

Profile of Mexican students in nursing clinics

Perfil dos estudantes mexicanos nas clínicas de enfermagem

Perfil de los estudiantes mexicanos en las clínicas de enfermería

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ABSTRACT

Objective: To describe the profile of health and occupational hazards of nursing students in the clinical stage. **Methods:** Cross-sectional study conducted in a Mexican university, intentional sample of 750 students, through self-administered questionnaire. Analysis by SPSS software, bivariate with a 95% confidence interval. **Results:** There was a predominance of women (85%) average age of 22 years; 7.1% reported ailments such as gastrointestinal, respiratory, postural pain and stress; 68.3% reported smoking; 25.4% ingest alcoholic beverages; 57.5% never does exercises. Only 22% have three meals a day. Occupational accidents: 39.7% had experienced them, and only 49.2% always use gloves. **Conclusion:** Students have harmful habits to health, although it is of legal drugs. There is a lack of physical activity, combined with low intake of basic meals. The occupational accidents occur in the stage, furthermore, the adherence to the use of gloves needs to be stimulated.

Keywords: Nursing; Nursing Care; Students; Health occupation.

RESUMEN

Objetivo: Describir el perfil de salud y los riesgos ocupacionales de estudiantes de enfermería en las prácticas clínica. **Métodos:** Estudio transversal, realizado en una universidad mexicana, muestra intencionada de 750 alumnos, a través de un cuestionario auto-administrado. Análisis por software SPSS, bivariado con un intervalo de confianza de 95%. **Resultados:** Predominio de mujeres (85%) con edad media de 22 años; 7,1% relataron enfermedades: gastrointestinales, respiratorias, dolores posturales y estrés; 68,3% informó fumar; 25,4% ingieren bebidas alcohólicas; 57,5% nunca realiza ejercicios. Solamente 22% hacen tres comidas diarias. Accidentes ocupacionales: 39,7% ya sufrieron y solamente 49,2% siempre usan guantes. **Conclusión:** Se concluye que los estudiantes poseen hábitos nocivos para la salud, aunque sean drogas lícitas. Se observa sedentarismo, además de una baja ingestión de comidas básicas. Los accidentes ocupacionales ocurren en las prácticas clínicas, por otro lado, la adhesión al uso de guantes es necesario ser estimulada.

Palabras clave: Enfermería; Atención de Enfermería; Estudiantes; Salud ocupacional.

RESUMO

Objetivo: Descrever o perfil de saúde e de riscos ocupacionais de estudantes de enfermagem, em estágio na clínica. **Métodos:** Estudo transversal, realizado em uma universidade mexicana, amostra intencional de 750 alunos, através de questionário auto-administrado. Análise pelo software SPSS, bivariada com um intervalo de confiança de 95%. **Resultados:** Houve predomínio de mulheres (85%) com idade média de 22 anos; 7,1% relataram enfermidades tais como: gastrointestinais, respiratórias, dores posturais e estresse; 68,3% informou fumar; 25,4% ingerirem bebidas alcoólicas; 57,5% nunca realiza exercícios. Somente 22% fazem três refeições diárias. Acidentes ocupacionais: 39,7% já sofreram e somente 49,2% sempre usa luvas. **Conclusão:** Os estudantes possuem hábitos nocivos à saúde, ainda que seja de drogas lícitas. Observa-se sedentarismo, aliado a baixa ingestão de refeições básicas. Os acidentes ocupacionais ocorrem no estágio, por outro lado, a adesão ao uso de luvas precisa ser estimulada.

Palavras-chave: Enfermagem; Cuidados de enfermagem; Estudiantes; Saúde ocupacional.

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INTRODUCTION

The origin of the study was the concern about the health of future workers in nursing, because during the training process, the progressive and intense work of clinical practice in hospitals is involved, from the organization of work, to activities inherent in caring as a contribution to the challenges of public health. Students, at the beginning of their experience of human pain get stressed and feel helplessness. Also, they try to relieve the suffering of others brings them some dissatisfaction due to the conditions and limitations imposed by the work environment^{1,2} to care here and now.

