Evaluation of a pedagogical proposal in teaching Medicine

Evaluación de una propuesta pedagógica de enseñanza de la Medicina

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ABSTRACT In this article we discuss the role that medical schools play in the creation of a particular profile of health professionals. To this end, we analyze the impact of two field experiences carried out in 2006 and 2009 with students in the Epidemiology course of the Faculty of Medical Sciences in the Universidad Nacional de La Plata (in the province of Buenos Aires, Argentina). Using individual semistructured questionnaires applied to students as well as focus group strategies, the study sought to obtain information about the ideas and representations of the students before and after these educational experiences. The ability of students to reconsider the explicative models of the health-disease-care process and the weight of social problems in the phenomena of sickness and health is highlighted as one of the study's primary results.
KEY WORDS: Medical Schools; Professional Practice; Social Conditions; Argentina.

RESUMEN En el presente artículo nos proponemos discutir el papel que cumplen las escuelas de medicina en la formación del perfil de los profesionales. Para ello, se analiza el impacto de dos experiencias de prácticas en terreno realizadas en 2006 y 2009, por los alumnos de la cátedra de Epidemiología de la Facultad de Ciencias Médicas de la Universidad Nacional de La Plata (Provincia de Buenos Aires, Argentina). Mediante cuestionarios semiestructurados individuales aplicados a los alumnos y estrategias de grupos focales se buscó obtener información de las ideas y representaciones de los estudiantes, antes y después de las experiencias pedagógicas. Entre los principales resultados se destaca la posibilidad de que los alumnos se replanteen los modelos explicativos del proceso salud-enfermedad-atención y el peso real de los problemas sociales sobre los fenómenos de salud y enfermedad.
PALABRAS CLAVE: Escuelas de Medicina; Práctica Profesional; Condiciones Sociales; Argentina.

INTRODUCTION

As medical schools provide the health system with its main human resource – health professionals – they are at the center of debates regarding the role that systems play in determining the health of individuals, groups, and communities. Therefore, they are faced with several major challenges: defining the types of training to provide to health professionals, establishing the types of professional practices to encourage, and determining the ideal system of professional insertion.

Similarly, health systems are the objects of permanent contention, particularly regarding their organization, effectiveness, and financing. These issues reenter the public debate when health systems fail to respond effectively to the increasingly complex problems affecting societies. The characteristics of these problems and the complexities of social and political structures in different countries and regions have led to the emergence of an irregular mosaic of public health responses based on differing conceptions of health and the organization of its care via the State.

At the same time, universities that house medical schools have characteristic structures (1) that define their particular profiles, often far removed from the realities of the organizations charged with resolving healthcare issues. Although this is considered to be an advantage in professional training as it promotes autonomy and freedom of thought, it can also be criticized for its negative aspects, such as a perceived lack of engagement of universities with the social and political development of the societies in which they are embedded (2).

In this article, we will discuss the role of medical schools in determining the professional profile of the healthcare sector, or more specifically the ways in which they construct the idea of what a health professional should be. With this objective in mind, we refer to the conceptual work of Pierre Bourdieu in order to generate an analysis that addresses the field of public health. Thus, we consider public health as a field in which different coexisting medical models compete for hegemony (3). With respect to the concept of field (a) we can observe that different forms of capital are at stake: symbolic capital and cultural capital (b). In turn,

these define the paradigm of what health should be and/or the types of knowledge that a doctor should possess – knowledge represented by degrees, credentials, and prestige. In turn, the possession and management of these forms of capital enable access to economic capital and other resources. At the same time, the distribution of these different forms of capital are contested by actors with differing interests, who compete for symbolic resources in order to define the problems and issues related to the field. Therefore, different actors (politicians, academics, professionals, corporations) struggle to consolidate a predominant position in the field and to appropriate one or more of the forms of capital at stake. By employing this concept as defined by Bourdieu, we are able to shed light on the specific rules that govern the healthcare field and the high level of relative autonomy it possesses. Furthermore, it becomes clear that actors must comprehend and accept the rules corresponding to the logic of the field in order to accumulate different forms of capital and modify their position within the field (4).

Bourdieu (5) posits that it is important to define the positions occupied by actors in a given field (c). In the particular field discussed in this article, these include hierarchical positions established as dominant (such as deans, hospital directors, and scientific associations) as well as those which appear as subordinated to them (primary care workers, professional associations, and student advisory boards) which in turn are defined by the relative possession of different forms of capital (economic, social, cultural, symbolic) in a range of concrete situations.

In this sense, considering the notion of health as a field allows us to contemplate the Hegemonic Medical Model, which has been defined by Eduardo Menéndez (6) as the predominant model determined by those who occupy dominant positions in the field, who seek (among other things) to reduce the understanding of health to the sphere of individual action and personal choice. However, this model is contested within the field, primarily by actors who contend for hegemony from subordinated and even marginal positions, and who put forward representations of health understood collectively (7) (d).

