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IMPACT OF LIFESTYLE ON THE QUALITY OF LIFE OF HEALTH SCIENCES STUDENTS

IMPACTO DO ESTILO DE VIDA NA QUALIDADE DE VIDA DE ESTUDANTES DE CIÊNCIAS DA SAÚDE

IMPACTO DEL ESTILO DE VIDA EM LA CALIDAD DE VIDA DE ESTUDIANTES DE CIÊNCIAS DE LA SALUD

Luciana Gonzaga dos Santos Cardoso[1], Lívia Keismanas de Ávila[2]

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ABSTRACT

Objective: To evaluate the impact of Lifestyle on the Quality of Life of students while the first year of graduation. **Method**: Observational research, longitudinal, prospective and quantitative, with undegraduate students of nursing, speech therapy, medicine, Technology in Radiology and Biomedical systems courses. The Fantastic questionnaire was used to assess the Lifestyle, and the WHOQOL-bref was used for the Quality of Life. The stastistic analisys was made by a Generalized Estimating Equation. **Results**: The total score of Fantastic questionaire and WHOQOL's domains of sleep, type of behavior and work/school decreased during the year, and the activity domain increased. WHOQOL-bref's physical and psycological domains were higher at beginning of the course. Between both instruments, the better the Lifestyle, according to Fantastic, better the quality of life, as maintained by WHOQOL-bref's domains. **Conclusion**: Recognizing the impact of Lifestyle on Quality of Life strengthens the development of programs to promote a healthy Lifestyle and to prevent diseases.

Descriptors: Life Style; Quality of Life; Students, Health Occupations; Universities; Health Promotion.

[1] Nurse. PhD in Health Sciences. Professor at the Faculty of Medical Sciences at Santa Casa de São Paulo. Faculty of Medical Sciences of Santa Casa de São Paulo.https://orcid.org/0000-0001-6917-4904

[2] Nurse. PhD in Nursing. Professor at the Faculty of Medical Sciences at Santa Casa de São Paulo. Faculties of Medical Sciences of Santa Casa de São Paulo.https://orcid.org/0000-0001-8739-1398

RESUMO

Objetivo: Avaliar o impacto do Estilo de Vida (EV) na Qualidade de Vida (QV) de universitários. **Método**: Pesquisa observacional, longitudinal, prospectiva e quantitativa, com discentes dos cursos de Enfermagem, Fonoaudiologia, Medicina, Tecnologia em Radiologia e em Sistemas Biomédicos. Para avaliação do EV foi utilizado o questionário Fantástico, e para a QV, o WHOQOL-bref. A análise estatística foi realizada utilizando-se a Generalized Estimating Equation. **Resultados**: O escore total do Fantástico e os domínios sono, tipo de comportamento e trabalho/escola reduziram durante o ano, e o domínio atividade aumentou. No WHOQOL-bref, os domínios físico e psicológico foram maiores no início do curso. Na correlação entre os dois instrumentos, quanto melhor o Estilo de Vida, segundo o Fantástico, maior a Qualidade de Vida, segundo os domínios do WHOQOL-bref. **Conclusão**: Reconhecer o impacto do EV na QV fortalece o desenvolvimento de programas para a promoção do EV saudável e para a prevenção de doenças.

Descritores: Estilo de Vida; Qualidade de Vida; Estudantes de Ciências da Saúde; Universidades; Promoção da Saúde.

RESUMEN

Objetivo: Evaluar el impacto del Estilo de Vida (EV) en la Calidad de Vida (CV) de estudiantes universitarios. **Método**: Investigación observacional, longitudinal, prospectiva y cuantitativa, con estudiantes de las carreras de Enfermería, Fonoaudiología, Medicina, Tecnología Radiológica y Sistemas Biomédicos. Se utilizó el cuestionario Fantástico para evaluar la EV y el WHOQOL-bref para la CV. El análisis estadístico se realizó utilizando la Ecuación de Estimación Generalizada. **Resultados**: La puntuación total de Fantástico y los dominios sueño, tipo de conducta y trabajo/escuela disminuyeron durante el año, y aumentó el dominio actividad. En el WHOQOL-bref, los dominios físico y psicológico fueron más altos al inicio del curso. En la correlación entre los dos instrumentos, a mejor Estilo de Vida, según Fantástico, mayor Calidad de Vida, según los dominios del WHOQOL-bref. **Conclusión**: reconocer el impacto de la EV en la calidad de vida fortalece el desarrollo de programas para promover la EV saludable y prevenir enfermedades.

