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Perceptions, concepts, attitudes and values of Mexican medicine students about gender: a descriptive study

*Percepciones, conceptos y valores de estudiantes de Medicina de México: un estudio descriptivo*Alma Hernández-Chablé¹ • Jessica Toraya-Vargas¹ • Teresita Maldonado-Salazar^{2,3} • Juan Manuel Muñoz-Cano¹

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Resumen**Antecedentes.** Los patrones de morbilidad y mortalidad son diferentes para mujeres y hombres. En los servicios de salud se suelen minimizar los problemas de las mujeres.**Objetivo.** Analizar algunas capacidades respecto al enfoque de género que se forman en el proceso de educación médica.**Materiales y métodos.** Se realizó una investigación observacional, analítica y transversal con estudiantes de Medicina de una universidad del Sureste de México. Se realizaron entrevistas semiestructuradas a estudiantes, mujeres y hombres, hasta que se saturaron las categorías de análisis.**Resultados.** Los estudiantes no perciben la violencia como problema de salud, aunque aceptaron la existencia de discriminación y de violencia psicológica y física. Las respuestas de los estudiantes avanzados no mostraron construcciones conceptuales que les permitieran manejar este problema en la práctica de la medicina.**Conclusiones.** Hubo fallas para identificar la diferencia en morbilidad entre mujeres y hombres.**Palabras clave:** Identidad de Género; Salud de las Mujeres; Mujeres maltratadas; Actitud; Intención; Curriculum basado en problemas (DeCS).

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Background

Inclusive societies must identify the differences among their individuals in order to guarantee a full enjoyment of the citizens' rights. This requires a certain degree of knowledge on the cultural diversity, the presence of disabilities, the special needs of some individuals and gender-related aspects, among others. By analyzing the data concerning the access to tertiary education, equal pay and health systems that deal with specific women and girls problems (1) it is clear to notice that even in developed societies inequalities exist. These differences in terms of opportunities and rights came from stereotypes that not only permeate the structure of roles, which are culturally constructed, but also came from rules that legitimize inequalities in gender and in ethical or cultural groups too.

Medical education processes, most of which have no transversal axes such as a focus on gender, do not harbor the idea that it is important to consider the differences between men and women in aspects like the different requirements in training that are needed to provide quality care. Problems persist, as a focus on gender in Medicine "does not occur spontaneously" (2). In Mexico, naive ideas, among other aspects, became an obstacle to reaching the millennium goals regarding women. For example, the maternal death rate per 100000 live births, which is expected to be 22.3 in 2015, was 43 in 2011 (3). Mortality due to cervical cancer maintains a high frequency in spite of the resources that are available for its early detection. Although improving the detection of the different types of cancer that affect women is a desirable goal (4), it is not the only indicator of what is needed to improve women's care. The present approach in medical schools does not recognize the public health problems of women and these are not even considered as subjects in transversal studies. Analyses do not take into account the increase in indicators such as the prevalence of AIDS in women, teen-age pregnancy, domestic violence (5) or the fact that 80% of the mortal cases of breast cancer in Mexico were caused for its non-early detection. (6)

Daily problems of women are also not analyzed in medical education. There is no integral treatment plan for dysmenorrhea, a problem that is frequent and scarcely dealt with, as medical education plans and study programs do not consider an approach including gender-related problems in Medicine (7) or educational processes that allow physicians to break the pregnancy cycle in adolescence.

Objective

The aim of this study was to analyze the results of the medical education processes regarding the construction of the cross-sectional gender approach to the doctor's activities.

Materials and methods

Type of study

An observational, analytic, cross-sectional research was carried out with medical students of the Universidad Juárez Autónoma de Tabasco, in Southeastern Mexico.

