got at least one vote. Some of the 37 ideas were very similar, leading to a synthesis of the group ideas from different groups into ten final ideas. Combined, the three most prioritized final ideas received 60% of all voting points. See Figure 5.2 for the idea generating process and ranking into final ideas.

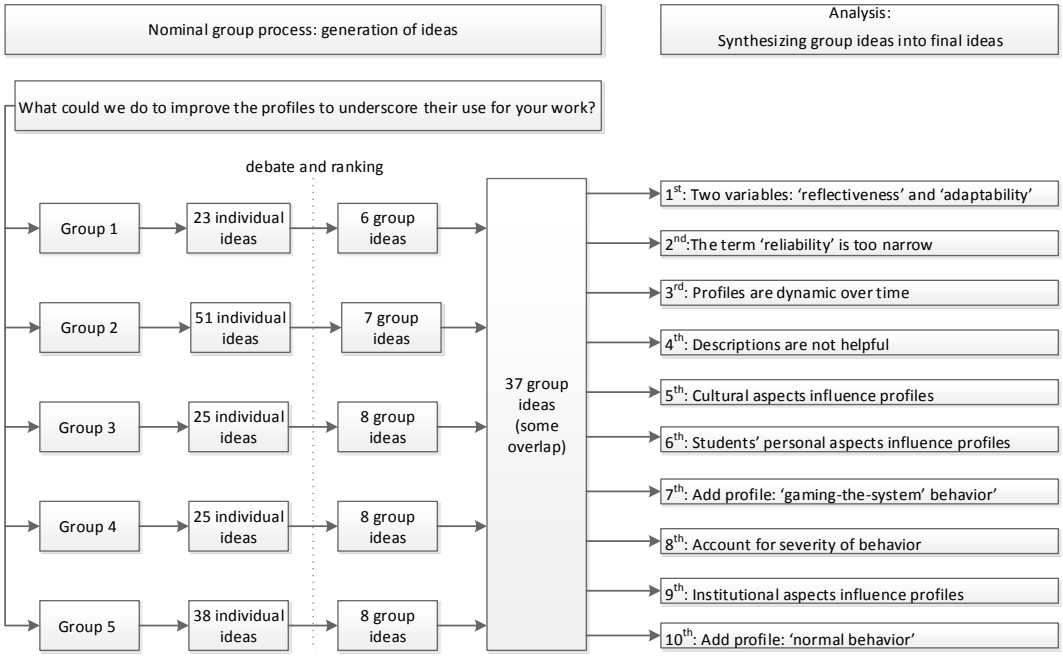

Figure 5.2 Generation of individual ideas, group ideas, ranking process and synthesizing into final ideas

B. Thematic analysis of the expert panel meetings

We found three main themes: (1) The profiles and the variable that distinguishes between the profiles, (2) The dynamic nature of the profiles over time, and (3) Causal factors for the unprofessional behaviour. These three themes will be discussed below.

1) The profiles and the variable that distinguishes between profiles

In all expert panel meetings participants were generally content with the profiles. They recognised 'real students' in them. Participants described the pre-existing profile *no reliability* as 'normal' behaviour. Any student, and also any physician, can have an accidental lapse. That is normal, and not problematic if the student listens to feedback and wishes to learn from the lapse. Participants stressed that the professionalism problems that accidentally happen are not limited to reliability concerns, but can be presented by all kinds of unprofessional behaviours, also including disrespectful behaviour, lack of integrity and poor self-awareness.

According to the participants, the pre-existing profile *no reliability, no insight* can be divided into behaviour that indicates reflectiveness, but lack of improvement and behaviour that indicates improvement, without reflectiveness. This way, participants identified an extra behavioural profile in which students seem to display improvement in professional behaviour, without having insight in the way their behaviour relates to the fundamental values of professionalism as adopted by their institution. This behaviour is described as socially desirable: being professional at the right time, the right place, towards the right people. Participants state that it takes time to ultimately recognise this behaviour as unprofessional. They describe the behaviour as *faking* or *gaming-the-system*. They expressed that this behaviour is worrisome since it is not sustainable behaviour in more challenging circumstances.

Experts recognised the pre-existing profile *no reliability, no insight, no adaptability*: behaviour that indicates no reflectiveness and no improvement of the student over time. Sometimes, behaviours in this profile are so severe that they might threaten patient safety, which thus warrants a punitive approach, instead of a pedagogical, remediating approach.

The distinguishing variable between the profiles, the *capacity to reflect and adaptability*, is not seen as one combined variable but as two distinct variables. Adaptation can be seen with and without reflectiveness, and vice versa. Some students do not have the possibility to adapt, although their reflectiveness is apparent, e.g. when physical or mental health issues or family difficulties play a contributing role. Participants defined the term *adaptability* as the student's willingness and ability to develop and improve over time. *Reflectiveness* was defined by participants not only as the ability to reflect on own behavior, but also as the willingness to do this.

2) The dynamic nature of the profiles

Participants stressed that students are not fixed in specific profiles, but the profiles form a

time continuum, and student behaviour varies in different times and in changing contexts. This implies that students can move from one profile to another. It also has consequences for the process of diagnosing a profile: Frontline educators need time to observe the student and to interact with the student to discover the right profile by observing how a student responds to feedback. Based on their perception at the end of their attachment they can ascertain the profile. Remediating faculty need assessments performed by different educators in different contexts to get the full picture over a period of time. Although they indicated that they often can 'diagnose' a profile at once, they always use remediating activities, and the students' response to these remediation activities was part of their diagnostic process in confirming the profile.

3) Causes for unprofessional behaviour

Unprofessional behaviour was attributed to personal circumstances, factors in the educational context and cultural differences.

Personal circumstances

Participants indicated that students' personal constraints influence their professional behaviour. This includes the lack of competencies, such as communication skills or time management and organisation skills. Furthermore, internal conditions, such as somatic or psychiatric illness of the student, or external circumstances, e.g. important life events or commitments outside the medical school can contribute to unprofessional behaviour.

Factors in the educational context

According to the experts, institutional aspects play a role in causing unprofessional behaviour. They mentioned that expectations for professional behaviour are not always made clear to both educators and students. Furthermore, the quality of the educators and the quality of the professionalism assessment method influence students' professional behaviour. Also, an important factor is that students often experience the educational context as stressful.

Cultural differences

Personal and professional values that form the basis for the assessment of professional behaviour differ according to culture, which makes the pre-existing concept difficult to apply to students with non-Western backgrounds. Differences of opinion about unprofessional behaviour, based on different cultural values, can lead to friction about actual behaviours in the workplace. Participants see such differences as difficult to overcome, since a student will not easily change internalised values originating from his/her upbringing. Especially the descriptions of behaviours do not seem to be applicable to non-Western students according to the experts.

In Table 5.1 the ten final ideas from the NGT-process are illustrated with quotes from the expert panel meetings.

Theme	Rank	Final idea	Quote
The profiles and the variable that distinguishes between the profiles	1	'Reflectiveness' and 'adaptability' are two distinct distinguishing variables	"Well, maybe there is a class of students who display poor reliability, good insight, and poor adaptability. That would mean that we could create four classes of student behaviour, instead of three"
	2	The term 'reliability' is too narrow to describe profes-sionalism concerns	"If students fail, and they are referred to us, that can be because they are very arrogant, that can be because they do not engage, that can be because of many other things than not being reliable"
	4	Leave descriptions of behaviours out	"... you might as well leave the descriptions of behaviours out; the crucial question is: How does the student handle feedback?"
	7	Add profile 'gaming-the-system behaviour'	"We see students who have been addressed about their behaviour, and subsequently do exactly what we asked them to do. They pass with desirable behaviours, without being changed fundamentally"
	8	Account for severity of behaviour	"Sometimes you see behaviour that does not fit in class 3; one would say: "I take this student from the clerkship right away, because it is unsafe, this simply cannot be", and I find profile 3 too mild for that"
	10	Add profile 'normal'	"I would say.... uhm... profile 1 is the ordinary... uhm... working student, and maybe also the ordinary physician, who now and then put foot in mouth, but if the behaviour is addressed... uhm... that they would know..."
The dynamic nature of the profiles	3	The profiles are dynamic over time	"The fact that someone does not change their behaviour can mean that there are so many things to handle, that, at that point in time, it is just not possible to adapt"
Causes for un-professional behaviour	8	Cultural aspects influence the profiles	"Many students from non-Dutch origin that I work with will never ask for extra support, because they have not been raised like that. They will listen, and maybe even admit their lapse, but they will never ask for help to improve"
	6	Personal aspects influence the profiles	"What might add is, that for each individual case you look at internal and external factors. Sometimes you see personality disorders. People can have psychiatric illness, or psychological problems. Some people are confronted with all kinds of external hindrances. These are the students who are referred to us. They have been struggling, and at the end of the day they just cannot manage"
	9	Institutional aspects influence the profiles	"Probably, not every teacher is as ...uhm....competent as we would want them to be. Do they have the courage that is needed to slow down a student early in the process by paying attention to feedback, and taking time to discover what is happening at that moment?"

Table 5.1 Three themes, ten final ideas and illustrating quotes from participants

C. Development of the final model

We incorporated the ten ideas to improve the profiles and the variables that distinguish between the profiles in the pre-existing concept, paying close attention to the results of the thematic analysis of the transcripts. These amendments are described in Table 5.2.

Ranking order	Idea	Changes made in the pre-existing concept to create a final model.
1	'Reflectiveness' and 'adaptability' are two distinct distinguishing variables	This prompted to a two-dimensional model including four profiles, distinguished by the variables 'reflectiveness' and 'adaptability'
2	The term 'poor reliability' is too limited to describe professionalism concerns	Accordingly, we removed the term 'poor reliability'
3	The profiles are dynamic over time	We added arrows to illustrate this
4	Leave descriptions of behaviours out	We left the descriptions out
5	Cultural aspects influence the profiles	We acknowledge this in the description of the model, but did not make any changes in the depiction of it, as this influence is applicable to all four profiles of unprofessional behaviour
6	Personal circumstances influence the profiles	This was acknowledged by incorporating the profile 'struggling behaviour'
7	Add profile 'gaming-the-system behaviour'	We added this profile
8	Account for severity of behaviour	We acknowledge that severe unprofessional behaviours can be part of each profile. This did not prompt us to change the model because for such severe unprofessional behaviours both the reflectiveness and adaptability of the student seem to be important
9	Institutional aspects influence the profiles	We acknowledge this in the description of the final model, but did not make any changes in the depiction of it, as this influence is applicable to all four profiles of unprofessional behaviour
10	Add profile 'normal'	We changed the name of initial profile 'no reliability' into 'accidental unprofessional behaviour'

Table 5.2 Adaptations that were made to the pre-existing concept as guided by participants' ideas

The highest ranked idea from the expert panel meetings was that *reflectiveness* and *adaptability* are two distinct distinguishing variables. This prompted us to devise a two-dimensional model of four profiles distinguished by two variables. (See Figure 5.3) The pre-existing profile *no reliability* is seen by our participants as normal behaviour, reflecting that unprofessional behaviour can accidentally happen. It is important that the student acknowledges the unprofessional behaviour, and demonstrates that he or she can learn from it. This profile is thus described as *accidental behaviour* in the final model. The pre-existing profile *no reliability, no insight* has been divided in two separate profiles. On the one hand, students' behaviour that indicates a student's insight without the possibility to adapt, in the final model described as *struggling behaviour*. On the other hand, students' behaviour that shows improvement, despite lacking insight, in the final model described as *gaming-the-system behaviour*. The pre-existing profile *no reliability, no insight and no adaptability*, describing a student displaying unprofessional behaviour without showing reflectiveness or adaptability over time, has not been changed. In the final model this profile is described as *disavowing behaviour*.

In the expert panel meetings attention has been given to causes for unprofessional behaviour. These ideas were among the lower ranked ideas to improve the pre-existing concept. The revised model does not depict these causes, as they can be equally relevant for any of the profiles.

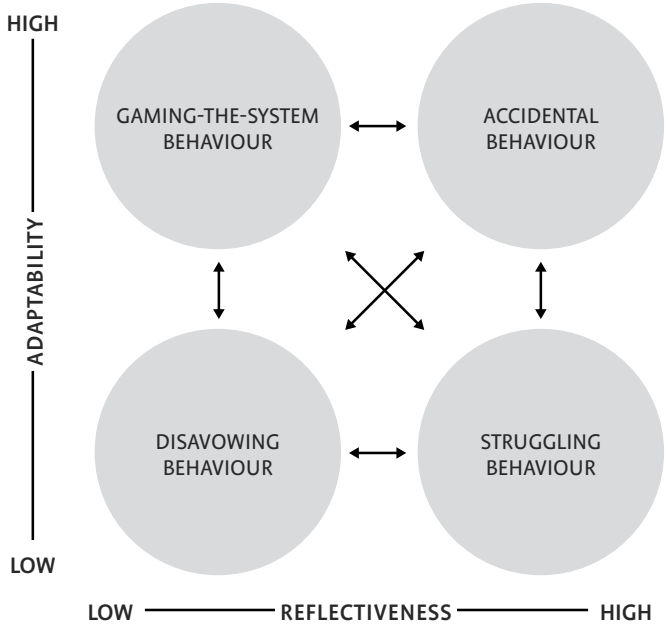

Figure 5.3 New two-dimensional model of unprofessional student behaviour

D. Validation of the results by member checking

After establishing all results, a draft of the results section of the manuscript was sent to the 31 participants of the study. They were asked to individually review the draft, and specially pay attention to Figure 5.3. Three participants had left their institution and could not be reached anymore. One participant was not able to review the manuscript due to time constraints. Twenty-five participants returned the email. All but one of them validated the revised model as depicted in Figure 5.3. Twenty of them delivered additional remarks on the draft of the results section. These remarks featured (1) the way of indicating that the profiles are dynamic, (2) the interdependency of *reflectiveness* and *adaptability*, and (3) the text of the results section. All remarks were discussed in the full research team. Based on this discussion we decided not to alter Figure 5.3. However, we incorporated the experts' remarks in the results and discussion sections of the manuscript.

Discussion

The purpose of this study was to refine a pre-existing research-based concept by adding opinions of professionalism experts from different contexts, thus developing a model for unprofessional behaviour profiles of undergraduate medical students. Expert educators participating in expert panel meetings collectively proposed ten ideas to improve the pre-existing concept. The results indicate that the variables discriminating the profiles are *reflectiveness* and *adaptability*. Furthermore, two additional profiles emerged: gaming-the-system behaviour and struggling behaviour.

Experts stressed the fluidity of the profiles, which means that students can move from one profile to another over time. Surprisingly, specific narrative descriptions of unprofessional behaviours appeared not to be important to the experts. We used these findings to construct a final model of four profiles and two distinguishing variables. This final model should guide medical educators to recognise unprofessional behaviours of undergraduate students, thus facilitating the identification of students who underperform in the competency of professionalism. The final model could also support the decision-making process to remediate or dismiss learners from further training.

The two variables discriminating between the profiles appeared to be *reflectiveness* and *adaptability*. This confirms earlier findings that reflective ability plays a role as a determinant for describing the thresholds between pass and fail for professional behaviour [28, 29, 30]. We add to these earlier findings that *adaptability* is also an important guiding factor in the decision-making process on remediation strategies or dismissal. A question that still remains is: "Are these two variables independent, or do they influence each other?"

Two new profiles were described. The first new profile was the profile of *gaming-the-system behaviour*. Experts expressed that this behaviour is difficult to detect, since teachers obviously find it difficult to recognise this behaviour. *Gaming-the-system behaviour* seems to be the display of desired professional behaviour based on external norms, without having personally internalised the values of professionalism. This brings up the question if *faking* or *gaming-the-system behaviour* is unprofessional, or a threshold phase in the learning process [31]. Or is it a way that students protect themselves from burn-out in the highly challenging environment of medical education? Our findings indicate the importance of the students' awareness of this situation. '*Fake it till you make it*' can be an effective strategy, as long as the learner is aware that it is a means to an end [32, 33]. The second new profile, *struggling behaviour* is widely acknowledged in the medical education literature about burnout [34]. Also in this case, the student's awareness of the situation seems crucial for further development.

Experts stressed that students can move from one profile to another over time. Our findings indicate that reflectiveness and adaptability are important aspects to consider in making decisions about seriousness of the professionalism deficiency. Students' response to feedback, and improvement thereafter is part of establishing the fitting profile. Teachers typically take a snapshot, act accordingly, and later re-evaluate the student's performance to ascertain or modify the profile chosen. Possibly, not only students' profiles are dynamic, but also educators' opinions about them. This warrants the programmatic assessment method, in which performance is assessed over a period of time, by combining assessments of different educators [35]. This also implies that remediation activities should be part of the normal educational process, and integrated in the medical education program [28].

Descriptions of specific behaviours turned out to not be discriminative. Possibly the narrative descriptions that came with the initial profiles were too detailed and context-specific. In contrast with frontline educators, who seem to focus on behaviours, expert educators pay more attention to students' reflectiveness and improvement. This finding is a contribution to the existing literature about detecting underperformance, in which behaviours, attributions for behaviours and consequences of behaviours have been described [2, 8, 12]. Our findings confirm that reflectiveness is related to professionalism concerns [30]. Accidental unprofessional behaviour is not seen as problematic, but a lack of reflectiveness and a lack of improvement after feedback on observed unprofessional behaviour are seen as indicators that a student needs remediation.

The pre-existing concept was based on frontline (physician)-educators' evaluations of professional behaviour on evaluation forms, and the final model of profiles is based on opinions of expert faculty. We hypothesize that the differences between the pre-existing concept and the final model could be explained by the different approaches of frontline (physician)-educators and experts to students' unprofessional behaviour, in several phases of the process of recognising unprofessional behaviour. (See Table 5.3)

Phase in the diagnostic process	(Physician)-educators (who delivered data for the pre-existing concept)	Expert professionalism-educators (who delivered data for the final model)
Observing	Observe students for a short time	Observe students for a longer time
Identifying	Primarily identify behaviours as reliability problems	Identify unprofessional behaviour as a lack of reflectiveness and improvement
Acknowledging	Need time to acknowledge unprofessional behaviour	Acknowledge unprofessional behaviour instantly, and confirm afterwards
Explaining	Account for students' intentions	Account for personal, contextual and cultural causes
Remediating	Strive to improve actual professional behaviour	Strive to stimulate longitudinal professional development

Table 5.3 Different approaches to students' unprofessional behaviour by frontline (physician)-educators and by experienced professionalism educators

We used the rankings of the expert panel meetings to generate consensus on ideas, and the thematic analysis to understand and describe the underlying reasons and mechanisms for the amendments in order to come to the model of unprofessional behaviour profiles. Using the NGT method in combination with thematic analysis of the expert panel meetings allowed us to refine and develop the pre-existing concept in three ways. (1) We were able to incorporate practical experience from faculty in the pre-existing concept, which originated from empirical evidence. (2) This experience was derived from professionalism experts, while the pre-existing concept was based on information from frontline medical educators. (3) Furthermore, experience from different medical schools supported the research findings from one institute (VUmc). These three aspects make it likely that the findings, reduced to a model, display the reality of educational practice, and will be applied by medical educators [17, 18].

Limitations

A limitation of the method we used is that the five expert panel groups did not interact with each other, and thus participants were not able to comment on ideas from other groups. Nevertheless, the 1st and 3rd ranked ideas came forward from all groups, and the 2nd ranked idea from four of the five groups, indicating the relevance of these ideas. We addressed this limitation by performing a member checking of the combined results of all expert panel meetings. Another limitation is that the results were influenced by the different educational cultures prevalent in the participants' institutions. An example is that the influence of cultural differences on professional behaviour was especially indicated by the expert groups from those medical schools that are known for having students from diverse (international)

backgrounds. To account for any blind spots, we incorporated all ten group ideas into the final model. Furthermore, as we limited this study to medical schools in the Netherlands, results are not plainly generalisable to an international context.

Implications for education and future research

The profiles can be useful for frontline educators because identification of a certain profile can help to decide if a student needs to be referred for further guidance after the teacher's course has been finished. Frontline educators should not only focus on reliability issues, but also on a student's reflectiveness and adaptability, which are seen as essential aspects of professionalism by expert faculty. The profiles can be useful for individuals with remediation oversight to follow the student's development after remediation has been applied, especially students' reflectiveness and adaptability.

Educational researchers have to investigate if the profiles are a means to determine effective remediation. *Reflectiveness* and *adaptability* could possibly be incorporated as thresholds for remediation in frameworks that are under development [4, 28]. Based on the findings of our study, we postulate the following remediation strategies for each of the profiles that need to be studied further for outcome effectiveness. For the profile of *accidental behaviour* the student needs to develop the notion that anyone can have a lapse based on the combination of personal, contextual and cultural causal factors, and that the goal is to let the individual learn from lapses, support each other in doing so, and collectively learn from these accidental unprofessional behaviours. For students who display *gaming-the-system behaviour* the relevance of professional behaviour needs to be made clear, so that they can internalise the professionalism values. The student with *struggling behaviour* needs support for the internal or external causal factor for the unprofessional behaviour. This might include guidance from resources outside the medical school. The *disavowing behaviour* seems to be the most challenging to remediate. These students initially need to develop reflective skills, and be motivated to try out alternative behaviour based on the feedback provided to them. We intend to address these hypotheses in a future study. Furthermore, it would be interesting if new descriptions or vignettes that fit the profiles could be developed through research. The hypothesized differences between frontline teachers and expert teachers as described in Table 5.3 also need to be confirmed by research.

Conclusion

This study used expert educators' opinions on the evaluation of professional behaviour in undergraduate medical education to refine a pre-existing concept of profiles of unprofessional behaviour in medical students and to develop it into a final model. While evaluating professional behaviour, expert faculty want to follow students over time to discover students' adaptability and reflectiveness. Reflectiveness and improvement over time are considered more important than displayed unprofessional behaviours. This implies that remediation of unprofessional behaviour should primarily focus on these two aspects, and is preferably designed as a part of the regular medical curriculum. The empirical findings of the current study can have consequences for the choice of remediation strategies and could add to frameworks on success and failure being developed in medical education systems, aiming to define expertise to conduct effective remediation.