This collective notion of health grants centrality to the social determinants of health (8,9),

which in turn can be thought of within the field of political struggle – in Bourdieuian terms, the field of power – where these social determinants are shaped and distributed. Therefore, to actors occupying subordinated positions within the healthcare field, these determinants go far beyond the biophysiological aspects of the individual (as hegemonic positions would assert) and thus limiting their explanation to only these aspects would be a reductionist account of the complex issues related to health and disease (10).

It is important to highlight that healthcare systems reproduce hegemonic models through their customary practices, shaping the ideas of what a healthcare professional should be, both within medical schools as well as in the community itself. This is precisely what is meant by the creation of a hegemonic model: that all actors – consciously or unconsciously – adopt and replicate that model (11).

This explains why it is so difficult to modify this situation – that is, to end the reproduction of the hegemonic model and to reorient healthcare systems and their professional training towards a socially-oriented model. These changes must also originate within the medical schools themselves, which would challenge the predominant profile of professional training and help to break the cycle of reproduction (e) that currently characterizes the relationship between medical schools and healthcare systems.

This article analyzes the impacts of a proposal for teaching medicine at different stages and its ability to reorient training towards the social, historical, and cultural components that determine health-disease processes in individuals, groups, and communities. This proposal is understood within the context of the disputes related to the field of health, as a strategy for accumulating social and symbolic capital in order to strengthen the positions of actors who attempt to construct a counterhegemonic model within the field.

The proposal employs educational strategies based on practical training as a way of promoting meaningful learning in real-life scenarios, while developing and giving significance to conceptions of the "social determinants" of health-disease-care processes.

Models of medical training

It should be noted that a liberal, biologicistic, and uncritical education model is frequently employed in teaching medicine at diverse medical schools in Argentina, and can be thought of as part of the so-called Hegemonic Medical Model (MMH, from the Spanish *Modelo Médico Hegemónico*) (6,12). The MMH is generated and reproduced within the circuits of medical training, through teaching practices of both physicians and non-physicians, and it extends to professional practice, thereby consolidating a hegemony that excludes and marginalizes other models of health care.

As this model has retained dominance over time, it has generated in the field of health what Bourdieu calls a *habitus*:

> ...systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends and an express mastery of the operations necessary in order to attain them, objectively 'regulated' and 'regular' without being in any way the product of obedience to rules, they can be collectively orchestrated without being the product of the organizing action of a conductor. (13 p.92)

This *habitus* is permanently reproduced by actors at universities through the practices they employ in teaching. Thus, it constitutes a disputed terrain in the healthcare field, in which ideas about how professional practice should be organized are structured, which are then adopted by students. In this manner students and teachers naturalize this understanding of medical practice, an integral part of their daily experience, reproducing through their representations, attitudes, and practices the hegemony of the healthcare model (11).

Thus, the training of health professionals in medical schools appears as a specific arena within the field of health. In the training of health professionals actors maneuver in order to increase and/ or acquire symbolic, social, or economic capital

(hours of instruction, senior positions, funding, heavier course loads, and administrative experience), which they can then use to better position themselves in the healthcare field more generally. In this specific arena – that is, medical training – mechanisms must be created to generate debate over the relevance of different models. It is within this framework that the pedagogical proposal analyzed in this article is considered.

The redefinition of the health professional

The desired profile of medical school graduates is under constant debate (14,15). On the one hand, a minority of university and professional actors operate outside of the academy with the aim of training health professionals who are more sensitive to reality (that is, to the needs of the society in question) or proposing continuous training in health care (16). On the other hand, the heirs of the hegemonic tradition (f) (directors of professional associations and universities) rebuff these attempts, seeking to maintain power relations as they are. In between these two sectors competing for hegemony in the field – between those who have hegemony and struggle not to lose it and those who contest it by proposing a counter-hegemonic model – are other actors that contribute to its reproduction as well, despite not being considered heirs to the hegemonic tradition.

The concept of *habitus* (13) is essential to understanding this situation. The majority of members of the health field are unlikely to profit – materially or symbolically – from the current hegemony (that is, a specialized, liberal, and uncritical model of the health professional). However, having been socialized into the field, they are molded by the *habitus* that naturalizes the dominant model of the health professional and asserts that it is the only one possible (17). According to Bourdieu (13), *habitus* is a "structuring structure" given that it allows us to perceive and comprehend the world and act accordingly (18), and it is structured because it is predefined, and therefore seems obvious and natural. This characteristic allows us to contemplate the transformation of the *habitus*, without which resistance against the hegemony of the field and the struggle for its transformation would not be possible.