Clinical practice in hospitals is a fundamental pillar in the training of undergraduate nursing students, they are the answer to the education of the non-university walls; there is no question of context or where the user ends their theoretical and practical training to enhance the development of theoretical skills and practical skills in the real context of learning before the acquisition of skills, useful tool in the education of university students³⁻⁶. Countries like England, Canada, Australia, The United States are pioneers in the applying of competition⁷.

By accessing the hospital setting, to master the practical skills that correspond to the period, students also face competitions with high risk of infection⁸. During the process of skills development, students do this process with contaminated needles, ie, occupational post-exposure to biological material risks, prevailing: hepatitis B virus (HIB) and immunodeficiency human virus (HIV) serumpositives among others^{9,10}.

During training, students may acquire diseases or potentiate the existing ones. Given this, stress is considered as a behavior generator among college nursing students when integrated into teams of health assisted care practices; this process involves a good performance and personal satisfaction. The university student in training becomes a generator of knowledge, from the perspective of professionals with academic excellence as a result of the educative process¹¹.

This research has the general objective: to describe the profile of health and occupational hazards of nursing students in clinical practice; and specific objectives: to know the socio-demographic profile of nursing students; identify pre-existing conditions and family history of chronic disease; analyze addiction practices and healthy practices undertaken by students; analyze occupational accidents to which they are exposed and protection measures adopted as well.

METHODS

It is a cross quantitative study, developed in the stage of formation of university students from a nursing school in the State of Mexico. A purposive sample of a universe of 750 students enrolled in the school year 2013- 2014 was used in connection with the procedures, through inclusion criteria: enrolled in the

periods indicated, without communication problems, having completed at least one clinical practice in hospitals and 100% answered questionnaire.

An amount of 250 students from each of the periods previously selected: 3, 5 and 7, to begin the study, and thus ensure the sample; participants received an ordinal numbering according to the data collection, according to the curricular program in which they were at the time of data collection and reference to the year avoiding duplication of these.

The instrument used in this study was a self-administered questionnaire as a group, in space time agreed with the teacher and student, this implied to capture the dynamics of interaction between them and the questionnaire.

To conduct the research permission was requested from the corresponding authorities, then immediately proceeded to the collection of data, finally the meeting was scheduled to collect data and proceeded to request the signing of informed consent, guaranteeing the confidentiality and anonymity of the information. According to the statement by the General Law of Health in Research for Mexico¹² (Article 14, section VII), the project was sent to the Research Ethics Committee of the Mexican public institution, responsible for issuing project approval, adhered to the regulations contained in this law.

After organizing the information collected, we proceeded to the analysis. Quantitative data were processed through SPSS version 20 in Spanish. According to the type of research, the results were analyzed by its descriptive nature, average and standard deviation were the most important evidence for analysis; it was admitted to the value of $p < 0.05$ as significant for the statistical analysis used. Subsequently, a bivariate analysis was performed to explore the association variables using a confidence interval of 95% (95%) and χ^2 statistical test.