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“People’s behaviour makes sense if you think about it in terms of their goals, needs and motives.”

Thomas Mann

CHAPTER 6

A road map for attending to medical students' professionalism lapses

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ABSTRACT

Aim

The purpose of this study was to develop a road map for educators attending to medical students' professionalism lapses, aiming to offer an empirical base for approaching students who display such lapses.

Methods

Between October 2016 and January 2018, 23 in-depth interviews with 19 expert faculty responsible for remediation from 13 medical schools in the United States were conducted about the way they handle students' professionalism lapses. Three researchers independently completed three rounds of coding. Data collection, coding, and analysis were performed in a constant comparative process. A constructivist grounded theory approach was used to develop an explanatory model for attending to students' professionalism lapses.

Results

Based on participants' descriptions, the authors developed a 3-phase approach for attending to professionalism lapses. In phase 1 experts enacted the role of concerned teacher, exploring the lapse from the student's perspective. In phase 2, they functioned as supportive coach, providing feedback on professionalism values, improving skills, creating reflectiveness, and offering support. In phase 3, if the student did not demonstrate reflectiveness and improvement, and especially if (future) patient care was potentially compromised, participants assumed an opposite role: gatekeeper of the profession.

Discussion

An explanatory model for attending to professionalism lapses that fits in the overarching 'communities of practice' framework was created. Whereas phase 1 and 2 aim at keeping students in the medical community, phase 3 aims at guiding students out. These findings provide empirical support to earlier descriptive, opinion-based models, and may offer medical educators an empirical base for attending to students who display professionalism lapses.

Introduction

Attending to professionalism lapses of undergraduate medical students is a demanding and time-consuming task for educators [1]. How to manage professionalism lapses is not taught, nor does expertise come easily [2]. Despite its acknowledged importance, there is no evidence indicating which behaviours should be remediated to prevent future problems, nor which behaviours are not amenable to change. Knowledge about managing professionalism lapses will provide institutions with evidence based tools by which to make decisions about their students (i.e., whether a student should be allowed to graduate). An empirically derived model that can guide medical educators to make these decisions about professionalism lapses is required.

Teaching, modeling, and monitoring professionalism in undergraduate medical education are crucial for the delivery of good patient care by future physicians [3-8]. Previous research shows that students' professionalism lapses occur in four domains, the so called 4 I's: lapses in *involvement*, *integrity*, *interaction* and *insight* [9]. Additionally, patterns of professionalism lapses indicate that a lack of reliability, insight and adaptability are aspects of unprofessional behaviour [10-12]. Contributing factors are often a combination of individual influences, such as deficits in cognition, skills and attitude [13-14], and contextual influences from the learning environment [15-17]. Despite a growing understanding of (un)professional behaviour, better identification and remediation is hampered by educators' reluctance to report it [18-21]. Educators often consider remediation of lapses difficult and ineffective [18, 22-24]. Also, a wide variability among schools regarding professionalism remediation practices can be observed [25-26]. Educators would be more willing to report professionalism lapses, if policies regarding the management of professionalism lapses and the effects such management has on the learner were clearer to them [18].

Models for managing professionalism lapses have been described in several theoretical papers. These models are of two types: specific models that target professionalism concerns, and general models that are applicable to knowledge, skills or attitude problems [6, 8, 27-30]. See Table 6.1 for an overview of these models and their major concepts.

Existing models are based on different levels of (under)performance of learners. In each model, the different levels have specific actors, rules and regulations that the literature does not adequately describe. So far, it is unclear what constitutes the thresholds between the levels. From these prior publications, we can conclude that there is a need for empirical evidence that supports a more detailed and explanatory model for attending to professionalism lapses.

Therefore, the goal of this study was to explore views of expert faculty on the guidance of unprofessional behaviour in medical students, informed by behavioural profiles outlined by previous research [10]. These empirical data were used for the development of a model: a road map for attending to medical students' professionalism lapses. Our underlying

Model	Author	Major concept
The disruptive behaviour pyramid	Hickson et al., 2007 [27]	Pyramid with five levels of (un)professional behaviour and corresponding interventions: 1. Professional behaviour 2. Single 'unprofessional' incident: 'Informal' intervention 3. Apparent pattern: Level 1, Awareness intervention 4. Pattern persists : Level 2, Authority intervention 5. No change: Level 3, Disciplinary intervention
Model of a program for remediation of performance deficits of medical trainees and practicing physicians	Hauer et al., 2009 [8]	Model describing four steps: 1. Competence assessment: multimodal assessment 2. Diagnosis of deficiency and development of an individualised learning plan 3. Instruction/remediation activities with deliberate practice, feedback and reflection 4. Focused reassessment and certification of competence Mentoring and coaching takes place during steps 2 and 3.
The disruptive behaviour pyramid describing a possible approach to unprofessional behaviour	Van Mook et al., 2010 [28]	Additions to Hickson's model , regarding institutional responsibilities for the levels : • Level 1 and 2: Low threshold for reporting lapses • Level 2, 3, 4: Adequate faculty training and instruction • Level 4 and 5: Strong leadership
A stepped approach to intervention	Levinson, 2014 [6]	Pyramid with four levels of unprofessional behaviour and corresponding interventions: 1. *Minor to moderate single event*: Level I, Coaching = Coaching in the moment 2. *Major single event or multiple minor to moderate events*: Level II, Awareness = Counseling after the moment 3. *Recurrent behaviour after counseling*: Level III, Consequences = Correction and consequences 4. *Refractory behaviour despite improvement plan*: Sanction
Four-Tier Continuum of Academic and Behavioural Support (4T-CABS) Model	Stegers-Jager, 2017 [30]	Four levels of support for students who are experiencing academic and/or behavioural difficulties. 1. Adequate instruction 2. Targeted small group interventions 3. Individualized support 4. Exit support
A five-zone model of rules and practices associated with different performance levels	Ellaway, 2018 [29]	Model describing 5 zones of performance and progression, each with corresponding remediation strategies: 1. Zone 1 = Performance at or above expected level 2. Zone 2 = Performance below expected level: Correction 3. Zone 3 = Performance below acceptable level: Remediation 4. Zone 4 = Performance below unacceptable level : Probation 5. Zone 5 = Performance below unacceptable level : Exclusion

Table 6.1 Existing models for attending to (professionalism) performance deficits

research question was: How do expert educators, who are responsible for remediation of professionalism lapses, make choices for interventions for undergraduate medical students who display lapses in professionalism?

Method

Study design

We employed a grounded theory approach to conduct this study [31, 32], as it allowed us to develop an understanding, and propose a theoretical model regarding the management of professionalism lapses. A grounded theory approach is often used as an inductive method but can also be used to build further on existing knowledge [33]. In this study, the data acquisition and analysis was guided by findings from our previous research [10, 35].

Reflexivity

We used a constructivist paradigm, in which knowledge is seen as actively constructed and cocreated as a result of human interactions and relationships [35]. Among the author team, we are all educational researchers and/or medical educators experienced in teaching and guidance of medical students' professional behaviour. Our shared vision on professional behaviour is guided by this experience and by our earlier research on this topic. MM, GC and RAK are general medical doctors, WvM is a practicing clinician, AT is an education researcher and AdlC is a linguist. MM and WvM are actively involved in the guidance of students who display unprofessional behaviour. As the other authors have more distance from the daily practice of medical education, they ensured that conclusions were not drawn too prematurely, and were grounded in the data. To consider our own contribution to the research process, and thus to enhance the trustworthiness of our findings, we kept an audit trail that was regularly discussed with each other and debated in research meetings of the Department of Research in Education, VUmc School of Medical Sciences, Amsterdam.

Procedures and participants

Between October 2016 and January 2018, we iteratively collected qualitative data through 23 open-ended in-depth interviews with 19 experts from 13 medical schools in the United States. A maximum of 2 participants per school were included. Four participants were interviewed twice as part of the iterative approach. Ten participants were current or former deans or associate deans, 7 were curriculum directors, and 2 were faculty members responsible for professionalism remediation at their school. All had, for at least three years, the task of supervising the remediation process for professionalism in their school and will in this article be referred to as 'professionalism remediation supervisor' (PRS). They were identified through accessibility and snowballing, meaning that people who were willing to participate in turn referred others. We sampled PRSs from 8 public and 5 private medical schools from 8 states across the United States, including

schools founded between 1824 and 1972, to explore multifold viewpoints and perspectives from settings that possibly differ in the way professionalism lapses are managed. MM conducted the interviews, in which findings from a previous study were used as starting point for an exchange of ideas about managing professionalism lapses. Participants were aware that MM is an experienced medical educator and researcher of professionalism. All interviews were audio-recorded and transcribed verbatim, after which the recording was destroyed. We continued sampling until the research team members collectively considered that sufficiently rich data had been gathered to have an adequate understanding of the processes underlying the choice for attending to professionalism lapses, and to be able to construct a model in the form of a road map [36].

Data analysis

Three researchers (MM, AdlC and RAK) performed the qualitative analysis, concurrent with data collection. Using ATLAS.ti, (Scientific Software Development GmbH, Berlin, Germany) initially one interview transcript was independently coded, (by MM and RAK) using, but not limited to our previous research findings. For the initial coding phase we used an early coding scheme originating from the pilot interview, which evolved in a constant comparative process of reading, coding, and discussing. On the basis of the initial findings we employed additional sampling. After analysing these additional data, a final set of codes and categories was established, and a preliminary model was drafted. For the second coding phase, MM recoded all transcripts using the final set of codes, discussing difficulties with the other coders. MM and AdlC went through the data a third time to especially look for any cases that would challenge the preliminary model. During the analytic process we used memos, diagrams and minutes of research meetings to collect ideas. We raised the results from the categorical to the conceptual level through discussions with the full research team. By exploring relationships between the codes and themes, we aimed to understand the meaning of the data, thus finalizing the road map model for attending to professionalism lapses.

Ethical approval

This study was qualified as exempt from ethical approval by the University of California, San Francisco Institutional Review Board (reference no. 176957).

Results

On the basis of the interviews, we visualized how educators attended to professionalism lapses as a 3-phase process. Phase 1 was characterized as '*Explore and understand*', phase 2 was the '*Remediate*' phase, and phase 3 was the '*Gather evidence for dismissal*' phase. The threshold between phases 1 and 2 appeared to be constituted by the underlying causes for the lapse. The threshold between phases 2 and 3 appeared to be constituted by the student's reflectiveness and (lack of) improvement.

Each of the three phases differed in the goals to be achieved, the individuals involved, the type of activities undertaken, and the reasoning behind decisions that were made. Individuals that the participants described as being involved in remediation were the (associate) dean, course directors, regular (clinical) teachers, remedial (clinical) teachers, experts outside the school, members of promotion committees and sometimes members of Student Honor Councils. For each phase these individuals fulfilled different roles. In phase 1 these individuals had the role of a concerned teacher, in phase 2 of a supportive coach, and in phase 3 they became gatekeepers of the profession. Participants' remarks illustrating each of these phases follow; speakers are identified by participant number.

Phase 1: Explore and understand

After a student had been cited for a professionalism lapse, the PRSs reported holding a conversation with the student, in which the PRS initially sought the student's understanding of what happened and the emotions regarding the lapse.

> The first question that I ask the student when he comes into my office is probably just: "Explain to me what happened."(P2)

In this phase the PRS was tasked to understand what personal or contextual factors influenced the behaviour.

> We have to look at what the underlying issues are, whether it's you're just not taking it seriously, or there are other issues going on in their life, or is it drug and alcohol abuse or is it depression? Any number of things. Knowing what the underlying features are is much more important to us than just the behaviour itself. (P12)

One PRS recognised that an additional and important goal of the initial conversation was to show that the school takes professionalism seriously. PRSs felt that students are developing physicians who can accidentally behave unprofessionally. Hence, in phase 1, the PRS assumed the role of a concerned teacher who aims to support and help, not to punish the student, as is evidenced by this quote:

> Even though I'm not going to penalise the student, they have to come and talk to me and they know that their behaviour was noticed. I think that's kind of powerful itself. Without any penalties or anything like that. For someone simply to know: "Oh, actually, they take this seriously." (P12)

In this phase, PRSs reported often encountering a conflict of interest about being allowed to 'diagnose' a learner.

Personal factors	*No knowledge base of professionalism* *Competency deficits* *Personality disorders* *Asperger or autism spectrum type symptoms* *Other mental health issues* *Physical health issues* *Substance abuse* *No motivation for medical school* *Language difficulties*
External factors	*Family issues* *Financial challenges*
Interpersonal factors	*Racist micro-aggressions* *Different cultural expectations* *Hierarchy*
Contextual factors	*Professionalism expectations have not been clarified* *Feeling overwhelmed by stressful circumstances in the workplace* *Frustration about organisation of health care* *Learning environment not as good as it should be* *High expectations in medical school* *Poor role modeling*

Table 6.2 Contributing factors to lapses in professionalism according to PRSs

> I'm very, very reluctant to give any student any kind of diagnostic label whatsoever. You know, there are clear, strong reasons for that. At the same time, it's impossible for me to eliminate my mental health knowledge and insight from my role as an educator. (P5)

Interview responses show that the PRS and the student would ideally arrive at a mutual understanding about the contributing factors for the professionalism lapse, which were classified as personal, external, interpersonal, or contextual. See Table 6.2 for a list of contributing factors that were mentioned by the participants in this study.

In the case that both the PRS and the student were of the opinion that the lapse was accidental, and there was no further need to prevent repetition, participants indicated that the student continued his or her education in the normal curriculum. If both agreed that the student needed further support) e.g., to fill in a knowledge gap or to develop certain skills), the student was offered remediation, and phase 2 commenced.

In the case of unlawful behaviours, the student sometimes immediately moved to phase 3. It seemed that such immediate dismissal was exceptionally rare and would only be considered in the case of an extreme event. As one participant stated:

> Although, I would say that even for dismissal, it's unusual to be an event of such magnitude in the absence of other data that would result in dismissal. (P16)

Phase 2: Remediate

The goal of this phase was to improve students' ability to reflect, and for students to overcome identified deficiencies in knowledge, skills and competencies that contributed to the professionalism lapses. Therefore, individual support was offered for difficult personal factors or external contributing factors for the lapse, although participants acknowledged that these issues were hard to solve. In collaboration with the student, a remediation plan was set up that described interventions tailored to the student's personal needs. PRSs described creativity in designing remediation interventions, and considered different options, each with its specific goal: assignments to improve the knowledge base of professionalism and to clarify the consequences of unprofessional behaviour for (aspiring) physicians and patient care; skills' training to improve specific skills and create the student's awareness about own performance; one-to-one mentoring to teach values and offer guided reflection on experiences. PRSs often chose a core faculty member with adequate expertise to conduct the remediation.

> They're often people who we know do this well, but they're respected faculty. Students respond to them well, students respect them. Handpicked, yeah. (P10)

In this phase the PRS and remedial teachers were described as supportive coaches. The expectations and consequences of not reaching the goals were set out clearly, including a time frame in which improvement must be reached:

> You would probably say if we don't see an improvement here, we're going to take this to the Professionalism Committee or we're going to take this to the Promotions Committee. You're at risk of being dismissed for unprofessional behaviour if we don't see an improvement here. (P9)

Participants mentioned an unintended effect of professionalism remediation. Some students seemed to 'play the game', which was described by the participants as displaying desired behaviours to satisfy their educators, without having internalised the values of professionalism:

> Sometimes the student succeeds not because we have helped them reach an epiphany, but they have decided that they will play the game and they will make it right. They will follow the rules, they will cross their t's, they will do what is necessary: "I'll do it and then I will just get through this place." (P12)

This type of unprofessional behaviour was described by the interviewees, yet no ideas on how to deal with the 'gaming' student came forward from the data.

Phase 3: Gather evidence for dismissal

The threshold between phases 2 and 3 was crossed if the problem appeared to persist despite remedial teaching, and if the student displayed dishonest or even unlawful behaviours. In these cases, patient safety was deemed to be threatened:

> When things are severe in that regard, we have concern for patients, for public safety, then we make use of that. (P17)

Sometimes participants reported a student lacking insight into the consequences of his or her behaviour for working in a medical environment. Consequently, the student was not willing or able to reach the professionalism expectations. According to PRSs this could result in repetitive professionalism lapses without improvement, despite individualised remedial teaching:

> If the student doesn't see that what they're doing is a problem and doesn't change, they're likely to repeat behaviour. That's what gets students dismissed from medical school. (P4)

In phase 3, PRSs were of the opinion that further remediation would not be effective anymore. As one educator stated:

> I don't have a … I have a pessimistic feeling at the beginning, but I try to keep hope. There have been a handful of students I just felt like it would take … The kind of work it would take to get them to have that insight or the ability wasn't in our tool kit. (P14)

Strong evidence had to be obtained for dismissal, through very clear processes:

> We have to demonstrate that we've done everything … (P14)

> You have to have a committee, you have to have clear processes, before people can get dismissed. There's only two ways you can be promoted or dismissed. It's the Judicial Board or the Committee of Student Promotion. Those are the only two ways. (P6)

The responsibility for deciding about continuing the studies was not in the PRS's hand, but belonged to a promotion committee. Promotion committees could be reluctant to take the tough decision to dismiss a student:

> I've been in four medical schools and the culture is the same in all those schools. There's a real reluctance to dismiss students once they're admitted to medical school. There's a lot less reluctance to dismiss students from lots of other academic programs than there is in medical school. (P9)

In phase 3, PRSs took up a completely different role than in phases 1 and 2: They became the gatekeepers of the medical profession. Although they took this role seriously, they found it difficult to conclude that a student should not be allowed to become a doctor. PRSs had to notify the medical school promotion committee with information to justify dismissal. Going from collaborator to opponent, PRSs experienced a conflict in choosing between the interest of the student and the interest of health care and patients:

> I think there's always a bit of a difference to give the student an opportunity to succeed. Sometimes the people making the decisions about whether or not a student can come in, it's a committee that's different from those who have been working with the student. It can be good that people don't get tied up in the personal relationship. It can be bad if the people making the decisions don't seek or get input from everyone who's been involved with not only getting the student's perspective, but everyone's else, and knowing what some of the problems were. (P13)

Furthermore, participants acknowledged that remediation is a demanding task that has to be shared among a group of teachers:

> The sad part of what happens is — I had this position now for over 15 years — that I find that each school the people I know that are good at this ... I have to be careful not to just continually use them repeatedly. First of all, it tires them out. You also then are giving other people opportunity back when there's opportunity to learn how to do this. (P1)

The road map model

Analysing and relating the data prompted us to a road map model that describes the process of attending to professionalism lapses of medical students. Figure 6.1 depicts this road map. PRSs consider the first phase as regular teaching, and only the second phase as remediation. If, after a concerted effort to remediate unprofessional behaviour, the conclusion is drawn that the student should not be allowed to continue the medical studies, the third phase would start. In this last phase, the role of the PRS as gatekeeper of the profession competes with the role of concerned teacher and supportive coach.

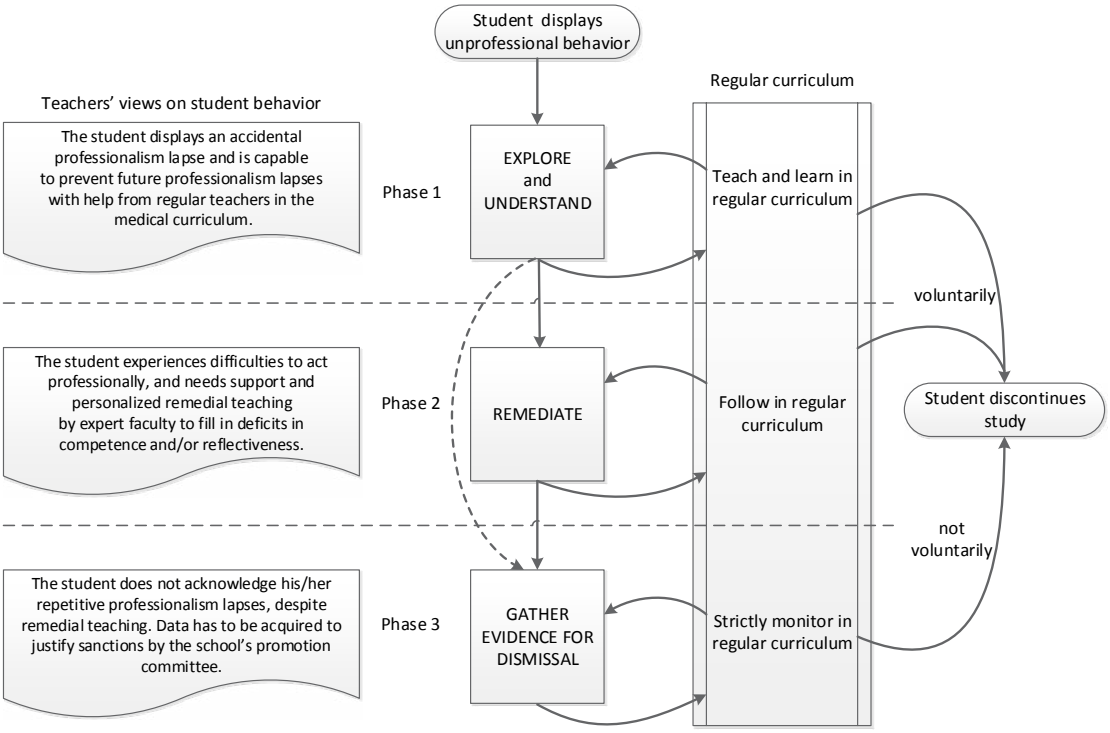

Figure 6.1 A road map for attending to professionalism lapses in medical students

Table 6.3 shows participants' quotes delineating examples of student cases per phase: two that fit neatly into each phase, and one that does not as well.