The lack of a more humane, comprehensive, and holistic view on the part of medical school graduates originates in part from the limited approach taken by these institutions and the few opportunities they provide to allow for closer contact with social realities (19). This "contact" with social realities – from which health-disease-care processes (HDCP) arise – is a key element for linking theory and practice, such that students can be sensitized through experience. This not only includes experience that is gained through sensory perception, but also the mental processing of what has been experienced vis-à-vis reflection on the experience itself, which in turn gives it added complexity (20). This contact with reality urges both reflection and the articulation of theory and practice among teachers and students, fundamental components of the proposed analysis.

Under the current model, although the necessity of practical training prior to obtaining a medical degree is not questioned, it is limited to the acquisition of knowledge and technical skills needed to perform specific functions related exclusively to administering treatment and performing procedures on patients. Students are taught how to take blood pressure or how to suture a wound, but they do not learn about the "attitudinal" dimension of their practice – that is to say, how to handle the reactions of and interactions with patients.

In order to incorporate the attitudinal dimension in teaching methods, theory must be articulated with practice in order to develop knowledge through *practicum*:

> ...a setting designed and arranged to learn a practice, in which students learn to evaluate this practice, create their own perception of it, systematically reflect on the experience and its foundations, and analyze its more uncertain areas. (21 p.253) [Own translation]

This point serves to clarify the role that practical training should play in the curriculum, as a point of contact between reflection and practice not solely limited to learning mechanical procedures. Thus, practice-based experience must be resignified such that the results obtained may be used to produce systematic knowledge regarding the implications of teaching and learning a professional practice. Therefore, it is "necessary to

work from a logic of problems, not from a logic of solutions," allowing the problems encountered in practice to "challenge the texts" (3 p.279).

Within this framework, the objectives of this article are as follows: first, to determine how the differences between forms of capital in a medical model and the differences between forms of capital in professional training are revealed, for example, through the prevalence of "core" subjects in the curriculum, the mandatory course load, or the teaching structure. Second, to establish if a pedagogical proposal centered on the social determinants of health-disease processes manages to make an impact on students' preconceived notions, and in turn on their *habitus*, in order to create an awareness of the need to redirect resources and social and symbolic capitals towards an alternative professional model.

METHODOLOGY

In order to obtain elements for the analysis of the curriculum and its orientation, a quantitative analysis of the structure and distribution of resources among different subject areas was performed. Additionally, data on students' ideas regarding the organization of the curriculum and the professional model was collected from a first-year Epidemiology course prior to the implementation of the pedagogical proposal based on field practice. After the proposal's implementation, its impact on students' ideas was evaluated.

Analysis of the curricular structure

First, a quantitative analysis of the medical curriculum was conducted through a structural analysis of the courses included in the 2004 Curricular Plan of the Medicine Program at the Medical Sciences Department of the Universidad Nacional de La Plata (22). Courses were classified into two main categories – "core" and "social" (g), according to the area of study each of them covered. We classified the basic-clinical consolidation courses outside of these categories, given that their purpose is to articulate the knowledge acquired from the basic science cycle and the

clinical cycle by presenting clinical cases that introduce concepts from both cycles.

"Core" courses are centered on biological processes that occur in the body without relating the theoretical elements to other variables that explain health-disease phenomena. This coursework tends to assume that a disease "begins" or "strikes" due to factors that are beyond a person's will, as if they were natural phenomena unrelated to social or cultural determinants. This discourse is present in all major subject areas such as Physiology, Biochemistry, Anatomy, Pathology, and Clinical Practice, as well as the courses included in the clinical cycle. In contrast to "core" subject areas, the courses that include in their curricula contents related to the social sciences for the purpose of explaining and problematizing health-disease phenomena were classified as "social" courses. Their syllabuses were analyzed so as to categorize them according to the objectives of this article.

Once the courses of the program were categorized, the numbers of "core" and "social" courses were recorded along with the total number of credit hours corresponding to each area, and the required courses for successful completion of the program were identified. Additionally, an attempt was made to identify the differences among subject areas in terms of the size and tenure of teaching staff, in order to assess the level of importance attributed to each subject area vis-à-vis the structural support it received.

Qualitative analysis: Students' ideas

It is essential to add to this diagnostic the ideas and representations that students have regarding the profession, its importance in society, and the knowledge that the university should provide them. This adds vital information about the way in which their professional profile takes shape, by revealing the elements that students consider essential to becoming competent physicians. This permits us to infer that the organization of university curriculum not only provides students with knowledge and practical tools, but also influences their opinions regarding the different areas of study, whereby students establish a hierarchy of importance among them. These considerations, in turn, impact the students' *habitus*.

For this dimension, we gathered information from two field experiences carried out with the students of the Epidemiology course, which aimed to articulate theoretical knowledge in practical scenarios. These field experiences had been added to the course requirements, meaning that students were expected to complete them in order to receive credit for the course (h). Both field experiences sought to link conditions present in individuals and families attending primary health care centers to certain circumstances and lifestyles that would promote the development of those conditions. To buttress this field experience, the students were encouraged to carry out their fieldwork in the places of residence of the families and groups involved, outside of the university's four walls. Despite differing objectives, both projects involved the use of epidemiological tools to address health-related issues and encouraged the presence of instructors and students in the field.

