

Developing professionalism in Italian medical students: an educational framework

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Abstract: Developing and assessing professionalism in medical students is an international challenge. This paper, based on preliminary research at the Faculty of Medicine and Dentistry of the University Sapienza of Rome, Italy, briefly summarizes the main issues and experiences in developing professionalism among Italian undergraduate medical students. It concludes with a proposed framework suited to the Italian medical curricula. In our educational system, professionalism is defined as the context of medical expertise, the combination of rules, conditions, and meanings in which the act of health care occurs, as well as the ability of critical reflection on technical expertise. It is a multidimensional construct of ethical, sociocultural, relational, and epistemological competencies, requiring a wide range of tools for assessment. With reference to Italian versions of validated tools of measure, vignettes, videos, and a student's portfolio of reflective writings, this paper outlines the manner in which education for professionalism is embedded in the existing curriculum and overall framework of assessment.

Keywords: professionalism, undergraduate medical education, tools for assessment

Introduction

Defining professionalism and explicitly integrating professionalism into the medical curriculum presents a difficult challenge.^{1,2}

While there is a general consensus regarding a set of elements that are components of professionalism,³ their exact determination remains elusive. Aside from being a set of personal traits, professionalism can also be conceived as the expression of the relationship between the profession and the social and cultural context in which health care professionals function.⁴ One of the recommendations of the International Working Group on Professionalism is to “examine the concept of professionalism and its assessment across different linguistic and cultural contexts”, raising the issue of intercultural comparison of curricula.⁵

The purpose of this article is to present the initial experiences at the Faculty of Medicine and Dentistry of the University Sapienza of Rome, Italy, where an educational framework for the development of professionalism, suited to the structure of the Italian medical curriculum, was implemented.

Background and principles of design and methods

The Faculty of Medicine and Dentistry of the University Sapienza of Rome maintains traditionally designed curricula in medicine, nursing, and other allied health care professions. Medical training lasts 6 years and is divided into three 2-year periods: basic, preclinical, and clinical. A medical education committee identifies and discusses problematic areas

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in teaching/learning to propose solutions. A working group, composed of the authors of this paper, was in charge of designing a curriculum for the development of professionalism.

Based on the concept of “spiral learning”, the foundation of the design is the vertical integration of learning of professionalism throughout the formal curriculum.⁶ A special stream of courses, prefixed as methodology, is offered in all 6 years of the curriculum. These courses only partially relate to the acquisition of specific technical knowledge or skills. In addition, they focus on the general ability to use knowledge to set and solve problems (Table 1).

Table 1 The stream of methodology courses at the Faculty of Medicine and Dentistry of Sapienza University of Rome, Italy

Year/semester	Course and main subjects
1°/I	Basic methodology – human sciences 1: Introduction to medicine – Epidemiology – Clinical psychology – Internal medicine/general surgery
1°/II	Basic methodology – human sciences 2: Epistemology – Epidemiology and statistics – Physics and biochemistry
2°/I	Basic methodology – human sciences 3: history of medicine and physician–patient relationship – History of medicine and bioethics – Clinical psychology
2°/II	Clinical methodology 1: logic, clinical reasoning, Bioethics – History of medicine and bioethics – Introduction to clinical medicine
3°/I	Clinical methodology 2: introduction to experimental medicine – Epidemiology – Introduction to clinical medicine
3°/II	Clinical methodology 3: physical examination and introduction to critical thinking – Introduction to clinical medicine
4°/I	Integrated methodology 1: hygiene 1 – Hygiene – Infectious diseases – Respiratory diseases
4°/II	Integrated methodology 1: hygiene 2 – Hygiene – Oncology – Gastroenterology – Endocrinology
5°/I	Methodology in public health 1: medicine of work – Medicine of work
6°/I	Methodology in public health 2: health care management – Health care management
6°/II	Methodology in forensic medicine – Forensic medicine – Bioethics

This stream appeared as the most obvious framework to provide structure to a vertical curriculum addressing the development of professionalism.

A second core concept in design was “assessment for learning”.⁷ Quantitative and qualitative information from multiple sources is needed to assess a complex competency. Therefore, we paid special attention to a variety of assessment tools that address different components of the overall construct of professionalism.

