

Perception of cultural correlates of Medicine: a comparison between medical and non-medical students – *The authoritarian health*

G.M. TROVATO, D. CATALANO, S. DI NUOVO*, D. DI CORRADO*

Department of Internal Medicine, School of Medicine, and *Faculty of Education, School of Psychology, University of Catania (Italy) – e-mail: guglielmotrovato@unict.it

Abstract. – Aim of the study was to ascertain if a common cultural feeling of young people toward health, disease, physician's role and doctor-patient relationship, is present, and if under- and post-graduate students concepts and opinions modify during their stay in a School of Medicine.

The study (1999-2001) was performed by anonymous questionnaires with 75 students (m = 28; f = 47) of the State School of Medicine, tested at the 3rd year, and with 73 students (m = 29; f = 44) tested at the 5th year of course; moreover with 71 (m = 30, f = 41) postgraduate residents at the 3rd year of specialty (Internal Medicine, Cardiology and Surgery). A group of 76 (m = 33; f = 43) students of the last year of a high school was also tested as reference group.

Results: Interference of medical under- and post-graduate school curricula on thoughts of youngsters toward health, disease, physician's role and doctor-patient relationship appears quite limited. Dissimilar way of thinking of medical vs. non-medical students was confined to some aspects concerning patient's possibility of healing, physician's role, behavior and function in chronic diseases. In the whole, our results suggest a trend, growing with the age of students, toward a more authoritarian and less "participative" approach with the patient: less confident relationship and more conflictual and antagonistic behaviors are widely considered and accepted. A general perspective with the construct of an authoritarian concept of health is superimposed as a net of rules and conditions on feelings' background of youngsters: postgraduate students regard themselves (and are perceived by younger students) as the guardians of an "healthy" system founded on scientific, economical and sociological grounds, as a work pointing to effectiveness, more than as a science with the target of efficacy.

Conclusion: Impact of curricular studies of Medicine on youngsters is complex, but seems to modify only some and limited aspects of previously acquired thoughts and feelings on health and disease.

Key Words:

School of Medicine, University, Curriculum, Health representation, Illness perception, Students, Residents.

Introduction

Medical students learn in the schools of medicine, throughout their studies and training, clinical reasoning based on the theoretical principles of medicine, practical skills and professional behavior¹. Cultural impact of medicine and of medical education on youngsters, as on general population, originates from different sources, including, certainly, but non mainly, curricula of high schools and universities². There are several adjunctive and/or pre-existing *concealed* curricula, deriving by individual background (social, ethnic, religious) and by not uniform exposition to media.

Behavioral skills of students and young residents in medicine refer essentially to doctor-patient relationship³ and could derive from several source, and mainly: previous own experience and socio-cultural background, the effects of role models of clinical teachers on hospital wards and clinics and, the last but not the least, the impact of informations and comments supplied by media nowadays and in the past⁴⁻⁵.

The "mediatic bombing" concerning problems of health and disease is essentially determined by health policies and by marketing strategies of pharmaceutical, diagnostic and

clinical lobbies. Moreover, religious, ethical, ethnic and anthropological background are modified by inputs promoted by media: medical research progresses and futuristic socio-economic scenarios are divulged and/or anticipated with different degrees of visionary or catastrophic suggestions. A hidden concept of authoritarian health seems operating, in which effectiveness of medicine is regarded as a myth, pursued through a ritual efficiency⁶. In this context awareness and recognition of ethical implications of new frontiers in the field of genetic, transplantations and modifications of personality can be difficult and anecdotic⁷. This uneasy discriminating possibility can derive from the diffuse feeling of the contradictions of medicine as a defective experimental science (it is difficult to share in the same studies experimental, fully controlled research and adequate care of patients), without a clear-cut discrimination between ethics, marketing strategy and neutrality. Moreover, the existence of asymmetry in medical encounters, as well in the encounter of other health professions with patients, has been discussed in interesting researches⁸, beginning with Parsons' influential functionalist view of socially prescribed roles for physician and patient. So, the clinical encounter of patient and physicians has been proposed as a mediation between them regarding to different explanatory models of illness and care⁹; in this view the role of learners (students and residents) shares the feature of protagonist and of bystander. Others delineated negotiations as the central focus of medical interview and decision¹⁰, and, reciprocally, as the link between student and teacher¹¹. Whatever the model, the learning process can be easily distorted toward a passive acquisition of concepts and logical processes.

