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Are first year Nursing students' lifestyles coherent with their future career?

Abstract

Aim. The objective of this study was to evaluate the lifestyles of first year Nursing students of two Universities (one in Spain, the other in Colombia).

Background. Nursing students are going to be professionals in the near future and as carers it will be essential for them to behave in a way which will allow them to have a positive influence on the health of others as well as their own health.

Design. A cross-sectional descriptive study design using validated surveys was adopted.

Methods. A sample of 140 Nursing students enrolled in 2014 in their first year of two Universities (Seville in Spain, n=37 and Antioquia in Colombia, n=93) self-reported the FANTASTICO Lifestyle checklist.

Results. Findings reveal that (I) the lifestyles are not appropriate in 1 of 3 of nursing students in both Universities, (II) there are statistically significant differences for family items, positive thinkers, the use of safety belts and alcohol consumption before driving.

Conclusion. A high proportion of the study's participants have inappropriate lifestyles which involve risks for the deferred development of chronic diseases. It is necessary for Universities to develop educational interventions in the design of Nursing Degrees to strengthen healthy behaviours during training.

Summary statement

What is already known about this topic?

- Lifestyles are a product of people's motivations to protect or improve their own health and to avoid illnesses.

- The lifestyles of Nurses have an influence on their patients acquiring healthy behaviours.
- The literature shows that nurses' lifestyles are not as coherent as they should be.
- To care for others, nurses first have to take care of themselves.

What this paper adds

- A high proportion of first year nursing students had inappropriate lifestyles.
- The participants have risks of developing illnesses, especially those which are chronic.

The implications of this paper

- Nursing students are mostly young people who are at a stage in which some of the most important behaviours for adult life can still be modified.
- It is necessary to develop educational interventions in Nursing Degrees to strengthen healthy behaviours during training.
- Nursing Schools not only have the duty to train professionals, but also to foster the health, welfare and quality of those who study and work there. They must encourage knowledge and skills oriented to having more healthy lifestyles.

Key words: Colombia, Cross-Sectional Studies, Health Behaviour, Lifestyle, Nursing, Spain, Students, Universities.

INTRODUCTION

In recent decades, the health personnel has had to assume the role of more relevantly influencing the education of the general population regarding the prevention of risk factors of lifestyles that are open to change.¹ This task more usually lies with nurses, who are seen as role models by their patients. This is why it is important for these professionals to not only have a good knowledge of healthy behaviours but also to practise them.²

Today's nursing students will be tomorrow's professionals³ and to fulfill their role in caring they not only need knowledge, they also must maintain behaviours which enable them to improve and protect both the health of others and their own.⁴ With this in mind, Universities present a unique environment of opportunities to foster the maximum potential of health which the families of their students and the community at large will also benefit from.⁵

To care for others, people first have to take care of themselves. This statement is especially important for Nursing, in which promoting healthy lifestyles is a priority.⁶ Some research shows that Nursing students' lifestyles are inappropriate.^{7,8} Additionally, exacerbating this situation, it has also been described that during Nursing Degrees some unhealthy lifestyles not only worsen, but also may start.^{9,10} This panorama is far from promising in the new professionals who are joining the labour market.⁶

Lifestyles are a product of people's motivations to protect or improve their own health and to avoid illnesses.¹¹ Therefore, it is really relevant to evaluate if Nursing students' lifestyles are healthy enough at the beginning of their university education, so that Nursing Schools may design timely interventions which improve the health behaviours of the future professionals.

METHODS

Aims

The objectives of this research are to analyse the lifestyles of Nursing students and to compare

differences between the two Universities involved (Seville and Antioquia).

Study Design

This is a cross-sectional and descriptive study using a validated self-reported survey.

Participants

The objective sample was Nursing students enrolled in 2014 in their first year in the University of Antioquia –UdeA (Colombia) – and in the University of Seville –US (Spain). 93 of the 157 Nursing students of the UdeA (59.2%) and 37 of the 50 of the Macarena Teaching Unit of the US (74%) were included. Nonparticipation was due to some students not attending class that day or their not being enrolled in the course the information was taken from. No student present when the information gathering took place rejected filling out the form.