Phase	Fit/no fit	Participants' quotes delineating student examples
Phase 1	Examples that fit	I've definitely worked with quite a number of students where there's a lot of shame and remorse and guilt. They did something they knew instantly ... and they did it for all sorts of reasons, and it's clear both from what they say about themselves and what my instincts are in talking to them that they will never do it again. That was all the feedback they needed. (P14)
		We had a student who did not actually know how to use email appropriately, when we followed up on this and discussed it, it turned out that somehow she had set up an email folder where all the messages that had the exclamation point, or the high important messages, were all going to a folder that she never looked at. (P17)
	Example that does not fit neatly	It's one of the first things we do, ask the student how they feel about what happened. And when you get that remorseful student that says: "I'm so sorry, I had no idea, I will not do it again. I will change," it makes you feel so much better because that's the one that's easier to remediate. But then like I said you sometimes you have a student that will say that, but they're really not saying that. Do you know what I mean? They know they have to pass you. (P11)
Phase 2	Examples that fit	I think about the students who are just late to things, or turn things in, they understand that it wasn't the right thing to do, but the rest of their world is chaos, and they are not able to organise themselves enough to meet some of the expectations or the rules. They have complete insight, and they would, if they were in a better place, have better adaptability in terms of being able to right this issue, but they have too many stressors, or they're lacking some skills. (P17)
		I've had a few experiences where students come and they're remorseful. They're quite sad because they don't feel like the things they have been told are anything they have any agency over. That's the kind of able versus not able. They are willing, but unable, or at least they feel unable. (P14)
	Example that does not fit neatly	I still remember one of my students, who is graduated now... I am afraid to look up what he's doing now because I'm just worried he's not providing great patient care. He slipped through the system and I think it's a failure on our part, my part, for letting a guy like this graduate and I think that was the one that kind of triggered my thought .... Because I really thought he was responding to my feedback. And we do know that people smile enough, they finally get happy. We know that students fake it enough, they actually suddenly do good. So I guess I could be on the optimistic side and say maybe he's gonna come out the right end. I guess trying to be responsible about my students, almost like my children going out into the world, I would feel really bad if they did not turn out to be good, and did bad things right? And it's almost like a parent right? And I guess you just have to realise you have only so much control. (P11)

Table 6.3

Phase	Fit/no fit	Participants' quotes delineating student examples
Phase 3	Examples that fit	Obviously, mental health and substance abuse are the most challenging situations that clearly can impact a student's performance, and they're challenging to us because number 1, we worry about the student working in the clinical context and protecting patients. Number 2, our experience is that mental health and substance abuse are often paired with the most limited insight of the student into their homes. Maybe that's part of the disease process. A student is really, I think in a difficult situation, where they're obviously impaired or in denial or their illness prevents them from having the insight and they want to proceed on. Sometimes the best thing we can do for a student who is impaired or otherwise underperforming is to get them out of the curriculum before they start failing courses. (P12)
		And not that I … just because it's a common language, not because I ever made time to go see some of my learners, but they often end up being a combination of narcissistic and anti-personality disorder combination. That ends up being this profile of having no insight, remain unreliable and then unwilling to be adaptable. (P18)
	Example that does not fit neatly	The student was disrespectful to his group mates. This continued for 2 years and no matter what you've done. He started fighting the faculty. He did not like PBL. He thought that this was the wrong place for him. He did not want to accept the process. Did not buy into it, and he fought us all the way through. I was literally involved with this. This is many years ago. Ten years ago. Then he went on to (*another medical school*) and haven't had any problems. What I think happens in this kind of cases, is that they learn something after all, and when they move to a new place, and they're less angry, and they know the rules of the game by then, they start anew. (P2)

Table 6.3 Participants' quotes delineating examples of student cases that fit neatly, and do not fit neatly in each of the three phases.

Discussion

The purpose of this study was to create a model for attending to professionalism lapses by unraveling how faculty responsible for professionalism decide about interventions for students who display lapses. Our findings can be grouped in three phases: (1) *Explore and understand*, (2) *Remediate*, (3) *Gather evidence for dismissal*. In addition, results suggest that clear thresholds exist between these phases. The threshold between phases 1 and 2 is determined by the mutual understanding of PRS and student that remedial teaching is necessary, based on the perceived contributing factors of the lapse. A lack of reflectiveness and adaptability, as evidenced by an ongoing pattern of lapses despite remedial teaching, is seen as a reason to proceed to phase 3, and thus forms the threshold between phases 2 and 3. Participants expressed that a lack of reflectiveness and adaptability can lead to potential compromises of patient safety. PRSs have different roles in the three phases, which can create conflicts of interest. The road map delineating the three phases provides a guideline to faculty for attending to professionalism lapses of undergraduate medical students.

What this study adds to existing models

Our findings provide empirical support to earlier proposed models more generally describing phases in the process of attending to professionalism lapses [6, 8, 27-30]. What we designate as phase 1 resembles the first phase in all previous models: the 'cup of coffee' conversation as proposed by Hickson and colleagues [27]. Our findings indicate that in phases 1 and 2, the approach to remediation is guided by the contributing factors for the behaviour, and how the student responds to feedback. This finding contrasts with existing models in which the phases are based upon the perceived severity of the professionalism lapse [6, 8, 27-30]. Also, according to previous research, severity of the behaviour is most often cited as the reason for dismissal from school for professionalism deficits [24]. We do confirm that remediation is scaled up if the student does not show improvement of performance, despite remedial interventions: recurrent professionalism lapses, regardless of the cause, point to phase 3. In contrast, according to the findings in our study, in the last phase of the process neither the severity of the behaviour, nor causal factors seem to be important. We found that a student's lack of insight and improvement determines the threshold to the last phase. This is in line with Krzyaniak and colleagues' findings among residents [12]. If a student does not show progress in reflectiveness and adaptability she or he will no longer be absorbed into the culture of the community of practice. This can lead to dismissal. These findings add to existing models [6, 8, 27-30].

Kalet and colleagues advocate that remediation should be a part of the curriculum, which is supported by the findings of our study [37]. Remedial strategies, as applied in phase 2, do not in essence differ from normal teaching methods. The difference is that the remedial teacher needs to have 'above average' skills. PRS participants in this study confirmed that remediation is a demanding task for which they need to 'handpick' remedial teachers, and give support to these individuals because their work can be energy consuming [1]. Clearly, faculty could benefit from working together to share their experiences and improve expertise in the medical school [2].

Congruent to the normal curriculum, participants sometimes noticed 'gaming-the-system behaviour' of their students, meaning that students show desired behaviours without having incorporated the professional values. Possibly, the focus on behaviours and professional development diminishes the attention for traditional virtues [26]. This finding confirms that the knowledge base of professionalism values is foundational, and that skills training has to be combined with activities to improve the student's professionalism values to prevent such behaviour [5, 6].

The phases and the community of practice

A surprising insight was that the different remediation phases could be interpreted using the framework of communities of practice to add further insights to attending to professionalism lapses [38]. As Cruess and colleagues state, this framework can serve as the foundational

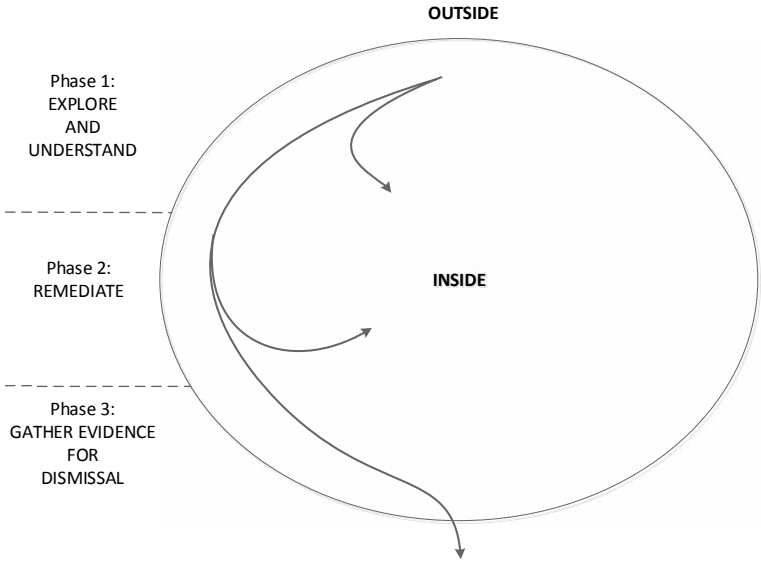

Figure 6.2

theory for medical practice, as it "does not in any way affect the validity or usefulness of other theories", yet can provide a useful background for most other theories [39]. If we view medical practice as a community of practice, the student journey at the medical school progresses from legitimate peripheral activities to full participation and membership, coming closer and closer to the core of the community. Professional behaviour can be seen as a common value of the community, practiced by those in the core — competent physicians. Unprofessional behaviour, however, is not the standard in the community, and can be a signal that a student needs help in her or his journey into the community.

Taking this a step further, we can look at the relationship between our 3-phase model of attending to professionalism lapses, and the communities of practice framework. (See Figure 6.2)

In our 3-phase model, the first phase assumes that the student is still in the process of joining the community. There has been a lapse in professionalism, yet the approach to the student is friendly, open, and helping. The individuals involved in remediation make a concerted effort into including students into the community, and their role is one of a concerned teacher or colleague. In the second phase, the intention seems to slowly shift, as in this phase the student needs to prove that he or she is willing and able to develop the skills to stay in the community. To steer the student back onto the journey into the community of practice, participants mentioned forms of mentoring and matching the student to role models. Our road map shows that indeed, while the goal is to approach the student as still

being eligible for staying in the community, conditions are being laid out, and it is made clear that the student needs to meet the requirements. In phase 3, however, the student no longer moves from the periphery to the center, but in the other direction, by not adhering to the expected practices. In this phase, core values of the medical community are threatened. This is where we see the initiation of a reverse process: effort is put into guiding the student out of the community of practice.

Implications

The results of this study may offer medical educators a theoretical base for attending to students who display professionalism lapses. According to the concept of communities of practice, social relationships are important to bring an individual into the core of a community [38]. When remediation takes place outside the regular educational context, it can lead to isolation of the student. This can make it even more difficult for the student to enter the community. This implies that, during remediation trajectories, attention should be given to the need for connection with other learners and educators.

Context influences behaviour, which is confirmed again in this study [15-17]. PRSs are informed about contextual contributing factors for professionalism lapses, and they can use that information to make changes in the institutional culture to prevent medical students' future lapses.

Limitations

The interviews were guided by findings from our earlier research, which theoretically could have limited the discussions or biased the participants. We deliberately chose this approach as we are of the opinion that it was an advantage to build further on earlier research findings.

The reality of attending to professionalism lapses is complex, as many serious professionalism problems involve uncertainty and differences of opinion, which can be difficult to sort out. Our paper is the result of an attempt to extract useful information from experts in the field to develop a model for handling professionalism lapses. This extraction might not be 100% correct, but yet useful for people who have to attend to professionalism lapses in medical students.

Furthermore, where judicial and financial aspects of studying medicine in the United States differ from those in other countries, the findings are specific for the United States and need to be tested in other contexts to make them generalisable to other countries.

Future investigations

It was beyond the scope of this study to examine the effect of remediating strategies; future research should focus on the effectiveness and efficiency of specific remediation activities as those applied in phase 2.

The threshold between phases 1 and 2 is constituted by behaviours and their causes, and is thus highly context dependent. Future research should reveal the contextual influence on this threshold. Such research could also further refine the description of the threshold between phases 2 and 3, and thus underscore the evidence to dismiss (or not dismiss) a student from the medical school.

This study might stimulate the medical education community to consider the way medical students are guided or sent out of the community of practice. Whereas we found substantial prior research about entering such a community, we were not able to find literature about exiting a community of practice, whether it be voluntary or forced.

Conclusion

The findings of this study prompted the development of a 3-phase explanatory model for attending to medical students' professionalism lapses that fits well in the overarching framework of communities of practice. Whereas phases 1 and 2 are aimed at keeping students in the community of practice, phase 3 is aimed at guiding students out. These results provide empirical support to earlier proposed models describing the phases in the process of handling professionalism lapses, and may offer medical educators a theoretical, now empirically founded, base for approaching students who display such lapses.

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“Knowledge is no guarantee of good behaviour,
but ignorance is a virtual guarantee of bad behaviour.”

Martha Nussbaum

CHAPTER 7

Investigating US medical students' motivation to respond to lapses in professionalism

The study described in this chapter has been published as:

Marianne Mak-van der Vossen, Arianne Teherani, Walther van Mook, Gerda Croiset, Rashmi Kusurkar

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ABSTRACT

Aim

As physicians' unprofessional behaviour can compromise patient safety, each physician should be willing and able to respond to professionalism lapses. Although students endorse an obligation to respond to lapses, they experience difficulties in doing so. If medical educators knew how students respond, and why they choose a certain response, they could support students in responding. The aim of this study was to describe medical students' responses to professionalism lapses of peers and faculty, and to understand students' motivation to respond or not respond.

Methods

We conducted an explorative, qualitative study using Template Analysis, performed by three researchers independently coding transcripts of semi-structured face-to-face interviews. We purposefully sampled 18 student representatives convening at a medical education conference. Preliminary open coding of a data subset yielded an initial template, which was applied to further data, and modified if necessary. All transcripts were coded using the final template. Finally, three sensitising concepts from the *Expectancy-value-cost* model were used to map participants' responses.

Results

Students mentioned having observed professionalism lapses in both faculty and peers. Students' responses to these lapses were: avoiding, addressing, reporting, and/or initiating a policy change. Generally, students were not motivated to respond if they did not know how to respond, if they believed responding was futile and if they feared retaliation. Students were motivated to respond if they were personally affected, if they perceived the individual as approachable and if they thought that the whole group of students could benefit from their actions. *Expectancy of success*, *value* and *costs* appeared each to be influenced by interpersonal/personal and system factors.

Discussion

The *Expectancy-Value-Cost* model effectively explains students' motivation to respond to lapses. Forthcoming interpersonal/personal and system factors influencing students' motivation to respond are modifiable and can be used by medical educators to enhance students' motivation to respond to observed professionalism lapses in medical school.

Introduction

Approximately 60% of medical students observe professionalism lapses of faculty and peers in medical school [1]. Each year up to 19% of medical students fail a professional behaviour assessment [2-5]. Although each physician should be willing and able to respond to professionalism lapses of colleagues [6], it is not always easy to do so. For medical students, who are still learning and dependent on their teachers for grades, it is particularly difficult. While medical students endorse a professional obligation to respond to professionalism lapses [7], they experience difficulties in following this obligation [8]. It is still unclear what motivates students to overcome these difficulties, and how they actually respond. Knowledge about students' motivation to respond will allow educators to support students responding to observed professionalism lapses.

Medical professionalism can be defined in many ways [9]. The essence that speaks out of these definitions is the necessity for physicians to adhere to high ethical and moral standards, in order to gain the trust of their patients. Professionalism lapses can be defined as instances in which physicians fail to gain this trust of their patients or their colleagues, or faculty fail to gain trust of their students or colleagues, or students fail to gain trust of their teachers or peers. Lapses, either from students or faculty, are occasionally serious, such as falsifying medical records or sexual harassment, but are more often less egregious, such as a lack of engagement, lack of respect or lack of insight into own behaviour [6, 10-12]. Displaying a professionalism lapse does not automatically indicate that the individual is an 'unprofessional' person: many professionalism lapses result from poorly navigated responses to interpersonal and system factors in the workplace, to which we are all vulnerable [13]. However, even less egregious lapses can have adverse effects. Recently, Cooper reported that unsolicited patient observations of unprofessional behaviours of a surgeon (e.g. relating to disrespectful communication or poor availability to patients) were associated with complications for the surgeon's patients [14]. Thus, acknowledging the relevance of unprofessional behaviours for patient safety, physicians should respond to such behaviours and openly discuss them. The goal would be to learn from lapses and ultimately influence personal, interpersonal and system factors to prevent future lapses [6].

Although medical educators feel highly responsible for the teaching and learning of professionalism in medical school, they do not always report professionalism lapses of students [15]. Recent research reveals several personal and institutional barriers that explain why teachers remain silent when witnessing lapses [16]. While these barriers might be understandable, this way the faculty nevertheless end up role modeling to their students that professionalism lapses are not worth to respond to. Recommended responses for medical students who observe professionalism lapses are: ignore, challenge the individual, discuss the lapse with peers, or report to a faculty member [12]. Regardless of these, it is not clear

how medical students respond, and *why* they choose a particular way of responding. It is clear that students are reluctant to report professionalism lapses to a higher authority [17-19]. We also know that students experience difficulties in challenging an individual after observing a morally troubling situation. These difficulties arise from personal and systemic constraints [20, 21]. Personal constraints include a lack of confidence in own knowledge and judgement, and systematic constraints include repercussions for grades or opportunities, fear of damaging relationships, and hierarchy [20].

The *Expectancy-Value-Cost model of motivation*, an update of Eccles' *Expectancy-Value model*, can help to understand students' choices on how and why to engage in responding to professionalism lapses that students observe in faculty or in peer students [22, 23]. The model describes that a person's motivation to engage or not engage in a certain task is based on the balance of the *expectancy* of being successful in that task (*Can I do it*?), the perceived *value* of engaging in the task (*Do I want to do it*?) and the costs of engaging in the task (*Are there barriers that prevent me from doing it*?) The model divides *value* in three qualities: intrinsic value (enjoyment), extrinsic value (usefulness, and ethical values of socializing agents like teachers), and attainment value (individual identity factors like relatedness, competence and esteem). This study investigated how medical students respond to observed unprofessional behaviour of peers and faculty, and what motivates them to choose a certain response. In addition, we explored how the teaching of responses to professionalism lapses, based on students' propositions, can be incorporated into a medical curriculum.

Method

We designed an explorative, qualitative interview study using thematic analysis to capture the experience of the participating medical students [24]. The study was set up using a constructivist paradigm, in which data and analysis are created based on the interaction of the experiences of both participants and researchers [25]. Acknowledging the influence of the researchers, we share the following information with the readers: all authors are educational researchers and/or medical educators experienced in the teaching and guidance of professionalism of medical students. MM, WvM, GC and RAK are medical doctors.

Setting and participants

We interviewed students at a medical education conference during which representatives from all sectors of US medical schools and teaching hospitals convened to discuss the future of academic medicine. To gather a variety of experiences from different settings we created a purposeful sample of 2nd, 3rd and 4th year students representing different medical schools, by reaching out to the organisation of student representatives. We aimed for at least 15 participants. We did not sample 1st year students since they might not yet have had the

experiences to be explored in this study. We specifically sampled student representatives, as they show, by taking up the role of a representative, to feel responsible for the quality of teaching and learning in their medical school. We also expected them to have a broader understanding of institutional policies and procedures than most medical students. We expected that interviewing these proactive students would yield a wide range of responses to professionalism lapses, and assumed that these responses also could be noticeable in the wider student body.

Interviews

We conducted semi-structured face-to-face interviews with the participants, lasting approximately 30 minutes each, using an interview scheme based on the literature and our personal experiences. The first question was: (1) What does your institution expect from you regarding professionalism, and do you align with that? Subsequently, participants were asked to recall a situation in which they had observed a professionalism lapse in a peer or in a faculty member (teacher, resident, attending). Then, we posed the following questions: (2) How and why did you respond to the observed professionalism lapse of a peer student? (3) How and why did you respond to the professionalism lapse of a faculty member? (4) Which alterations in the curriculum do you propose to medical educators to make it easier for students to respond to professionalism lapses?

Procedure

MM invited student representatives to participate. Before starting each interview, participants were informed about the research protocol and ensured that the interviews were completely voluntary, and that all data would be handled anonymously to warrant confidentiality in all circumstances, after which consent was obtained. Participants received a 15 USD gift card for their participation. MM or a trained research assistant, both not related to the student's school, conducted the interviews. All interviews were audio recorded and transcribed verbatim.

Data analysis

We used ATLAS.ti to organise the coding. Data were coded in three consecutive steps. The first step consisted of independent open coding of two transcripts by three of the investigators (MM, AT, RAK). They reached consensus about an initial set of codes and themes. MM used this initial set to code all transcripts, discussing difficulties with the other two coders, thus generating a thematic map of the analysis. MM used this final map of codes and themes to code all transcripts again [24]. The last step included also the use of *sensitising concepts* [26]. Sensitising concepts are general ideas that suggest different directions to see, organise and understand the experiences of participants. In a discussion among the three coders, participants' answers to interview questions 2 and 3 were mapped to the sensitising concepts *expectancy, value and costs* coming from the *Expectancy-Value-Cost model of motivation* [22].

This study was qualified as exempt from ethical approval by the University of California, San Francisco Institutional Review Board.

Results

We interviewed 18 student representatives (10 female, 8 male) from 17 different US medical schools (12 public, 5 private). Eight participants were in 2nd year, four in 3rd and six in 4th year of medical school. Interviews lasted between 25 and 40 minutes. Students responded to an observed professionalism lapse of a faculty member or peer student by *avoiding, addressing* or *reporting* the lapse, and/or by *initiating policy change*. The balance of *expectancy of success*, *value* and *cost*, each influenced by factors on personal/interpersonal and system level, determined which response was chosen. See Figure 7.1.