The first of these experiences, in 2006, was the Nominalized Health Care Program (PANDELAS, from the Spanish *Programa de Atención Nominalizada de la Salud*) (23). This program included a diagnosis of socio-demographic and healthcare issues in the town of Ensenada (Province of Buenos Aires) and a georeferencing with a software packet of the families suffering from social or health-related problems in this district. The students conducted door-to-door interviews with 48,800 individuals in order to understand the relationship of health problems to determinants such as housing structure, living conditions, and the characteristics of the communities in which the individuals lived. The role of these determinants in the spread of health problems was then discussed with physicians at the primary health care centers. In the classroom, the students then presented their findings related to the problems they encountered and significant events they experienced which necessitated reflection and analysis under the guidance of the instructor.

The second field experience took place in 2009, in which students from the same Epidemiology course conducted interviews with pregnant patients attending the health care centers of the municipality of La Plata. Many of these interviews were conducted in the patients' homes. The patients were selected by health center staff, who based these choices on their opinions regarding

the individuals' need for care. The students were organized into small groups and asked to contact the patients from the health care centers with the aim of detecting variables that in some way linked their health status to the living conditions of their families and the environment in which they lived. Obstetricians at the health care centers worked on cases in which pregnancy coincided with a range of problematic situations such as violence, adolescence, and poverty, among others.

In 2006, 411 out of 418 first year students completed semi-structured questionnaires and in 2009 the same method was applied to 334 out of the 348 first year students (a total of 745 out of 766 students, yielding a 97.25% participation rate). Additionally, focus groups moderated by instructors were conducted in 2006 and 2009 in order to further understand certain aspects of the information gathered.

The purpose of the questionnaires and focus groups was to obtain information about the ideas and representations the students had before and after carrying out their work in the field. The dimensions that were analyzed included:

- *Levels of priority regarding curriculum:* Students were asked to rank subjects in order of priority and to indicate what knowledge they considered to be fundamental for medical practice.
- *Professional model:* Students were asked about their professional interests, which area of medicine they would prefer to practice upon completion of their degree, and which specialties they considered should be better paid and why.
- *Explanatory models of health-disease processes:* Students were asked about the reasons that people contract disease, how health problems are distributed throughout the population, ways of preventing disease, and the role physicians should play in health issues of the population at large.

Once the information from questionnaires and focus groups was obtained, an analysis of the responses to open-ended questions and the transcriptions of focus groups began in order to gather all relevant information.

Prior to that, group meetings were held to inform students of the objectives and scope of the study. Confidentiality and anonymity in the

handling of all data was assured, and participation in focus groups and completion of the questionnaires was completely voluntary.

RESULTS

As noted in the methodology section, "core" subjects center on biological processes that occur in the body without relating them to other variables that explain health-disease phenomena.

A structural analysis reveals that out of a total of 60 courses, 70% belong to the "core" category, while "social" subject areas only account for 21.6% (the remaining 8% corresponds to the consolidation cycle and cannot be included in either of the categories mentioned). If we perform the same analysis on the total number of instruction hours in the program (4640 hours), the difference increases substantially, with "core" courses representing 82% of the total amount of hours and "social" areas concentrating just 13.3% (the remaining 4.7% corresponds to the courses of the consolidation cycle) (Figure 1).

On the other hand, if we analyze this distribution based on program requisites, we notice that there are 45 required courses, out of which, 34 (75.5%) belong to the "core" category. When calculating the number of instruction hours (Figure 2), it can be noted that out of the total number of mandatory hours (3830 hours), 87.86% belong to "core" courses, leaving the "social" subject areas with only 6.4% of the total number of mandatory hours.

Along these lines, an analysis of the resources allocated to teaching staff yielded the following results: out of 959 total teaching positions, 106 (11%) corresponded to subjects related to the social sciences, while the remaining 853 (89%) pertained to "core" subject areas. Regarding the composition of teaching staff, professors of "social" subjects (both full-time and adjunct) represented 9%, while "core" subject areas accounted for the remaining 91%. Lastly, only 12% of the Coursework Supervision Assistants [a position similar to the Graduate Teaching Assistant but with slightly greater hierarchy] and 18% of Graduate Teaching Assistants are assigned to "social" subject areas (23) while the remaining percentage are assigned to "core" courses.

Students' ideas prior to field experience

Levels of priority regarding curriculum

This was assessed using the semi-structured questionnaire completed by students on the first day of class. Students were asked to rank courses in order of importance. The questionnaires revealed that courses related to the biological sciences were given priority over "social" subject areas, which on average ranked 26th in importance. Of 745 students interviewed, only 5% chose a "social" subject as one of the ten most important courses, and 15% placed one of the social subjects at the bottom of the list.

