

Research Article

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Community intervention: strategy for competence - based education

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Abstract

The purpose of the present study was to perform a community intervention as a strategy for the promotion of competences in chiropractic students by determining the frequency of postural alterations in students in an intentional sample selection of 282 students from schools in the state of Veracruz. For this postural assessment, 29 chiropractic students participated out of a total of 108 students.

Introduction

Educational reforms face Higher Education Institutions (HEI) to seek new strategies that allow reinforce the teaching processes through the implementation of actions that do not imply institutional expenditures but instead do support teaching-learning activities in the promotion of professional skills. In Mexico, recent changes to the General Law of Higher Education indicate that it should promote the integral human development of the student in the construction of knowledge based on the formation of critical thinking from various elements, among them, being able to participate in the transformation of the society and contribute to the improvement of social, educational, cultural, environmental, economic and political areas, as well as making social service mandatory as a way of developing

awareness of solidarity and commitment to society in future professionals. Similarly, the generation and development of capacities and professional skills that allow them to address problems among themselves for social transformation. Also, recommendations are made to HEIs to establish mechanisms and receive financial support that allow them to have resources to strengthen their equipment and educational performance (1). The Organization for Economic Cooperation and Development (OECD) states that the expansion of education is a global trend. In 2019, only 24% of people between the ages of 25 to 34 had a higher education degree, with women being the ones who have best access to this type of education.

The education reforms that have been established with the aim of having a more equitable system where quality and the student are the center, ensure school learning by adjusting to the needs of the 21st century, considering the time and resources necessary to schools for their implementation (2). The National Association of Universities and Higher Education Institutions (ANUIES), in its proposal for the year 2030, considers it necessary to undertake new routes as a national project towards greater equity in opportunities so that the right to quality education can be exercised. In the same way, within its five axes of transformation, it proposes the full exercise of social responsibility where HEIs, in their mission, principles and values frameworks, point to the quality and relevance of their functions within which the contribution to regional development and the participation in the construction of a prosperous society is considered with the support of the three levels of government and of society as a whole (3). Under this context, the educational programs of the HEIs must seek strategies that allow them to strengthen their training processes, without financial expenses, and promote lifelong educational experiences in real contexts and generating an impact on the communities, thus supporting social and regional needs where, through collaboration agreements, the municipal resource can be lead for the benefit of the population, intervening through the participation of teachers and students, placing learning and favoring the promotion of generic and disciplinary competences. In some way, these processes contribute to the optimization of resources and improve the formation of human capital. In research work on student learning in real contexts, it can be affirmed that practice plays an important role in their university training since it provides the opportunity to face the real-world work before graduation. It provides them with experience as they see the situations that they may face in their first approach of their professional practice (4). Therefore, an activity must be developed for a specific topic where learning is contextualized, where there is active participation of the student and the interest on social, economic and environmental problems is generated (5),

taking into account that the strategies of teaching-learning are closely related to the attitudes and skills of teachers who want to get out of a traditional education. There are various lines of research where the determinants of learning and academic performance have been analyzed. One of the most revised lines of work is related to the way in which university students are coping with study; other lines have focused on learning approaches and others have addressed the role that learning strategies play. However, the results of the studies determine that the profile of the university graduate with a good level of learning is that student who achieves a deep learning approach, self-regulated, motivated, trusting in himself, using cognitive and metacognitive strategies to plan his intervention, review and, finally, rethink their study processes, achieving significant learning (6). The model of the Universidad Veracruzana, under the competence approach, focuses on the integral, meaningful and lifelong learning of the student, therefore, under the established context, we consider it important to make known that its medical school implements the strategy of Teaching-Learning of community intervention for the promotion of competence-based teaching as part of the integral educational model that the Universidad Veracruzana operates and, in some way, allows addressing the recent recommendations for HEIs (7). The strategy involves the signing of agreements or conventions with the municipalities and with the directors of schools in order to carry out activities that promote training competencies of both school groups in training (8). It is decided to apply the strategy in rural communities since it is where the schoolchildren carry out more non-age activities, such as carrying things that are heavier than they can carry in proportion to their height, age and weight, according to their physical characteristics, a situation that has a negative impact on the maturation of their bone structure and will probably impact as a health problem in their productive age. It is important to mention that certain investigations indicate that the development of childhood in rural communities shows a deficiency of attention during childhood, preschool and school period of the child, as well

as a lack of family orientation among other household educational factors which negatively affect their physical, emotional and social maturation (9). With these premises, and as indicated by a study carried out on learning styles and strategies, it is shown that, with this type of intervention strategies, collaborative and motivational learning in the population studied increases. Taking the previous experience of the academic nucleus of the program, the community intervention strategy is committed as the best learning activity for health sciences students (10) and, in particular, for Chiropractic students who, by participating in a satisfaction survey, 100% said they were satisfied with their learning. These students returned more motivated, more empathetic and more interested in their learning, in addition to strengthening the student-student, student-teacher and student-patient relationship.