We intended this construct as a multidimensional set of competencies:

1. ethical competence: with regard to clinical ethics and bioethics;
2. sociocultural competence: with regard to sensitivity to community, multiculturalism and the social contract, as well as the contributions of sociology and anthropology;
3. relational competence: with regard to the relationship with self, with colleagues in a team, and with patients; and
4. epistemological competence: with regard to the use of evidence and critical thinking as well as the ability to cope with complexity.

In our view, professionalism is the context of medical expertise, as a combination of rules, conditions, and meanings in which the act of health care occurs. Additionally, professionalism encompasses the ability of critical reflection on technical expertise. It is expressed through the ability to act and make decisions when dilemmas or elements of complexity are present.

This approach and the interim results of the design were discussed in an iterative process with the medical education committee and coordinators of the methodology courses.

Results

As mentioned above, the stream of methodology courses already demonstrated a close congruence with the elements and skills necessary for the development of professionalism. Table 2 summarizes some of the most relevant objectives for the growth of professionalism, already present in the courses. Currently, our curriculum is comprised of lectures, small group tutorial activities, and practice. Therefore, we did not introduce new contents but emphasized to both students and teachers that the goal of the curriculum was the development of a mature medical professional ready to meet today’s health care challenges in Italy. This was accomplished by illustrating the new framework to the methodology course teachers in a series of meetings. The framework was also explicitly detailed in the official guide for students. Finally, the most

Table 2 Examples of learning objectives identified as relevant in the framework of professionalism for the stream of methodology courses at the Faculty of Medicine and Dentistry of Sapienza University of Rome, Italy

Course and main subjects	Examples of relevant objectives
Basic methodology – human sciences 1: introduction to medicine	To discuss <ul style="list-style-type: none"> – The historical evolution of the concept of health and disease – The perception of health and disease in migrant people – Physician–patient relationship in different context
Basic methodology – human sciences 2: epistemology	To distinguish between “difficult” and “complex” problems To suggest types of solution for complex problems
Basic methodology – human sciences 3: history of medicine and physician–patient relationship	To frame in a historical perspective the main theoretic and technical development of medicine To discuss the cultural factors which affect the practice of medicine and the models of disease To describe the behavior of a physician observed in a clinical encounter
Clinical methodology 1: logic, clinical reasoning, bioethics	To critically discuss the ethical implications in a clinical case To assess the lifestyle of a patient during history taking
Clinical methodology 2: introduction to experimental medicine	To describe the design and implementation of clinical research To take a history from a patient according to the rules of good communication To show attitude to reflective thinking in writings on the first clinical experience
Clinical methodology 3: physical examination and introduction to critical thinking	To discuss the characteristics of errors in medicine by critically reviewing simulated decisional processes
Integrated methodology 1: hygiene I	To discuss the use of different kinds of health care facilities in cases of infectious and respiratory diseases
Integrated methodology 1: hygiene 2	To discuss the use of different kinds of health care facilities in cases of oncology, gastroenterology, endocrinology
Methodology in public health 1: medicine of work	To discuss the relationship between communication media and people with regard to health: social perception of risk
Methodology in public health 2: health care management	To show cultural competence in relationships with patients of different ethnic origin
Methodology in forensic medicine	To identify duties and rights of physicians in different situations
– Forensic medicine	To define functions and structure of the college of physicians
– Bioethics	To show awareness of the contents of the code of professional Ethics of Italian physicians To discuss the concepts of euthanasia and overtreatment

relevant element in the enhancement of awareness was the introduction of a systematic series of assessments throughout the 6 years based on the set of tools we identified.

We began the assessment of professionalism traits in students during the first year because expectations, knowledge, and attitudes of students at the beginning of their studies are often not perfectly aligned with the real needs and practise of health care today.⁸ With this goal in mind, we selected, translated, and adapted three instruments from international literature, with authors' permission, and revalidated them in an Italian version. The selected instruments were designed to measure the knowledge and attitudes towards sociocultural competence,⁹ empathy,¹⁰ and the interactions with self, patients, colleagues, and institutions.¹¹ The validation study was conducted on 90 first-year students. Table 3 summarizes the structural and psychometric characteristics of the three instruments, which proved to be valid and reliable even in the Italian adaptation. Specifically, for each instrument, a reliability index was expressed as Cronbach's α .