Furthermore, students tended to consider these courses as the most important throughout their course of study, given that they are necessary in order to fulfill the requirements for successful completion of the academic year. This generates in the students notions of "high and low levels of priority."

In focus groups, students questioned the manner in which social subjects are taught, with
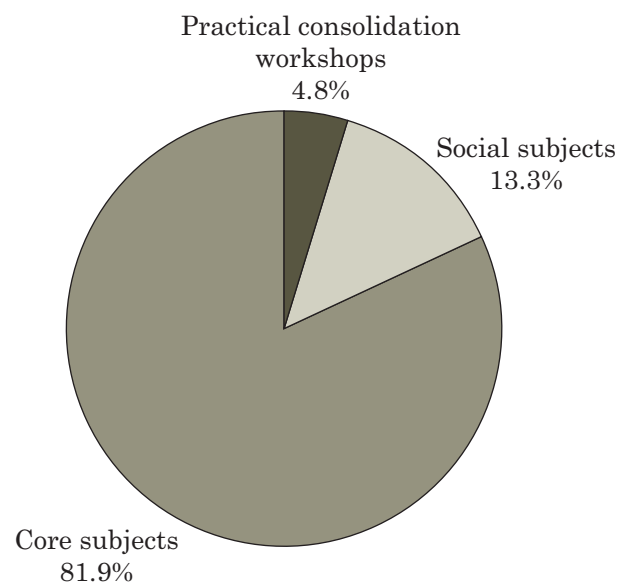

Figure 1. Percentage of instruction hours by area of study in the curricular plan of the Medicine Program. Universidad Nacional de La Plata, Argentina, 2004.

Source: Own elaboration using data from the curricular plan of the Medicine Program at the Faculty of Medical Sciences (22).
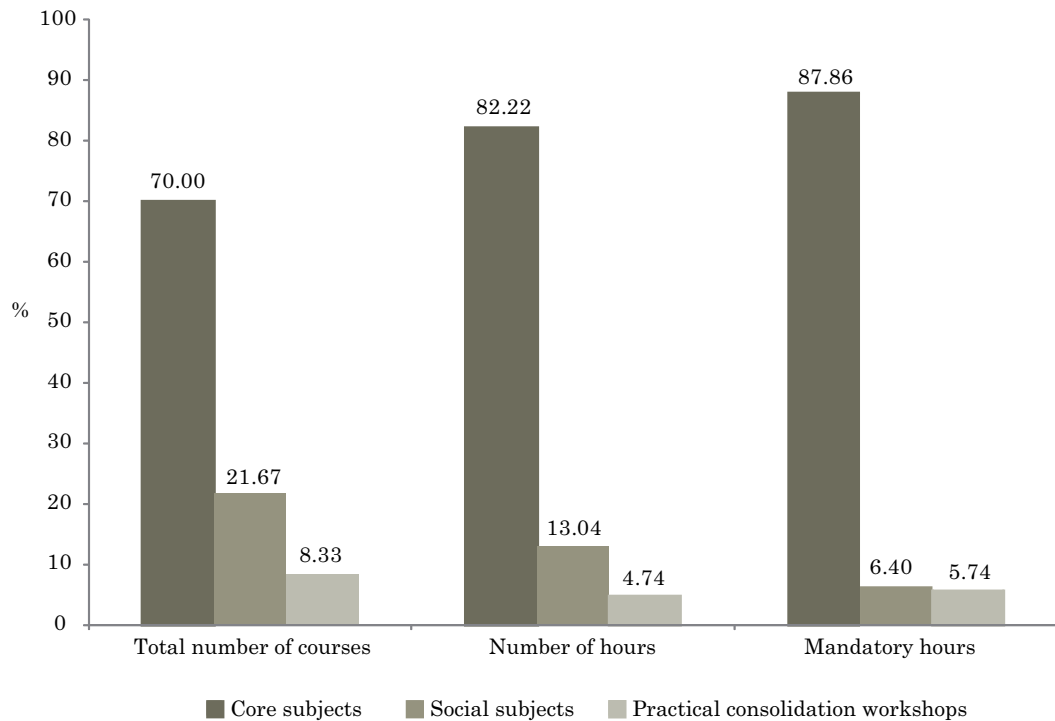
Figure 2. Distribution of instruction hours and mandatory hours according to area of study. Curricular plan of the Medicine Program. Universidad Nacional de La Plata, Argentina, 2004.

Source: Own elaboration using data from the curricular plan of the Medicine Program at the Faculty of Medical Sciences (22).

statements such as: *"they are boring," "they do not help us cure people," "the different subjects do not have common evaluation criteria"* (referring to the fact that different authors can interpret social concepts very differently, or that concepts are not employed identically among different authors, unlike in biological courses). They also considered these courses to be easy, and believed that by simply articulating certain concepts related to social issues they could demonstrate knowledge of course contents.