Change of perspective and attitude of medical students and residents throughout their curriculum studies regarding concepts of health and disease and patient-doctor relationship were described¹². Despite the great effort of cultural homologation with the goal of optimizing healthy lifestyle – hygienic, nutritional and even complex medical information seem to increase continuously in the general population – reliability and effectiveness of proposals, assumption and interventions are controversial for most people and also for medical students. This hap-

pens because commitments, and likely benefits, are not coincident with final user: often hidden or apparent conflicts of interest are recognized and even declared. As a consequence, consumerization of health² meets still obstacles and sound diffidence. Medical Teachers modify their methods also through students' evaluation¹³: however, continuous processes of modification of the schools of medicine occur according to socio-economic needs¹⁴⁻¹⁵, cultural trends and political choices¹⁶. Last years had a fairly tumultuous history¹⁷⁻¹⁸ with concern regarding to priorities in health and care and, accordingly, to the model of doctor, implicit and/or explicit, that the school of medicine must offer and train. Relationship of ethics of care and medical education¹⁹ can derive by a complex bio-psychosocial approach²⁰ considering also illness, behavior and expectations of medical students about physician-patient relationship²¹. Moreover, the role model of teachers in the school of medicine is hardly separated by their concrete professional role of physicians, and can be scarcely defined by curricular criteria, items and rules²²⁻²⁴. Micro-rationing strategy²⁵, that takes place in a variety of focused interactions (medical consultations, case conferences, ward rounds, telephone conversations between referring physicians and utilization review staff), is a most important issue in the training of students and residents.

In general population perception of health and disease, specially considering habits and lifestyle, changes across adult life course²⁶⁻²⁷. Changes in student's sociopolitical attitudes toward health, illness and medicine during medical school can be due both to socialization and maturation effects²⁸. However, dissimilarity of view on health problems among students of different academic school (law, business and medicine) was reported as limited and not very impressive². Moreover, it was observed that 1st year medical students²⁹ had already strong negative attitudes toward rationing health resources and limiting freedom of care of physicians. We were interested to assess if under- and postgraduate students of medicine modify their general concepts and opinions during their stay in a school of medicine as students and residents, and if there are differences in comparison with younger students of the last year of lyceum (high school).

Aim of the study was to try to ascertain if there is a common cultural feeling of youngsters toward health, disease, physician's role, medical teachers' function and doctor-patient relationship.

Materials and Methods

The study was performed by anonymous questionnaires in the years 1999-2001, with 75 students (m = 28; f = 47, age 21.5 ± 1.3 years) of the School of Medicine of the University of Catania tested at the 3rd year and 73 students (m = 29; f = 44, age 23.9 ± 1.8 years) tested at the 5th year of course; moreover with 71 (m 30, f 41, age 28.7 ± 3.8 years) postgraduate residents tested at the 3rd year of specialty (internal medicine, cardiology and surgery). The State University of Catania School of Medicine uniforms graduate and post-graduate curricula to the other Italian Schools of Medicine and to the criteria and recommendation of the European Union with complete professional reciprocity.

All tests were given at the end of the respective course of internal medicine (3rd and 5th year) by a researcher psychologist external to the faculty and not known before by the students; she was trained in advance to perform this task.

A group of 76 (m = 33; f = 43, age 19.1 ± 0.9 years) students of classes of the last year of high school (lyceum) were also tested, using a questionnaire in which items regarding relationships between students and clinical teachers were deleted. It must be specified that only a minority of these students, if any, considered seriously the possibility of becoming a doctor and, above all, none had already submitted a preliminary application (as possible in Italy) to any school of medicine at the time of this survey.