The instrument

A survey was used in which was included data on age, gender, marital status and the questions of the FANTASTIC Lifestyle Assessment Questionnaire scale which was developed in the University of McMaster (Canada).¹² This instrument provides information about the person's healthy behaviour over the last 30 days. The word "FANTASTIC" comes from the acronym of the names of the ten domains in which there are 30 items: Family and friends (F), Activity (A), Nutrition (N), Tobacco (T), Alcohol and other substances (A), Sleep and stress (S), Type of personality (T), Introspection (I) and, Control of health (C). Each item has three Likert-type answer options (0-1-2). The total scale score is the sum of the values of each item multiplied by two. The greater the value attained, the better the lifestyles of the person.

The Spanish version was adapted in Chile to be used in youth populations,⁵ and this translation is the one used in this research. In this version, as a new section at the end about "Other behaviours" was included the questionnaire was renamed as "FANTASTICO".

Depending on the total, the health of the survey respondent's health is classified as

dangerous (≤ 46), bad (47-72), normal (73-84), good (85-102), or fantastic (103-120).

The reliability of the instrument was adequate¹³ and it has been tested in the first study (Cronbach alpha 0.88)¹² and also in 550 healthy adults in Colombia (Cronbach alpha 0.7).¹⁴ Our study presents a Cronbach's alpha value of 0.7.

Data collection

To gather the information, the researchers used the subject's class hours when the greatest number of students was present during the first semester of the academic year 2014/15. After explaining the aims, the methodology and the results expected from the research, the students were asked to voluntarily take part in the study and those who gave their consent filled out the self-report of the FANTASTICO questionnaire. The questionnaire was subjected to a semantic and legibility validation by 14 Nursing students (7 from each university).

The following procedure was carried out: first a written example of the questionnaire was handed out for each participant to resolve; second, we asked for their opinions about the comprehension and appropriateness of the language of each of the items; third, we requested the students to give synonyms or statements in their own words of words or phrases which proved to be difficult; fourth, the researchers evaluated the observations in this test and compared the theoretical concepts with which it was meant to measure each of the questionnaire's items with the statements proposed by the participants in the semantic validation, establishing if there was an equivalence - in the case of there being differences the researchers determined the statement of each item by consensus; fifth, the researchers approved the scale's final version on the basis of consensus.

Ethical considerations

This study was approved by the Ethical Committee of the Nursing School of the University of Antioquia. The participants gave their informed consent and the survey was answered

voluntarily and anonymously. Each survey had an annex for each student to rate and to interpret the score obtained and, according to this, advice to improve health behaviours was given.

Data Analysis

The information gathered was analysed by the SPSS v. 21.00 programme (Chicago, USA). All the quantitative variables were examined for outliers and non-normal distributions. When they fulfilled normality criteria their average, their standard deviation and their minimum and maximum values were calculated, and percentages were determined for the qualitative variables. In the exploration of the relation between the university and the student: a) a one-tailed ANOVA statistic was used for the total score and that of the the FANTASTICO's domains; and b) the χ^2 test was employed for the percentages of healthy lifestyles - the Yates correction was carried out when the expected cell result was less than 5. In all cases, there was considered to be statistical significance of $p < 0.05$.

RESULTS

There were not statistically significant differences between the two universities regarding the average age (UdeA: 18.8 ± 1.9 and US: 19.6 ± 4.1), the proportion of female students (UdeA: 89.5% and US: 78.4%) and the proportion of single students (UdeA: 96.8% and US: 100.0%).

The total sum of the FANTASTICO scale was slightly higher in the US students than in the UdeA students (UdeA: 86.9 ± 10.9 and US: 89.2 ± 7.9), though this difference was not significant (t of Student = 1.164, $p = 0.247$). There was not a statistical difference in the total or per item scores between the two universities when stratified by gender, age or marital status. Statistically significant differences were found for some items.

In Table 1 it is seen that 73.0% of the US students versus 63.4% of the UdeA students had good or fantastic lifestyles (p value of the Fisher test: 0.783). We note that the UdeA students doubled the percentage of dangerous or bad lifestyles with respect to the US students.

(Insert Table 1 here)

Table 2 describes the frequency of healthy behaviours corresponding to the FANTASTICO scale's 30 items in the first year students of Nursing in the two universities. We highlight the following in each domain:

(Insert Table 2 here)

Family and friends. The US participants are more supported by their family and friends than those of the UdeA. These provide them with affection and they can talk with them about subjects which are important in their life. These differences were statistically significant.