Model of healthcare professional

In the semi-structured questionnaires, students entering their first year of studies were asked about their ideas on professional development. All students mentioned a limited number of areas of

clinical practice in their answers, mostly related to specialties and subspecialties. A total of 745 students were interviewed in 2006 and 2009, out of which 35% (261 students) chose specialties (surgery, pediatrics, clinical medicine, ophthalmology) while the remaining 65% opted for subspecialties (neonatal therapy, plastic surgery, neurosurgery, pediatric endocrinology). What is interesting about these results is that the students who chose specialties mentioned that they had been driven to choose that path based on a "helping" spirit of service to humankind, while those that chose subspecialties were more cognizant of issues such as prestige and economic gain. This service/prestige dichotomy was also present when examining results by gender: 68% of women chose specialties and identified professional practice with the spirit of service while

75% of men chose subspecialties. It is interesting to note that both those who chose specialties and those who chose subspecialties envisioned themselves working in the private sector or in public hospitals, at best. The students did not consider working in health care centers as a possibility. When asked to rank the salaries of different specialties, from highest to lowest according to their own criteria, they considered that surgery should be the highest paid, followed by the subspecialties, and lastly the remaining specialties. The students frequently associated surgery with the idea of the operating room as a place where the patient's life is "in the hands of the physician" and where "no mistakes are allowed," and they related this characterization to higher levels of pay.

Explanatory models of health-disease-care processes

For this item, an attempt was made to gather all the ideas students had prior to the field experience regarding explanatory models of disease. Students that participated in focus groups were encouraged to debate about the "causes" that might lead to the development of a disease. Interestingly, the debate revolved around strictly biological causes such as: the body as a damaged agent, deteriorating organs, microorganisms entering the body, and patients confined to hospital beds for extended periods of time (generally in critical condition where their lives depend upon the physician's skill and ability to identify the correct course of action). Only in extreme cases – such as child malnutrition – did economic, social, or educational factors appear in the debate. However, the idea that medicine has little or nothing to do with those types of cases (that there are no treatments or medications that can resolve social issues) did appear. Students identified this as the reason that social issues are not included in the scope of action of the medical profession, given that they are much more general and physicians lack the ability to intervene in such a way that is not strictly related to clinical practice. As one 19-year-old female student put it, *"... we will be able to diagnose diseases and provide treatment, but when it comes to social problems, there is nothing we can do."*

Students' ideas after the field experience

Levels of priority regarding curriculum

In general, all groups agreed on the positive outcome of the field experience because it allowed them to come into contact with social realities they were not familiar with, and it helped them internalize the idea of health care centers as viable places to carry out their professional practice. Nonetheless, the underlying tension with "core" subject areas still existed, evidenced by students' comments during the field experiences such as: *"... we waste a lot of time with this* [...] *the locations are very far away* [...] *visiting just a couple of times would be enough"* (male student, 20 years old). These comments revealed the secondary place that this type of experience occupies in relation to what the students consider to be important (anatomy, physiology, biochemistry, and so on).

As for the levels of priority in relation to coursework, after the field experience students still ranked social subjects in lower positions (25th position). Nonetheless, changes could be observed in the focus groups with phrases and comments such as: *"the importance of social problems* [...] *raising physicians' awareness* [...] *It is important for our peers who did not participate to experience it"* (female student, 19 years old). Although these statements can be taken within the context of a humanistic or vocational conceptualization of medical practice and not as part of the overall conception of professional responsibilities, it is clear that the experience made students critically reflect on the limitations of traditional medical training.

Model of healthcare professional

Regarding the professional model, students only changed opinions about the specialty they wanted to pursue in a small number of cases. However, what did change were their ideas about the importance of the professionals that work in primary health care centers, to the point that they considered that their salary should be equated to that of other specialties. Although this may stimulate discussions regarding equality of payment, it has little impact on the prestige assigned to this

area, evidenced by the very small number of students who initiate their professional careers in primary health care centers.

Explanatory models of health-disease-care processes

After the field experience, the largest impact was perceived in the explanatory models of health-disease-care processes. In this sense, students began to consider the true relevance of social problems in determining health and disease phenomena. There was also a positive change in students' perception of responsibility of health problems, shifting focus from the personal/individual level to other powerful social institutions (government, the State, politicians, and the economic system). Moreover, they cited the need for an incorporation of tools from the social sciences in order to analyze these complex situations. This constitutes another important change in that these problems came to be included in the area of concern and responsibilities of physicians, with the contributions of the social sciences appearing as valid tools for the medical profession.

Basic explanations of social concepts began to surface, such as the following:

"…uneducated poor women have children at increasingly younger ages, which means they can't attend school and are forced to take any job they can, and they have more children who are then poor from birth" (female student, 19 years old).