Methodology

A descriptive transversal study was applied in the period from March to June 2019. A non-probabilistic convenience sampling is used in infants aged 7 to 12 years whose parents signed an informed consent. The student filled out the medical history with the help of the parents of the schoolchildren and the supervision of the teachers. During the study period, three elementary schools in the state of Veracruz were attended. To assess posture, the PostureScreen Mobile, a technological application software, was used.

Results and Discussion

282 schoolchildren, 124 men (44%) and 158 women (56%), participated in the application of the community intervention strategy. Table 1.

Table 1. Sex

N=282	Frequency	Percentage
Men	124	44.0
Women	158	56.0
Total	282	100.0

Of the schoolchildren seen, 47.9% (135) had a right lateral head displacement and 40.8% (115) had a left lateral head displacement. Also, shoulder flexion was analyzed where 30.1% (85) presented flexion of the right shoulder and 21.6% (61) flexion of the left shoulder. When analyzing the displacement of the rib cage, it was found that 31.6% (89) had displacement to the right and

60.6% (171) presented displacement to the left. When reviewing the hip inclination, it was found that 73% (206) had hip displacement to the right and 12.4% (35) presented it to the left. Regarding head displacement, an anterior displacement was observed in 87.6% (247) of the schoolchildren and a posterior displacement in 11.7% (33), as can be seen in Table 2.

Table 2. Postural Alterations

Postural Alterations	Yes		No		All	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Right Lateral Head Shift	135	47.9	147	52.1	282	100
Left Lateral Head Shift	115	40.8	167	59.2	282	100
Right Shoulder Bend	85	30.1	197	69.9	282	100
Left Shoulder Lean	61	21.6	221	78.4	282	100
Right Rib Cage Displacement	89	31.6	193	68.4	282	100
Left Rib Cage Displacement	171	60.6	111	39.4	282	100
Right Hip Tilt	206	73	76	27	282	100
Left Hip Bend	35	12.4	247	87.6	282	100
Anterior Head Displacement	247	87.6	35	12.4	282	100
Posterior Head Displacement	33	11.7	249	88.3	282	100

The results obtained allow a situational diagnosis of the postural hygiene of schoolchildren, where the actors involved, which are, schoolchildren, parents, teachers, chiropractic students, research teachers and municipal and school authorities; identify the importance of knowing concepts related to postural hygiene in favor of the integral health of schoolchildren as well as proposing strategies that avoid schoolchildren carrying large backpacks that may damage their postural hygiene, and avoid, as far as possible, that the schoolchildren engage in activities at home that expose their neuromusculoskeletal system.

On the other hand, Chiropractic students have the opportunity, through this intervention strategy, to carry out learning activities in a real context that motivates them to continue with the construction of their knowledge when facing real social needs of their professional services, as mentioned by Freiberg (2017) who states that medical students are distinguished by using collaborative learning strategies and competencies for the management of information since they must correlate data of clinical interest of the patient to establish the probable diagnosis, as well as use patient health indicators to establish diagnoses that allow differentiating health states of the patient in its different stages, a correlation that implies cognitive and metacognitive processes.

The teaching-learning strategy of community intervention under tutelage favors professional training. The student observes, palpates the patient, correlates data, identifies the origin of the postural problem and applies techniques under the supervision of their tutor. When the activity feedback was carried out, 100% of the students considered that the strategy allowed them to apply, correct and reconstruct the concepts learned in real contexts. Also, interacting with patients, municipal authorities, schoolchildren and their tutors, strengthened their professional skills by identifying the social needs regarding postural hygiene in schoolchildren for the promotion of the health of the neuromusculoskeletal system, as

well as emphasizing the importance of their intervention in the school age.

Community intervention impacts the benefit for society and the training of the Chiropractic professional in real contexts under the economic auspices of the municipality. Perez V. et al. (2013), in his conclusions on learning difficulties in university students, he refers to the importance of considering the competences for teaching-learning strategies and training activities with the same approach in the training courses of teachers, facing the teacher, during the development of their training, to self-regulation strategies, carrying out activities in contexts, tasks and contents of the curriculum itself so that, later, he will be able to transfer this learning. Likewise, he points out that self-regulation and study activity are competencies that university students must develop in order to be autonomous in their meaningful and lifelong learning.

Nowadays, we find more significant what Pérez V. (2013) planned for us about developing appropriate tasks of the discipline, where teachers offer students tasks and discuss with them the application of self-regulation in daily life situations that serve as applied and supervised learning experiences, so that the student can replicate them autonomously. Each self-regulated action with an established objective, that is the reason for each task and the self-evaluation of the object of study, we can present or adapt it as learning facilitators, or among colleagues, for its teaching and learning, such as going from the simple to the complex in the construction of knowledge, a situation that, in our experience, we feel achieved with the community intervention strategy.

Another important product is the interest of the students in not only obtaining data for their thesis work but also the show of interest and willingness to return to give continuity to the health service of the school community and invite colleagues from other academic areas upon detection of more needs in the context of the intervened community.

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