Participants

The study was made in March 2013. The sampling was focused on students who were not considered as outstanding in their academic background with the purpose of obtaining a maximum variation in the sample. The selection of the students was based on the school attendance of second and eighth semesters of medicine. Then, they were invited to answer a semi-structured interview in a space where they were comfortable with this activity (Table 1). The interview questions asked about: a) if the social context, which was explored due to the ideas about social roles, had characteristics from being inclusive; b) the existence of differences in the epidemiological profile of women and men, where it was expected to have more than the statement of the most frequent causes of death in Mexico, and c) domestic violence as a health problem and its relationship with women and men roles in this environment.

Table 1. Participants.

	n (age in years)	
	2 nd semester	8 th semester
Women	15 (\bar{x} 18.8, SD 9.75)	10 (\bar{x} 21.8, SD 1.16)
Men	16 (\bar{x} 19.42, SD 0.97)	9 (\bar{x} 21.8, SD 0.72)

N = 50. \bar{x} = mean. SD = standard deviation. Source: authors' elaboration.

Gathering information

Two members of the research team conducted the interviews. Each participant received a code in order to identify the interview; however, names and school enrollments were not requested. Concurrently, the other members of the research team identified the answers key sentences. And with those answers the dependent variables were created, concepts that were used for the gender approach, which was created in the schooling process. The interviews were conducted until the categories were full (8) (Table 2), which happened once

50 questionnaires were answered, therefore data collection was stopped.

Statistical treatment

A X^2 test with one degree of liberty and a significance level of 0.01 was applied. Significance was considered with values greater than 6.63 according to the tables and $p \leq 0.01$.

Ethical considerations

The research committee reviewed the methodology. The ethical committee revised the compliance of the study with the guidelines of the Declaration of the World Medical Association and Mexico's norms for health research from the "General Health Law Responsible for Health Research". Then the study was assigned with the register number UJAT-DACS-2013-21

of the Dirección de Investigación de la Universidad Juárez Autónoma de Tabasco. All students were asked to take part in the study in an anonymous way. After accepting, they were asked to sign an informed consent and were told that they could end their participation anytime in spite of having signed the consent. Each questionnaire had a recording number with no possibility of identifying the participant, example: 49HA was the record 49, a woman in 8nd semester; 29HN was the record 29, a man in 2nd semester.

Results

For the construction of the analysis categories, the transcribed texts, words or phrases that came up from the students' answers based on the guiding questions, were located and codified. The summary of the answers is shown on Table 2.

Table 2. Summary of answers by category of analysis.

Categories	Subcategories	Good choices <i>f</i> (%)			
		2 nd W n = 15	8 th W n = 10	2 nd M n = 16	8 th M n = 9
Social equality. Participants opinions about the women and men roles at home, work and school.	1. Discrimination perception because of the gender.	11 (73)	7 (70)	11 (69)	6 (67)
	2. Opinion on the equitable distribution of housework.	15 (100)	10 (100)	16 (100)	9 (100)
	3. Obstacles perception related to the equality for both genders in the job paid.	3(20)	3(30)	5 (31)	5 (67)
Differences in the morbidity and mortality profiles. Concepts about the differences between the cause of the disease and the death according to the gender.	1. Opinion on the different causes of death.	11 (73)	3 (30)	9 (56)	4 (44)
	2. Opinion on the different ways to get ill.	4 (26)	1 (10)	4 (25)	2 (22)
Violence against women. Types of perceived violence.	1. Psychological violence.	12 (80)	10(100)	10 (62)	6 (67)
	2. Physical violence.	15 (100)	10 (100)	11 (69)	6 (67)

2nd = Second semester; 8th = eighth semester; W = women; M = men; N = 50. Source: authors' elaboration.

Perception of inequalities

When analyzing the answers related to aspects of equality regarding access to services and opportunities, the students showed awareness of the existence of discrimination and of the fact that socially determined roles are imposed on women. As this may correspond to their oral version in the interview rather than to a change in individual values or educational processes, the existence of social roles and their imposition was questioned. There was also consensus regarding the fact that the performance of women and men is predominantly different and depends on the dominant culture. This perception, recorded for both female and male second semester students, was not different from that of the eighth semester ones, as the X^2 test for both men and women was very distant from the critical value. The same situation was

observed regarding discrimination of women, of which all the student groups were aware.

