Students’ Perception of Public Health in Medical Education Training

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Abstract

Since the implementation of the current Brazilian Health System (Sistema Único de Saude – SUS), there has been a trend to change medical school curricula regarding primary care and community-centered activities, in an attempt to replace the predominant hospital-centered teaching model, and to graduate more general practitioners. The current national guidelines for medical schools’ curricula support this orientation; however, many medical schools present with difficulties to change their curricula, especially considering the lack of tradition that Public Health disciplines face as a primary field of practice, when compared to highly specialized fields. In the present study, which used qualitative methods with an exploratory-descriptive approach, field study, and data analyses by content analysis, a data collection instrument was administered to students of two different medical schools, aiming at understanding their perceptions regarding the importance Public Health disciplines have on their education; the characteristics of these disciplines on the two different schools; and the students’ satisfaction with these disciplines. The results have demonstrated that students surely consider Public Health disciplines important for their medical education, acknowledging that concepts regarding the public health system and the physician’s role in primary health care are invaluable to newly-graduated physicians. Satisfaction with the discipline varied between the two medical schools analyzed, with students of the school that prioritizes Public Health horizontally along the entire course being more satisfied and considering themselves capable of working within the public health system as soon as they are graduated. Data allows us to perform a critical analysis of the way Public Health disciplines are inserted in these two different medical schools, suggesting the need to more deeply insert them along the years of study, starting early, and prioritizing practical activities, aiming at sparking a higher degree of interest among the students, and consequently leading to a higher number of professionals seeking this field after graduation.

Keywords: Public Health, Medical Education, Brazilian Health System, Primary Health Care
Introduction

The teaching of Medicine in undergraduate courses in the 20th century went through constant changes. A first phase is established with the Flexner Report, published in the United States in 1910, which tried to guide the American medical teaching through the so-called biomedical model, with learning eminently using the tertiary hospital as a scenario, with a rationale of teaching subspecialties, and with little emphasis on prevention and health promotion (TEMPSK e BORBAM, 2009). At a historic moment marked by great diversity in medical training, this document had an important role in the organization of teaching, and provided a great advance in knowledge, in such a way that it was reproduced in several countries.

The second phase of medical education begins in the 1970's, when ideas about prevention and health promotion, and the model of multi-causality of diseases gain visibility due to the Lalonde Report, in Canada, in 1974. The International Conference of the World Health Organization (WHO), in 1978, reinforced this ideological model of integral medicine, and the importance of the training of a general practitioner, who works in Primary Health Care (PHC), implementing several proposals, such as Family and Community Medicine, in response to the high costs of the medical care model, and the inadequacy of the population coverage of the current model at the time (GONÇALVES et al., 2009; TEMPSK and BORBAM, 2009).

Medical training was based on the specialist physician, justified by the rapid development of new technologies and "hospital-centered" training, or centers of excellence, to the detriment of Primary Health Care Centers (OLIVEIRA et al., 2010); there was also the problem of inadequacy of medical education in the face of social, economic and political changes affecting health systems worldwide (MASSOTE et al., 2011).

One of the great areas within the undergraduate programs in Medicine that seek a greater training of general practitioners and is focused on the current health system is Public Health, which addresses the Social Sciences in Health, Descriptive and Analytical Epidemiology, Biostatistics, Health Surveillance, Public Health Management and Policy, Service Organization and Assistance Models, Worker Health and, above all, medical practice and living in Primary Health Care and Family and Community Medicine, which develop integrated and integrative practices for the promotion, protection, and recovery of health directed at individuals, families and communities (CAVALCANTE NETO et al., 2009; SOUZA et al., 2013).

Public Health’s set of disciplines leads the student to develop the idea of multidisciplinarity (OLIVEIRA et al., 2010). Public Health has been defined as "a field of knowledge and practices that presupposes the understanding of health as an eminently social, collective phenomenon, historically determined by the conditions and ways of life of the different population groups" (CAMPOS and ELIAS, 2008).

Public Health is ever present in the academic settings, in disciplines and in Post-Graduation courses. In practice, it is often confused with the actions of Public Health; this does not refer to an academic discipline, but to an interdisciplinary social practice (SOUZA, 2014).

Public Health work involves responsibility for the collective work process, apprehension and understanding of health needs, and management of health work processes; the work in Public Health encompasses the traditional Epidemiological and Sanitary activities, applies the models of disease transmission, and carries out health education actions (SOUZA, 2014).