DISCUSSION

Over the past thirty years it has been possible to observe a worldwide trend towards the training of specialized and hyperspecialized health professionals. According to data available from the Ministry of Public Health of the Province of Buenos Aires (24), unfilled vacancies for medical residencies tend to be found in the so-called basic areas (pediatrics, clinical, and general medicine), whereas there is excessive demand for residencies in specialties with a higher degree of complexity (neonatology, intensive care, anesthesiology, etc.). Considering that the shift towards hyperspecialization constitute a significant feature of the MMH, these trends demonstrate that this model is in full force in the field of health.

In order to modify and contest that hegemony, it is necessary to redefine the professional profile of medical school graduates by incorporating viewpoints that address social determinants and collective realities. This reorientation should not be solely based on changes in curricular contents, but must include pedagogical strategies that can generate an impact on different dimensions of professional training – attitudes, practices, and knowledge – and that incorporate a social science-based approach that would challenge the purely biologicistic conception, in hopes of creating a cognitive conflict (25) that would reveal the limitations of the traditional models and their explanatory capacity. Given that the social sciences incorporate the complexity needed to complement and enrich these models, the vision of medicine and health would become more complex. The task, then, is not to add social science courses to the "core" category, but to revise the entire curriculum and the general conception of health it puts forward.

The new graduate profile of the Faculty of Medical Sciences at the Universidad Nacional de La Plata formally establishes the need to train professionals that are engaged with the socioeconomic realities of the country, and that acquire knowledge, practices, and attitudes that allow them to address health-disease phenomena with the complexity that they deserve (26).

Nonetheless, the academic sphere shows no evidence of moving towards educational strategies that would ultimately allow for the achievement of this goal. The reality is somewhat different, wherein the prominent type of labor market insertion among new professionals is based on the hyperspecialization of practice, reinforced by teaching *staff* role models.

There seems to be a contradiction – which can be interpreted in various ways – between the model of health professional that the curricular plan intends to create (as expressed in the professional profile), and that which ultimately results as the final product: the graduate. In this regard, the knowledge of subjects related to the social sciences (sociology, anthropology, and history) – which make up part of the different forms of capital possessed by those who struggle to dominate the field – are regarded as secondary and even marginalized by dominant actors in the training of health professionals.

In addition, when students are faced with certain conditions such as obesity, cardiovascular disease, and unvaccinated children, they tend to blame the patient, thereby reproducing the individualistic and ahistorical hegemonic model and ignoring a more complex understanding of health conditions. This type of attitude could be modified through an educational model that makes use of the tools of the social sciences. Achieving a profile of health professionals with social awareness would necessitate a change in power relations among the actors of the field, as it would introduce spaces for criticism of the hegemonic professional model. Naturally, this implies confrontations and struggles over the various forms of capital at stake within the field of health.

The field experiences described above have shown a positive impact in terms of changing the explanatory models of HDCP that students had. The experiences themselves and the debates they provoked encouraged the students to formulate more complex explanations for these phenomena.

In order to make progress in debates regarding the modification of the professional model, it is crucial that students not only understand the complexity of HDCP, but also the need to analyze them in terms of their context.

In our research, no significant changes have been observed in students' levels of priority regarding the medical curriculum after participating in the field experience, despite their acknowledgement of the need for a comprehension of the social sciences in order to better understand the origins of HDCP. This was also reflected through the lack of modifications in the relevance of these courses and their distribution throughout the degree program. There is a very complex relationship among factors such as the students' expectations regarding training, the reality that the curricular structure provides, and the needs of the existing professional profile. Although the curriculum matches the students' expectations when they start medical school, spaces for critical reflection should be constructed such that their expectations are redirected towards pertinent public health issues. This debate should form part of a broader discussion in which all actors are represented; a debate that considers the purposes of education, its connection with professional practice, and the social and political context within which they are situated.

Regarding students' opinions on specialties and subspecialties, the field experience did not modify the importance they assigned to subspecialties. These were still ranked in the first position, closely followed by hospital specialties, while both continued to rank well above specialties related to primary care. This characteristic of the current medical model should be modified via an articulation of the coursework and the knowledge gained in the clinical cycle with the courses related to social issues, such that they are equated in importance, prestige, and structure.

A factor that would reflect changes in terms of professional prestige is that of salary modification, given that salary evidences the relationship between economic capital and symbolic capital. Therefore, it is important to equalize the salaries of primary care professionals to those of other healthcare professionals. Additionally, students began to incorporate the idea of primary health care centers as a possibility for carrying out their professional practice, an idea that they had not previously considered. This aspect is highly important given that it speaks to the possibility of recruiting sufficient healthcare professionals to meet the needs of public policies.

In neither of the described field experiences, which were conducted in different years and with different students, did we encounter evidence of any barriers to the implementation of field activities similar to those found by other authors (27). The fact that the field experiences were carried out far from the urban center, and even in other jurisdictions, was not a major source of conflict among students. As we have mentioned, it was only problematic for students when they found themselves obligated to devote large amounts of time to other coursework. The personal safety of students was also not a topic of debate, despite the fact that the areas in which the fieldwork was carried out were considered to be marginal (contact with local authorities and police provided support for students and prevented them from having reservations regarding their safety).