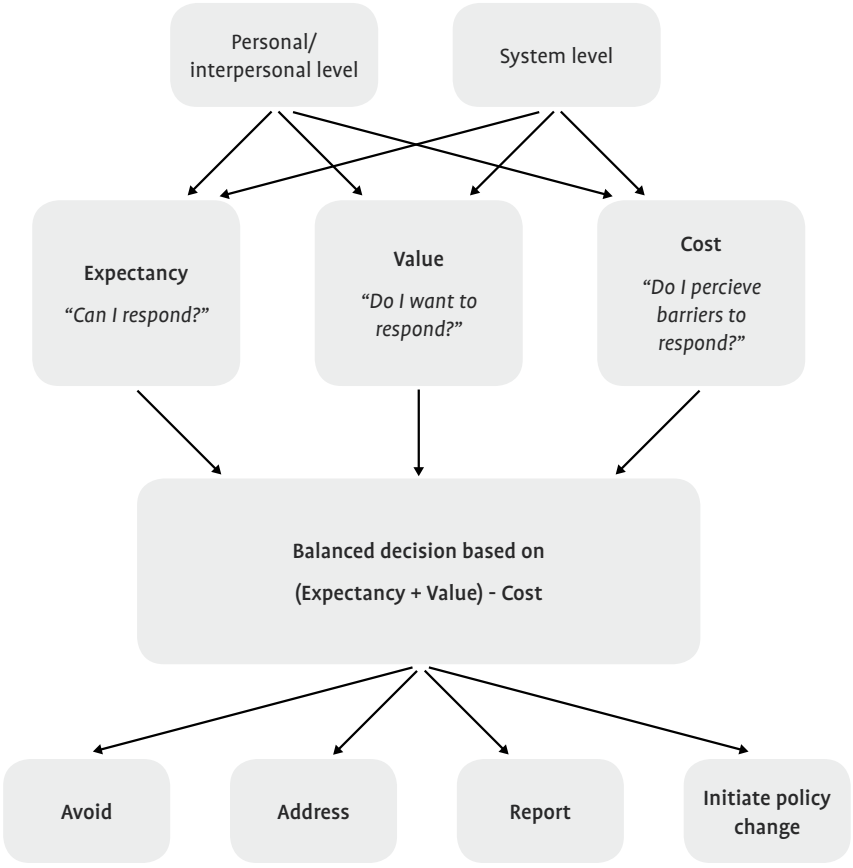

Figure 7.1 Expectancy, Value and Costs influencing students' responses to professionalism lapses of peers and faculty

Students' alignment with their school's definition of professionalism

Most students were able to cite their medical school's definition of professionalism, and all students knew of its existence and where to find it. Students' own perceptions of professionalism did generally align with their school's definition, although they sometimes disagreed with the way the school operationalised the professionalism values into attendance rules.

> Student 6: "How we do 'attendance' factors into our grade. A lot of people don't like to go to lecture, but rather go to a study room and study. That is deemed unprofessional behaviour. I think sometimes these policies, although good-natured, can cause people to think professionalism in the school is a joke."

Alignment with the schools' definition of professionalism was more common for students who felt that they had a voice in the formulation of the school's professionalism code.

> Student 7: "Students write their own honour code at the beginning of medical school. Every person in the class signs the code. It's framed and it's hung up in our lecture hall to remind us that these are the behaviours that we expect students to have."

Also, even if they agreed with the professionalism definition of their school, students found that measures taken against students who had displayed unprofessional behaviour were sometimes too strict.

> Student 3: "I think that, because some professionalism studies have correlated students being late to later issues in professionalism, I think that they kind of grab onto that notion and run with it and perhaps are a little bit too harsh in certain instances where, you know, so a student is late a couple times, it maybe isn't such a huge issue."

On the other hand, students appreciated faculty reacting promptly, and addressing unprofessional behaviour in order to remediate it.

> Student 5: "I think my perception is that they address it rather soon, so as soon as they notice that maybe somebody is not behaving the way that the school's mission statement aligns with, they'll meet with them rather than trying to ruin their future. You know what I mean? Even if they did something really, really bad, they just try to address it right away."

Character of responses

All students observed professionalism lapses in peers as well in faculty. The type of behaviours did not differ between these two groups and could be themed as problems with *involvement, integrity, interactions,* and *insight*. See Table 7.1 for examples of professionalism lapses as observed by the participants.

Theme	Examples of professionalism lapses of faculty	Examples of professionalism lapses of students
Involvement	Faculty member does not respond to students' emails.	Student has issues regarding timeliness.
	Professor is not prepared for lecture.	Student lets others do the extra work.
Integrity	Resident never uses the hand sanitizer or wash hands going from room to room.	Student is very competitive, taking credit of other student's work.
	School is not accountable for administrative mistake with lottery system for placements for clerkships, even denying that there was a problem.	Student copies notes from others, which is not allowed.
Interaction	Surgeon was calling the patient names and stuff in the OR.	Student displays disrespectful behaviour to other student, about gender issues, politics and religion.
	Attending was texting and calling the student in a really inappropriate way.	Student posts a message on social media that was derogatory to a professor.
Insight	Educator was too personal, making jokes about his medical procedures he's having that week.	Student is selling nutritional supplements, suggesting that he is an expert.
	Faculty member puts forward a strong own opinion, and is not open to different opinions within small student groups.	Student becomes abrasive and dismissive of others who have very good ideas, but cannot express it because he believes that it is his view that works and no one else can convince him otherwise.

Table 7.1 Examples of professionalism lapses as described by participants, categorised into four themes

The types of responses to these lapses did not differ between the two groups. Students responded to professionalism lapses of both peers and faculty in four different ways: *avoiding, addressing, reporting* and/or *initiating policy change*. See Table 7.2 for a description of each response and sample quotes for each of the options.

Avoid

Avoiding the unprofessional behaviour did not always mean that the student did not respond at all; an example of an avoidant response was that the observer became less likely to help the perpetrator.

> Student 1: "I think once I start to perceive this what I thought was unprofessional competitive behaviour, that made me less likely to help this person."

Address

When students decided to address the unprofessional behaviour, they sometimes responded *at the moment* e.g. by making a joke, posing a question, or addressing the behaviour directly. They could also respond *after the moment* by conducting a strategic discussion with the perpetrator.

Theme	Responses to lapses of peers	Responses to lapses of faculty
Avoid Acknowledges the lapse, but does not take any action.	*I thought about it a lot because I think the thing that they wanted me to do was to laugh and I didn't feel comfortable laughing with them, but unfortunately, I didn't say anything either. I was just kind of silent.* (Student 10)	*I smiled and I was like, oh, that's good. I just moved on, because I really didn't know what to say. I had to be with him for the rest of the day. I didn't know who to complain to, I didn't know if I could change physicians. I felt a little stuck.* (Student 1)
Address Discussing the lapse with the observed person.	*I texted her and said "Hey, you may not want to post that here, it seems like it's a little bit too far," and they did take it down probably about ten minutes after it was posted.* (Student 3)	*We arranged a meeting with the professor where we discussed his opinion and how our opinion differed and how we felt about what he had said.* (Student 3)
Report Informing a higher authority about the lapse.	*We don't tell names, but we tell the administration.* (Student 6)	*I had never written that a professor should not work with students, and this was the first time I had done that, knowing that he would know who wrote that.* (Student 7)
Initiate policy change Changing system factors to prevent similar lapses in the future.	*Seems a little bit harsh, (i.e. students receiving an unprofessional behavior judgement for not scheduling their exam in time) so the conversation that we had with administration, I was on student government, was to change this from a punitive thing, like you would get a demerit of sorts, into just some very strong, "We advise you very strongly to schedule this by this time for these reasons."* (Student 1)	*I am part of a group that does report to faculty on issues like that (i.e. biased statements of faculty) and basically when we see something like that come up we just take note of it and report it to the faculty.* (Student 4)

Table 7.2 Sample quotes for responses to professionalism lapses of peers and faculty

A personal reflection on how to react appropriately, and/or a discussion among peers to verify their own perceptions always preceded the response. Peer discussions sometimes resulted in collective interventions to address the unprofessional behaviour, e.g. in a group discussion with the perpetrator. In such interventions with faculty students muted their voice, as they tried to deescalate the lapse as much as possible.

> Student 3: "It was more muted when we were talking to the professor, of course, because we didn't want to come off as unprofessional."

Notably, students also mentioned defending peers when teachers asked for information about a peer's behaviour, even when they found the behaviour was not appropriate.

> Student 12: "This is a tricky thing, because when the attendings or the residents would ask me where this person was, I didn't want to get them in trouble, so I wouldn't say, "Oh they left," I would say, "I'm not sure where they are."

Report

Concerns were very occasionally escalated to a higher authority, and only when deemed absolutely required, for example in the case of behaviour that would affect patients in a negative way. If students decided to report a lapse, they favoured reporting to a student council over reporting to the clerkship director or dean. Reporting to a higher authority was preferably done anonymously, although students acknowledged that authorities could not take action on anonymous complaints. Although students were reluctant to report faculty's lapses to a higher authority, they regularly mentioned observed lapses in anonymous course evaluations.

Initiate a policy change

Participants took action as a student representative by making the problem visible to their peer students and responsible faculty, aiming to initiate a policy change.

> Student 15: "As a representative, I hope I kind of set an example almost for my school and my classmates and just as a representative for just our class in general. Just kind of standing up, saying, "Hey, it's okay that these, that things happen. It's not okay that it did happen, but there are ways to move forward."

> Student 14: "I'm also close with most of the deans. If someone were to approach me, I would feel comfortable talking to the deans."

Motivation to respond to professionalism lapses

We were able to map all codes coming from interview questions ii and iii to the sensitising concepts *expectancy, value* and *costs*.

Expectancy of success

Expectancy of success of responding to professionalism lapses of others appeared to be dependent on personal/interpersonal and system factors. Addressing was expected to be successful if the student saw him/herself as an assertive type, if a good relationship had already been established with the observed person, and if a feedback-giving culture existed in the medical school.

> Student 14: "You know, I've never, like I said, been formally instructed on what the appropriate way is to give feedback in a professional environment, but I think I myself, I would feel I would be assertive enough to just say, "Hey, I noticed that this happened. It made me feel uncomfortable."

> Student 5: "I knew him from before, so I felt like I could tell him that."

> Student 10: "Our school has kind of set a tone that we give a lot of feedback to our lecturers, we get a lot of feedback from lecturers; individual feedback on how we perform in small groups and we give a lot of feedback to our peers and it's required that we give this feedback, so I think we're just kind of now in a culture where we expect people to tell us what we're doing."

Addressing was expected to be less successful, and thus avoided, if the observed person was angry, not approachable, or defensive in her/his reactions.

> Student 5: "If they have really aggressive personalities, very antagonizing behaviours, I won't say anything about the unprofessional behaviour."

Students indicated that they found communications about professionalism lapses difficult and that they did not know how to respond effectively. Reporting was hampered by a lack of knowledge about the report system. Addressing was hampered by a lack of specific skills to communicate in difficult circumstances.

> Student 9: "I smiled and I was like, oh, that's good. I just moved on, because I really didn't know what to say. I had to be with him for the rest of the day. I didn't know who to complain to, I didn't know if I could change physicians. I felt a little stuck."

> Student 12: "How do you bring it up in a way that you don't hurt their feelings or don't get them in trouble, but at the same time, have them stop that unprofessional behaviour."

An existing hierarchy between the student and perpetrator made this more difficult.

> Student 12: "We kind of felt, as the students, there were two students, and then it

was just all these residents and the attending. We felt very uncomfortable and very outnumbered."

Value

Value (a higher value increases the likeliness of responding to unprofessional behaviour) also appeared to be dependent on personal/interpersonal and system factors. Interpersonal and personal factors were described as feelings of responsibility for their own education and the education of other students.

> Student 15: "Because I think it's important that we kind of share and help build each other up and make sure that we also are letting each other know what our weaknesses are."

System factors were described as feelings of responsibility for the well-being of patients, or the reputation of the profession as a whole.

> Student 1: "I guess ultimately the standard that I hold is when does the so-called lack of professionalism actually affects the care the patient has."

> Student 16: "Because I think at the end of the day there's a lot of unprofessional behaviour towards medical students, and that's one thing, I think I can handle people mistreating me, but when I feel that a patient is being impacted..."

> Student 11: "A trainee should have the ability to communicate among themselves, because we're going to be communicating with colleagues and people above us for the rest of our lives. So, we need to be able .... That needs to start being ingrained within our conduct. So it .... We need to be able to openly talk about anything. Even things that are conflict."

Students expressed that they, during their medical education, had built up a tolerance for unprofessionalism and thus sometimes perceived responding to unprofessionalism as futile.

> Student 1: "Maybe I just have a tolerance for unprofessionalism now".

> Student 8: "I think it was mainly feelings of futility that prevented me from going to the dean."

Costs

High costs made responding to professionalism lapses less likely. Costs were also contingent on personal/interpersonal and system factors. The idea or action of responding to unprofessional behaviour made students nervous. Students did not want to be seen as a troublemaker, a whiner or a tattletale.

Student 5: “You don’t want attending to think that you’re, ‘difficult’, and ‘hard to work with.’

As such, students worried that relationships could be damaged. Students feared personal retaliation, which might affect their academic grades, their education and their future.

Student 5: “We don’t report anything because we’re too afraid for negative implications for our future career.”

Costs of responding to behaviours of peers we’re perceived lower than responding to behaviours of faculty. Costs were also perceived to be lower in case of a collective response.

Student 10: “I think as the peers we’re better at keeping people in … like … more in line because if someone does something that seems a little bit unprofessional, then you feel more comfortable approaching the peer about it than you do a teacher.”

Student 10: “We kind of both did together and I think what kind of made it easier was that there were two of us.”

Students’ recommendations

Students suggested changes in the curriculum to guide them in how to respond to professionalism lapses of peers and faculty. They formulated options to strengthen awareness, knowledge and skills related to professionalism in students and in faculty, as well as made recommendations for changing aspects of the curriculum.

Strengthening of professionalism in students

For the strengthening of professionalism in students several options were mentioned: showing students the link between unprofessional behaviour and patient safety, discussing the schools’ expectations, and offering practical sessions in which students learn how to address professionalism lapses in both equal and hierarchical situations. Students would value to have a credible and trustworthy mentor to speak about their professionalism dilemmas. This could also be an older student, which would create support among students. This way, the school can provide students with a space where they can discuss their experiences without the fear of retaliation.

Student 8: “I think that if you create a space where people can raise concerns without jeopardizing …overall, balancing the concerns around jeopardizing your social standing, your future peers’ careers and your own career, which is a lot to balance, certainly. I think any work you take to mitigate some of those concerns, I think it makes students more likely to feel comfortable doing it.”

Improvements for professionalism in faculty

Suggested improvements for professionalism in faculty included that faculty would model the right behaviours in a better way, including taking responsibility to address unprofessional behaviour in a timely fashion. Students advocated that faculty members respond to lapses in a non-punitive, pedagogical way: intending to let the student learn. Students suggest that faculty need to reserve punitive actions for students who fail to respond to this pedagogical approach.

> Student 12: "I think if they modeled that behaviour for us, that will help us feel more comfortable also doing that."

> Student 4: "With our clerkships and in their work here, they could try to make it more a part of our curriculum that we are working together, and we are working for the benefit of everyone in our team. We're not casting blame or undue responsibility. It would take a large structural change."

Change of system aspects

For the change of system aspects, students suggested that institutions formulate their rules and regulations in collaboration with students, thus providing clarity to students about the values upon which professionalism evaluations are based. The participating student representatives were very clear that the initiative for suggested changes would preferably come from students themselves. Thus, they recommended deliberately involving students in policy-making at medical schools.

> Student 6: "Who could change that are the people who do have the power to change policies and the students who can talk to the people who can change policies and provide them their point of view and perspective. But the people who are in charge need to be willing to open up and listen to the students and their concerns about these issues first before they can even think of addressing these policies."

Discussion

The aim of this study was to investigate medical students' responses to professionalism lapses observed in medical school, and their motivation to respond. In addition, we explored if students aligned with their institutions' definition of professionalism, and what alterations in the curriculum they would propose to facilitate responding to professionalism lapses.

Students' alignment with their school's definition of professionalism

Students broadly aligned with the professionalism values of their institution, although accountability was difficult to align with if it was merely translated into mandatory tasks or

attendance. In their opinion, this does not reflect the goal of accountability being the self-regulation of the professional community to ensure competent practice by physicians [27]. Based on our findings, it seems that the translation of the professional value of accountability to rules of mandatory tasks can cause students to narrow their perception of accountability to a minimal effort (i.e. of simply showing up) and to diminish students' capacity to recognise and consider the broader concept. This indicates that the translation of professional values into rules and regulations in medical schools is not easy [28].

Responses to professionalism lapses

Our findings are based on experiences of medical students, in contrast to earlier findings that come from simulated circumstances and questionnaires, or from residents [8, 29]. Roff investigated medical educators' advice for students to respond, which included *ignore, challenge the individual, discuss the lapse with peers or report* [12]. Our findings resemble these recommendations, although we found that while students sometimes seem to ignore lapses, this does not always mean the student does nothing at all. We saw that after *avoiding* a lapse, all students, without exception, *discussed the observed lapse with peers*. These discussions helped them to decide on how to proceed individually or collectively. We confirm that students indeed sometimes follow Roff's recommendation to challenge the individual, but they remain very reluctant to report the behaviour to a higher authority [12]. An additional type of response that we found is *initiating policy change*: students, as representatives of the student body, thus acquire the power to influence the medical school. Through this influence, they try to change system factors that contribute to professionalism lapses. This is crucial, since these student leaders are likely to be the future change agents that the medical profession needs.

Factors that influence the motivation to respond

This study has uncovered several motivational factors of students to respond to professionalism lapses in medical school. All factors could be mapped to the *Expectancy-Value-Cost model* [22]. Our addition to this model is the distinction of personal/interpersonal and system factors for each of the three sensitising concepts *expectancy, value and costs*. We found some of the factors to be modifiable, which means that they could be used to design educational interventions to enhance student's motivation to respond to professionalism lapses.

Expectancy of success

This study reveals that students feel that they are not always able to respond to professionalism lapses. Speaking about unprofessional behaviours is relatively underemphasized in medical curricula [29, 30]. This factor seems to be highly modifiable: responding to unprofessional behaviours can be taught in medical school to provide students with the skills to do so. The expectancy of success is also higher if faculty members are approachable and the school has a feedback culture.

Value

We confirm Tucker's findings that students are more motivated to address lapses if there is a chance of harm to patients, which reflects the intrinsic value of feeling responsible for patients [8]. We also found extrinsic value, e.g. "*We have to do it as physicians so we must learn it now*", and attainment value: students were motivated to respond if their actions would lead to improvements for other students. Value factors were not the most important barriers we found, but could nevertheless be positively modified by providing students the knowledge base of professionalism [31]. Also, professionalism values should preferably be discussed among teachers and students to obtain bidirectional alignment.

Costs

The most important costs, leading to avoiding to respond, were negative psychological experiences like anxiety, fear of failure or being uncomfortable. Students expressed their anxiety to experience retaliation, varying from retaliation for grades or missing out on teaching opportunities, or career opportunities. Also fear of not fitting into the group and damaging relationships were important costs. Like Kohn we found that directly addressing an individual is less costly than reporting [32]. Costs can be mitigated by making the task of responding easier. This was the case when students felt support from the organisation, e.g. the possibility to bring their concern to a student council or a faculty member instead of acting themselves.

Our findings suggest that the factors that positively influence student motivation coming from the personal and interpersonal level (knowledge, skills, existent positive relations, own or other students' learning being affected) make addressing of a lapse more likely. Motivational factors coming from the system level (faculty approachable, feedback culture, strong professional values, organisational structures like a student council) appear to make the reporting of a lapse for a student easier. The condition for students to take action to make a policy change seems to depend on the combination of both factors that foster motivation on the personal/interpersonal level as well as on the system level. Initiating a structural change in the curriculum/educational process requires personal leadership qualities, but also an institutional system that encourages student engagement and cultivates collective accountability.

Students' recommendations

Students propositions for alterations in the curriculum remarkably resemble some of the *new assumptions* that Lucey described: lapses are a part of learning, response to these lapses should be pedagogical, the community of practitioners has to assume responsibility for supporting colleagues to remain professional [6]. Responding to patient safety issues has been promoted in the last decades, which resulted in more willingness to respond to such issues [33]. Similarly, responding to professionalism lapses needs to get attention, since the impact of unprofessional behaviour on patient outcomes has been proven [14, 29].

	Improving expectancy of success	Improving value of professionalism	Diminishing cost of responding
Pedagogical strategies	• Teach practical skills how to address professionalism lapses • Inform students about the routing when reporting professionalism lapses	• Teach the cognitive base of professionalism • Stress the effect of professionalism lapses on patient-care • Stress the effect of professionalism lapses on students' learning • Create opportunities for students to interact with diverse patient groups	• Stimulate critical responses of students by openly asking for it • Evaluate professional behaviour formatively and timely • Ensure that lapses are openly discussed to create learning opportunities • Offer room to students to discuss their experiences with peers in sessions that will not be assessed
Institutional strategies	• Ensure that teachers are approachable • Create a culture of feedback • Make confidential 'triage' of observed professionalism lapses possible • Facilitate small group teaching • Centralise complaints management • Make collective responding possible • Inform reporting students about outcomes of investigations that took place after reporting of lapses	• Set values in collaboration with students to create bidirectional alignment • Make students part of policy making • Ensure that teachers maintain the school's rules and function as role-models who display professional behaviour • Make reporting of professionalism lapses of faculty possible for students	• Provide options for confidentially reporting • Install a student council that is responsible for handling students' professionalism lapses

Table 7.3 Pedagogical and institutional strategies to enhance students' motivation to respond to professionalism lapses

How to implement participants' recommendations remains challenging and deserves further research. It has been proven that modeling of the responding to inappropriate behaviours by educators is crucial to reach the goal [34]. Students' recommendations also confirm earlier advice that students need to be offered room to discuss their experiences with peers in sessions that will not be as assessed [35].

Implications of our findings

In this study we were able to define modifiable factors that could enhance students' motivation to respond to professionalism lapses. Based on these factors, and the suggestions for improvement of the curriculum as given by the participants in this study, we formulated recommendations regarding pedagogical and institutional strategies. See Table 7.3.