Activity. In both universities, and in spite of the youth of the participants, less than one in three in both universities carried out vigorous physical activity for at least 30 minutes three or more times per week and two out of three performed moderate activity with the same duration and frequency. Our attention is drawn to the fact that only one out of five Nursing students in both universities is an active member of sports or self-care groups or organisations.

Nutrition. The proportion of first year Nursing students of both universities who had appropriate eating behaviours in consuming vegetables and fried food and who restricted foods rich in sugar, salt and fat was low. Four out of five perceived their current weight to be close to the ideal weight.

Tobacco. Eight out of ten stated that they had never smoked and less than one out of ten that they were currently smokers.

Alcohol and other substances. In both universities almost all the respondents reported that they did not consume illicit psychoactive substances (marijuana, cocaine and others) and that they had less than three drinks with caffeine per day. With respect to alcohol consumption, almost all of the participants have less than seven drinks in the same week and one out of two has four or more drinks on the same occasion. A statistically significant difference was found

for not driving after drinking alcohol: this protective practice was greater in the UdeA students.

Sleep and stress. It is very worrying that only one out of three Nursing students of both universities sleeps well, that a similar proportion feels capable of controlling the stress of their daily life and that only three out of five are capable of relaxing and enjoying their free time.

Type of personality. It is also alarming that more than 80% of the students of both universities are always in a hurry, that two out of three feel annoyed or aggressive and that one out of three is not content with the activities that they carry out.

Introspection. The UdeA participants had a significantly greater percentage of positive thinkers than those of the US (62% versus 35%). On the other hand, in the other two items which make up this subscale (*I rarely feel tense*, and *I don't feel depressed or sad*) the percentage was higher in the US students, though this difference was not significantly significant.

Control of health. In both universities, despite the Nursing students having been trained in illness prevention, less than one out of three has regular health check-ups. With respect to sexual health, less than half talk with their partner or family about these matters and have safe sex.

Other behaviours. Nine out of ten students of the two universities respect street rules as pedestrians, drivers or passengers. For the item on the use of safety belts, the US students had a greater percentage than those of the UdeA (94.6% and 69.9%, respectively) – a statistically significant difference.

DISCUSSION

In our research of 93 students at the UdeA and 37 at the US enrolled in the first year of the Nursing programme, the total average of the FANTASTICO scale was very similar (86.9 points for the former and 89.2 for the latter), without there being statistically significant gender-based

differences either. This is the same situation as that reported in kinesiology students at UDLA University.¹⁵ Our participant's lifestyles were between good and fantastic in 73% of the US students and in 63.4% of the UdeA students. These results are very similar to those obtained with medical students of the Puebla University in Mexico.¹⁶

Regarding the general frequencies of the items of the FANTASTICO domains, the following can be underscored:

In both universities this result is 50% higher than that reported for these items in a study of 300 students of the Austral University of Chile.^{9,17} Demonstration of affection is identified as a form of expression of love involving attention, warmth and friendship, all of which are forms of attention towards another person and to what is done, and can reveal interests, zeal and importance to others.¹⁸ In the students of this study's two universities, only one out of three carried out vigorous physical activity at least 30 minutes three times or more per week. This finding was 40% lower than that found in Nursing students in Medellín (Colombia)⁸ and in London.¹⁹ Analysing the Nutrition domain, it was noted that less than one of five students of the two universities who took part in the survey declared that they had a well-balanced diet and that they avoided the consumption of sugar and junk food. Although this finding is much higher than that reported in Greek nursing students,²⁰ it is a cause for concern given that, moreover, they are studying Nursing. Regarding their current weight, four out of five perceived it as close to ideal. This finding is 50% higher than that reported by London Nursing students.¹⁹

As for the habit of smoking, this study found that in the two universities only one out of ten was currently a smoker. This is 22% less than the percentage obtained in Israeli Nursing students.³ Tobacco consumption is well documented as the main avoidable cause of morbidity and mortality in the world. Indeed, it is one of the most serious epidemics which need urgent action to be undertaken in order to be controlled.²¹