In Public Health practice, most of the time, the physician’s main role involves actions of preventive medicine, primary health care, not necessarily only in the Brazilian health system, but also in supplementary health.
Although it has been practiced for many years in England, Canada, and the United States, where it already enjoys some recognition in the medical field, Public Health as the physician's field of action had to overcome several obstacles, such as low career valorization, insufficient professional qualification, low salaries, and little social prestige, characteristics still widely observed in Brazil. This lack of interest in Public Health is probably due to an incapacity of medical training to prepare the professionals for work in Primary Health Care, resulting in most graduates searching for medical specialties, and few following the areas of Public Health.

**General Objective**

The present study aimed to investigate students' perceptions about the Public Health discipline in their medical education.

**Methodology**

This is an exploratory-descriptive study with a qualitative approach. For information collection, the semi-structured interview instrument was used with questions regarding the distribution of the discipline throughout the course; the workload; the importance the student gives to the issues of Public Health that are addressed; and the view of the students regarding their training as general practitioners.

Because of the involvement of human beings, the research project was submitted to the Ethics Committee of 'Faculdades Pequeno Príncipe', and was adopted under Report no. 1.365.645.

The study participants consist of an intentional non-probabilistic sampling: students of the 6th year of two Medicine courses of a city in the West of the state of Paraná - Brazil, who attended the last semester of the course in 2015.

We interviewed 73 participants (31 of the Institution of Higher Education 1 [IHE1] and 42 of the Institution of Higher Education 2 [IHE2]), with median age of 25 years for both IHE and similar proportion for the genders (36 males and 37 females).

For data analysis, the technique of Content Analysis was followed, with 3 steps, namely: "Pre Analysis", "Exploration of Material" and "Treatment of Results and Interpretation" (MINAYO, 2014).

**Results and discussion**

The thorough readings allowed the separation of patients’ expressions, according to the meaning of the speeches. Each segment was identified as a Registry Unit, which resulted in clusters forming the categories, as shown in Table 1.

Table 1. Coding material following content analysis.

| CATEGORIES | 1. Approach to Public Health in Medicine |
In the category "Approach to Public Health in Medicine", the analysis of the speeches of the Registry Unit 'Content in different periods/years' presents that the contents of Public Health are seen throughout the courses of Medicine by means of theoretical contents, clinical cases, and practical activities. In this context, the participants reported some of the activities carried out during Internship in Public Health, and that arose interest in this field.

"care in Basic Health Units, home visits, territorialization, discussion of clinical cases, classes on Brazilian Health, epidemiology, diseases of compulsory notification and ophthalmological diseases" (D2/IHE1).

The disciplines with a Public Health approach provided knowledge to the students from the first year to internship on the Brazilian Health System, specific legislation, programs of the Ministry of Health, epidemiological surveillance, occupational medicine, preventive medicine, policies of tracing, territorialization, and active search of cases.

"Public Health I contemplates the Brazilian Health System with all its legislation, in Public Health we have epidemiology and medicine as part of practice" (D15/IHE1).

Public health education permeates the training process from the earliest years to internship, depending on the type of curriculum adopted by the course, as well as the learning objectives established in the curriculum design.

Concerning 'Workload/periods', a distinction was made in the distribution of Public Health along the course between the two IHEs researched, grouped differently:

- IHE1: Public Health I (first year of the course, 60 hours), Public Health II (second year of the course, 60 hours) and Internship in Public Health (sixth year of the course, 400 hours);
- IHE2: Health and Society Learning Program (first to eighth grade, 120 hours each) and Internship in Public Health (sixth year of the course, 400 hours).

Students' opinions diverge when they focus on the workload offered.

There are divergences in the participants' perception regarding the appropriateness of the workload for their training; in IHE 1, which follows the curriculum called "traditional", a shortage of practical activities and theoretical overload are mentioned, especially at the beginning of the course.

"in view of being something of extreme importance for the general practitioner, the workload of this discipline over the years should be higher than other more specific disciplines..." (D4/IHE1).
In IES2, Public Health is worked horizontally, from the first semester to Internship, highlighting a differentiated profile regarding the competencies of the professional that will be formed:

"the workload was satisfactory because this discipline is very important for medical training" (D44/IHE2).

The medical course "traditional" curricula still carry a segregation between theory and practice, and fragmentation of learning; there is a high resistance in universities regarding the "de-hospitalization" of the teaching-learning process that, in the Public Health case, can only take place satisfactorily with activities in the community (OLIVEIRA et al., 2010). In addition, the medical graduates themselves still resist acting in scenarios that distance them from the ideals they cultivate – to be an expert in a private hospital, or to work in their own office.