Participation of all youngsters was voluntary and was preceded by an explanation of the reasons of the study. The degree of motivation to answer was high, and no dropout was registered among the groups of youngsters considered. Confidentiality of the information gathered during the study was guaranteed.

Questionnaires were designed including three series of items:

1. Descriptive, with the request of a definition of health, disease and physician's role.
2. Multiple-choice questions regarding: aspects of illness, healing, death, therapeutic progresses; medical organization and clinical teaching inside the hospital; physician's role and mission; relationship among physicians, residents and medical students.
3. Exclusive questions (true-false), concerning the deepness of information that the physician must provide to patient and relatives; the perception of disease in the likely point of view of patients according to the opinion of students; differences, if any, between the likely approach to patient of physicians according to their own gender (male-female).

Descriptive statistics were designed by class of school (non medical students, 3rd and 5th year medical students and third year residents); group comparisons were made using χ^2 test.

Results

Analysis of results is presented in four subsets:

- The first assesses groups of items *with* differences of answer among the considered groups of students;
- The second assesses groups of items *without* difference of answer among the considered groups of students;
- The third assesses groups of items addressed *only* to medical students and residents and not to non-medical students;
- The fourth group of items was addressed to *all the sample* of youngsters with the true/false modality.

1. Groups of Items With Differences of Answer Among the Considered Groups of Students

1a. *Main condition of healing (Figure 1)*

Among these items there was no significant difference of opinion among each

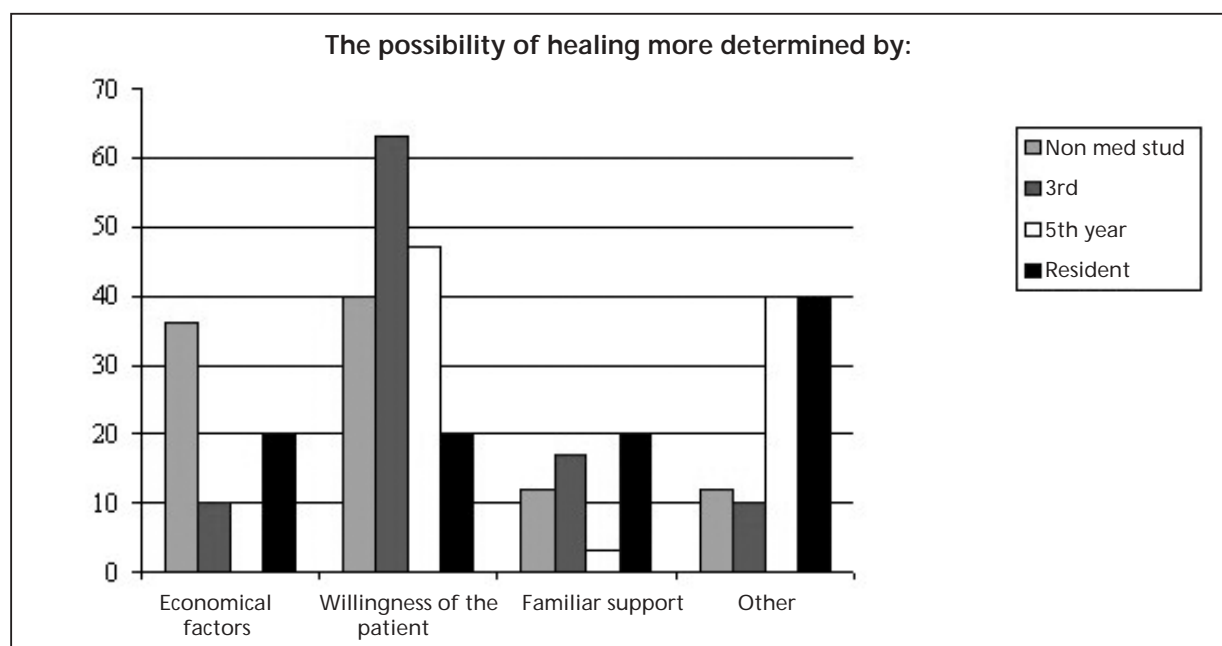


Figure 1. *Main factor of healing.* Among the items regarding the possibilities of healing there was no highly significant difference of opinion among each group, regard to the relevance of willingness of the patient and familiar and/or social support; but younger students (non-medical students) consider more than others economic status a key factor in the process of healing (36% vs. 12%; $p < 0.05$).