Descriptores: Estilo de Vida; Calidad de Vida; Estudiantes del Área de la Salud; Universidades; Promoción de la Salud.

INTRODUCTION

Admission to higher education is an event that can generate important changes in the Lifestyle (LS) of students, marked by significant physiological, social and cultural changes, with consequent behavioral changes.[1-2]

The fact that the student leaves to live with their parents to live in another city, state or country, involves adapting to different cultures, values, customs or even the language barrier, which can impact on the EV, on satisfaction with life and the students' stress level.[1]

Living with different people, dedication and the level of academic demand, time and financial reorganization, the need to establish a new routine are impacts of entering university that often generate difficulties for students.[2]

It is common to associate university life with incorrect eating habits, lack of physical activity and greater exposure to tobacco and alcoholic beverages. On the other hand, the student's psychological condition may favor the adoption of a healthy VE with regard to the practice of physical activity, healthy eating, alcohol consumption, sleep, among other behaviors. Therefore, attention strategies to students' psychosocial needs become important and necessary.[2-3]

Especially for courses in the health area, the university can generate illnesses and, at the same time, provide spaces for reflections focused on health education, understanding the processes of health promotion and disease prevention.[4]

Studies point to the influence of university life on the EV of students, and the benefits of adopting a healthy EV for this population.[3-5]

In addition to the VE, Quality of Life (QL) is another aspect to be considered in higher education students, which can impact school performance, psychosocial development and health conditions. Factors related to health, physical, functional, emotional and mental well-being, work, family, friends and everyday situations are aspects involved in its evaluation.[6]

Although EV and QL are terms often used as similar concepts, their meanings are different. The VE has an objective aspect that is related to an individual's behaviors, habits and customs, while the QoL is a more subjective term and is related to well-being and the individual's perception of their life and health.[7]

The changes that occurred in the VE and QoL of students after entering the university should bring reflections on the university as a generator of conflicts and with possibilities of illness.[4]

In this way, the following research question is asked: Do the students' EV and QL change during the first year of graduation?

It is considered the hypothesis that entering the university is capable of promoting changes that negatively influence the VE, and that these can impact on the QoL of students. This research proposes to verify these aspects and their possible correlations, so that later specific strategies are established to promote the health of students, so that they have better physical, psychological and social conditions for a good use of academic activities, good school performance and better awareness to act as health professionals.

Therefore, the objective of this study was to evaluate the EV and QL of university students during their first year of graduation, and to verify the impact of EV on QL.

METHODS

Ethical aspects

The present study was approved by the Research Ethics Committee of the Irmandade da Santa Casa de São Paulo (ISCMSP). In compliance with Resolution 466/2012 of the National Health Council, the participation of students in the research took place after the signing of the Free and Informed Consent Term - TCLE, by students aged 18 years or over, and by the legal representatives of those under 18 years of age. These agreed to participate in the research by signing the Term of Free and Informed Assent - TALE.

Study design, period and place

Observational, longitudinal, prospective and quantitative analysis study, guided by the Strengthening the Reporting of Observational Studies in Epidemiology tool (STROBE). It took place during 2017, in three moments: at the student's entrance at the beginning of the year, to identify baseline EV and QL (T1), at the end of the first semester (T2) and at the end of the first year of the course (T3). Held at a private higher education institution, located in the central region of the city of São Paulo, which offers five courses in the area of Health Sciences, namely, Nursing, Speech Therapy, Medicine, Technology in Radiology and Technology in Biomedical Systems

Sample; inclusion and exclusion criteria

Students were selected through convenience sampling. All first-year students entering each course in the first half of 2017 were invited to participate in the study and those who accepted were included. Forms with incomplete data were excluded. The sample consisted of 214 students at moment T1, 175 at moment T2 and 166 at moment T3. From the initial sample, 50.5% were medical students, 15.4% speech-language pathology students, 13.6% biomedical systems technology, 12.6% nursing students and 7.9% radiology technology students.

Study protocol

At T1, the students were approached in classrooms at the educational institution, separately for the Nursing, Speech Therapy and Medicine courses and together for the technological courses in Radiology and Biomedical Systems. The project was presented to each class, and students who agreed to participate in the study were instructed to complete the data collection instruments (self-administered), considering the period of the last month for the EV and the last 15 days for the QOL.