In the interrelation between "theory and practice", there was a difference between the two institutions when IHE 1 and 2 were compared with respect to theoretical activities:

"2nd and 3rd years have only theoretical activities" (D1/IHE1).

"approaches to theoretical and practical classes make the student become involved with the community" (D48/IHE 2).

The vast majority of participants in IHE 1 showed dissatisfaction with the small number of practical activities, and the subjects of IHE 2 pointed out that there is a great number of practical activities, as it can be seen below:

"practical activities only in the 6th grade," (D1/IHE1).

"as a practice, during all the years of college, where we attend Primary Health Care, know the reality, and learn the importance of Public Health" (D39/IHES2).

The analysis of 'Satisfaction' demonstrates that the degree of students' satisfaction with the disciplines that approached Public Health throughout the course was investigated, as well as their general characteristics and workload. There was a predominance of satisfaction responses with the discipline to the participants of the IHE 2 (82.7%); for IHE 1, there was discrepancy in opinions (50% satisfied and 50% unsatisfied).

CAMPOS and FOSTER (2008), students of the 5th year of a medical course, identified that 48% of them classified Collective Health as quite important, and 27.5% as very important; the participants of this study recognize the importance of Public Health by highlighting that knowledge and performance in Primary Health Care, contact with socioeconomic and family issues, and practice of integral medicine are internship strengths.

The participants on the subject Public Health highlight the following as positive points: the theoretical and practical content on the Brazilian Health System promoted more proximity to patients, leading the participants to develop skills and security in the service; the following speeches highlight these points:
"in relation to the time load I think it was satisfactory, and I believe that all the content could be presented and discussed" (D10/IHE1).

"discipline and satisfactory workload gave us an extensive knowledge about preventive health" (D45/IHE2).

Reports of dissatisfaction with the discipline presented some explanation, with the most common being that few practical activities were offered in Primary Health Care; there was little attention to patients; extensive theoretical hours, with all these leading to the students’ disinterest; the course was focused on specialties; there was difficulty in applying the theoretical concepts taught into practice, as shown below.

"the discipline is only unsatisfactory when it is observed that the contact with the patient during internship’ is minimal" (D11/IHE1).

OLIVEIRA et al (2011) observed that 22.5% of the participants cited an aversion to the discipline, in addition to 4.7% who answered "I do not know", and 1.5% who did not respond. COSTA et al (2012) list negative points cited by the students in the evaluation of the Public Health stage: absent or insufficient precepts, disorganization, lack of interest in home visits in this study; 70% of the interviewees used negative expressions to define their stage.

In Category 2, the registration units were discussed as shown in table 2.

Table 2. Coding material following content analysis.

| CATEGORIES          | 2. Importance of themes in Public Health |
|---------------------|-----------------------------------------|
| Registry Units      | - Different content addressed            |
|                     | - Approach on the Brazilian Health System (Sistema Único de Saúde – SUS) |
|                     | - Contribution to medical training       |
|                     | - Contribution to individual training    |
|                     | - Prioritization of general practitioners in the training |

The analysis of the second category "Importance of Topics in Public Health" shows the participants’ perception on the importance of subjects in Public Health for the general medical training (with emphasis on Brazilian Health System, and their contribution for the course of each IHE for general and individual medical training).

When addressing the ‘Approach to Brazilian Health System’, the registration units showed the opinions of the participants, who pointed out that there is the possibility of general understanding and contact with the health system, its operation in practice, and of seeing the importance of achieving this knowledge, since Primary Health Care is considered the gateway for the user to the care network. It is noteworthy that this discipline was the only one that led the student "out of the hospital" (D17/IHE1).
"contributes to the knowledge of the governmental programs involved, the contact with the reality of the users of such programs and the practical approach to their needs regarding primary care and health care at the primary level of care" (D13/IHE1).

Public Health and the experiences of students in Primary Health Care are important for them to know the reality of the health system, and to develop perceptions of the health-disease process, also taking into account the social, economic and cultural issues (MASSOTE et al., 2011).

The inclusion of the Public Health discipline in the curriculum since the beginning of the course shows important personal gains for the 1st- and 2nd-year students, with improvement in the relationship with the community, knowledge building in an integrated way, social contribution to the community, development of communication skills (BRASIL, 2014).

