

The assessment of student doctors' attitude towards disabled people after teaching them a module

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Abstract: *Objective:* Assessing the attitude of medical students towards people with disabilities after teaching them a disability module. *Methods:* Several themes were taught. To assess the attitude of disability before and after the course, we used the ATDP (Attitude towards disabled persons) scale after translating it from English into Classical Arabic using the translation-back translation method. *Results:* 250 students benefited from this course. 78 of them were subjected to evaluation, including 20 male students (25.64%) and 58 female students (74.35%). There was no significant difference in the ATDP score between before and after among boys (before 72 (66.75–81.5) vs 72 (66, 81.5) after, p: 0.32). Among girls, there was a decrease in the ATDP score (74 (67.5–83.25) vs 70 (65–80.25), p: 0.03). No significant difference was found according to gender before and after. The ATDP construct validation in classical Arabic had a Cronbach's alpha of 0.60. The test-retest (ICC) 0.825. *Conclusion:* Although the perception towards disabled people has negatively changed among girls and while unchangeable within boys, this disability module in our faculty was a first experience in Morocco. It would be desirable to develop other educational methods in this subject matter.

Keywords: Disabled people, Morocco, Module, Disability

Introduction

Morocco has around 1.5 million people with disabilities. These encounter numerous obstacles to their integration. The country works hard to promote the health and well-being of this category of the population. To do this, many laws were canceled in their favor, several centers were inaugurated and many care associations were founded. Similar to other WHO member countries, Morocco has put in place a 2015–2021 notional health and disability plan. This plan will use all possible human and material resources for the benefit of people with disabilities.

“Valid people” can be a limiting factor. The intervention in this factor is essential. This strategy could

help in the integration of people with disabilities. Intervention on the human factor involves intervention on three levels: family, social and school. Acting in such a way as to teach doctors can not only change their attitude and modify the conditions of access to care or the medical decisions taken, but also affect the social integration of this category of the population through the decisions taken by the medical staff (reform, certificates, commissions, etc.). Studies show the importance of teachers' behaviors in the school integration of disabled people (1).

At the university level, the Moroccan faculty of medicine has set up a module for medical students of the 6th year. Teaching this module to student doctors is essential to improve their medico-societal manage-

ment of disabled people and their attitude and / or behavior towards them.

The objective of this study is to assess the attitude of the 6th year medical students before and after teaching them the module of «disability».

Methods

Content of the module

This study involved several medical specialties (neurology, psychiatry, Otorhinolaryngology, ophthalmology, pediatrics and physical and rehabilitation medicine (PM&R)). Four different themes were shared: Neurosensory disability (Sight disability and Hearing disability), Mental/Psychological disability, Physical disability and Pediatric disability. «Disability, incapacity, dependence» were the three points this course was about. This module was coordinated by a physical and rehabilitation medicine professor. The general objective was to ensure the implementation of all the necessary measures aiming at preventing or reducing, to the unavoidable minimum, the functional, physical, mental, social and economic consequences of impairments and / or incapacity.

The students had a pre-requisite orienting them to the main axes that the module covers. It focused first on the evolution of the concept of disability across different civilizations and religions, then the different classifications, after that the mechanisms of occurrence and injury of disability and the main symptoms and finally examples of disabled people patient care by identifying the interveners in a rehabilitation program.

Presence of students to the module was compulsory. We built 8 groups of around 30 students each. Each group had to go through the for sub modules. The course was in the form of practical workshops in the afternoons from Monday to Friday. Several learning methods were used: photos, videos, group work and clinical cases. The students were projected a video entitled «Disability in our faculty», produced by the coordinator of the module. This video dealt with the different motor, psychic, mental and neurosensory impairments. The various pathologies that cause disability have been addressed. The length of the video was 11 minutes.

The course's duration was of 64 hours, 2 hours for the Neurosensory Disability (deafness and blindness: one hour each), 2 hours for the Mental-Psychic Disability (one hour each) and 2 hours for the pediatric Disability (medical and surgical: one hour each), and finally 2 hours for the Physical Disability.

Questionnaire assessing the perception of disability towards disabled people

The selection of the questionnaire

A bibliographic search did not allow finding a valid tool in Arabic. The choice was made for the ATDP «Attitude Towards Disabled Persons» (2). This questionnaire was established in 1960 by Yuker, an American psychologist suffering from disability himself and evolved until reaching its B version developed in 1966. It is a generic scale which considers Disability in a very general way without requiring knowledge of any underlying pathology. We have chosen the O form of ATDP, the ATDP score includes 20 items, each with 6 answering possibilities, on Likert scale: «completely agree», «agree», «agree a little», «somewhat disagree», «disagree», or «completely disagree». There is no possibility of a neutral answer. It is a forced choice, oriented towards a positive or negative appreciation of the attitude chosen in relation to the question being asked.