At T2 and T3, students were approached in their respective classrooms and invited to fill out the instruments again. Sociodemographic variables were collected through a form containing gender, color, marital status, religious practice, course and course period. VE was assessed using the FANTASTIC lifestyle questionnaire, originally developed in Canada, translated and validated for the Brazilian population in 2008, and recommended for use in young adults.

It is a self-administered instrument and is based on individuals' behavior in the last month. There are 23 questions, organized into nine domains. The score is obtained through a Likert scale, with points ranging from zero to four, per question and two more dichotomous questions, from the acronym FANTASTIC, with the following domains: 1. Family and friends; 2. Physical activity; 3. Nutrition; 4. Cigarette and drugs; 5. Alcohol, 6. Sleep, seat belt, stress and safe sex; 7. Type of behavior; 8. Introspection; 9. Work. The total score of the instrument can range from zero to 100 points, and the lower the score, the lower the relationship with healthy EE.

In the Brazilian version of the EVF, a categorization was proposed to identify the relationship of the total score with the healthy EV8: from 85 to 100 points, the EV is considered excellent, that is, it has an excellent influence on health; 70 to 84 points - very good, with adequate influence on health; 55 to 69 - good, many health benefits, 35 to 54 - regular, the EV generates some health risk; zero to 34 - needs improvement, many risk factors.

For the assessment of QOL, the instrument developed by the World Health Organization (WHO), WHOQOL-bref, validated in Brazil, with its Portuguese version developed by the Brazilian Center of the WHO QOL Group.[9] It is recommended for the assessment of QOL in the general population in epidemiological studies and for joint application with multiple assessment instruments for the correlation of QOL with other analyzes. It consists of 26 questions, two of which are general questions (1, 2) on QoL and the others divided into four domains: physical (3, 4, 10, 15, 16, 17, 18), psychological (5, 6, 7, 11, 19, 26), social relationships (20, 21, 22) and environment (8, 9, 12, 13, 14, 23, 24, 25). It can be self-administered if respondents have the ability to do so. To answer the questions, the last two weeks should be taken as a reference. Answers are categorized from one to five (Likert scale); the higher the score, the higher the QOL.

Analysis of results and statistics

After completing the forms, the information was entered into a database of

the Research Electronic Data Capture (REDCap®) program, and analyzed with the aid of the Statistical Package for Social Sciences (SPSS), version 13.0 for Windows. The analysis was performed with the grouping of all students of the five health courses offered at the institution. For the analysis of the VS according to the VFS questionnaire, a comparison was made between the three moments of data collection, called T1, T2 and T3: for the average total score, for the average of each domain of the VFS and for the categories of the VFS: regular, good, very good and excellent.

For the analysis of QOL according to the WHOQOL-bref, the means of each domain (physical, psychological, social relations and environment) were compared between the three moments of data collection. The association between VS and QoL was obtained by associating the categories of the VSF with the QoL domains of the WHOQOL-bref. For all these analyses, the statistical test used was the Generalized Estimating Equation (GEE) model.10 This method is recommended for this study because in all analyses there were several measures of the same variable, that is, there was a comparison of the behavior of the variable over the three moments of data collection. The significance level adopted for all analyses was 5% ($p<0.05$).

RESULTS

When students entered, the age ranged from 17 to 57 years, with an average of 22.29 (SD=6.9) years. The percentage of female students was 53.3%, white, 68.5%, single, 93.9%, had no religious practices, 35.3%.

In the analysis of the fantastic lifestyle questionnaire (QEVF), at T1 of the study, the mean was 72.21 (SD=8.22), at T2, mean of 70.36 (SD=9.33) , and at T3, 70.08 (SD=9.70), with a significant difference between them (p=0.0254). Table 1 shows the analysis by domain of the QEVF in the three collection moments, with significance for the domains activity, sleep, seat belt, stress and safer sex, type of behavior and work/school.

Table 1. Mean and standard deviation of the fantastic lifestyle questionnaire domains, according to data collection moments at the beginning of the year, at the end of the first semester and at the end of the first year of the course, São Paulo. Sao Paulo, Brazil, 2017.