Limitations of this study

Our decision to sample student representatives may explain why we found students willing to act upon professionalism lapses and trying to create changes in the curriculum. We chose to study student representatives based on the assumption that their responses would also be noticeable in the wider student body. Further research should reveal if this is the case, and if modifying the factors that we found indeed enhances the motivation of all students to respond to professionalism lapses in medical school.

We asked the participants to talk about observed professionalism lapses and their responses to these. Theoretically, this implies that we did not find the instances in which unprofessionalism was not registered at all, i.e. when the student did not consider the behaviour as unprofessional. The question is whether others, e.g. patients or educators, would have different opinions. Furthermore, we only spoke to US students, which means that transferability to other cultural contexts might be limited, and should be further investigated.

Conclusion

Student representatives respond to an observed professionalism lapse of a faculty member or peer student by a*voiding, addressing* or *reporting* the lapse, and/or by *initiating policy change*. The balance of *expectancy of success*, *value* and *costs* determines which response is chosen. *Expectancy of success, value* and *costs* all three appear to be influenced by factors on personal/interpersonal and system level. Medical educators can use these factors to enhance students' motivation to respond to the professionalism lapses they observe in medical school.

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“Information does not change behaviour, practices do.”

Richard J. Leider

CHAPTER 8

"Training the responding muscles is key!" Simulated patients' perspective on speaking up about unprofessional behaviour

This chapter has been published as a perspective paper:

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Simulated patients' perspective on speaking up about unprofessional behaviour:
"Training the responding muscles is key!"

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ABSTRACT

Unprofessional behaviour of physicians can put patient safety at risk. At VUmc School of Medical Sciences, Amsterdam, the Netherlands the workshop 'Responding to unprofessional behaviour of faculty and peers' has been developed for undergraduate students. As the patient perspective on speaking up behaviour is important and currently missing in the literature, two 'simulated patients' who participate in this workshop, were interviewed to explore their opinions and experiences. Their perspectives could be helpful to medical educators who want to develop education about speaking up about unprofessional behaviour.

In the interviews, both simulated patients expressed that they expect physicians to speak up about unprofessional behaviour of colleagues. Consequently, they expect students to develop the skills to do so. In the workshops, they experience that students encounter difficulties to bring their intended message across, clearly without offending the person addressed. They state that practice is needed to acquire the skill of responding to unprofessional behaviour. The simulated patients are of the opinion that not only students, but also educators have to learn how to handle unprofessional behaviour. By role modeling to their students an open, supportive way of responding, teachers can help to create a culture in which it is accepted to address behaviours among each other.

Concluding, simulated patients explicitly support the assumptions that are made in the medical education literature about addressing unprofessional behaviour: all involved in health care — students, educators, physicians and patients — have a responsibility to change the atmosphere in medicine towards an open supportive culture in which it is acknowledged that lapses in professionalism can occur in people with good intentions. By openly discussing such lapses, we can put a step towards changing the culture in health care.

Introduction

In a previous study (described in Chapter 7), the authors explored the motivation of medical students to respond — or not respond — to unprofessional behaviours they encounter in medical school. Based on this work, a workshop was developed for undergraduate students, in which they learn how to speak up about unprofessional behaviour of supervisors and peers. In this workshop, students can role-play difficult conversations with the help of actors, so-called 'simulated patients'. As the patient perspective on speaking up behaviour is important and currently missing in the literature, this perspective article will present the experiences of two simulated patients, Michel Stoeltie and Jorick Jochims. They enact patients, supervisors and peers in training sessions for medical students. The perspectives of these simulated patients could illustrate the issues encountered and help educators to improve the teaching of professionalism.

Background from the literature

Unprofessional behaviour of physicians can put patient safety at risk. Recently, this was illustrated by Cooper and colleagues, who reported that unsolicited patient commentaries about unprofessional behaviours of a surgeon (e.g. relating to disrespectful communication or poor availability to patients) are associated with post-operative complications [1]. This research once more highlights that any physician should be willing and able to respond to lapses of professionalism of colleagues [2]. Unfortunately, speaking up is not always easy. For medical students, who are still learning and dependent on their teachers for grades, it is even more difficult. Professionalism lapses, either from students or faculty, are sometimes serious, such as falsifying medical records or sexual harassment, but more often they are less extreme, such as poor engagement, disrespectful communication or poor insight into own behaviour [2-5]. Displaying a professionalism lapse does not automatically imply that an individual is an 'unprofessional' person: many professionalism lapses result from inadequately handling interpersonal and system factors in the workplace, to which all physicians are susceptible [6]. However, even mild lapses can have adverse effects on patients [1].

Medical students overwhelmingly endorse an obligation to respond to professionalism lapses [7], but they experience difficulties in honouring this obligation [8]. Students often decide to avoid responding to a morally troubling situation, since they experience difficulties in challenging an individual. These difficulties can be personal constraints, e.g. a lack of confidence in own knowledge and judgement, and/or systemic constraints, e.g. repercussions for grades or opportunities, fear of damaging relationships, and hierarchy [9, 10]. Thus, addressing both personal and systemic constraints is crucial to make students respond to observed unprofessional behaviour.

Acknowledging the relevance of unprofessional behaviours for patient safety, physicians should respond to such behaviours and openly discuss them. An important development in medical practice is the acknowledgement that effectively handling such lapses requires peer support among physicians [11, 12]. Medical educators can teach their students how to support each other, and influence system factors if possible. The goal would be to learn from lapses — individually and collectively — and ultimately influence personal, interpersonal and system factors to prevent future professionalism lapses [2, 6].

What we did

In 2015, we consequently developed the workshop 'Responding to unprofessional behaviour of faculty and peers' for undergraduate medical students, as part of a communication programme that promotes healthcare communication between patients and healthcare practitioners [13]. The underlying principle of this workshop is that students learn to discuss the unprofessional behaviour in such a way that it is '*tough for the case, gentle for the person*'.

In each session, a group of twelve students is guided by a teacher who is assisted by a simulated patient participating in role plays. Students are asked to present a situation in which they observed unprofessional behaviour, be it displayed by a person in their private life, a peer student, or a supervisor in the medical school. Students are invited to initially role play the way they addressed the troubling situation as it had occurred, discuss among each other alternative options to respond, and subsequently try out these alternatives in further role plays.

Simulated patients' perspective

Simulated patients Michel Stoeltie and Jorick Jochims regularly participate in the workshop 'Responding to unprofessional behaviour of faculty and peers'. Both are educated as actors, and have been working as simulated patients in medical education for more than ten years. Currently, both contribute to more than 100 sessions of 20 different workshops a year, for undergraduate, graduate and postgraduate medical students. An important reason for them to work as a simulated patient is the wish to advance communication in health care, not only between physicians and patients, but also between physicians themselves.

As patients, both Michel and Jorick advocate that future physicians practice the skills of responding to unprofessional behaviour. Both indicate that they expect physicians not only to behave professionally themselves, but also to take responsibility for the professionalism of the group of physicians as a whole. This means that they expect their physician to speak up when observing unprofessional behaviour of a colleague. Michel states: "Patient safety can

be threatened if miscommunication takes place. Physicians should respond to unprofessional behaviours in the workplace, but I don't think they adequately do that."

As simulated patients in the workshops, Michel and Jorick recognise the constraints that students encounter in responding to unprofessional behaviours and understand that these constraints can result in avoiding to respond. Michel: "I see that for students 'avoiding' is very common, even if the situation is clearly morally unacceptable." Jorick explains: "Maybe, it seems that 'avoiding' might be a good option in the short term, but it will not create change, and thus is a bad option in the long term." Thus, the teaching and practicing of personal skills to respond to adverse situations is deemed very necessary. Michel declares: "Students who take the opportunity to practice can learn a lot in this workshop", and as Jorick expresses it: "Training the *responding muscles* is key!"

Both simulated patients experience that students, when roleplaying their response, often feel that they address the issue too strongly, and express themselves rudely or even abusively. At the same time the simulated patients feel that students downplay the issue, resulting in an ineffective delivery of the intended message. Michel: "Students are so glad that they finally address the issue that they understate their message, which is thus not adequately understood by the addressed person. I see that students tend to be happy with any solution that can be reached, even if this does not solve the initial problem at all." They see that students pay a lot of attention to the relationship, which undermines the content of the case itself.

Both simulated patients indicate that they have experienced that the guiding principle of the workshop, '*be tough for the case, gentle for the person*', is very helpful for students. They state that, if students succeed in making a distinction between the way the case is discussed and the way the person is treated, they will be able to bring the intended message across clearly, without offending the person addressed.

The two simulated patients state that not only students, but also all teachers (both non-clinical teachers and clinician-educators) of the medical school have to behave professionally. They prefer that all teachers are also trained in responding to unprofessional behaviour; teachers need not only to learn how to respond, but also to learn how be open to feedback themselves. Michel: "Do the teachers know how much time and effort is paid to teach students how to respond to unprofessional behaviours? Maybe teachers themselves could benefit from the same sort of trainings, in which we as training-actors could enact the students." Teachers are important role models. They can create a safe learning environment by showing their students that it is normal to give and receive feedback, even about the difficult topic of unprofessional behaviour. Jorick: "Addressing unprofessional behaviour is often seen as a punishment, while the intention should be to help your colleague to improve their behaviour." By role modeling to their students an open, supportive way of responding, teachers can

help to create a culture in which it is accepted to address behaviours among each other. The simulated patients acknowledge that such a culture change may take decades to accomplish, and that therefore, medical educators better start initiating this change now.

What to do next

Every medical professional should be willing and able to have a constructive conversation about professionalism [2]. This is crucial to ensure high quality patient care [1]. An important development for medical practice is the acknowledgement that effectively dealing with professionalism lapses requires peer support among physicians [11, 12]. Acknowledging the importance of peer support has implications for the teaching of professionalism, including the responding to unprofessionalism, in medical schools.

Medical schools must teach their students how to speak up about professionalism lapses that they encounter. Some medical schools already pay attention to this topic, by supporting students to overcome personal constraints that hamper them to respond to unprofessional behaviour. An example is a UK medical school that developed a structure for student-led interventions to encourage students to respond to lapses. Students are taught how to initiate conversations about concerns in a non-threatening way, strengthening students' confidence to respond [14]. However, educators also have to pay attention to the systemic constraints, and ensure that the learning environment is safe enough for students to administer the acquired skills. Recently, Martinez introduced a survey scale to measure the support that residents receive from the clinical environment to speak up. This scale could possibly also be generalised to other contexts to discover the system factors that support or hamper responding to unprofessional behaviour [15].

Conclusion

At VUmc School of Medical Sciences a workshop has been running for two years for undergraduate students to improve their skills to respond to unprofessional behaviour in the workplace. Simulated patients participating in this workshop feel highly involved in reaching this goal. Their opinions explicitly support the assumptions that are made in the medical education literature about this topic: all involved in health care — students, educators, physicians and patients — have a responsibility to change the atmosphere in medicine towards an open supportive culture in which it is acknowledged that lapses in professionalism can occur in people with good intentions [2, 6]. By openly discussing such lapses, in a way that is '*tough for the case, gentle for the person*' we can put a step towards changing the culture in health care.

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“When values are strong, rules are unnecessary.
When values are weak, rules are insufficient.”

Don Berwick

CHAPTER 9

How to identify, report and address students' unprofessional behaviour in medical school

The article described in this chapter is under review for publication as an AMEE guide.

ABSTRACT

This guide provides a research overview of the identification of and responding to unprofessional behaviour in medical students. It is directed towards medical educators in preclinical and clinical undergraduate medical education. It aims to describe, clarify and categorise different types of unprofessional behaviours, highlighting students' unprofessional behaviour profiles and what they mean for further guidance. This facilitates identification, addressing, reporting and remediation of different types of unprofessional behaviour in different types of students in undergraduate medical education.

Professionalism, professional behaviour and professional identity formation are three different viewpoints in medical education and research. Teaching and assessing professionalism, promoting professional identity formation, is the positive approach. An inevitable consequence is that teachers sometimes are confronted with unprofessional behaviour. When this happens, a complementary approach is needed. How to effectively respond to unprofessional behaviour deserves our attention, owing to the amount of time, effort and resources spent by teachers in managing unprofessional behaviour of medical students.

Clinical and medical educators find it hard to address unprofessional behaviour and turn toward refraining from handling it, thus leading to the 'failure to fail' phenomenon. Finding the ways to describe and categorise observed unprofessional behaviour of students encourages teachers to take the appropriate actions.

Introduction

Professionalism of doctors is crucial for the quality of health care. For a physician, behaving as a professional is not just a desirable condition, but also a requirement to safeguard patient safety and improve patient care outcomes [1]. This is relevant for medical schools, since they prepare students for their future roles as physicians. In the latter role they, as members of the medical profession, will be held responsible for their own professional performance, and also for upholding the trustworthiness of the whole medical profession.

Papadakis's seminal study displaying that unprofessional behaviour during undergraduate medical training is predictive of unprofessional behaviour as a physician, makes clear that a permissive approach to unprofessionalism in undergraduate education is unacceptable [2]. While medical professionalism is now taught and assessed in medical schools, educators sometimes notice that students do not behave professionally. Although medical educators observe unprofessional behaviour in up to 20% of all students, they only report 3-5% [2-4]. This discrepancy reflects the difficulty in evaluating professionalism, and is often denominated as the 'failure to fail' phenomenon [5]. Probable reasons for the latter are: a lack of conceptual clarity about (un)professionalism in medical school, concern for the subjectivity of one's judgement, fear of harming a student's reputation, lack of appropriate faculty development, and uncertainty about the remediation process and its outcomes [6].

Unprofessional behaviour of undergraduate medical students, either originating from personal, interpersonal, contextual or external causes, can have an impact on peer students, teachers, health care teams and also patients [7]. As professionalism lapses are a part of learning, educators should be prepared to deal with them [8]. The implicit, hidden curriculum in medical education is more powerful in teaching professionalism than the formal and informal curricula [9]. If educators do not respond to unprofessional behaviour, they implicitly transmit the message to their students that unprofessionalism is acceptable, and that responding is unnecessary or not worth the effort. Thus, educators need to (both implicitly and explicitly) teach their students how to handle unprofessionalism.

Moreover, if an unsatisfactory evaluation has been given to a student because of unprofessionalism, it is not clear what can be done to remediate this behaviour [10]. The guidance of such a student takes a toll on the resources, time and effort of faculty. Medical schools can optimize such guidance by adopting a clear strategy to guide students who, through their behaviour, show that they need extra help to develop their professionalism. A uniform strategy could also form a source for evaluation of the educational context and education research.

This guide aims to provide practical guidance in detecting and responding to unprofessional behaviours of medical students. The guide is based on the medical education literature on

students' unprofessional behaviour, complemented by the authors' research on this topic and their extensive personal experiences with managing unprofessional behaviour of medical students. The guide outlines various approaches, aiming to facilitate medical educators to recognise students who behave unprofessionally and to acknowledge a student's need for extra guidance in developing a professional identity. Also, attention is paid to factors in the educational context that might contribute to students' unprofessional behaviour. Furthermore, the guide describes the steps that can be taken after identification of a student who has behaved unprofessionally.

What is 'unprofessional behaviour' in medical education?

The essence of the various definitions of medical professionalism is the necessity for physicians to adhere to high ethical and moral standards, in order to gain the trust of their patients [11]. Correspondingly, for medical students professionalism necessitates that they gain the trust of their peers and teachers and, if applicable in the context (simulated) patients. Showing professional behaviour requires knowledge, skills, and judgement to deal with dilemmas that occur in specific situations [12, 13]. Professional identity formation is the process of acquiring such knowledge, skills and judgement qualities, and integrate these into a developing professional identity. Thus, unprofessional behaviour may be a sign of the student's need for guidance in this process of professional identity formation.

Medical schools define their own standards for professionalism as a foundation for teaching and assessing the professionalism domain [14]. Concerns about a student's professionalism need to be identified and corrected before graduation. As behaviours can be defined and observed, the most frequent way of assessing professionalism takes place through observing professional behaviour. Assessment methods for professional behaviour are critical incident reports, and routine evaluations based on direct observations of students' behaviour, which is sometimes a stand-alone evaluation or integrated into ongoing evaluations [15].

Critical incidents reports by educators or peer students can be used to identify unprofessional behaviours that warrant action. This provision is necessary for egregious and unlawful behaviours, such as sexual harassment, intimidation, plagiarism or falsifying official records. Such behaviours call for punitive responses like probation or dismissal.

For assessments during scheduled educational activities, a combined formative and summative approach is recommended [3]. The educator's formative feedback regarding the observed unprofessional behaviour is intended to trigger the student's individual professional development, aiming to reach the intended outcome when the summative assessment takes place. A reason to use formative assessments is to lower the stakes for both the student

Figure 9.1 Four themes including 30 descriptors for unprofessional behaviours among medical students

and the educator. Another reason to initially assess professional behaviour formatively is the dependence of behaviour on observer and context. Combining the opinions of different assessors based on observations of the student in different contexts, so-called triangulation of assessments, can ensure a sound summative evaluation [3]. Any resulting unsatisfactory evaluations call for pedagogical approaches toward the student to correct unprofessional behaviour during the course. Furthermore, observer factors and contextual factors supporting professional behaviour need to be strengthened [7].

Descriptors of students' unprofessional behaviours

The recent version of the United Kingdom's General Medical Council (GMC) guidance for undergraduate medical students provides descriptors of key areas of concern regarding students' professionalism [16]. The guidance describes examples of student behaviours that will undermine the trust of patients and society in the medical profession. The key concern areas are: persistent inappropriate attitude or behaviour; failing to demonstrate good medical practice; drug or alcohol misuse; cheating or plagiarizing; dishonesty or fraud; and aggressive, violent or threatening behaviour. The guidance stresses that medical students must display professional behaviour not only inside the medical school, but also outside. Examples of unprofessional behaviour outside the medical school refer to the misuse of alcohol and drugs. The GMC's key areas of concern partially overlap with the domains that are proposed by Papadakis: responsibility; relationships with health care team and the environment, including systems and organisations; relationships with patients; and capacity for self-improvement [17].

In an earlier review conducted to explore, describe and categorise results of empirical studies describing medical students' unprofessional behaviours, witnessed by stakeholders or admitted by students themselves [18], an overview of 30 descriptors for unprofessional behaviours was generated. These descriptors could be divided into four distinctive categories, denominated as '*the 4 I's*'. These are lack of: Involvement, Integrity, Interaction, and Introspection [18] (see Figure 9.1).

These descriptors clarify to medical educators what to document and how to document it, in order to clearly articulate their concerns about the unprofessional behaviour they encounter. In this way, supporting documentation for poor performance in assessment forms can be generated explicitly.

Factors contributing to unprofessional behaviour

Triggers for the occurrence of unprofessional behaviour can originate from personal issues, interpersonal issues, external factors and contextual factors [8, 19]. See Table 9.1 for examples

Personal factors	*No knowledge base of professionalism* *Competency deficits* *Personality disorders* *Asperger or autism spectrum type symptoms* *Other mental health issues* *Physical health issues* *Substance abuse* *No motivation for medical school* *Language difficulties*
External factors	*Family issues* *Financial challenges*
Interpersonal factors	*Racist micro-aggressions* *Different cultural expectations* *Hierarchy*
Contextual factors	*Professionalism expectations have not been clarified* *Feeling overwhelmed by stressful circumstances in the workplace* *Frustration about organisation of health care* *Learning environment not as good as it should be* *High expectations in medical school* *Poor role modeling*

Table 9.1 Examples of contributing factors to unprofessional behaviour

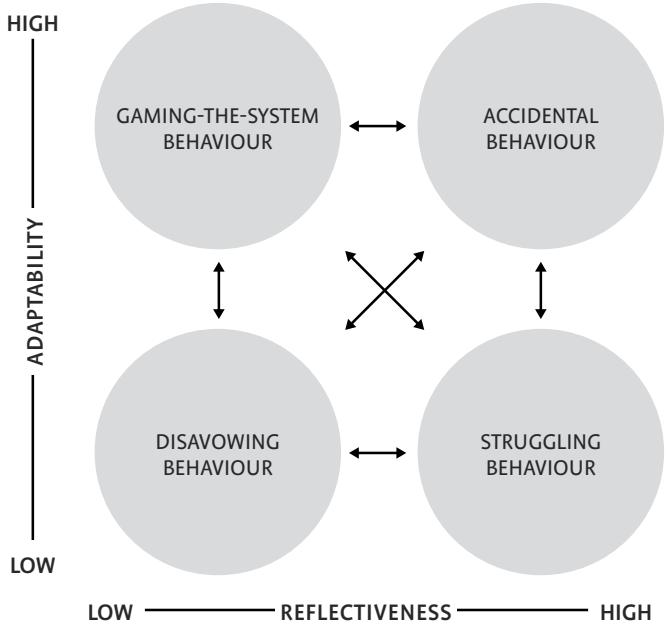

Figure 9.2 Model of unprofessional student behaviour

of contributing factors to unprofessional behaviour originating from these four sources. Trainees might not recognise these triggers in time, e.g. because they fail to realise that the adopted style is unprofessional [20]. Educators need to keep in mind that the display of a professionalism lapse should not be used to label a student as an 'unprofessional' person. Mostly, students with good intentions temporarily lack the skills or attitudes to manage the professionalism challenge in front of them, or the context in which they operate does not encourage or facilitate professionalism [21]. Structural unprofessionalism is thus far less common, but can be revealed when assessing students longitudinally over longer periods of time, using a framework of triangulated assessments [3].