RESULTS

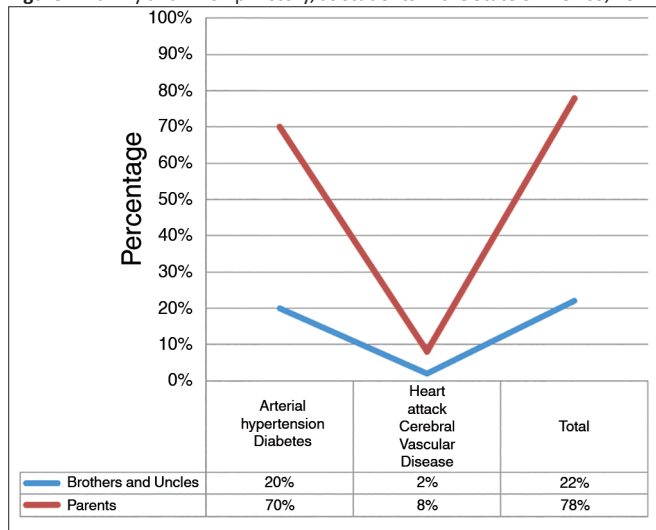
Regarding the sociodemographic characteristics of future nursing workers, the predominance of women (85%) was observed with an average age 22 (SD = 2.8 years old), 75.2% single and 4.8% married, 30.8% have children, the average is one child. On their labor variables, besides studying, working; 30% is done on weekends and holidays, followed by the night shift, where women predominate; they perform various activities, including the main ones are: general nurse (4.2%), care of patients with chronic disease - in the user's home - a minimum percentage devoted to trade, others serve as receptionists; these activities are carried out in private hospitals, at home, in clinics and primary care.

In relation to the time it takes to move from home to college, 60.9% estimated an average of two hours. As for the means of transportation, 85.3% use public transport, only 12.5% own a car. The average wage received by working students is \$ 3800,00 pesos monthly, equivalent to US 224 dollars.

Regarding health problems, 92.9% denied any; 7.1% reported having problems such as colitis, constipation, asthma, allergic rhinitis, inguinal hernia, seizures, postural back pain, hypothyroidism, stress and depression, diseases that have been diagnosed by a doctor that are currently in drug treatment. Also, 70.5% reported good health, and 30.4% regularly; training motivates them to a medical test performed; however, it is disturbing to know that 83.3% has never performed it, only 16.7% did a laboratory test, colposcopy, Pap or mammogram CBC.

Regarding family history of chronic disease and family history, 90% said: diabetes, hypertension, myocardial and cerebral vascular event. The degree of direct kinship: parents (78%); brothers and uncles (22%), Figure 1.

Figure 1. Family and Kinship History, as students in the State of Mexico, 2014.



As for the legal addictions, smoking revealed 68.3%; at the same time, this variable showed that single women smokers 3.66 times (95% CI 1.34 to 2.05; $p \leq 0.000$) than married; cohabiting or divorced 1.6 times (95% CI 1.22 to 2.72; $p \leq 0.003$).

Regarding alcoholic beverages, 25.4% indicated drinking some kind of these, mentioning beer in first place followed by tequila and whiskey, this variable showed that single women consume 2.66 times more than married women (95% ; 3.34 to 1.05; $p \leq 0.0009$).

In relation to physical activity, 57.5% said they never do any exercise, due to the number of hours of study, only 43.5% carried out activities such as running, walking, play basketball, go swimming and go to zumba classes, an average of 50 minutes, 30% weekly, followed by 7.5% each 3 days and 4.5% twice a week.

As for food, 22% of them include three meals a day; 78% referred to one, even two; missing the main meal, acquiring food outside the home (cakes, toast, soda or candy); concerning the variety in food, 63% consume daily white and red meats; 37% rarely; as fruits and vegetables, 56% eat them frequently, and

sometimes 44%; Also, 99.9% consume daily tortilla - tortilla an average of 6.58 per day.

With regard to accidents during needlestick practice (lancets, and punzocat needles), 71.3% hasn't had; 39.7% said yes. The patient was diagnosed with HIV, hepatitis C, and of those, only 5% is in prophylactic treatment.

Regarding protection measures, 49.2% always wear gloves; 58.3% do not usually use goggles, 27.9% only sometimes. Regarding the use of face masks and mask, 77.5% always does, 19.1% reported doing it a few times and 3.3% do not use them.