QEVF Domains	T1	T2	T3	p-value*
	Average (SD)	Average (SD)	Average (SD)	
Family and friends	6.97 (1.49)	6.76 (1.45)	6.8 (1.42)	0.0658
Activity	3.11 (2.44)	3.34 (2.64)	3.65 (2.55)	0.0386
Nutrition	7.3 (2.67)	7.1 (2.79)	7.04 (2.58)	0.2598
cigarette and drugs	13.98 (2.06)	13.85 (2.19)	13.79 (2.4)	0.5015
Alcohol	10.66 (1.72)	10.57 (1.7)	10.45 (1.74)	0.0765
S/CS/E/SS**	14.98 (2.49)	14.22 (2.87)	14.35 (2.76)	0.0005
type of behavior	4.33 (1.71)	4.13 (1.57)	3.81 (1.6)	0.0004
Insight	7.56 (2.4)	7.28 (2.23)	7.15 (2.51)	0.0509
work/school	3.06 (0.93)	2.74 (0.99)	2.75 (1.09)	0.0003

Grades:
QEVF- Fantastic Lifestyle Quiz
T1- student entry at the beginning of the year
T2- end of the first semester
T3- end of the first year of the course
SD- standard deviation
*statistical test: Generalized Estimation Equations model - GEE
**sleep, seat belt, stress and safe sex

In the analysis by QEVF categories, a predominance of the very good category is observed in the three moments of data collection. at moment T1 there is a lower percentage of regular when compared to moments T2 and T3 (p=0.0066). (Table 2).

Table 2. Absolute and relative frequency of students, according to regular, good, very good and excellent categories of the fantastic lifestyle questionnaire, according to collection moments at the beginning of the year, at the end of the first semester and at the end of the first year of the course. Sao Paulo, Sao Paulo, Brazil, 2017.

QEVF	T1	T2	T3	p-value*
	N(%)	N(%)	N(%)	
Regular	3 (1.6)	9 (5.7)	10 (6.6)	0.0066
Good	71 (36.8)	61 (38.9)	59 (39.1)	
Very good	105 (54.4)	79 (50.3)	76 (50.3)	
Great	14 (7.3)	8 (5.1)	6 (4.0)	

Grades:
QEVF- Fantastic Lifestyle Quiz
T1- student entry at the beginning of the year
T2- end of the first semester
T3- end of the first year of the course
*statistical test: Generalized Estimation Equations model - GEE

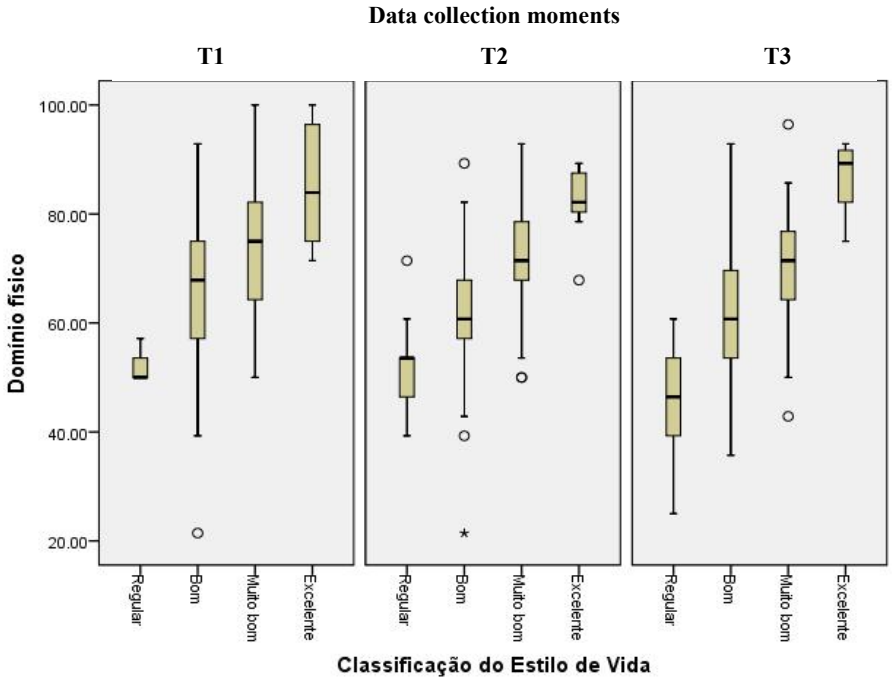
The QoL assessment, according to the WHOQOL-bref, shows statistical significance for the physical and psychological domains (Table 3).

Table 3. Mean and standard deviation of the questionnaire domains World Health Organization Quality of Life-bref, according to data collection moments at the beginning of the year, at the end of the first semester and at the end of the first year of the course. Sao Paulo, Sao Paulo, Brazil, 2017.