This index measures the degree of internal consistency of an instrument. An α -value above 0.6 is considered acceptable for experimental use, while a value greater than 0.8 indicates excellent performance, which allows for the routine use of the instrument. The overall educational framework also included a yearly reassessment with the same instruments. From the third year on we will also use vignettes and a Professionalism Mini Evaluation Exercise (P-MEX).

The use of vignettes to contextualize ethical dilemmas is a method of challenging students' decision-making ability and to measure their proposed behavior.¹² The vignettes can be written or videotaped scenarios.¹³ We wrote ten vignettes addressing problematic situations using the Italian Code of Professional Ethics of the Italian Federation of Medical Colleges as a reference. We also translated into Italian five short videos used in an international study on the cross-cultural comparison of students' approaches to professional dilemmas.¹⁴ Written and video vignettes will be used in small group tutorial sessions to foster reflection and provide formative assessment.

Table 3 Structure and psychometric characteristics of the three instruments, translated and adapted for Italy

	Objective	Structure	Cronbach's α
Sociocultural Attitudes in Medicine Inventory (SAMI) ¹⁸	To measure the sensitivity and knowledge of the impact that sociocultural factors have in the process of care	Self-administered questionnaire, 26 items, 4-point Likert scale	0.84
Jefferson Scale of Empathy (JSE) ¹⁹	To measure the personal attitude toward empathic behavior and opinions that the respondent has towards the importance of empathic communication in the process of health care	Self-administered questionnaire, 20 items, 7-point Likert scale	0.79
Nijmegen Professionalism Scale (NPS) ²⁰	To analyze professional behavior according to four sections: in relation to patients, to other professionals, to society, to ourselves. NPS was created as a grid of observation for tutors in general medicine, but it was adapted by the authors for the exploration of personal attitudes	Self-administered questionnaire, 106 items, 4-point Likert scale. The version used in this study was reduced to 40 items, divided into four sections	0.83

The Mini Clinical Examination Exercise¹⁵ is a well-known method of clinical performance-based assessment in which a student–patient encounter is observed and assessed by a grid. This method was developed to encompass the assessment of professionalism and was then named the P-MEX.¹⁶ The evaluation is based on short interactions (about 5 minutes) that occur frequently during training so that each student can be evaluated on several occasions by different faculty members. The P-MEX was created as an advanced exercise and assessment method for use during the clinical years.

A final method of assessment will be the systematic introduction of a portfolio of professionalism for third- to sixth-year students. It is intended to collect their narratives and reflections about their performance of practical activities. Portfolios have been used for many years as a means of collecting reflections of students' first clinical encounters with patients during the third year.¹⁷ We are now ready to expand its use through all preclinical and clinical years. As already noted, the main mechanism for development of professionalism is reflective thinking. Portfolios have proved to be particularly effective in promoting reflection,¹⁸ provided they are properly considered and valued by teachers and not dismissed as an accessory, marginal to the dynamics of learning and assessment.

Discussion

The concept of a profession was clearly distinguished from the more general category of a job almost 60 years ago in sociology literature.¹⁹ However, up until about 30 years ago there were no articles in the medical literature explicitly addressing the issue of professionalism. Many papers dealt with educational concepts defined as “noncognitive” or “interpersonal skills”, but only in the late 1980s did reflection on the elements and characteristics of medical professionalism

become explicit.²⁰ One of the most updated definitions of professionalism considers it a social contract based on trust and mutual respect between health care professionals and patients, despite the asymmetry of the relationship.⁴ If rooted in a social contract, professionalism is a cultural construct subject to the influence of location and time.²¹ Therefore, an educational framework for the development of professionalism must be tailored to the local cultural context.