The analysis of the answers also indicated that both the allocation of roles and the subordination of women to men was justified. "I consider that there are hierarchies. Nature has provided each one of us with a different role" (35-HA). "In my religion there is man and woman, the man provides the family with this equilibrium, the man is not a heavy-handed governor" (47-HA).

It must be noted that these students had not realized that in the student population of the División Académica de Ciencias de la Salud, the campus where the medical school is located, there are more women than men: of the 1137 recently admitted students in August 2013, 804 were women (70.7%) while 333

were men (29.3%). This responds to the existence of more courses with a higher female population: Nursing, Nutrition, Psychology, Odontology and Medicine.

Identification of epidemiological differences

When analyzing whether the students had learned to identify the differences between gender morbidity and mortality profiles, a necessary ability to improve health care, few differences were recorded between the new and the advanced students, those of the eighth semester that had already taken the subjects “Epidemiology” and “Public Health.”

Regarding the main causes of death, male students stated the following:

“I believe that for men they —causes of death— are more commonly the traumatic ones, I suppose” (2-HA). “If I remember right, accidents [...] I don’t recall the others” (28-HA). “Mortality rate is higher in men [...] as they have always been more prone, women are longer-living and men have always been exposed to greater risks both in the work place and in the environment, one may say” (49-HA).

These naive ideas were shared by the women of that semester. The main causes of death in Mexico, “I understand are breast cancer, lung cancer and gastric cancer” (12-MA). “The cause, now the number of [...] as one may say the incidence, well no, the cause of morbidity-mortality is the same in men and women, but the causes are the same” (42-MA). The causes of death and disease are the same for men and women “if we speak physiologically, physically, I say yes, although it has also been seen that car accidents and deaths in the work place have increased a bit, I think they are slightly greater in men due to, as I say, the heavier work of men than that of women” (44-MA).

This was corroborated by a X^2 test which had a value of 4.57 for women ($p=0.0325$) and of only 0.32 for men ($p=0.057$). Both values are far from 6.63, the critical value for 0.01 in the statistical table.

Domestic violence as a public health problem

Most of the students of both sexes and semesters perceived both physical and psychological violence towards women. This public health problem is not dealt with as it must be, but as a part of the ideas that male students acquire throughout their lives. Likewise, violence is not one of their problems. “In both, cities and rural areas, there continues to be discrimination due to ‘machismo’, and many women don’t

know their rights, that they should not be mistreated by their brothers, sons, husbands” (43-HA); “as far as I know, there still is mistreatment, it continues in some regions, mainly in rural areas” (35-HA); “there are many regions in the country, particularly in rural areas, where women are still under a man’s yoke and suffer from a very marked *machismo*” (49-HA). As it happened with the men interviewed, interviewed women had not acquired a precise idea through the school processes and their answers lacked a conceptual support, as it may be seen in an answer of 12-MA: Only the women that allow it are the ones who are mistreated. Women suffer, “especially psychologically by being made to feel inferior at work or because of the number of boyfriends or husbands she may have had, women suffer a lot of discrimination in that aspect” (48-MA). Women are mistreated “physically not so much now, but they are mistreated psychologically” (46-MA).

Discussion

As in other universities of Latin America (9) and the world (5), gender-related problems are not included in the school processes. Procuring quality health care requires a gender approach to be included in medical education (2), as the changes in laws and procedures directed to achieving gender equality are not enough (10). This study was carried out with this objective. No significant differences were found between the perceptions, concepts, attitudes and values of the advanced students and those of the new students.

Opinion of an inclusive society

It was expected that the advanced students would express themselves considering “gender equality”, defined by the WHO (11) as “the absence of discrimination regarding opportunities and the search for resources and profits, and the access to services, based on gender”. On the contrary, although students were aware of the existence of the imposition of social roles, they did not feel a need for the cultural patterns to be changed.