Profiles of unprofessional behaviour

Medical professionalism can be assessed by observing behaviours. Various researchers have grouped such behaviours into categories or patterns [22, 26, 28, 29]. The reason for using this approach is that such patterns are easier to recognise for an educator than single behaviours, and also, that different patterns might need different guiding or remediating activities. Grouping unprofessional behaviours thus yields distinctive behavioural profiles. Research-generated profiles of student behaviours are based on two factors: the student's reflectiveness and their adaptability. See Figure 9.2. Reflective behaviour (listening to feedback and willingness and ability to incorporate it in future behaviour) is the basis of these profiles, as it predicts the future professionalism of a student better than the common engagement behaviours educators tend to denominate [28-31]. A student's behavioural profile can become apparent over time in different ways: by one teacher observing the student over a period time; by forward feeding of performance from present teachers to new teachers, or by combining evaluations from different teachers by someone who has an oversight of the assessments. When a student's behaviourial profile has become apparent, it can be used to design an appropriate remediation strategy.

How to facilitate educators' responses to unprofessional behaviour

The *Expectancy-Value-Cost* model by Barron describes that a person's motivation to engage or not engage in a certain task is based on the balance of the expectancy of being successful in that task (*Can I do it*?), the perceived value of engaging in the task (*Do I want to do it*?) and the costs of engaging in the task (*Are there barriers that prevent me from doing it*?) [33]. This model appeared to effectively explain the motivation of students to respond to unprofessional behaviour in medical school [28]. Assuming that this model also applies to educators' motivation to respond to unprofessional behaviour of students, the facilitators for

	Improving expectancy of success of responding (*Can I respond?*)	Improving value of responding (*Do I want to respond?*)	Diminishing cost of responding (*Are there barriers to respond?*)
Faculty development	• Teach practical skills how to address unprofessional behaviour [5, 15, 34] • Provide individual guidance by staf [34]	• Stress the effect of students' unprofessional behaviour on future patient-safety [5, 34, 35] • Emphasize role modeling of responding to unprofessionalism to educators [36] • Inform teachers about policies [36]	• Offer the possibility to educators to discuss their experiences with colleagues and get mutual support (e.g. in teacher communities) [4, 5, 34, 36]
Institutional strategies	• Make 'triage' of observed unprofessional behaviour possible [4, 36] • Create a strong (longitudinal) assessment system [5, 25] • Give institutional support, e.g. through faculty development [5, 15] • Create an online repository of examples of remediation policies and procedures [15]	• Organise forward feeding of professionalism concerns [4, 25] • Create effective opportunities for students after failing [5, 15] • Provide feedback about the results of remediation, give evidence of student support [4, 34, 36] • Formulate clear expectations and policies [15] • Focus on help, not on punishment [15]	• Give teachers adequate time to observe and evaluate behaviours [37] • Provide short assessment and report forms that are easy to use [34] • Make assessment of professionalism part of normal assessment procedures [34] • Separate teaching and assessing of professionalism [34]

Table 9.2 Strategies to facilitate educators to respond to unprofessional behaviours of students

educators to respond to unprofessional behaviour of students, as found in the literature, were summarized using this model. See Table 9.2. The two main strategies to facilitate educators to respond to unprofessional behaviour of students are (1) strengthening educators' personal skills and qualities through faculty development, and (2) strengthening organisational policies to mitigate the assessment procedure and improve remediation outcomes.

How should educators respond to medical students' unprofessional behaviour?

Responding to reported unprofessional behaviour is theoretically described as a graduated approach, e.g. in the Vanderbilt 'disruptive behaviour pyramid' [19]. Recently, five zones of success and failure for medical students have been presented, including failure in professionalism [38]. The basic philosophy of such models is that students are growing and developing, and sometimes fail, 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 profiles of student behaviour can help in designing such supporting remediation strategies. Punitive actions are reserved for those instances in which a student does not improve, despite remediation [21]. A road map for handling unprofessionalism includes three phases: (1) Explore and understand, (2) Remediate, and (3) Gather evidence for dismissal [39]. See Figure 9.3.

Explore and understand

After a student has been cited for unprofessional behaviour, a professionalism remediation supervisor (PRS), often the dean of student affairs, course director or clerkship director, invites the student for a conversation about the lapse. Jha demonstrated that the Theory of Planned Behaviour can be used to explore and understand students' unprofessional behaviour [40]. This theory encompasses that a student's ultimate behaviour is influenced by intentions and beliefs about the behaviour and its outcomes, the subjective norm, and the perceived behavioural control. Another theoretical approach is offered by the 'Onion model', consisting of the following layers: environment, behaviour, competencies, beliefs, identity, and, in the center, mission [41]. Based on these models, ten questions to be posed in a conversation with the student are summarized. See Table 9.3. The goal of this conversation is to create awareness about professionalism in the student, and to stimulate the student to formulate individual learning objectives that can be reached with the help of educators in the regular curriculum. For most students, this approach is sufficient to prevent future unprofessional behaviour. Furthermore, these conversations can yield important information about (hidden) organisational and contextual causes for students' unprofessional behaviour, that can be fed back into the organisation [7, 36].

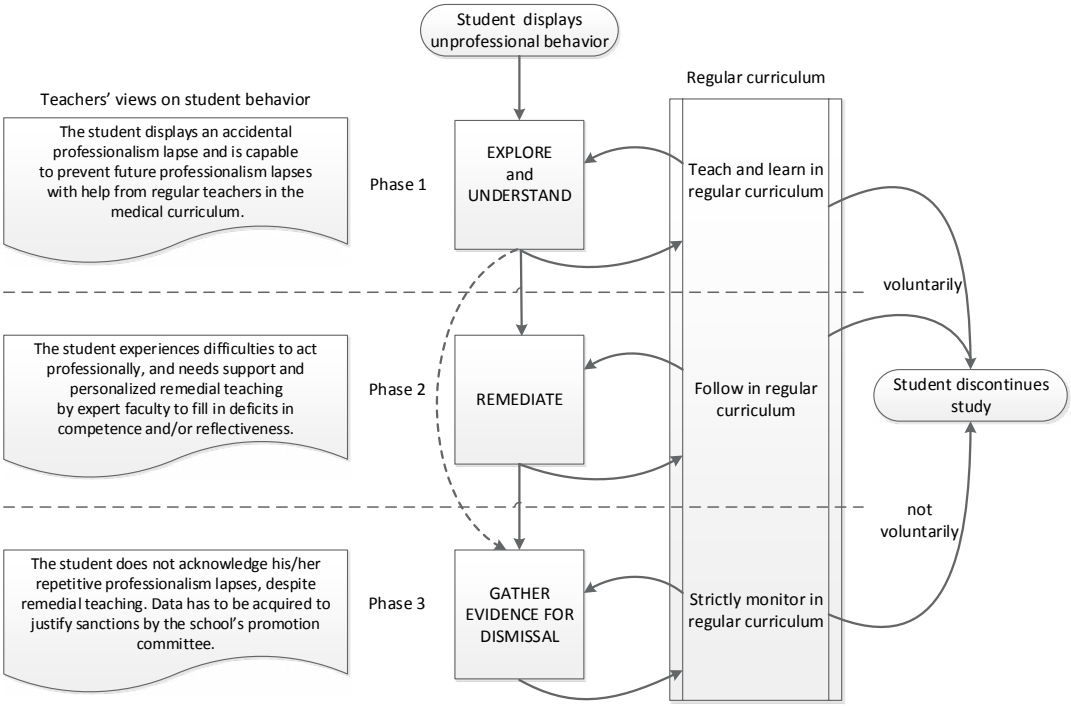

Figure 9.3 A road map for attending to students' professionalism lapses

	To be explored	Question
1	Student's perspective about the facts	What happened?
2	Alignment with assessment outcome	Do you agree with the unprofessional behaviour judgement?
3	Intentions	What did you intend to do?
4	Beliefs	What did you expect to happen?
5	Context	What circumstances influenced your behaviour?
6	Power	Were you able to influence the circumstances?
7	Effect on others	What do you think your behaviour did to others?
8	Emotions	How do you feel about it now?
9	Causes	Are there any circumstances that make it more difficult for you than for other students to comply with the professionalism expectations?
12	Plans	How would you act in a similar situation next time?

Table 9.3 Ten questions to explore a student's unprofessional behaviour

Remediate

This phase starts when the unprofessional behaviour appears to be repetitive, or when both student and PRS acknowledge that additional teaching is needed to fill in certain deficiencies to prevent future unprofessional behaviour. The approach is mainly pedagogical, although sometimes also punitive actions are deemed necessary, such as an informal or formal warning, or probation [34]. The PRS, in collaboration with the student, creates a remediation plan that is tailored to the supposed underlying cause, and the student's capacities. Several authors have described pedagogical measures that can be applied to remediate unprofessionalism, which span from remediation assignments or curricula, matching to a (self-chosen) role model, individual mentoring and coaching/counseling, deliberate practice and feedback in simulated situations, repeating part/all of course/clerkship, community service, up to mental health evaluation/treatment [8, 15, 23, 24, 42]. All measures are intended to support the student in reaching his/her learning objectives, to improve professionalism knowledge and personal/interpersonal skills, and to create insight into professionalism values. This is preferably done through an individual relationship by specialised faculty within the school, or by specialists outside the school. Although it sometimes seems desirable that remediation measures are mandatory, this is difficult to accomplish, since the student is the one who should decide to act or not. Thus, expectations must be set out clearly and at most a strong advice can be given how to attain them. Ultimately, the effect of the remediation has to be established by further assessment in the regular curriculum, within a given time frame [23, 24, 42]. The student's progress over time should be monitored by the PRS [15].

Professionalism remediation takes far more faculty time and effort than remediation of academic knowledge and skills deficits [23]. This calls for specific faculty development for remediation teachers. All individuals involved in the remediation process ideally form a community of practice to share experiences and support each other [42].

Gather information for dismissal

Not every student develops a strong professional identity. A handful of students, less than 2% of all learners referred for remediation, appears to insufficiently demonstrate reflectiveness and improvement, showing the profile of *disavowing behaviour*, as evidenced by a structural pattern of unprofessional behaviour despite remedial teaching [23, 24]. Especially if (future) patient care is potentially compromised, faculty must take their role as gatekeepers of the medical community. That's when the final phase commences, in which strong evidence has to be gathered for dismissal, through very clear processes that are specified in the institutional policy documents. Although remediation may continue in this phase, the main goal of the effort has changed from guiding the student into the medical community to guiding the student out of it. Therefore, assessment outcomes have to be documented carefully. To avoid conflicts of interest, in this final phase the responsibility for the process and guidance of the student should be shifted from remediation teachers to other people within the institution, e.g. a professionalism progress committee [39].

Implications for practice

Lapses are a part of learning, and discussing lapses among teachers and students can effectively enhance students' professional identity formation [21]. Thus, responding to unprofessional behaviour to prevent future lapses should be part of the normal curriculum [43]. Medical educators need to be taught about how to recognise and respond to unprofessional behaviour, and to be informed about the way the behaviour is dealt with after reporting.

Not only students, but also teachers may display unprofessional behaviours. That's why, ideally, professionalism values are developed in collaboration between educators and students [44]. If professionalism expectations for both groups align, professionalism of students, and professionalism of teachers can be evaluated using the same standards.

Future research should focus on the effectiveness of remediation of unprofessionalism. Possibly, the behavioural profiles are a means to determine remediation measures. Especially, 'gaming-the-system' behaviour needs further research. Is it a phase in the learning process? [45]. Or is it a result from an extensive focus on behaviours, instead of on values? In further research contextual and cultural factors of unprofessional behaviour should also be taken into account. It would be worthwhile if educators would know how they could help to prevent unprofessional behaviour by bringing about changes in the educational context.

Conclusion

Poor professional behaviour is a symptom, not a diagnosis. By giving feedback to each other, and talking about unprofessionalism both students and educators can potentially learn. Students can learn that unprofessionalism is not tolerated, since it has a negative effect on (future) patient care. Educators can learn which factors in the educational context need to be influenced to support professional behaviour of medical students.

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“Change will not come if we wait for
some other person or some other time;
we are the ones we’ve been waiting for,
we are the change that we seek.”

Barack Obama

CHAPTER 10
General discussion

A part of this chapter has been published as an invited commentary:

Marianne Mak-van der Vossen

Failure to fail: the teacher's dilemma revisited.

Medical Education, 2019; 53(2):108-110

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

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.

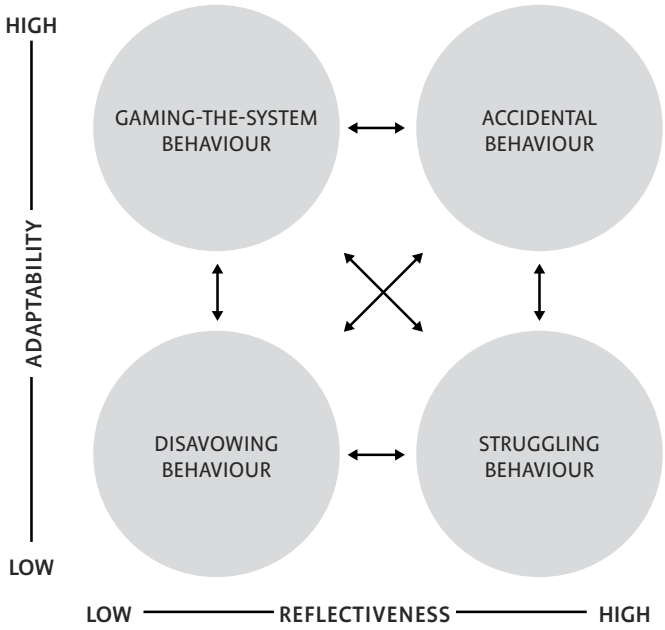

Figure 10.3 Final model of profiles of unprofessional behaviour among medical students

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

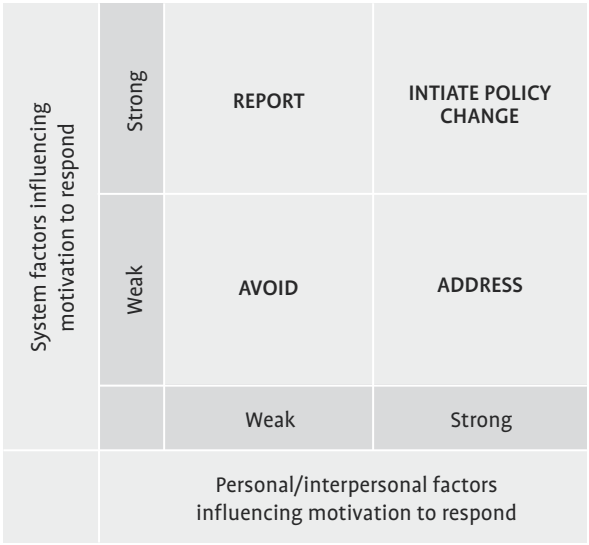

Figure 10.4 How personal/interpersonal and systemic factors determine student responses to unprofessional behaviour

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.

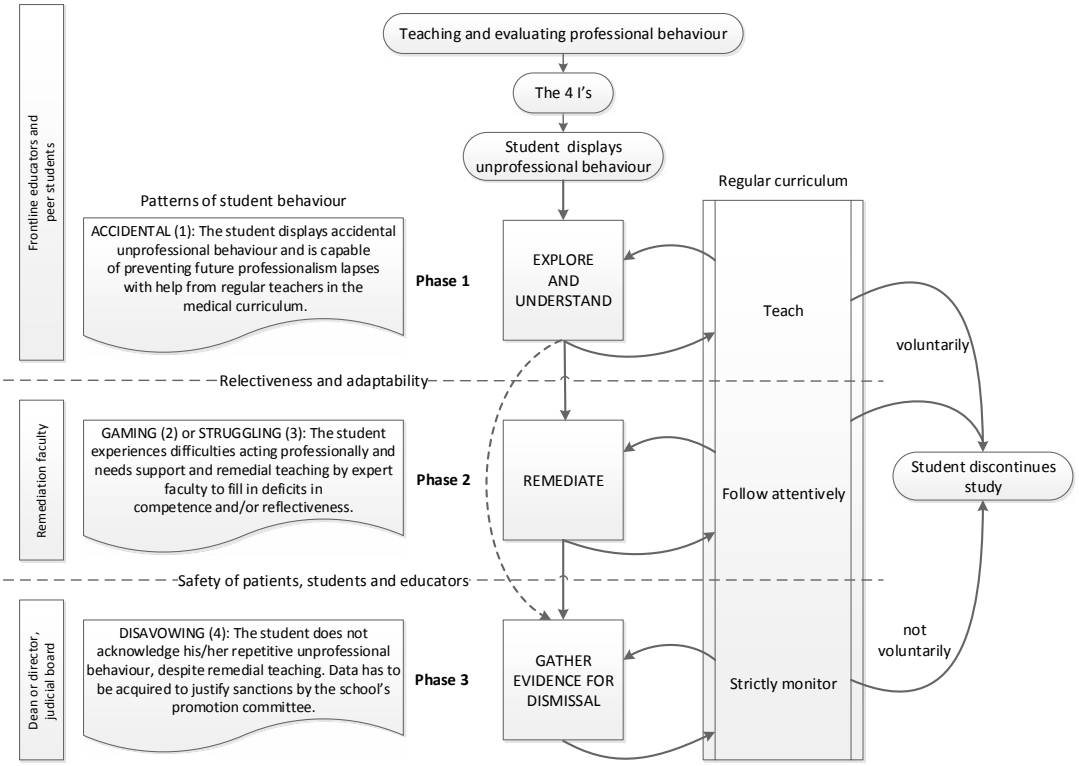

Figure 10.5 Model for handling medical students' unprofessional behaviour

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.

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Appendices

Glossary of definitions and terms

Term	Definition	Reference
Profession	An occupation whose core element is work based upon the mastery of a complex body of knowledge and skills. It is a vocation in which knowledge of some department of science or learning or the practice of an art founded upon it, is used in the service of others. Its members are governed by codes of ethics, and profess a commitment to competence, integrity and morality, altruism, and the promotion of the public good within their domain. These commitments form the basis of a social contract between a profession and a society, which in return grants the profession a monopoly over the use of its knowledge base, the right to considerable autonomy in practice and the privilege of self-regulation. Professions and their members are accountable to those served, to the profession, and to the society.	Cruess et al., 2004
Medical professionalism	Having medical knowledge and skills acquired through extensive study, training and experience, being able to apply this within the rules that have been drafted by the medical profession itself, the medical organisations and the government, in which one can be held accountable for actions by all parties involved. This needs to be placed within the cultural context and time frame in which the term is used.	Van Luijk et al., 2009.
Professional behaviour	The observable aspects of practicing professionalism, indicating that a student has the skills to (1) deal with tasks, (2) deal with others and (3) deal with oneself.	Van Luijk, Consilium Abeundi 2009
Professional identity formation/ development	An adaptive developmental process that happens simultaneously at two levels: (1) at the level of the individual, which involves the psychological development of the person and (2) at the collective level, which involves the socialization of the person into appropriate roles and forms of participation in the community's work.	Jarvis-Sellenger, 2012
Context	The definition includes 3 different dimensions of context: (1) a physical dimension, representing the environmental characteristics; (2) a semantic dimension, pertaining to the internal conceptual framework related to the learning task, and (3) a commitment dimension, representing the amount of experienced motivation and responsibility for a learning task.	Koens, 2005
Remediation	The act of facilitating a correction for trainees who started out on the journey toward becoming a physician but have moved off course.	Kalet, 2014
Medical educator	Person who fulfils one (or more) of the following tasks in the education and training of medical students: • Designing and planning learning • Teaching and facilitating learning • Assessment of learning • Educational research and scholarship • Educational management and leadership	AoME 2014
Bachelor/Master structure	A two-cycle model starting with an undergraduate bachelor phase and a graduate master phase.	Ten Cate, 2007
Formal curriculum	Represents the curriculum of teaching knowledge and techniques as it is stated.	Kaufman, 2010
Informal curriculum	Both explicit and implicit teaching that results from the interaction between students and their educators.	Kaufman, 2010
Hidden curriculum	Being a part of the informal curriculum, it represents the transfer of the culture of medicine, i.e. values, beliefs and moral judgements.	Hafferty & Franks, 1994

“I hate writing. I love having written.”

Dorothy Parker

SUMMARY

Chapter 1

Quality of health care depends on doctors behaving professionally. A medical student's unprofessional behaviour predicts later unprofessional behaviour as a physician. Therefore, professionalism is an important topic in undergraduate preclinical and clinical curricula. In **Chapter 1** the concepts of *profession, professionalism, professional behaviour,* and *professional identity* are introduced. It is argued that, despite the importance of responding to unprofessional behaviour in medical students, medical educators find it difficult to identify students who behave unprofessionally. Moreover, once they have done so, they are generally reluctant to fail students for unprofessionalism. The current medical education literature does not provide sufficient guidance to faculty on how to detect, identify, and classify medical students' unprofessional behaviours — much less does it provide guidance regarding remediation strategies. If medical educators knew how to detect students in need of professionalism remediation, and which remediation strategies to apply, they would likely be less reluctant to fail students, and more inclined to remediate them. This would benefit students, medical educators, patients, and future health care workers alike. This thesis aims to contribute to the teaching and assessing of professional behaviour, and the remediation of unprofessional behaviour in undergraduate preclinical and clinical education.

Chapter 2

Chapter 2 describes the design of the educational domain '*Professional Behaviour*' as a longitudinal thread throughout the six-year medical curriculum of VUmc School of Medical Sciences, Amsterdam. Workplace learning and role modeling are the pedagogic concepts for teaching professional behaviour. Educators carry out multiple formative and summative assessments of professional behaviour. They are trained to identify and report unprofessional student behaviour. Students with unsatisfactory professional behaviour are not awarded their degree irrespective of their medical knowledge. Students in question are offered interventions and support. With the continuous educational theme of *Professional Behaviour*, the institute emphasizes professional behaviour and firmly embeds it in its medical curriculum. This may be an illustrative case example for professionalism training programs in other institutions.