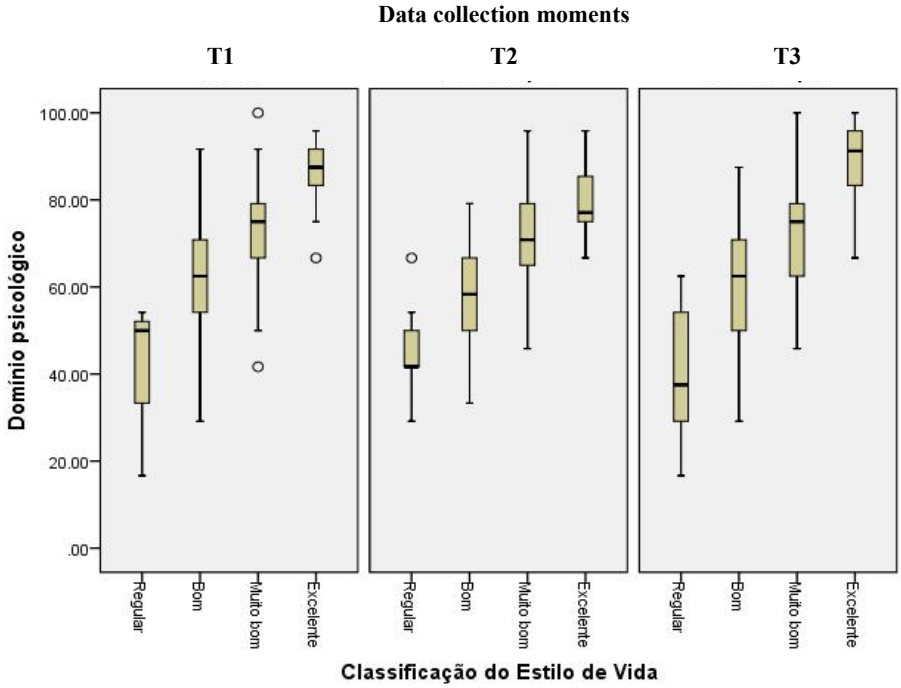
WHOQOL-bref Domains	T1	T2	T3	p-value*
	Average (SD)	Average (SD)	Average (SD)	
Physicist	71.53 (13.02)	67.80 (12.35)	65.94 (13.60)	<0.0001
Psychological	68.29 (13.97)	65.71 (13.55)	65.72 (15.62)	0.0466
Social relationships	73.62 (16.24)	70.88 (17.67)	73.07 (17.56)	0.0680
Environment	67.18 (13.48)	66.49 (14.6)	67.95 (14.84)	0.5069

Grades:
WHOQOL-bref -World Health Organization Quality of Life-bref
T1- student entry at the beginning of the year
T2- end of the first semester
T3- end of the first year of the course
SD- standard deviation
*statistical test: Generalized Estimation Equations model - GEE

The QEVF categories were associated with the Physical, Psychological, Social Relations and Environment Domains of the WHOQOL-bref questionnaire. For all domains, the better the VS, according to the QEVF categories, the higher the QL domain score, according to the WHOQOL-bref. There was no difference in this association between the moments of data collection T1, T2 and T3. (Figures 1 and 2).