Nurses are the professionals who offer the best advice to patients about the dangers of consuming tobacco.²² However, the very suitability of carrying out effective intervention in smokers was placed in doubt by patients when nurses smoked.²³ Regarding alcohol consumption, one out of two first year Nursing students in the universities studied has more than four drinks on the same occasion. This is 51% higher than the figure obtained in Peruvian Nursing students in their second year of studies,²⁴ in which an excessive consumption of alcohol was furthermore associated with an exaggerated academic overload. In our students there was not a gender-based difference in alcohol consumption, while previous research identified that women had a lesser prevalence than men.¹⁵

It is worrying that 6% of the participants of the UdeA versus 25% of those of the US had driven a car or motorcycle after drinking alcohol when it is known that alcohol affects the ability of the person who is driving and increases the risk of traffic accidents which can lead to serious injuries and even death.²⁵

The consumption of psychoactive substances (marihuana, cocaine and others) in the Nursing students of the two universities was under 5%. This is 10% lower than Nursing students of a Brazilian university.²⁶ Moreover, in this latter case the students' placements in their last year of the degree were related to an increase in the risk of consuming alcohol and illicit substances. This was explained as being a way to diminish the exhaustion caused by their clinical and academic activities. The consumption of non-prescribed medicaments is a common practice in one out of two participants in both universities. This is 84% lower than that reported in medical students and Nursing staff in India.²⁷

Although sleep is a vital need which needs to take place in the best conditions and be enough in order for it to be effective, only one out of three of the students in the two universities sleeps well and wakes up rested. This means that the rest faced their daily activities sleepy and

tired. This finding is the same as that reported in Australian Nursing students.²⁸ In a research in the University of Huelva in Spain,²⁹ it was found that 50% of the Nursing students had a deteriorated sleep pattern. This may affect academic development as well as health. In this study it was also noted that first year students slept better than students in the following years. Sleeping less was explained as being a response to the great academic demands of the different subjects. It was also reported that, to overcome sleep, it was common to smoke and have drinks with caffeine. This situation was also observed in our study.

With respect to stress, seven out of ten students in both universities in our study felt incapable of controlling the stress of their daily lives. This finding is similar to Huelva Nursing students,²⁹ and was almost always shown in complaints which the students related to the excess of demands in the theoretical and practical subjects. Therefore, the need for Nursing students to have time to carry out extracurricular activities and to fulfil responsibilities appropriate to their age is underscored.³⁰

In the personality and introspection domains, four out of five of the students of the study's two universities were not content with their work or with their activities, or were depressed. Nurses are prone to developing burntout syndrome due to being subject to situations of interaction with patients and relatives which propitiates the development of different stressors.³¹ This syndrome is a negative and persistent mental state and has been related to certain personality traits, such as sensitivity to criticism, mistrust towards others, difficulty in establishing social contacts and low psychological adjustment.

The UdeA students had almost twice as many positive thinkers as those of the US. It is known that optimism is related to both better mental and physical health,³² as well as that nurses who are optimistic perform better professionally.³³ A nurse, as the centre of the health team, must help in preserving a work atmosphere in which healthy interpersonal relations are

fostered. To do so, it is necessary for them to think positively. This will result in more effective interactions with the health team and the patients, a better solving of conflicts and lower levels of tension in the services.³⁴ In this study, one out of five students of the two universities has regular health check-ups and a significant proportion of them is concerned about having safe sex. This reflects the responsibility each person has about their health and that of their partner, and it is to be expected that, due to their training, Nursing students will be totally aware of the risks for their own health and that of other people.

As to other behaviours related to road safety, our students as pedestrians, drivers or passengers are mostly respectful of traffic rules, However, 30.1% of the UdeA students versus 5.4% of those of the US did not always use safety belts when driving or as a passenger. This is inappropriate behaviour as it is estimated that implementing this safety device reduces the risk of death due to a crash by 40% for drivers and 25% for the passengers next to them.³⁵

Limitations

Our study has certain limitations which must be considered. The first is that it used a transversal design. This does not allow the establishing of causal relations between the lifestyles and the independent variables studied. Nevertheless, some associations are explored whose results may be the basis of future analytical studies. The second is the reliability of the information provided by the participants. This was not verified, but the anonymity of the questionnaires could have favoured sincerity when answering the questions. The third limitation is the difficulty of comparing the results themselves with those of other investigations due to this being the first research to use the FANTASTICO instrument with nurses.