DISCUSSION

Being involved in the research a young population in productive and reproductive years, their economic situation considered in a lifestyle of students, certainly affects their academic, professional and personal condition, but nonetheless most of them are affected somehow, it does no limit them to continue their studies, in order to reach their career goal: to become health care workers. The respondents believe that the economic problem is due to the lack of job opportunities, as charged by school schedules, which causes a decrease in their incomes and limit their spending, this significant impact, from an international context, that will probably continue in 2014. Before this, data for Latin America and the Caribbean have, in relation to unemployment among women, a decrease of: 0.3% ie 7.9% in 2012 to 7.6% in 2013¹¹⁻¹³.

This universe of undergraduates is aware of the occupational risk factors, ie, the work context has generated gastrointestinal problems and allergies. The nursing profession allows them to acquire knowledge on measures to promote health, prevent these and other diseases, but also has aspects to take better care of their health, to be in continuing medical surveillance; self care has improved dramatically, that enables delay of complications from a disease preventing from becoming severe^{11,14}.

Parental history clearly has a subsequent risk of cardiovascular morbidity and mortality; to be positive, it has significant values; family history stand for the female gender, making a common problem; in Mexico, hypertension and diabetes mellitus are at the top in number of deaths per year in both men and women mortality rates show an upward trend in both sexes with over 70,000 deaths and 400,000 new cases annually¹⁵⁻¹⁷.

The results of this study show the risk condition for the use of legal or illegal drugs in the student stage. Facts from literature works recorded an occurrence three times greater of consumption of alcohol and tobacco among men and women. Another phenomenon that occurs most often is the increase in drug use in women^{18,19}. As conditions of these addictions, among others: marital status (single); the need to ease tensions; study requirements; easy access to them; little or no knowledge of their effects; influence of colleagues and friends; all of this associated with increased consumption at world level and nacional¹⁶⁻¹⁹.

Figures quoted are indicative to encourage the care of these future professionals from the mental and social point of view; consumption can be primary a cause of complications, ranging from withdrawal to low job performance, decreased concentration in school, feeling of anxiety, depression and a serious cause, death^{15,16}.

Smoking prevalence reported by the National Survey of Addictions (ENA) 2011 compared to the Mexican population of 18 to 65 corresponds very closely to this study. The consumption of tobacco and alcohol is higher among the university student population studied, this shows that despite having a high educational level that lets them know the health damage caused by them or drugs, considered as public health problems prevalent in the general population, like all human beings looking for a way to avoid stress workload. Even the academic environment^{20,21} is in favor of students experimenting with drugs, because in that period of their life is common to take part in various celebrations, such as the welcome of new students, events for economic funding for closing party, etc., giving them opportunity for drinking alcohol, smoking cigarettes or doing other substances²²⁻²⁵.

Most students due to inactivity currently facing caused by long periods they spend using new technology equipment, they are predisposed to being overweight, or obese; also sometimes stress or insecurity in many parts of the country are factors that influence the development of cardiovascular^{17,26} conditions. It is the responsibility of the students themselves to improve their lifestyles, as far as their limitations and possibilities, from the perspective that they have generated the knowledge to care; therefore, it is essential to seek the time to exercise and create favorable conditions for better health conditions^{3,10,18}.

Nursing is a profession exercised primarily by women, the percentage of males is minimal, sometimes zero in some groups. Regarding the study population summoned the two men did not participate due to being absent during data collection. Nursing studies are characterized by a growing demand for academic requirement in their students to continue efforts of adaptation to the academic demands both theoretical and practical; in addition, it is needed to obtain a high quality preparation; therefore, care involves exercise, medical check, and feeding^{3,14}.