group regard to the relevance and effectiveness of willingness of the patient and familiar and/or social support on the process of healing. There is a bell-shaped trend with a peak of higher consideration on psychological factors as critical elements of healing among 3rd year medical students, and a dip in the group of residents. Younger students (non-medical students) consider economic status as a key conditioning factor in the process of healing (36% vs. 12%; $p < 0.05$) more than medical students and residents do.

1b. Reasons of Physician's Appreciation by Youngsters (Figure 2):

Regarding consideration and reliability of physicians, non-medical students perceive as more reliable the physicians that look more self-confident; on the contrary medical students and residents do not share this opinion (40% vs. 17%; $p < 0.01$). In all groups, without any difference, the physicians with pleasant and warm behavior are mostly appreciated, and this behavior is considered relevant in the care and cure process. Moreover non-medical students perceive as more reliable

physicians those that have an experience in emergency medicine. This opinion is not shared with medical students.

1c. How the Physicians Communicate an Unfavorable Prognosis

Also for these items there is not a substantial difference between non-medical and medical students: both groups think that patient must be *directly* informed by the physicians (60% vs. 55%). However 24% of students in each group answered that *only* relatives must be informed; but, differently from all undergraduate students, 53% of residents answered that an unfavorable prognosis must be communicated only to relatives ($p < 0.01$); a minority (8% vs. 4%) answered that explicit information is not warranted.

1d. Which is the Most Important Function of a Physician

Non-medical students recognize with a lower prevalence (52% vs. 71% of medical students) a "social mission" for the physician; most of the 5th year students (87%) perceive the social function of the medical