Chapter 3

Chapter 3 reports a systematic review study, which aimed to generate an overview of descriptors for unprofessional behaviour based on research evidence of unprofessional behaviours seen in medical students. A search in PubMed, ERIC, PsycINFO and Embase

yielded 11,963 different studies, of which 46 met all inclusion criteria. We found 205 different descriptions of unprofessional behaviours, and grouped these into 30 different descriptors comprising lapses in four different areas, the so-called 4 I's: *Involvement, Integrity, Interaction* and *Insight*. *The 4 I's* framework is proposed as a tool that provides educators with a common language to describe medical students' unprofessional behaviour, and thus helps to solve the problem known as a *failure to fail*. This review study did not yield any descriptions of behavioural *patterns* indicating students' unprofessional behaviour. This gap in the literature is addressed in the next two chapters.

Chapter 4

Chapter 4 presents a study investigating the patterns of behaviour that can be distinguished in students who behave unprofessionally in medical school. We aimed to contribute to a better evaluation of unprofessional behaviour by identifying behavioural patterns (or *profiles*) and constructing descriptions based on these patterns. The study comprised of three steps: (1) Using a template of unprofessional behaviours from the literature for coding student evaluation forms indicating unsatisfactory professional behaviour, collected from 2012 to 2014 at the VUmc School of Medical Sciences, Amsterdam, the Netherlands; (2) Latent Class Analysis, used to identify groups of students with a high chance of displaying comparable unprofessional behaviours; (3) Teachers' feedback of prototype students summarized to generate profile descriptions. The study identified three profiles of students: Profile 1 (43%) was labeled as *Poor reliability*, profile 2 (20%) was labeled as *Poor reliability and poor insight*, and profile 3 (37%) was labeled as *Poor reliability, poor insight, and poor adaptability*. Based on the content of the three profiles the distinguishing variable was described as a *Capacity for self-reflection and adaptability*. The findings prompted further research to determine if the profiles would be recognised by other educators, and in other contexts, and if they could be used as an instrument to identify which students are expected to benefit from remediation trajectories.

Chapter 5

Chapter 5 describes a study that used Nominal Group Technique and Thematic Analysis to refine the findings that were derived from the study described in Chapter 4. Opinions of professionalism experts from different medical schools were synthesized, aiming to develop a model of unprofessional behaviour profiles in medical students. Thirty-one experienced educators, purposefully sampled for their knowledge and experience in teaching and evaluation of professionalism, participated in five meetings at five medical schools in the Netherlands. In each group, participants generated ideas, discussed them, and independently ranked these ideas by allocating points to them. Participants suggested ten different ideas, from which the top 3 received 60% of all ranking points: (1) *Reflectiveness and adaptability are two distinct distinguishing variables* (25% of all points), (2) *The term 'poor reliability' is too narrow to*

describe unprofessional behaviour (22% of all points), and (3) *Profiles are dynamic over time* (12% of all points). Incorporating these ideas in the pre-existent framework described in Chapter 4 yielded a model consisting of four profiles of medical students' unprofessional behaviour (*accidental behaviour, struggling behaviour, gaming-the-system behaviour* and *disavowing behaviour*) divided by two distinct dimensions (*reflectiveness* and *adaptability*). *Gaming-the-system behaviour* occurs when students adapt their behaviour for the sake of passing an exam, without showing to have reflected on professionalism values. Both *adaptability* and *reflectiveness* are deemed necessary to become a professional physician. The findings may advance educators' insight into students' unprofessional behaviour, and provide information for future research on professionalism remediation.

Chapter 6

In the study described in **Chapter 6** we aimed to develop a road map for attending to lapses of professional behaviour in medical students. Between October 2016 and January 2018, 23 in-depth interviews were conducted with 19 expert educators responsible for remediation at 13 US medical schools. A constructivist Grounded Theory approach was used to develop an explanatory model for attending to lapses of professional behaviour in medical students. Based on participants' descriptions, a 3-phased approach was developed. In phase 1 (*Explore and understand*) professionalism supervisors (PRSs) take up the role of a concerned teacher, aiming to explore the professional behaviour lapse from the student's perspective. In phase 2 (*Remediate*), PRSs function as a supportive coach providing feedback on professionalism values, improving skills, creating reflectiveness, and offering support. Ultimately, in phase 3 (*Gather evidence for dismissal*), if the student does not demonstrate reflectiveness and improvement, and especially if current or future patient care is potentially compromised, PRS take up an altogether different role, namely that of gatekeeper of the profession. The resulting model for attending to professional behaviour lapses fits in the overarching *Communities of Practice* framework. Phases 1 and 2 are aimed at keeping students in the medical community, whereas phase 3 is aimed at guiding students out. These results provide empirical support to earlier proposed models, which are mainly descriptive and opinion-based, and may offer medical educators an evidence-based approach for attending to students who display lapses in professional behaviour.

Chapter 7

Chapter 7 introduces the perspective of students. The aim of this study was to describe medical students' responses to professional behaviour lapses in peers and faculty staff, and to understand students' motivation for responding or not responding. Although students endorse an obligation to respond to the professional behaviour lapses they witness in medical school, they experience difficulties in doing so. If medical educators knew how students respond and why they choose certain responses, they could support students in responding appropriately.

We conducted an explorative, qualitative study using Template Analysis, in which three researchers independently coded transcripts of semi-structured, face-to-face interviews with 18 purposefully sampled student representatives convening at a medical education conference. Three sensitising concepts from the *Expectancy–Value–Cost* model were used to map participants' responses. This model describes that a person's motivation to engage or not engage in a certain task is based on the balance of the expectancy of being successful in that task (*Can I do it*?), the perceived value of engaging in the task (*Do I want to do it*?) and the costs of engaging in the task (*Are there barriers that prevent me from doing it*?). Students mentioned having observed lapses in professional behaviour in both faculty staff and peers. Students' responses to these lapses were *avoiding, addressing, reporting,* and/or *initiating a policy change*. The Expectancy–Value–Cost model effectively explained students' motivation for responding to lapses. Expectancy of success, value, and costs each appeared to be influenced by personal/interpersonal and systemic factors. These factors are modifiable and can be used by medical educators to enhance students' motivation to respond to lapses in professional behaviour observed in medical school.

Chapter 8

Chapter 8 provides the perspective of two *simulated patients* who regularly participate in the workshop *Responding to unprofessional behaviour of faculty and peers* that has been developed for undergraduate students at VUmc School of Medical Sciences, Amsterdam, the Netherlands. As the patient perspective on *speaking-up* behaviour is important and currently absent in the literature, the simulated patients were interviewed to explore their opinions and experiences. Their perspectives may be helpful to medical educators who want to develop education about how to speak up. In the interviews, both simulated patients expressed that they expect physicians to respond to unprofessional behaviour of colleagues. Consequently, the simulated patients expect students to develop the skills to do so. In the workshops, they experience that students encounter difficulties in bringing their intended message across clearly without feeling that they offended the addressed person. The simulated patients state that practice is needed to acquire the skill of responding to unprofessional behaviour. The simulated patients were of the opinion that not only students, but also educators have to learn how to handle unprofessional behaviour. By role modeling to their students an open, supportive way of responding, educators can help to create a culture that encourages addressing unprofessional behaviours. In conclusion, simulated patients explicitly support the assumptions that are made in the medical education literature about addressing unprofessional behaviour: all involved in health care — students, educators, physicians, and patients — have a responsibility to cultivate an open supportive culture, which acknowledges lapses in professional behaviour occurring in people with good intentions. By openly discussing such lapses, a next step towards changing the culture in health care can be taken.

Chapter 9

In view of the amount of time, effort, and resources spent by educators in managing the unprofessional behaviour of medical students, it is important to establish effective responses to such unprofessional behaviour. **Chapter 9** provides a practical guide for medical educators in preclinical and clinical undergraduate medical education. The guide is based on the medical education literature on students' unprofessional behaviour, complemented by the research described in this thesis and the authors' extensive personal experiences with managing unprofessional behaviour in medical students. The guide outlines various approaches, seeking to facilitate medical educators to recognise students who behave unprofessionally and to acknowledge a student's need for extra guidance in developing into a professional physician. Also, attention is paid to factors in the educational context that may cause students' unprofessional behaviour. Furthermore, the guide describes the steps that can be taken after identification of a student who has behaved unprofessionally.

Chapter 10

Chapter 10 provides a general discussion of the findings of this thesis. The main conclusions are:

- 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*.

With this thesis we hope to help medical educators and medical students alike in paying attention to professional behaviour in medical school, thus cultivating professionalism in future physicians. Explicitly denoting unprofessional behaviour serves three goals: (1) creating a culture in which unprofessional behaviour is acknowledged, (2) targeting students who need extra guidance, and (3) learning which contextual factors contribute to unprofessional behaviour. This is beneficial for the professionalism of aspiring doctors and their future colleagues — and ultimately for the safety of their future patients.

“Stilstaan is een hele vooruitgang.”

Hindoe wijsheid

SAMENVATTING

Hoofdstuk 1

De kwaliteit van de gezondheidszorg hangt af van de professionaliteit van artsen. Onprofessioneel gedrag van een geneeskundestudent voorspelt diens latere onprofessioneel gedrag als arts, reden waarom het ontwikkelen van professionaliteit een belangrijk onderdeel is van de basisopleiding geneeskunde. In **hoofdstuk 1** worden de begrippen *professie, professionaliteit, professioneel gedrag* en *professionele identiteitsontwikkeling* geïntroduceerd. Beargumenteerd wordt dat, in weerwil van het belang van het reageren op onprofessioneel gedrag van studenten, docenten het lastig vinden om te bepalen of een student onprofessioneel gedrag vertoont. Bovendien geven docenten niet snel een onvoldoende voor *professioneel gedrag*, ook al menen zij dat het gedrag onprofessioneel is. De huidige medisch-onderwijsliteratuur verschaft medisch docenten onvoldoende duidelijkheid over de manier waarop onprofessioneel gedrag ontdekt, geïdentificeerd en geclassificeerd kan worden, en geeft al helemaal geen richting aangaande de wijze waarop het geremedieerd zou kunnen worden. Als docenten studenten die remediëring behoeven zouden weten te identificeren, en de juiste aanpak van die remediëring zouden kennen, zouden ze wellicht minder terughoudend zijn in het geven van een onvoldoende voor professioneel gedrag, en meer geneigd tot remediëren. Dat zou niet alleen studenten, maar ook hun docenten, toekomstige patiënten en collega's ten goede komen. Dit proefschrift wil een bijdrage leveren aan het onderwijzen en toetsen van professioneel gedrag en het remediëren van onprofessioneel gedrag in het basiscurriculum van de geneeskundeopleiding.

Hoofdstuk 2

Hoofdstuk 2 beschrijft de opzet van de longitudinale leerlijn '*Professioneel gedrag*' die onderdeel is van het basiscurriculum Geneeskunde aan de VUmc School of Medical Sciences in Amsterdam. De pedagogische concepten voor het onderwijzen van professioneel gedrag zijn het leren op de werkplek, en het leren van rolmodellen. Docenten beoordelen studenten op hun professionele gedrag in een aantal tussen- en eindbeoordelingen. Ze worden getraind in het vaststellen en rapporteren van onprofessioneel gedrag van studenten. Studenten die zich onprofessioneel gedragen krijgen geen einddiploma uitgereikt, ongeacht hun medische kennisniveau. De desbetreffende studenten wordt gericht onderwijs en ondersteuning aangeboden. Met de longitudinale leerlijn '*Professioneel gedrag*' als integraal onderdeel van het curriculum benadrukt de opleiding het belang van professioneel gedrag. Dit kan als voorbeeld dienen voor het ontwikkelen van dergelijk onderwijs in andere opleidingen.

Hoofdstuk 3

Hoofdstuk 3 doet verslag van een systematisch literatuuronderzoek dat beoogde een overzicht te bieden van omschrijvingen van onprofessioneel gedrag van geneeskunde-studenten zoals die in de medische literatuur zijn weergegeven. De zoekmachines PubMed, ERIC, PsycINFO en Embase leverden 11.963 vermeldingen op, waarvan 46 studies voldeden aan alle toelatingscriteria. Met de onderzoeksmethode Content Analyse vonden we 205 verschillende aanduidingen van onprofessioneel gedrag, die wij groepeerden tot 30 beschrijvingen van tekortkomingen op vier terreinen, de zogenaamde *4 I's*: Inzet, Integriteit, Interactie en Inzicht. Het voorgestelde model van *de 4 I's* voorziet medisch docenten van een gemeenschappelijke taal voor het beschrijven van onprofessioneel gedrag van geneeskundestudenten en draagt zo bij aan het verminderen van de terughoudendheid om een onvoldoende te geven. Deze literatuurstudie leverde geen beschrijvingen op van gedrags*patronen*, combinaties van onprofessioneel optreden. Deze lacune wordt in de volgende twee hoofdstukken aan de orde gesteld.

Hoofdstuk 4

Hoofdstuk 4 beschrijft een onderzoek naar de gedragspatronen van studenten die zich onprofessioneel gedragen tijdens de basisopleiding geneeskunde. Deze studie had tot doel de kwaliteit van de beoordeling van professioneel gedrag te verbeteren door het identificeren van gedragspatronen (*profielen*), en het genereren van bijbehorende profielbeschrijvingen. De studie bestond uit drie onderdelen: (1) Beoordelingsformulieren waarin in de periode 2012-2014 aan de VUmc School of Medical Sciences in Amsterdam een onvoldoende voor professioneel gedrag werd gegeven, werden gescoord op beschrijvingen van onprofessioneel gedrag, zoals die uit de literatuur naar voren waren gekomen; (2) Met Latente Klasse Analyse werden groepen van studenten met overeenkomstige gedragingen geïdentificeerd; (3) De feedback van docenten voor prototypes van iedere groep werd samengevoegd om tot profielbeschrijvingen per groep te komen. De studie leverde drie verschillende profielen van onprofessioneel gedrag op: profiel 1 (43%) *onbetrouwbaarheid*, profiel 2 (20%) *onbetrouwbaarheid en gebrekkig inzicht*, en profiel 3 (37%) *onbetrouwbaarheid, gebrekkig inzicht, en slecht aanpassingsvermogen*. Op grond van de inhoud van de drie profielen werd als onderscheidende variabele het *vermogen tot zelfreflectie en aanpassing van gedrag* geformuleerd. In de volgende twee hoofdstukken worden studies beschreven waarin werd onderzocht of deze profielen konden worden bevestigd door docenten in andere opleidingen, en of ze te gebruiken zouden zijn om te bepalen welke studenten baat zouden hebben bij remediërende activiteiten.

Hoofdstuk 5

De studie in **hoofdstuk 5** werd opgezet om de bevindingen van hoofdstuk 4 te verfijnen. We gebruikten daarvoor de onderzoeksmethoden Nominale Groep Techniek en Thematische Analyse. Opvattingen van experts professioneel gedrag van verschillende medische opleidingen werden bijeengebracht om een model te ontwikkelen dat profielen van onprofessioneel gedrag van geneeskundestudenten omvat. In totaal 31 experts, afkomstig van 5 verschillende Nederlandse geneeskundeopleidingen, namen deel aan een groepsbijeenkomst op hun faculteit. In elke bijeenkomst genereerden de deelnemers ideeën ter verfijning van het drie-profielenconcept, bespraken die, en brachten vervolgens een rangorde van de ideeën aan door onafhankelijk van elkaar punten te geven aan ieder idee. De 5 groepen brachten 10 verschillende ideeën naar voren. De top 3 (samen 60% van alle punten) daarvan was: (1) *Vermogen tot zelfreflectie* en *vermogen tot aanpassing van gedrag* zijn twee aparte onderscheidende variabelen (25% van alle punten); (2) de term *onbetrouwbaarheid* is een te beperkte beschrijving van onprofessioneel gedrag (22% van alle punten); (3) De profielen kunnen met de tijd veranderen (12% van alle punten). Het incorporeren van deze ideeën in het concept zoals beschreven in hoofdstuk 4 leverde een nieuw model op met vier profielen (*incidenteel gedrag, worstelend gedrag, manipulerend gedrag* en *afwijzend gedrag*) en twee aparte dimensies (*reflectievermogen* en *adaptatievermogen*). *Manipulerend gedrag* wordt gezien als een student zijn/haar gedrag aanpast om de toets maar te halen, maar er geen blijk van geeft de professionele waarden te onderkennen. Zowel het vermogen tot aanpassing aan verschillende situaties, als het vermogen om te reflecteren op eigen gedrag wordt gezien als noodzakelijk om een professioneel handelend arts te worden. De bevindingen werpen nieuw licht op onprofessioneel gedrag van geneeskundestudenten, en kunnen helpen om het onderzoek naar remediëring verder vorm te geven.

Hoofdstuk 6

Hoofdstuk 6 beschrijft een studie waarin een wegwijzer werd ontwikkeld voor het beleid bij onprofessioneel gedrag van geneeskundestudenten. Voor deze studie werden tussen oktober 2016 en januari 2018 23 diepgaande vraaggesprekken gevoerd met 19 experts in de remediëring van onprofessioneel gedrag, afkomstig van 13 verschillende geneeskundeopleidingen in de Verenigde Staten. We pasten een constructivistische Grounded Theory benadering toe, ter ontwikkeling van een wegwijzer voor het te voeren beleid bij onprofessioneel gedrag van studenten. Het op basis van de opvattingen van de experts ontwikkelde model omvat drie fasen. In de eerste fase (*Exploratie*) vervullen de supervisors van professioneel gedrag de rol van een begripvolle docent die het onprofessioneel gedrag onderzoekt vanuit het perspectief van de student. In de tweede fase (*Remediëring*) vervullen ze de rol van een ondersteunende coach die met de student professionele waarden, het aanleren specifieke vaardigheden en het ontwikkelen van zelfreflectie bespreekt en steun biedt. Fase 3 (*Verzamelen van documentatie ter verwijdering van de opleiding*) gaat in als de student niet van zelfreflectie en verbetering blijk geeft,

en met name als de huidige of toekomstige patiëntenzorg in gevaar dreigt te komen. Dan nemen docenten een geheel andere rol aan, nl. die van poortwachter van de medische professie. Het resulterende drie-fasen model past in het concept van de '*Communities of Practice*'. De activiteiten in Fase 1 en 2 zijn erop gericht om de student binnen de medische beroepsgroep te houden, terwijl de activiteiten in fase 3 er op gericht zijn de student naar buiten te begeleiden. Deze resultaten bieden empirische ondersteuning aan eerder voorgestelde, doch voornamelijk beschrijvende en op opinies gebaseerde, modellen. Hiermee kunnen opleiders geneeskunde een op onderzoek gestoelde aanpak kiezen voor het bepalen van hun beleid jegens studenten met een onvoldoende beoordeling voor professioneel gedrag.

Hoofdstuk 7

Hoofdstuk 7 introduceert het perspectief van de student. Deze studie beschrijft de reacties van geneeskundestudenten op onprofessioneel gedrag van medestudenten en docenten, en beoogt te doorgronden waarom studenten hierop al dan niet reageren. Hoewel studenten het belangrijk vinden om te reageren op onprofessioneel gedrag waarvan ze in hun opleiding getuige zijn, vinden zij het moeilijk dat ook daadwerkelijk te doen. Als docenten zouden weten *hoe* studenten al dan niet reageren, en *waarom* zij dat doen, zouden zij hen kunnen ondersteunen bij het kiezen van een juiste respons. Wij voerden een verkennende, kwalitatieve studie uit waarin 18 Amerikaanse studentvertegenwoordigers, bezoekers van een medisch-onderwijscongres, werden ondervraagd. Transcripten van de semi-gestructureerde vraaggesprekken werden door drie onderzoekers onafhankelijk van elkaar geanalyseerd met een onderzoeksmethode genaamd 'Template Analysis'. De drie '*sensitising concepts*' van het zogenaamde 'Verwachtingen-Waarden-Kosten-motivatiemodel' werden gebruikt om de bevindingen te structureren. Dit model beschrijft dat de drijfveer voor het uitvoeren van een activiteit wordt bepaald door het antwoord op drie vragen: (1) Kan ik het doen? (*Verwachtingen*), (2) Wil ik het doen? (*Waarden*), en (3) Welke mogelijke belemmeringen ondervind ik bij uitvoering? (*Kosten*). De resultaten laten zien dat studenten zowel bij hun medestudenten als bij hun docenten onprofessioneel gedrag waarnemen, en dat hun reacties daarop waren: *vermijden, aanspreken, rapporteren,* en/of *initiëren van een beleidsverandering*. Het Verwachtingen-Waarden-Kostenmodel bleek geschikt om de motivatie voor hun reactie te verklaren. Alle drie aspecten van het model, de verwachting, de waarde en de kosten, bleken te worden beïnvloed door (inter)persoonlijke en systeemfactoren. Deze factoren zijn aanpasbaar en kunnen door opleiders worden gebruikt om de motivatie van geneeskundestudenten te versterken om te reageren op geobserveerd onprofessioneel gedrag.

Hoofdstuk 8

In *hoofdstuk 8* wordt de mening van twee simulatiepatiënten verwoord. Deze simulatiepatiënten nemen geregeld deel aan een training voor geneeskundestudenten die is opgezet door de afdeling Medische Psychologie van de VUmc School of Medical Sciences in Amsterdam: 'Hoe te reageren op onprofessioneel gedrag van docenten en medestudenten.' Aangezien de kijk van de patiënt op het vraagstuk van 'je mond opendoen' belangrijk is, maar in de literatuur ontbreekt, werd de simulatiepatiënten gevraagd naar hun meningen en ervaringen. Hun perspectief kan nuttig zijn voor opleiders aan andere instituten die dergelijke trainingen willen ontwikkelen. In de gesprekken gaven beide simulatiepatiënten aan van artsen te verwachten dat deze onprofessioneel gedrag van hun collega's aankaarten. Dat betekent in hun ogen dat studenten in de geneeskundeopleiding ook dienen te leren hoe dat te doen. In de rollenspellen die ze voeren, ervaren de simulatiepatiënten dat studenten het moeilijk vinden hun boodschap over te brengen op een wijze die wel duidelijk is maar niet beledigend voor de aangesprokene. Oefening is nodig, aldus de simulatiepatiënten, om dit goed te doen. Ze vinden dat niet alleen studenten, maar ook docenten moeten leren hoe om te springen met onprofessioneel gedrag. Als docenten zelf met een open, opbouwende respons het goede voorbeeld geven, scheppen ze daarmee een cultuur die het aan de orde stellen van onprofessioneel gedrag aanmoedigt. Samenvattend ondersteunen simulatiepatiënten uitdrukkelijk de veronderstelling in de medische literatuur over onprofessioneel handelen, dat alle bij de gezondheidszorg betrokkenen — studenten, opleiders, artsen en patiënten — medeverantwoordelijk zijn voor het cultiveren van een open, opbouwende cultuur die erkent dat mensen met de beste bedoelingen fouten maken in hun professioneel gedrag. Met het open bespreken van die fouten kan een stap worden gezet richting cultuurverandering in de gezondheidszorg.