Notwithstanding that an inclusive society is also tolerant, and people’s preferences must be respected, beauty contests should be considered discriminatory from the point of view of gender. It was expected that some students would express disagreement with this type of events in educational institutions, as occurs in Mexico. However, eighth semester students, near finishing their school courses, did not see it this way.

Regarding the organization of these contests, some opinions were against, but others were in favor. “They are partly good and partly for distraction. Good because most of the contests

that have been taking place have included knowledge tests, and they ask general questions that, in a way make, people not only look pretty but also prove some knowledge” (48-MA). This does not differ too much from the answers of the new students. “I am in favor because it is mostly women that take part, one can admire women’s beauty and, for example, in their speeches they propose objectives and goals for their private lives and their life in society. That is very important for the woman’s manner of thinking, attitudes and abilities become known” (29-HN).

Identification of differences in epidemiological profiles

If the students had provided a correct answer for at least the ten main causes of death in Mexico for all ages, they would have noted the differences, as in women the growth rate of a malignant breast tumor increases and caloric protein malnutrition is present (12), in contrast with the causes of death in men among them: accidents and violence. In the best structured answer, students were expected to consider the weight of a disease in the form of premature death, the duration, the sequels and the associated disability (2,13). Students not only failed when they did not consider the patterns of health care requirements including the differences for men and women that had been identified for Mexico, but in not doing so they also maintained the gap between what is memorized at school and the abilities they should acquire before providing care to patients. It would be even better if, from their perceptions, they could build disease prevention and management plans. Other answers, more as occurrences than as concepts, such as “men can die of prostate cancer and women can’t” (12-MA), illustrate the lack of a capacity to identify contextual needs, not only considering gender differences, but the population as a whole.

Perception of domestic violence as a health problem

Despite domestic violence is a global public health problem, as other studies show (9,14), reasons were found to justify its presence, from nature to customs, society, religion or ignorance. “While walking along a street, some people may wish to make a compliment, but it may also be uncomfortable, apart from women being different” (42-MA). It is also associated with groups such as farmers and the poor communities. “In a certain section of the population, I believe that in urban areas it is less common as women go to work, but in rural areas where they stay at home, if they don’t have similar things to their husbands, the latter will mistreat the women” (44-MA).

Not only is domestic violence not dealt with by only modifying the attitudes of physicians and health personnel, but an ability to identify the problems that affect the patients

is necessary. As has been noted in other studies on young people (15), students are aware of the existence of physical and psychological violence. Despite not accepting it, they do not establish a position from which they can help violence victims, which is the same as ignoring the problem. This aspect is shared with professional health groups described in other studies that were uncomfortable when facing the possibility of talking to patients about domestic violence (16).

One of the fundamental objectives of education is social change. In institutions where physicians are trained, a gender approach must constitute a space to think about behavior patterns and the need to modify roles. Otherwise, teachers will transmit the gender stereotypes acquired by them throughout their lives (17). Lastly, as a change towards a more inclusive and tolerant society is not only the result of educational processes, the construction of a social responsibility in physicians in the school processes is “a social duty of the teachers and of all the people working in education” (18) for which the problem of the lack of gender equality must be made visible to all (19) and new approaches in careers directed to satisfying the needs of patients must be proposed in the case of health professionals, instead of the teachers’ traditional classes in the form of canonical subjects and obsolete ideas used when explaining and testing type exams.

Strengths and limitations

A limitation lies in the fact that this type of study does not make it possible to firmly conclude that the curriculum, based on blocks of serial subjects, is related to the deficiency in building a gender approach. Despite this, it was proven that this approach is not included in the abilities of the students after studying several semesters in this medical school, which is a strong point of this study.

Conclusions

It is necessary to include a gender approach as an axis in medical education, as much as inter-culturality, science as a social construction, and the preparation of students that may learn by themselves according to the problems present in the social context in which they work.

A gender approach, as an axis in educational processes, does not refer only to analyzing one aspect of women, but requires several fields of study, as the three addressed in this study were not enough.

Competing interests

The authors state there is no conflict of interest.

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