We designed a framework rooted on the principles of longitudinal integration⁶ because we wanted to overcome the traditional approach to training through an implicit process of learning by example (role modeling). In this approach, students are exposed to the conduct of their teachers and theoretically develop typical attributes of the profession based on teacher behavior. In a complex multicultural society, however, this training model is not appropriate.²² A training process is needed that includes explicit iterative reflection that is distributed throughout the course of studies with a transdisciplinary involvement of the entire faculty.²³ The preferred training method is a combination of reflective thinking on the activities and experience of the student accompanied by a stream of formative assessments.²⁴

Another feature of our design was the concept of assessment for learning.⁷ We agree that the overall assessment program is more important than the individual tools, as suggested by the Ottawa 2010 Conference recommendations.⁵ The most recent systematic review on the assessment of professionalism²⁵ identified five major themes under which professionalism can be classified. Nine main types of assessment tools were also identified and the authors proposed a blueprint in which one or more types of suitable evaluation tools were associated with each element of professionalism. The tools we selected and developed are in tune with this approach, and in Figure 1, we illustrate an example of how

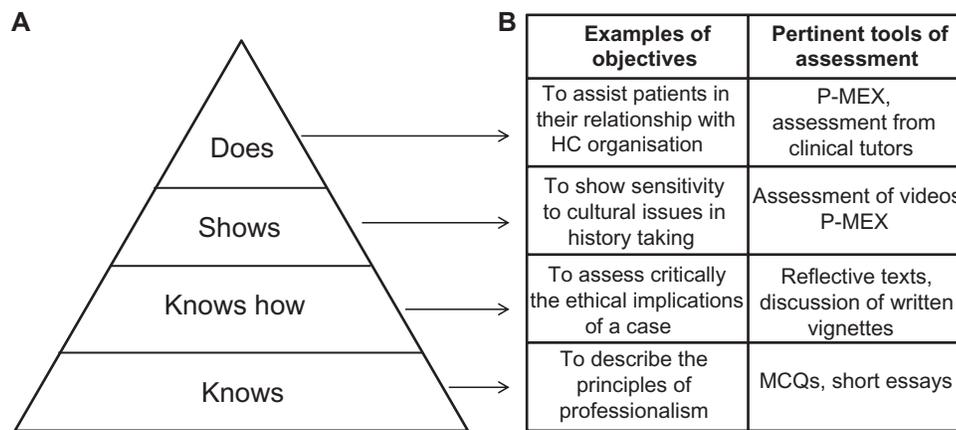


Figure 1 The adaptation of the pyramid of Miller model to assess professionalism. (A) Examples of objectives relevant to progressive levels of professional competence. (B) Examples of pertinent assessment tools.

Abbreviations: HC, health care; MCQs, multiple-choice questions; P-MEX, Professionalism Mini Evaluation Exercise.

some learning objectives relevant for professionalism can be matched with the various assessment tools. The results are presented in an adaptation of the classic Miller's pyramid of progression from knowledge to competence.²⁶

Although we did not introduce any new content, we placed a special emphasis on certain areas that are more relevant in Italy. Firstly, Italy is rapidly becoming a multi-ethnic country, giving the development of sociocultural competence in medical students a high priority. Secondly, the Italian health care system is public and universal with an elevated level of complexity. Therefore, Italian physicians must be intimately aware of its organization and procedures to direct patients towards the appropriate path.

Conclusion

The overall process of design and implementation of the educational framework for professionalism is still in progress. It is undoubtedly – as stated by Goldstein²³ – “an institutional challenge” which calls for a close coordination of what is already performed together with a special focus on continuous, formative, and multidimensional assessment of students. However, this requires not only substantial organization and planning but also faculty development and allocation of human resources.

The results of the initial round of assessment during the first year are not significant in themselves because we have no other reference by which to compare and interpret the results. In addition, due to varying cultural contexts, comparing the absolute values of the three scales used in this study with similar studies in other countries is not meaningful. Nevertheless, we expect relevant information from the follow-up of students, both in terms of normalizing values for the Italian version of the scales and identifying trends in evolution of the constructs.

Aside from being important information for personal feedback to each student, these results could suggest improvements for the whole framework in an iterative process of refinement. The results will also be an important topic to be addressed by faculty development programs.

Disclosure

The authors report no conflicts of interest in this work.

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