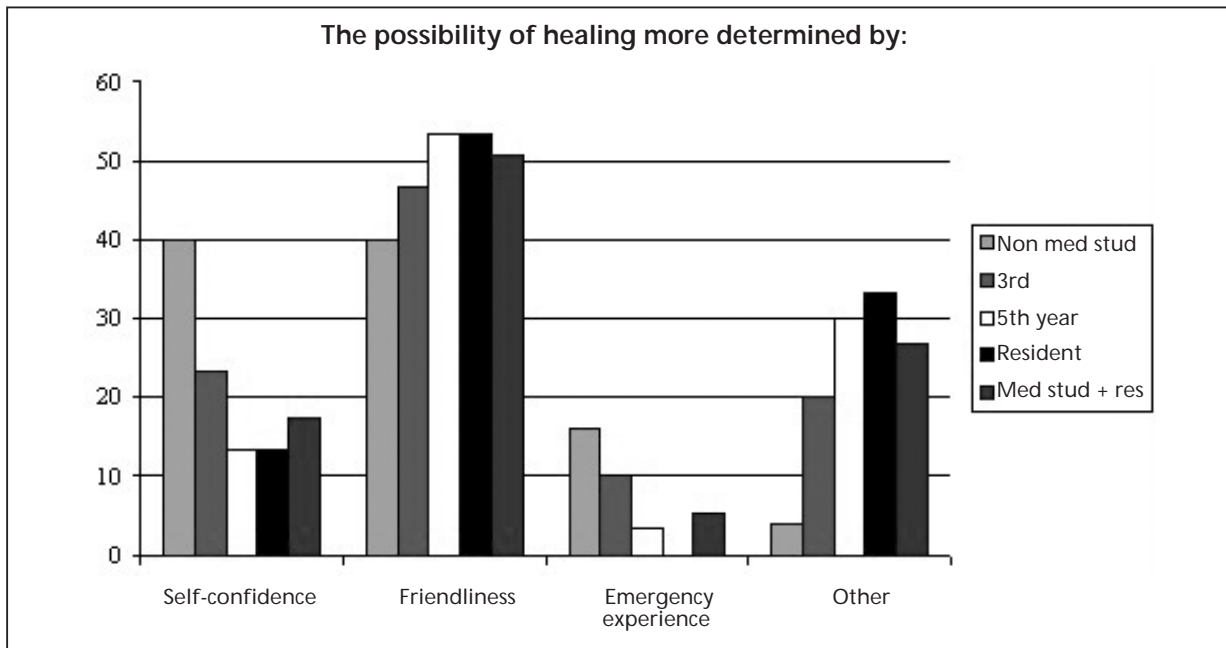


Figure 2. *Reasons of physician's appreciation by youngsters:* Regarding consideration and reliability of physicians, non-medical students perceive as more reliable the physicians that look more self-confident (40% vs. 17%; $p < 0.01$); on the contrary medical students and residents do not share this opinion. All students appreciate without any difference the physicians with pleasant and warm behavior. Moreover non-medical students perceive as more reliable physicians those that have an experience in emergency medicine. This opinion is not shared with medical students.

work; on the contrary, only 33% of residents share this opinion and consider mostly relevant the contribution of the physicians to scientific and technical progress ($p < 0.01$). Only 20% and 17% (non-medical students vs. medical students, respectively) consider a primary job for the physician the contribution to technical and scientific progress;

Only a minority of any group of students thinks that is important and useful for health and care of individual patients complete physicians' fulfillment of official and institutional guidelines.

2. Groups of Items Without Difference of Answer Among the Considered Groups of Students (Under-, Post-Graduate Students and Residents)

2a. Definition of Disease

No significant difference among the three groups of our sample:

- One third of students define disease as a statistical deviation from the normality;
- One third each defines disease as a condition of injure essentially subjective.

The remaining medical and non-medical students define disease as an objective injure condition.

2b. Pharmacological Treatment

Most students, without difference between the considered groups, think that most recent drugs are more effective (80% vs. 76%) and not more dangerous; only a small percentage (16% vs. 6,7%) consider them excessively numerous.

2c. Regarding the Hospital

All groups of students without significant differences describe as the most relevant problems in the hospital: the bad organization (48% vs. 47%) and difficult reciprocal relationships of physicians, staff, patient and relatives (36% vs. 39%).

3. Groups of Items Addressed Only to Medical Students and Residents (Comments on Curricula and Clinical Training)

3a. Appreciation of the Colleagues

3rd and 5th year medical students appreciated more than residents their clinical teachers with a non-authoritarian approach with patients; residents appreciate more colleagues and teachers trained with advanced medical procedures. Most students report an erratic interest of teachers regard to professional training of students.

3b. Disturbing Behavior of Colleagues

Particularly 5th year medical students are specially bothered by a “slavish” behavior of colleagues in classrooms and in ward; residents perceive as mostly disturbing a inert, static professional behavior of their colleagues.

3c. Collaboration of the Patients

5th year medical students mostly feel need and trouble of gaining collaboration of patients in their medical training.

3d. Effects of Medical Teaching on Culture of Gender Difference

Most students and residents assert to have learned that patients must be approached and treated in the same manner irrespective of gender differences (3rd year 80%; 5th year 87%; residents 74%).

4. Items Addressed to all the Sample of Youngsters With the True/False Modality

4a. Educational Duties of Physician

Almost the majority of youngsters without sub-group differences (94-100%) thinks that physicians have also educational responsibilities vs. people and, specially, vs. their patients.

4b. Compliance of Patients and Knowledge of Unfavorable Effects of Drugs

Almost the majority of youngsters, without sub-group differences (93-97%), thinks better that patients do not know in advance unfavorable effects of drugs because by this way more complete adherence to therapy can be achieved.