As for food, they stated that frequently skipped meals, especially breakfast; also there are no fixed hours to eat, and eat high energy food - so-called fast food - they rarely eat vegetables and fruits; These problems are most relevant at the beginning of university education which coincides with the cessation of physical activity, also leaving healthy eating habits, as they must devote more hours to study with the consequent reduction of time for activities favorable to help their own care. Students identify the importance of feeding in their academic stage, however, it is perceived that the lack the availability of time is one of the major determining factors in the quality of food received²⁵. A study of Brazilian adolescents notes that fast food meals are

typical of adolescence, despite being unhealthy; teens have knowledge about healthy eating habits as well as the problems that unhealthy eating habits can cause, however, they continue with these habits²⁷. If in adolescence they develop these habits, this justifies why teenagers remain with high intake of fast and low intake of basic foods meals.

These circumstances allowed the researchers of this study to consider that in the active participation of future professionals in nursing, health promotion and the prevention of accidents are of particular interest to improve their quality of life, which will be an impact on increasing personal care, their school progress, because most personal, emotional and cognitive maturity, which in turn will influence their decisions related to protection measures^{14,23}.

In their capacity as students, they do not yet have enough experience; sometimes causing accidents when preventive measures are not implemented; This study showed that 79.4% of accidents were caused by needles, in these cases, when performing the procedure in front of the patient^{1,14}.

This invites to reflect on the necessary activities as synonymous of protection, as well as the impact in terms of providing nursing care to the user; it is essential to emphasize that knowledge is related to the experience, this gives intellectual and scientific authority and distinguishes the professional from the care of oneself to the care of another, a basic requirement that generates intuitive awareness of accident prevention and work risks^{2,27}.

Future nursing professionals develop skills in various scenarios to do internships in different clinical nursing scenarios, that constantly faces them with various risks when directing the actions of caring for others; it is evident that the most capable person can make mistakes and that the smartest can incur in acts that can complicate more than once the care, even risking his life to make a heroic act in favor of others^{27,28}.

The most important point of the findings of this study is the relationship between high cumulative incidence of exposures to blood and body fluids. The phenomenon of biosafety is alarming, the percentage of students with puncture accidents - considering the high rate of chronic carriers of the virus in hospitals - may be tolerable, but also neglects their health, this is considered as a major issue. The body region most affected by the occurrence of these accidents are the fingers, because of manipulation of needles to puncture, medication preparation and realization of recapping⁷. In this context, the needles are the main cause of needlestick accidents, followed by sharp materials such as foils and glass.

This aspect becomes relevant due largely to the activities of nursing workers that are focused on managing medications and fluid therapy, involving the constant manipulation of needles and scalping. Therefore, they should be developed with the utmost care, as any carelessness can cause an accident.

CONCLUSION

College students called for the present study are young, mostly female, healthy, in the process of training in hospital settings where they conclude their training; they face triggers stress scenarios, generators diseases that strengthen existing ones, even when they feel healthy, there is a minimum percentage with diseases that require an effort to adapt not only to the environment but to the professional group that receives them, in the case of patients or users, and colleagues in hospital practice units.

Even knowing the important genetic load they have on chronic degenerative diseases, these students are sedentary, situation coupled with the consumption of cigarettes and alcohol; no regular laboratory tests are conducted, even though in their professional training can be a decisive form of care, so it is inferred that it is a young population at risk of falling ill by the lifestyle that predominates in this study population.

Another last emerging issue but not least important is the biosecurity measures which purpose is to cherish health as much as possible, therefore, this activity must be a compromise rather than simple training for the institution where you are educated, you must prevent risks, include vaccination, post-exposure management, also form part of the curriculum as learning unit, not only as a theme. In all schools of health, those responsible must ensure that these measures are met, therefore, students take responsibility conferred on the regulations issued for this purpose because inexperience can generate stress, and lead to greater risk of accidents; it is also necessary to plan strategies to achieve workplaces free of work-related risks, suitable to promote health.

The results show that there are challenges to be considered to continue the professional development of these students and thus strengthen the body of knowledge they hold in different work scenarios, not to mention taking care of themselves to increase the biosafety of these future nursing workers.

Limitations on this study refer to its development in a unique training school. It is important to look into this type of study, expanding to other nursing schools.

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