Rating is done as follows: for each answer, we give a value ranging from +3 for «completely agree» to -3 for «completely disagree», and we reverse the positive sign of certain specific items (2) then we add all the values of the 20 items together, we invert the sign of the sum and we add 60. The total score is between 0 and 120, with the higher scores showing a more positive attitude towards the disabled people from candidates answering the questionnaire (2).

Obtaining the consensual version in Arabic

We have used the same methodology held in the quality of life scales (3, 4). A translation from English to Arabic is done by a third party translator whose mother tongue is Arabic. The back translation is done from Arabic to English. A meeting gathering together the project director, the translator and retro-trans-

lator and a specialist in linguistics makes it possible to compare the original document to the translated / retro-translated version. This meeting enables making the necessary adjustments and to reach a consensus text accepted by the different members of the translation team. This consensus version was reviewed several times by the project committee to make the necessary modifications.

Psychometric validation

The psychometric characteristics of the ATDP scale were made on another category of doctors in training (residents). The construct validation of the translated and adapted version was proofchecked by a Cronbach test on all the 47 completed questionnaires. The test-retest was carried out on this very sample, the questionnaire was completed a second time after a week. As this is a self-administered questionnaire, we have not assessed inter-observer reproducibility.

Ethical considerations

This study was carried out with respect to Moroccan regulations and the Helsinki declaration for the protection of individuals. Participants were informed of the objectives of the survey, and their consent was obtained before administering the questionnaire. Throughout the study, anonymity and confidentiality were guaranteed.

Statistical survey

The collected data was analyzed by SPSS 13.0 software. The quantitative variables of asymmetric distribution were expressed in medians and quartiles and the qualitative variables in numbers and percentages. The comparison of the quantitative variables of asymmetric distribution was made using the Mann Whitney test. A significance threshold lower than 0.05 was considered.

Results

The course was attended by 250 students. Those evaluated on the perception of disability were 78 students, 20 male students (25.64%) and 58 female students (74.35%). There was no significant difference in

the ATDP score between before and after among boys: before 72 (66.75-81.5) vs 72 (66-81.5) after, $p: 0.32$. However, for girls, there was a decrease in the ATDP score: 74 (67.5-83.25) vs 70 (65-80.25), $p: 0.03$. No significant difference was found according to gender before and after. The ATDP construct validation in classical Arabic had a Cronbach's alpha of 0.60. The test-retest (ICC) 0.825.

Discussion

Among boys, there was no significant difference. Among girls, there was a change in their perception, a 4-point decrease. Overall, the students' attitude towards disabled people was negative, our scores are close to those considered negative by some authors, they are respectively 62.3 and 78.7 (5,6). There was no significant difference in the ATDP score according to gender; studies find that women have more favorable attitudes than men (6-8).

In comparison with other French foreign studies targeting 4th year medical students, the ATDP scores (> 100) exceed ours, according to this study, teaching a Disability module did not change the score after a theoretical course, or after an internship in physical and rehabilitation medicine (9). Compared with a Moroccan study done in Oujda region in the east of the country, the highest average ATDP score was observed among doctors (69.3 +/- 13), followed by physiotherapists (67 +/- 12), then nurses (64.3 +/- 12), then doctors in training (63.8 +/- 13) and finally auxiliaries (61.6 +/- 13) (9). Therefore, our scores before and after slightly surpass these scores, this clearly shows the influence of culture and / or topography within the same country, as the case in Morocco.

In our survey, the boys seem to be responding based on their own experience with Disability (Disability in the family or in the surroundings) or according to their view of the very general phenomenon like the whole population, thus reflecting the attitudes and beliefs permeated in common Moroccan culture. Studies show that medical students have the same behaviors as the general population (8), similarly, examining the attitudes of medical students towards disabled people depicted no significant difference from the beginning

to the end of medical studies (10). We wonder what impact this module had on their perception in comparison with the courses; the boys in our study did not change perception. They may be considering this module as a continuity of the courses taught throughout the university curriculum involving the acquisition of purely medical knowledge. This urges us to see other educational methods along with this theoretical course.