4c. Prevention and Clinical Medicine

Almost all medical students and residents (89-100%) think that efforts for prevention are not shrinking resources and efforts for clinical care of patients. 18% of non-medical students consider preventive medicine as a redundant approach. Most students (76% non-medical, 81% medical students) think that the main limiting factors in clinical practice are knowledge and motivation of the specific doctor *in-charge* and not the rationing care system strategies. This opinion is shared by a much lower fraction of residents (34%).

4d. Role of the Physician Facing Chronic Disease

Most medical students (95-100%), and residents (88%) consider relevant the role of the physicians in the care of chronic disease; this problem is less recognized as important by non-medical students (74%).

4e. Healthy People and Disease

Most non-medical students and 3rd year students think that healthy people do not consider disease as a possible personal event; on the contrary, greater part of 5th year students and residents believe that this is not right, because most people consider really their own possibility of illness. This awareness is reported as directly age-related.

4f. Reciprocal Empathy of Patients

Most youngsters (70-88%) think that patients feel closer to their problems other patients with analogue problems.

4g. Approach of Physicians According to Patient Gender

While only a minority of 3rd year students (22%) believes that physicians have a different approach according to patient's gender, a greater part of residents (40%), 5th year medical students (37%) and non-medical students (38%) think that doctors approach their patients differently, according to gender diversity.

Discussion

Interference of medical schools and post-graduate training on students' cultural representation of health, disease, physician's role

and patient relationship, appears, from our results, quite limited, with few significant and not striking differences. It is likely that a kind of “hidden curriculum” is working before, throughout and after the curricular studies of medicine^{2,5}. The source of people’s perceptions of illness is diverse and ranges from first hand experiences with a family member who may suffer from an illness, to information from the relatives and friends as well as the media. These perceptions may lie dormant until they are activated by their own illness or someone close to them: this point is particularly relevant for students and doctors, because the direct experience of illnesses can deserve different degrees of emotional participation but, much more, of elaboration and interpretation of personally perceived own signs and symptoms, much or less dissimilar from those observed in patients. The concept of disease, or illness representation as expressed by individual definitions and by proposed items, does not substantially change throughout the four subsets of students. However our results show really a fair dissimilar way of thinking of medical vs. non-medical students about the possibility of healing, the physician’s role, behavior of the physician, and the physician’s function on chronic diseases.

It is noteworthy that more non-medical students think that economic status is a critical factor in healing, i.e. that money is also health, while younger medical students rely more on the willingness of the patients, showing a kind of more psychosomatic approach (Figure 1). Health effects of social networks and social support and, more generally, impact on health and disease of welfare, socioeconomic status and education inequality³⁰ are not much considered by youngsters. Moreover, the slightly “psychosomatic” and “anthropological” disposition of medical students seems to vanish in the last years of the school of medicine and during residency. It seems that studies and training with more “practical” and “evidence-based” target, force knowledge and interpretation of clinical problems inside less “humanistic” boundaries.

It is relevant that a small but significant percentage of non-medical students perceive preventive medicine as a redundant, obvious and substantially unhelpful approach. They seem to trust in more “aggressive” interven-

tions on medical problems when occurring, mirroring the view of most of 5th year medical students and residents.

About the quality of physician, non medical-students seem influenced by a Rambo-model of ER doctor, even appreciating the friendliness as a positive quality (Figure 2), while medical students and residents share a less “heroic” vision of physician. Residents disapprove the lack of inventiveness and enthusiasm of their colleagues in study and work, a problem less considered by students.

Most students and a still relevant part of residents think that the critical fact in withholding care to disadvantaged people (indigent, disabled, elderly) is the physician itself, with its limits of knowledge, skills and willingness, and not the “system” *per se*.

Concerning the difficult problem of the communication of unfavorable prognosis, the trouble of this task is well perceived by residents; while all students (medical and non-medical) would not hesitate in the choice of communicate the diagnosis directly to the patient. It seems reasonable to assume that even post-graduate training does not provide skills adequate to achieve this difficult task, suggesting mainly the disposition to a more cautious and indirect approach.