The ‘Contribution in the Training of the General Practitioner’ demonstrated unanimity among participants and IHE, regarding the importance of knowledge in the field for physicians, even if they do not work in this context.

"Public Health allows prioritizing and delimiting the general practitioner's field of action, showing the main diseases that affect the population, as well as the importance of health promotion and prevention policies" (D28/IHE1).

"important for the physician to act in the prevention of diseases, in addition to approaching relevant concepts in other social aspects" (D33/IHE2).

Despite the existence of positive citations emphasizing the contribution to the global vision of the patient and the health system, and aiming at measures of disease prevention and health promotion, divergent statements were observed.

The students interviewed by CAMPOS and FOSTER (2008) indicated some important points of collaboration of Public Health for medical training: the knowledge and performance in Primary Health Care (39.7%), with socioeconomic and family issues (20.6%), practice of integral medicine (15.1%), improvement in the doctor-patient relationship (5.1%). Moreover, 61% of these students reported that after the internship there was more attention for biopsychosocial aspects of patients, and 20% developed more skills, safety and patience. Also 86.8% of students from a university in the state of Ceará stated the importance of Public Health in the training of the physician.

In the ‘Contribution to individual training’ it was learned that the contents of Collective Health were important in the individual training for general practitioners. The majority emphasized the contribution of the experience in Primary Health Care, the knowledge of different population realities, the improvement of the doctor-patient relationship, the humanization and direct contact with patients.

"it was important to know another level of assistance, with which we will live together after leaving college and that we did not have much contact until the sixth year" (D30/IHE1).

"above all, to exercise humanization, having ample knowledge about the communities that depend on the Brazilian Health System" (D32/IHE2).
In the ‘Prioritization in the training of general practitioners’, differences in opinions were perceived among students, with priority for the secondary and tertiary levels. Others expressed greater emphasis on the Brazilian Health System regarding intra-hospital contact.

"in some areas, yes. During internship there is always a focus on general education but this does not occur in its entirety. this should change." (D27/IHE1).

"yes, since its grid privileges the collective health area even to the detriment of other areas related to tertiary care" (D68/IHE2).

The Guidelines for university health courses are clear about the importance of training general practitioners who meet the demands of the country's health system, emphasizing that they should be able to develop actions of prevention, promotion, protection and rehabilitation of health, both individually and collectively; and that the training should include the health system in force in the country (in this case, the Brazilian Health System - SUS) and integral health and teamwork (BRAZIL, 2012).

It was possible to observe that the activity in Public Health is recommended by the Guidelines to meet the Brazilian Health System regulations; therefore, it is necessary that the courses in health areas tailor the training of professionals to work in this area. According to GONZÁLEZ and ALMEIDA (2010), uncommitted management, Primary Care as a marginal, rather than main learning, teacher unpreparedness, students' resistance to contact with the community, and general education are the main barriers to be transposed, in order to obtain the appropriate training to attend Public Health.

**Final Considerations**

It was possible to observe that the participants consider Public Health important, because they work for the Brazilian Health System, and they think that to experience, during medical training, actions they will develop in the future as professionals is crucial.

The statements show that, for some students, the way the discipline Public Health was conducted in the first years of the medical course made it demotivating; however, this perception gradually changed as the students got more visibility and importance at the end of the course, due to the closeness of completion and insertion in the health work process.

Satisfaction with the discipline was different between the two IHE; in IHE 1 they were less satisfied, due to the high load of only theoretical activities and, consequently, little preparation to act later as a physician of Primary Health Care; in IHE 2, they said they felt safe to act as professionals.

Even in the face of differences between curriculum models and approaches, involving contents and workload of the discipline, the students expose that they are able to perceive the contribution of this content in the general medical training, highlighting the knowledge of Brazilian Health System, health policies, epidemiology, experience in Primary Health Care, humanization, contact with patients, and improvement of the doctor-patient relationship.
Emphasis is given to the need for greater engagement of medical schools to meet legal requirements; constant updating of pedagogical projects, as well as the early insertion of students in the Public Health with emphasis on Primary Health Care would be some strategies to improve the training of professionals according to the needs of the country, but also to arouse interest in Public Health, promoted by early and continued coexistence.

**Take Home Messages**

- Students surely consider Public Health disciplines important for their medical education
- Important the engagement of medical schools to meet legal requirements; constant updating of pedagogical projects

**Notes On Contributors**

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Appendices

Declaration of Interest

The author has declared that there are no conflicts of interest.