The decrease in the score among girls has shown a deep reflection on this phenomenon, no explanation in psychology has been found. Is it a confrontation between a positive perception based on beliefs and a truth requiring lots of effort from these future doctors to face this phenomenon using the available means in Morocco. In Morocco, the integration of Disabled People meets certain obstacles, they are numerous and different, material and behavioral (cognitive and / or emotional). Therefore, taking a disabled person in charge would be a burden due to the need for nursing and the unavailability of specific means to allow adequate care. Another explanation could be related to the anxiety and discomfort of the female students when they will be facing the situation of caring of a patient with a disability. The different examples given in the module probably gave these learners a different view of disability from the one they had. Asking them to take care of these people and reduce their deficiencies and incapacities with the available means would be a seemingly impossible mission to them.

Certain surveys result in higher scores among students from other non-medical studies than in medical students (6); the assumed hypothesis is related to the agitation of their collective competence to "heal" for these people having deficiencies (6).

A theoretical course of disability may not be the best way to promote attitudes and behavior towards disabled people and it may need to be postponed until after graduating and obtaining a doctorate in medicine. Indeed, the 6th and 7th year students have only one concern, they must pass the clinical exams which require clinical reasoning to have a diagnosis and then propose the adequate treatment. They are always following this pattern. We point out that the teaching of disability is a new concept that the student must integrate during this same clinical reasoning to assess impairments and disabilities, in other words assess the

consequences of the disease and all what relates to it. It is possible that the students in this Disability module at this stage may feel forced to a course different from their objectives.

The overall ATDP scores before and after did not reflect a fully positive attitude. We consider these scores hardly changeable by a theoretical module; an internship in a physical and rehabilitation medical service would be beneficial to have a largely positive attitude. We consider that these young future doctors have not yet taken on heavy responsibilities, the professional commitment would put them in contact with patients with disabilities. Admittedly, this contact triggers in the doctor a clinical reasoning and a behavioral procedure (welfare), adequate to solve the medico-social problems of the patients. This practice strengthens the sense of responsibility and the awareness of the consequences of the disease whose incapacity is the Disability. The involvement in dealing with disabled people is connected to positive attitudes of health professionals towards these people, as well as to experience and daily confrontations (11-13).

As part of the current medical reform in Morocco, General practitioners will benefit from a family medicine module. The training of these practitioners, already occupying positions of responsibility, can only influence perception concerning deficient patients. This has been demonstrated in some studies, such as within physiotherapists who have a much more favorable attitude than teachers. In fact, with repetitive rehabilitation sessions, they have daily contact with disabled people (11, 13). Health professionals (Psychotherapists) having more contact with deaf people have positive attitudes (13). Graduate students in occupational therapy have more favorable attitudes toward disabled people than undergraduate students (14). The presence of disabled people in the family, or in the immediate surroundings (friends, neighbors, colleagues), was associated with more positive attitudes towards disabled people (15, 16), professionals with prior disability training had more positive attitudes (13). Occupational therapists had significantly higher scores than nurses and physiotherapists. The educational background did not influence attitudes (6).

However, others assert that contact and work with disabled people are not significantly associated

with positive attitudes “Chadd and Pangilinan” (5, 17).

The study of attitudes towards children with physical or mental disabilities according to the professional status of nurses shows overall negative attitudes towards children with disabilities, the lowest average ATDP score was noted among the most experienced professionals (5).

We do not have a means in Arabic to assess the perception of disability. ATDP is the most used scale (18), in particular for testing the effectiveness of educational means for students in the health professions (6, 7, 8, 19, 20) or measuring differences in attitudes between men and women (21), studies show significant differences among student categories (6, 7, 8, 19, 20), the result of the ATDP psychometric study in classical Arabic shows a Cronbach's alpha at 0.6, affirming an acceptable construct validity. The test-retest (ICC of 0.88) shows good intra-observer reproducibility.

There were some weaknesses to this study, the small number of the tested people for instance, mostly male. It is very likely to change the perception if the assessment would have been made late after the educational intervention and especially after internships and an extended confrontation period with disabled people.

Finally, teaching physical and rehabilitation medicine in 4th year and the Disability module to the students of 6th year must transmit a medico-social culture of “guard against the Disability”, this culture must aim at ‘upgrading’ the attitude and behavior. It is hopeful to develop other scales in classical Arabic or in Moroccan dialect, adjusted to the Moroccan context, evaluating this perception towards disabled people and taking current conceptual bases into consideration.

Other teaching methods would be necessary, internships in physical and rehabilitation medical services or disabled people fitting center, educational simulation, and opening up to the world of associations and visiting their buildings.

Conclusion

It is true that teaching the «Disability» module is necessary in a university course for medical students; this module complements the clinical reasoning of future doctors. The evaluation of the perception towards

the disabled people after this humble experience at our faculty would be to improve. We have to open up to other teaching methods. The development of tools to assess attitudes and behaviors would be a must, without these tools, we will not know the addition this module brings.

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