In relation to the main feature of medical work it is impressive to observe that the ascending trend of the view of medicine as a social mission is present from non-medical students till to 5th year medical students, but drops abruptly in the group of post-graduate students (residents), looking like a drop of ethical tension. Residents substantially think that scientific and technical progress is the most important duty of the physician, addressing themselves to horizons of technological development even far from the direct relationship with patients.

This aspect is reflected by the fact that medical students highly appreciate a non-authoritarian approach with patients, while residents are strongly oriented versus a more stiff technological and specialized approach.

This interpretation is supported also by the fact that most students consider patients almost as the *object* of their studies and training. All students and residents did not learn (*see at 3^d*) that there must be a different gender approach toward men and women as patients; however, they observe that doctors

(their professional models) have actually a different gender approach to patients (*see at 4 g*), mirroring behaviors commonly present in other professional relationships.

Current widespread appeal to deeper attention of curricular studies regard to humanities for students of the school of medicine probably refers to the need of supplying students and doctors with those intellectual tools that in earlier recent years were given by family, church and, specially, by high schools. It is remarkable that all the youngsters that participated to our study were students in high schools that have still curricula with a quite "traditional" connection to the study of "humanities". This can be one or the main reason for the "common feeling" of youngsters toward most item tested, despite the age-gap of ten years and more.

Conclusion

Our study was limited to a particular Medical School (that exists as State University with continuity since 1434 AD). However, as the School shares identical curricula and criteria of training with the other Italian and European Schools of Medicine, with complete mutual reciprocity, our observations may be meaningful at least in a common "European" context³¹. Reduced concern and interest of youngsters toward skills of communication of prognosis, adverse effects of pharmacological therapy, organization of hospital, gender differences in medicine, relevance of preventive medicine and reciprocal empathy of patients were almost uniformly present in a minor but disquieting percentage of youngsters in the age interval of 18-32 years, independently of specific studies and experience.

Moreover, there is a prevalent opinion that inequalities in care distributive systems are still strongly physician-centered. Medical students have a clear perception of the social function of medical work, while non-medical students have not; to a greater extent, post-graduates residents share a formidable forgetfulness at this regard. This is a quite puzzling trend because there is a general appeal of media to a global approach of the physi-

cian to a medicine oriented to persons, with young doctors of our champion differently oriented. Perhaps technological answers to health-related problems are most rewarding and reassuring for students and physicians.

There are not differences among medical and non-medical students regard to doctor-patient dialogue and approach: communication of prognosis, effects of pharmacological association and importance of gender differences. In the whole, our results suggest a trend, growing with the age of students, toward a more authoritarian and less "participative" approach with the patient, taking into account less confident relationship and more conflictual and antagonistic behaviors. As a consequence, a general perspective with the construct of an authoritarian concept of health is superimposed as a net of rules and conditions: postgraduate students feel themselves (and are perceived by younger students) as guardians of an "healthy" system founded on scientific, economical and sociological grounds. There is a widespread acceptance of medicine as a work pointing to effectiveness, more as a science with the target of efficacy. Even the concept of quality of life related to health and disease is quite far from the constructs of students³².

Impact of curricular studies in a School of Medicine on youngsters is complex and, presumably, changing^{2,33-34}, but seems to modify only some and limited aspects of their thoughts and feelings on health and disease as formerly structured in their teen years. Opinions, prejudices and behaviors, strongly affected by media with a widespread impact on general population, seem prevalent also on students and residents.

Young people of the present survey share a background of humanistic studies. In our opinion, this does not immediately suggest or warrant the introduction of further "humanistic" studies throughout the curriculum of the school of medicine, even if the goal is to implement a more "humanistic" approach to patients³⁵. Perhaps a more "humanistic" background and disposition could be a more stressed pre-requisite at the moment of admission to school of medicine, and a feature warranted and promoted *throughout clinical teaching*. In our opinion, and in the aspirations expressed by the students, less abstract

and theoretical curricula are needed, supporting and clearly favoring the exposition of reliable teacher-physician models to verification of students themselves. This can be a way to reach effective skill learning and to endorse more directly and easily ethical and professionally correct behaviors.

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