CONCLUSIONS

We could note in this study that a significant proportion of Nursing students of the two public universities studied have inappropriate healthy behaviours due to their lifestyles. This means

probable risks for the developing of illnesses, especially those which are chronic. It is fundamental for both university institutions to work in order to improve behaviours which have a harmful effect on health, such as limited physical activity, an inappropriate daily diet, inadequate hours of rest, and their students' little awareness of health check-ups, among others.

Nursing students are mostly young people who are at a stage in which some of the most important behaviours for adult life can still be modified. It is therefore necessary to continue developing educational interventions in Nursing Degrees, especially those aimed at intensifying the creation or the strengthening of healthy behaviours and the reducing of those behaviours which are risky for health and which have been detected as harmful in this work in nursing students of a European and a Latin American university. Nursing Schools not only have the duty to train professionals, but also to foster the health, welfare and quality of those who study and work there. They must encourage knowledge and skills oriented to health.

It would also be interesting to carry out this research in most Health Faculties around the world so that each Faculty could design the best strategy to enhance its students' lifestyles.

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DISCLOSURE

The authors declare no conflict of interest.

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Table 1. Distribution of the category of lifestyle according to the university

Lifestyle	University	
	Antioquia (n=93)	Seville (n=37)
Dangerous	1.1%	0.0%
Bad	4.3%	2.7%
Normal	31.2%	24.3%
Good	60.2%	70.3%
Fantastic	3.2%	2.7%
Total	100.0%	100.0%

Table 2. Percentage of students who have healthy lifestyles according to each university

Characteristics		University		χ^2	p
		Antioquia (n=93)	Seville (n=37)		
Domain	Item				
Family and friends	I've people to talk with about my things	73.1%	94.6%	7.419	0.006†
	I give and receive affection	76.3%	94.6%	5.857	0.016†
Activity	I carry out vigorous daily activity	23.7%	29.7%	0.516	0.473
	I carry out moderate daily activity	62.4%	64.9%	0.071	0.790
	I'm an active member of sports or self-care groups	16.1%	24.3%	1.181	0.227
Nutrition	I eat two servings of vegetables and three of fruit each day	16.1%	10.8%	0.600	0.439
	I don't eat food with a lot of sugar, salt or fat	8.6%	13.5%	0.709	0.400
	My weight is ideal	81.7%	83.8%	0.077	0.778

Tobacco	I've never smoked	80.6%	81.1%	0.003	0.955
	I don't smoke even one cigarette a day	97.8%	91.9%	2.543	0.111†
Alcohol and other substances	I don't take psychoactive substances	94.6%	97.3%	0.430	0.512†
	I don't take medicaments without a prescription	47.3%	51.4%	0.173	0.678
	I have less than three drinks with caffeine per day	94.6%	94.6%	0.000	0.995†
	I have less than 7 drinks of alcohol in a week	100.0%	97.3%	2.533	0.111†
	I have four or less drinks of alcohol on the same occasions	41.9%	45.9%	0.174	0.677
	I don't drive after drinking alcohol	93.5%	75.7%	8.283	0.004
Sleep and stress	I sleep well and I feel rested	31.2%	40.5%	1.035	0.309
	I control stress in my daily life	30.1%	24.3%	0.435	0.510
	I relax and enjoy my free time	55.9%	59.5%	0.136	0.713
Type of personality	I don't walk in a hurry	17.2%	13.5%	0.266	0.606
	I don't feel annoyed or aggressive	22.6%	32.4%	1.356	0.244

		I feel content with my activities	65.6%	70.3%	0.262	0.609
Introspection		I'm a positive thinker	62.4%	35.1%	7.918	0.005
		I rarely feel tense	9.7%	21.6%	3.322	0.068
		I don't feel depressed or sad	16.1%	21.6%	0.548	0.459
Control of health		I have health check-ups	17.2%	27.0%	1.596	0.206
		I talk about subjects of sexuality	40.9%	27.0%	2.175	0.140
		I have safe sex	88.2%	89.2%	0.027	0.870
Other behaviours		I respect street rules	90.3%	91.9%	0.078	0.780†
		I use a safety belt when I drive or when I'm a passenger	69.9%	94.6%	9.099	0.003†

† χ^2 with Yates correction