Hoofdstuk 9

Gezien de hoeveelheid tijd en energie die docenten geneeskunde besteden aan de begeleiding van onprofessioneel gedrag van geneeskundestudenten, is een helder en effectief beleid voor de aanpak van onprofessioneel gedrag belangrijk. In **hoofdstuk 9** wordt een praktische richtlijn voor opleiders gegeven om dat beleid vorm te geven. De aanbevelingen in de richtlijn zijn gebaseerd op de bestaande literatuur over medisch onderwijs, de studies die beschreven worden in dit proefschrift, en de persoonlijke ervaringen van de auteurs. De richtlijn beschrijft eerst hoe docenten onprofessioneel gedrag kunnen herkennen en duiden. Vervolgens wordt aangegeven hoe gericht onderwijs gegeven kan worden aan studenten die extra begeleiding nodig hebben om zich te ontwikkelen tot een professionele arts. Ook wordt aandacht besteed aan systeemfactoren die onprofessioneel gedrag kunnen uitlokken. Verder beschrijft de richtlijn de stappen die gezet kunnen worden nadat is vastgesteld dat een student onprofessioneel gedrag heeft vertoond.

Hoofdstuk 10

In hoofdstuk 10 worden de bevindingen van de studies besproken en conclusies als volgt geformuleerd:

- Medisch docenten kunnen onprofessioneel gedrag opsporen met behulp van het model van de 4 I's. Dit model bevat 30 omschrijvingen van onprofessioneel gedrag, ondergebracht in vier domeinen: inzet, integriteit, interactie en introspectie.

- Medisch docenten kunnen onprofessioneel gedrag van studenten indelen in vier gedragsprofielen: incidenteel gedrag, worstelend gedrag, manipulerend gedrag en afwijzend gedrag. Deze vier profielen kunnen worden onderscheiden door twee dimensies: reflectievermogen en aanpassingsvermogen.

- De reacties van medisch docenten op onprofessioneel gedrag van studenten verloopt in drie opeenvolgende fasen: (1) exploratie, (2) remediëren, (3) verzamelen van documentatie ter verwijdering van de opleiding.

We hopen met dit proefschrift bij te dragen aan het onderwijs in professionaliteit, en daarmee aan de professionaliteit van toekomstige artsen. Aandacht voor professioneel gedrag van geneeskundestudenten is belangrijk om drie redenen: (1) het creëren van een cultuur waarin geaccepteerd wordt dat missers in professionaliteit nu eenmaal voorkomen; (2) het aanbieden van gericht onderwijs aan studenten die dat nodig hebben, en (3) het ontdekken welke systeemfactoren bijdragen aan onprofessionaliteit. Deze drie aspecten kunnen bijdragen aan de opleiding van aankomend artsen, en aan het vertrouwen dat hun toekomstige collega's en hun toekomstige patiënten in hen kunnen stellen.

“Experience is the name
everyone gives to his mistakes.”

Oscar Wilde

PhD PORTFOLIO

PhD training

2012 Course *Onderzoek van onderwijs (RESME: Research in Medical Education)* at SHE-Maastricht (Scherpbier)
2012 Course *Reference manager* at VUmc Library
2013 Course *PubMed* at VUmc Library
2013 AMEE Preconference workshop *Grounded theory* (Lingard, Watling)
2013 AMEE Preconference workshop *Professionalism* (Hafferty)
2014 Course *Masterclass in qualitative research* at SHE-Maastricht (Dornan, Lingard, King)
2014 AMEE Preconference workshop *Writing for publication* (Scott)
2015 Course *Constructing typologies* (Evers)
2015 NVMO course *Conducting a review* (Jaarsma)
2015 Course *Academic writing in English* at VUmc Taalcentrum (Bruijns)
2016 NVMO course *Qualitative analysis* (De Boer)
2016 AMEE Preconference workshop A framework for analysis of unprofessional behaviour in medical students (Jha, Byrden, Brockbank)
2016 AMEE Preconference workshop *Advanced presentation skills in medical education: Going from good to great* (Sherman)
2016 UCSF workshop *Regression analysis* (Boscardin)
2016 UCSF workshop *IPE Strategies: Setting the stage for inter-professional teaching* (Rivera, MacDougall)
2016 UCSF workshop *Clinical teaching* (Teherani)
2016 UCSF workshop *Large group teaching* (Amenhotep)
2017 Course *Masterclass scientific writing* at SHE-Maastricht (Lingard, Watling)
2017 NVMO conference workshop *How to write a peer review* (Schönrock-Adema, Boendermaker, Van der Vleuten, Driessen)
2018 UMC Utrecht-Harmen Tiddens Society Masterclass *Addressing the hidden curriculum and professional culture* (Mulder, Van Wijngaarden, Hafferty)
2018 UMC Utrecht-Harmen Tiddens Society Masterclass *What are ingroups and outgroups and how do they affect identity formation in medical trainees?* (Van den Broek, Ten Cate, Hafferty)
2018 AMEE preconference workshop *Remediation of professionalism concerns* (Monrouxe, Byszewski)

Presentations

1. Mak-van der Vossen MC, Peerdeman SM. Continuity in the assessment of professional behaviour. AMEE conference 2012, Lyon, France.

2. Mak-van der Vossen MC, Peerdeman SM, Kleinveld JH. Professioneel gedrag beoordelen en begeleiden: Wat levert het op? NVMO congress 2012, Maastricht, the Netherlands.

3. Mak-van der Vossen MC, Peerdeman SM, Kusurkar RA. Teaching, training, and assessment of professional behaviour at VUmc School of Medical Sciences Amsterdam. AMEE conference 2013, Prague, Czech Republic.

4. Mak-van der Vossen MC, Peerdeman SM, Galindo-Garré F, Croiset G, Kusurkar RA. Begeleiden van studenten na een onvoldoende voor Professioneel Gedrag: Voorspellen de leerdoelen van de student een succesvolle remediëring? NVMO congress 2013, Egmond aan Zee, the Netherlands.

5. Mak-van der Vossen MC, Peerdeman SM, Croiset G, Kusurkar RA. Can students' learning objectives for professional behaviour predict success of remediation? AMEE conference 2014, Milan, Italy.

6. Mak-van der Vossen MC, Kusurkar RA, Croiset G. Remediering van onprofessioneel gedrag met behulp van de Kernkwadranten van Ofman. NVMO congress 2014, Egmond aan Zee, the Netherlands.

7. Mak-van der Vossen MC, Van Mook WNKA, Croiset G, Kusurkar RA. A content analysis of literature describing unprofessional behaviours of medical students. AMEE conference 2015, Glasgow, UK.

8. Mak-van der Vossen MC, Van Mook WNKA, Croiset G, Kusurkar RA. Een literatuurstudie naar onprofessionele gedragingen van geneeskundestudenten. NVMO congress 2015, Rotterdam, the Netherlands.

9. Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. Distinguishing three unprofessional behaviour profiles of medical students using latent class analysis. ASME Annual Scientific Meeting 2016, Belfast, UK.

10. Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. Distinguishing three unprofessional behaviour profiles of medical students using latent class analysis. AMEE conference 2016, Barcelona, Spain.

11. Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. Distinguishing three unprofessional behaviour profiles of medical students using latent class analysis. VUmc Science Exchange Day 2016, Amsterdam, the Netherlands.

12. Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. Onprofessioneel gedrag van geneeskundestudenten: drie gedragspatronen geïdentificeerd met Latente klasse analyse. NVMO congress 2016, Egmond aan Zee, the Netherlands.

13. Mak-van der Vossen MC, Teherani AT, Van Mook WNKA, Croiset G, Kusurkar RA. Students' motivation to respond to professionalism lapses of their peers. AMEE conference 2017, Helsinki, Finland.

14. Mak-van der Vossen MC, van Mook WNKA, Kors JM, Van der Burgt SME, Ket JCF, Croiset G, Kusurkar RA. Descriptors for unprofessional behaviours of medical students: a systematic review and categorisation. VUmc Science Exchange Day 2017, Amsterdam, the Netherlands.

15. Mak-van der Vossen MC, Teherani AT, Van Mook WNKA, Croiset G, Kusurkar RA. Medical students' response to professionalism lapses of their peers. AAMC conference 2017, Boston, MA, USA.

16. Mak-van der Vossen MC, van Mook WNKA, Kors JM, Van der Burgt SME, Ket JCF, Croiset G, Kusurkar RA. Descriptors for unprofessional behaviours of medical students: a systematic review and categorization (poster presentation). EBMA conference 2017, Egmond aan Zee, the Netherlands.

17. Mak-van der Vossen MC, Teherani AT, Van Mook WNKA, Croiset G, Kusurkar RA. Motivatie van geneeskundestudenten om te reageren op onprofessioneel gedrag van docenten en medestudenten. NVMO congress 2017, Egmond aan Zee, the Netherlands.

18. Roosdorp D, Nieuwland I, Mak-van der Vossen MC, Kreeke JJS van der. Een collega aanspreken: Doe je het of doe je het niet? (workshop) NVMO congress 2017, Egmond aan Zee, the Netherlands.

19. Kreeke JJS van der, Bruijne MC de, Reefman K, Tahir O el, Mak-van der Vossen MC. Leiderschap voor coassistenten (poster presentation) NVMO congress 2017, Egmond aan Zee, the Netherlands.

20. Mak-van der Vossen MC, Teherani A, Van Mook WNKA, Croiset G & Kusurkar RA. Investigating US medical students' motivation to respond to lapses in professionalism. ASME Annual Scientific Meeting 2018, Newcastle, UK.

21. Mak-van der Vossen MC, De la Croix A, Teherani A, Van Mook WNKA, Croiset G, Kusurkar RA. Developing a two-dimensional model of unprofessional behaviour profiles in medical students. AMEE conference 2018, Basel, Switzerland.

22. Mak-van der Vossen MC, De la Croix A, Teherani A, Van Mook WNKA, Croiset G, Kusurkar RA. Investigating US medical students' motivation to respond to lapses in professionalism. VUmc Science Exchange Day 2018, Amsterdam, the Netherlands.

23. Mak-van der Vossen MC, De la Croix A, Teherani A, Van Mook WNKA, Croiset G, Kusurkar RA. De constructie van een drie-fasen model voor de remediëring van onprofessioneel gedrag van geneeskundestudenten. NVMO congress 2018, Egmond aan Zee, the Netherlands.

24. Mak-van der Vossen MC, Klumpers UU, Boogerman AEM, Mook WNKA, Kusurkar RA, Croiset G, Koens F. Symposium: Het Iudicium Abeundi: hoe wordt het een werkzaam instrument? NVMO congress 2018, Egmond aan Zee, the Netherlands.

25. De la Croix A, Veen M, Mak-van der Vossen MC. Fringe: Zombies! Waar komen ze vandaan en hoe komen we er vanaf? NVMO congress 2018, Egmond aan Zee, the Netherlands.

26. Van Luijk SJ, Van Mook WNKA, Rethans JJ, Barnhoorn P, Mak-van der Vossen MC. De Verklaring Omtrent het Gedrag (VOG) voor co-assistenten: gewenst of gevreesd?! NVMO congress 2018, Egmond aan Zee, the Netherlands.

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1. Mak-van der Vossen MC, Peerdeman SM, Kleinveld J, & Kusurkar RA (2013). Best abstracts of the NVMO conference. Teaching, training and testing of professional behaviour: What is the benefit? *Perspect Med Educ*, 2:41-53 http://www.ncbi.nlm.nih.gov/pubmed/23670656

2. Mak-van der Vossen MC, Peerdeman SM, Kleinveld J & Kusurkar RA (2013). How we designed and implemented teaching, training and assessment of professional behaviour at VUmc School of Medical Sciences Amsterdam. *Med Teach*, 35:709 http://www.ncbi.nlm.nih.gov/pubmed/23782044

3. Mak-van der Vossen MC, Peerdeman SM, Van Mook WNKA, Croiset G & Kusurkar RA (2014). Assessing professional behaviour: Overcoming teachers' reluctance to fail students. *BMC Research Notes*, 7:36
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4. Daelmans HE, Mak-van der Vossen MC, Croiset G & Kusurkar RA (2016). What difficulties do faculty members face when conducting workplace-based assessments in undergraduate clerkships? *International Journal of Medical Education*, 7:19
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5. Mak-van der Vossen MC, van Mook WNKA, Kors JM, van Wieringen WN, Peerdeman SM, Croiset G & Kusurkar RA (2016). Distinguishing three unprofessional behavior profiles of medical students using Latent Class Analysis. *Acad Med*, 91(9):1276-128
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6. Mak-van der Vossen MC, Van Mook WNKA, Croiset G & Kusurkar RA (2017). In reply to Bynum. *Acad Med*, 92(4):424-425
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http://primarycare.imedpub.com/simulated-patients-perspective-on-speaking-up-about-unprofessional-behavior-training-theresponding-muscles-is-key.pdf

9. Mak-van der Vossen MC, Teherani A, Van Mook WNKA, Croiset G & Kusurkar RA (2018). Investigating US medical students' motivation to respond to lapses in professionalism. *Medical Education*, 52.8: 838-850.
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10. Mak-van der Vossen MC, De la Croix A, Teherani A, Van Mook WNKA, Croiset G & Kusurkar RA (2019). A road map for attending to medical students' professionalism lapses. *Acad Med*, 93(4)

11. Mak-van der Vossen MC, De la Croix A, Teherani A, Van Mook WNKA, Croiset G & Kusurkar RA (2018). Developing a two-dimensional model of unprofessional behaviour profiles in medical students. *Advances in Health Sciences Education*,( ), 1-18 http://link.springer.com/article/10.1007/s10459-018-9861-y

12. Mak-van der Vossen MC (2018). Failure to fail: the teacher's dilemma revisited. Invited commentary, *Medical Education* 2019; 53(2):108-110 https://onlinelibrary.wiley.com/doi/pdf/10.1111/medu.13772

Conferences

2012 AMEE conference
2012 NVMO congress
2013 AMEE conference
2013 NVMO congress
2014 AMEE conference
2014 NVMO congress
2015 AMEE conference
2015 NVMO congress
2016 ASME Annual Scientific Meeting
2016 VUmc Science Exchange Day
2016 AMEE conference
2016 AAMC Learn Serve Lead
2016 NVMO congress
2017 VUmc Science Exchange Day Amsterdam
2017 AMEE conference
2017 AAMC Learn Serve Lead
2017 EBMA conference
2017 NVMO congress
2018 ASME Annual Scientific Meeting
2018 VUmc Science Exchange Day
2018 AMEE conference
2018 NVMO congress

Teaching

Lecturing bachelor and master students
Lecturing medical faculty
Tutoring and mentoring medical students
Supervising BKO trainees

Prizes and nominations

Date	Prize/nomination	Organisation	Title
Nov 2012	*Best paper prize*	NVMO	Mak-van der Vossen MC, Peerdeman SM, Kleinveld JH. *Professioneel gedrag beoordelen en begeleiden: Wat levert het op?*
Nov 2013	Nomination (among 3) for *best paper prize*	NVMO	Mak-van der Vossen MC, Peerdeman SM, Galindo-Garré F, Croiset G, Kusurkar RA. *Begeleiden van studenten na een onvoldoende voor Professioneel Gedrag: Voorspellen de leerdoelen van de student een succesvolle remediëring?*
Feb 2016	*New Researcher Award*	ASME	Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. *Distinguishing three unprofessional behaviour profiles of medical students using latent class analysis*
Nov 2016	Nomination (among 3) for *best scientific paper prize*	NVMO	Mak-van der Vossen MC, Van Mook WNKA, Kors JM, Wieringen WN, Peerdeman SM, Croiset G, Kusurkar RA. *Onprofessioneel gedrag van geneeskundestudenten: drie gedragspatronen geïdentificeerd met latente klasse analyse*
Nov 2017	Nomination (among 3) for *best scientific paper prize*	NVMO	Mak-van der Vossen MC, Teherani AT, Van Mook WNKA, Croiset G, Kusurkar RA. *Motivatie van geneeskunde-studenten om te reageren op onprofessioneel gedrag van docenten en medestudenten*
March 2018	Shortlisted (among 3) for *Best Original Research Paper Award (BORPA)*	ASME	Mak-van der Vossen MC, Teherani A, Van Mook WNKA, Croiset G & Kusurkar RA. *Investigating US medical students' motivation to respond to lapses in professionalism*

“Whatever you do in life,
surround yourself with smart people
who’ll argue with you.”

John Wooden

DANKWOORD

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De leden van het team Onderzoek van Onderwijs hebben een cruciale rol gespeeld in mijn ontwikkeling tot onderzoeker. Collega's: dank jullie wel! Onderzoek van Onderwijs kent

een ‘formeel curriculum’ met research overleggen, refereerbijeenkomsten, oefensessies voor congressen en schrijfworkshops, maar ons ‘informele curriculum’ heeft mij niet minder opgeleverd. Met oprechte belangstelling voor elkaar creëren jullie een heel effectief werkklimaat. Anouk Wouters: je bent de trouwste feedbackgever van allemaal. Cora Visser: je creativiteit was uitermate inspirerend. Ulviye Isik: jouw onverstoorbaarheid was voor mij een goed voorbeeld. Stéphanie van der Burgt: jij liet me zien hoe je doelgericht en snel resultaat kan boeken. Joyce Kors: dank voor je kritische blik en hulp bij de literatuurstudie. Ine Vos: dank voor je PG-uitpluiswerk. Sharon Schouten: je vrolijkheid inspireerde mij. Thea van Lankveld: jij bleek altijd goed voor een onderwijskundig concept. Anita Jacobs: dank voor je warme belangstelling tijdens onze gezamenlijke lunches. Anne de la Croix: dank voor je hulp bij coderen en schrijven van de laatste twee artikelen; de zombies zijn nog niet van ons af! Bart van Elswijk: dank voor je hulpvaardigheid. Andries Koster: dank voor het meedenken tijdens ons research overleg. Saskia Peerdeman, dank voor je intensieve rol bij kop en staart. Carolyn Teuwen, Marnix Westein, Jan Willem Grijpma en Jettie Vreugdenhil: ik wens jullie veel succes!

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ABOUT THE AUTHOR

Marianne Mak-van der Vossen was born in Amsterdam on April 3rd, 1958. After completing Gymnasium β (Zaanlands Lyceum, Zaandam) she graduated as an MD from the University of Amsterdam in 1986, and started her professional career as an elderly care physician at 'Verpleeghuis Oostergouw' in Zaandam. From 1988-1990 Marianne received residency training in general practice (Academic Medical Center, Amsterdam). She then worked as a general practitioner for 13 years. From 1993-2003 she had her practice within 'Wijkgezondheidscentrum Huizermaat' in Huizen. Since 1995 Marianne has been affiliated with VUmc School of Medical Sciences. In this role, she initially guided students in the workplace. In 2003 she ended her work as a general practitioner to fully focus on teaching in the areas of clinical reasoning, communication and reflection. This work sparked her interest in teaching and assessing professionalism. In 2010 Marianne Mak was appointed as the school's coordinator for the educational theme 'Professional behaviour'. Her talk at the 2012 NVMO conference about her teaching experiences was awarded with the best 'practice paper' prize. This proved to be a tipping point for her to develop into a medical education researcher: soon thereafter Gerda Croiset and Rashmi Kusurkar offered her a PhD trajectory. In 2016, Marianne's first scientific study was awarded the New Researcher Award by ASME, the Association for the Study of Medical Education. From September to November 2016, Marianne was a visiting scholar at the Center for Faculty Educators at UCSF in San Francisco. Currently, Marianne Mak continues to work at the VUmc School of Medical Sciences, partly as an educator, partly as a postdoc researcher in the Department of Research in Education. She favours research that can be integrated into everyday practice. Her research interests include professionalism and the well-being of medical students, academic writing and qualitative research methods. Marianne is married to Jan Karel Mak; they have two daughters, Eva Marijne and Anne Linde.

‘Untitled - 2009’ by Merijn Bolink

The cover of this dissertation shows the piezographic “Untitled, 2009” by Merijn Bolink. Hanging in the author’s office, it is viewed by students who, after an unsatisfactory judgement of their professional behaviour, come to discuss their lapse. Over time, and through students’ reflections, the artwork came to represent the symbolic union of the three domains of medical education - the development of knowledge, skills, and professionalism - and the indispensability of self-reflection in this process.

The skeleton, cut out by the artist from a medical book, represents objective knowledge. The little dancer - a Degas sculpture cut out from an art history book - represents delicate skills. Leaning on one another, the two step off their pedestal and into the unknown. Equally vulnerable in their new context, the two contrasting figures both display courage. They embrace uncertainty, with only their mirror image guiding them, echoing each step they take.

This interpretation mirrors the core proposition of this thesis. Professional development requires knowledge and skills, but also honest self-reflection and adaptability. Learning from lapses demands that students adapt to new and challenging situations with adequate guidance. Becoming a professional physician is an uncertain, personal endeavour which requires support from peers, educators and the medical schools.