CONCLUSIONS

The field of health contains much disputed terrain, clearly exemplified by the training of

health professionals in medical schools. These health professionals – both those that have graduated and those that are in training – tend to reproduce the hegemonic professional model, given that they incorporate that model during their academic training (i). This is nothing more than the production and reproduction of a liberal and uncritical medical habitus, which bases its practice on a biologicistic model. This constitutes the dominant model, and whether to keep it or to transform it is a source of much controversy.

Following this logic, the actors vying to promote an alternative model of health professional must aim to modify medical training, as it is during the period of university training that the professional *habitus* is molded and structured (28). For conservative actors supporting the current model, maintaining its naturalized character incorporated affords them the tacit support of the majority of members of the field, and as mentioned above, allows them to maintain their own positions of power.

In this regard, there are numerous universities both in Argentina (such as the Universidad Nacional de La Plata, Universidad Nacional del Sur, Universidad Nacional de Lanús, Universidad Nacional de Rosario) and abroad (for example, the Universidad Nacional Autónoma de México) as well as other institutions (such as the Pan American Health Organization) that are working on the development of educational strategies aimed at redirecting the professional profile (29). However, these organizations have encountered difficulties in reaching this goal, as certain institutions and professional associations – through reproduction and inculcation mechanisms (medical conferences, "gifts" of pharmaceutical companies) – have been successful at keeping graduates functional to their interests (which can be described as fragmentary, positivist, individualist, and biologicistic).

Throughout this article we have described what we consider to be a significant experience in professional training, which must be interpreted in the context of these disputes. This type of experience encourages reflection among students rather than those that are "naturalized" or imposed by dominant actors of the field.

A significant aspect that should be analyzed in future research is the role and relevance of the particular characteristics of instructors (career trajectory, profession, type and level of studies), given that some instructors – whose usual workplaces are diametrically opposed to the locations in which the field experiences took place – were concerned about personal security, a concern that fortunately did not impose a limit on the field experience of the students (30). Therefore, it would be important to evaluate the interests of instructors and to incorporate teaching professionals who can be found already working in those locations. This would reduce resistance on the part of instructors – not only resistance to the uncertainty of entering an unknown territory, but also the resistance to introducing changes in their internalized world of certainties – thereby facilitating mechanisms of entrance and tenure in the field despite the relatively small amount of time available for practical training and modifying the naturalized conceptions of instructors that prevent modifications of the professional profile.

The analyzed pedagogical proposal must be understood as a strategy of accumulation of symbolic and social capital on the part of actors that seek to modify power relations in the field of health, with the training provided in medical schools as their main target. In order to achieve this it is necessary to transform the dominant model of the health professional – not a simple task given that it calls attention to the interests at stake in the field. Nonetheless, although it may not be an easy task, it is a necessary one.

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ENDNOTES

a. Field: In analytical terms, a field can be defined as a network or a configuration of objective relations among positions. These positions are defined objectively in their existence and in the determinants they impose upon those that occupy them, whether agents or institutions, by their present and potential situation (situs) in the structure of the distribution of power (or different forms of capital) whose possession grants access to the specific benefits at stake in a given field, and at the same time by their objective relations with other positions (domination, subordination, homology, etc.).

b. According to Bourdieu, four types of capital can be distinguished: 1) Economic capital, consisting of the different production factors (land, factories, labor) and economic assets (income, wealth, and material goods). 2) Cultural capital, which refers to knowledge either granted by the education system or transmitted by the family. 3) Social capital is defined essentially as the set of social relations available to an individual or group. 4) Symbolic capital refers to the set of rituals (for example etiquette or protocol) associated with honor and recognition.

c. Bourdieu begins his text "Some properties of fields" (5) stating that "Fields present themselves synchronically as structured spaces of positions (or posts) whose properties depend on their position within these spaces [...]." Said positions are those of the dominant class and those who struggle for power, and the struggles between them adopt different forms in each specific field.

d. It is interesting to notice how the actors of the field use the theories of the field itself, in what is called the "theory effect", to analyze how Menéndez's model becomes native theory to them (7).

e. The reproductivist spiral refers to the idea of a mutually strengthened relationship that gradually increases its effects.

f. These two dichotomous positions – the minority and the heirs of the tradition – are introduced for analytical purposes only, to highlight the dispute within the field. However, this does not mean that we ignore the fact that within the field of health there are intermediate positions concentrating a wide range of professionals, associations, etc.

g. "Core" and "social" are the categories usually used by actors of the field to classify coursework.

h. The students' involvement in the field experiences was mandatory as it was part of the activities required to pass the course. However, their involvement as research informants, either by filling in questionnaires or participating in focus groups, was voluntary.

i. Incorporation refers to the acquisition that occurs during the formation of the professional habitus, which does not mean that medical training is consistent with the social representations of physicians that students have when they enter the university.

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