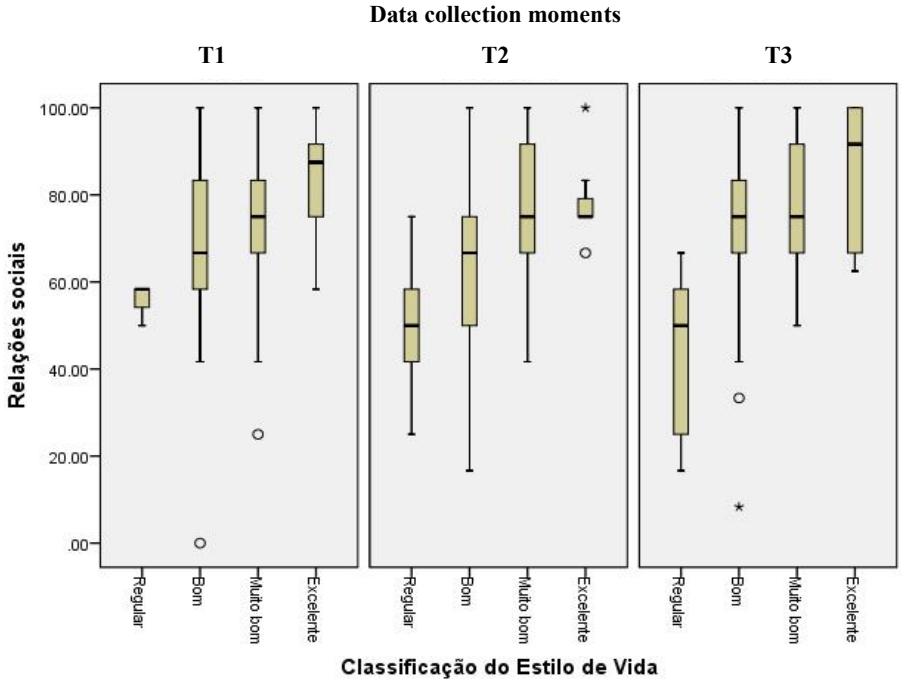
*p-value<0.0001



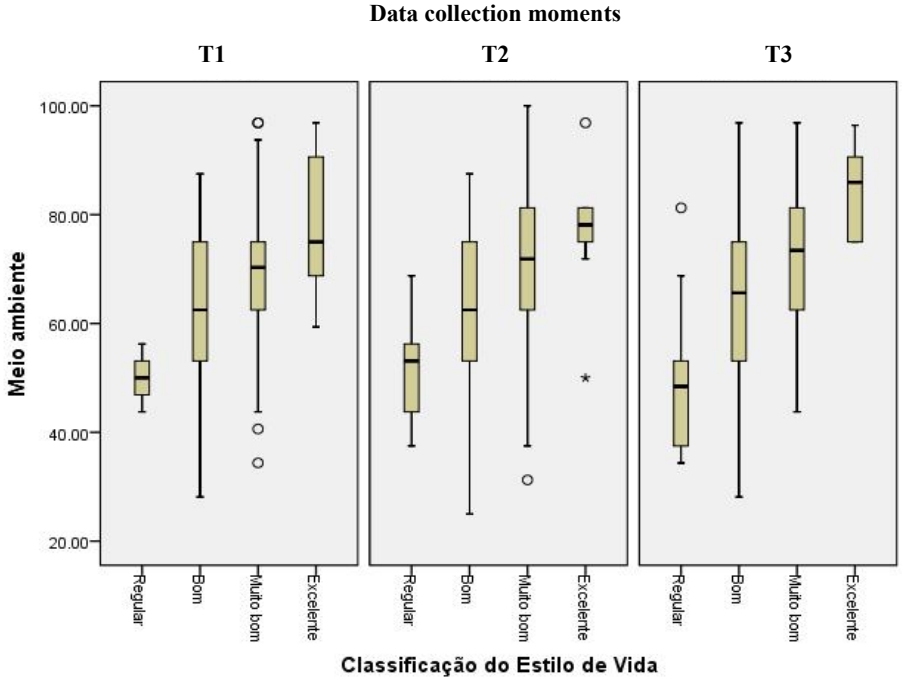
*p-value<0.0001

*statistical test: Generalized Estimation Equations model - GEE

Figure 1. Summary measures of the Physical and Psychological Domains of the questionnaireWorld Health Organization Quality of Life-bref, according to the fantastic lifestyle quiz categories. Sao Paulo, Sao Paulo, Brazil, 2017.



*p-value<0.0001



*p-value<0.0001

*statistical test: Generalized Estimation Equations model - GEE

Figure 2. Summary measures of the Social Relations and Environment Domains of the questionnaireWorld Health Organization Quality of Life-bref, according to the fantastic lifestyle quiz categories. Sao Paulo, Sao Paulo, Brazil, 2017.

DISCUSSION

The QEVF was developed by health professionals to measure the VE of people, based on the understanding of the VE as identifiable patterns of behavior, with multiple dimensions that encompass aspects that go beyond individual capacities and attitudes, also considering the physical, social and environmental environment. economic, and access to health services.[11]

In this study, the very good QEVF category, which ranges from 70 to 84 points, was the most frequent, with 54.4%, 50.3% and 50.3% at T1, T2 and T3, respectively. Throughout the year, there was a significant reduction in the mean total QEVF score, from 72.21 in T1, to 70.36 in T2 and 70.08 in T3 (p=0.0254). In general, this result points to a worsening of the EV during the first year of graduation of these students. However, by analyzing the total score, it is not possible to identify which aspects of the VS were determinant for this reduction.

In another VS analysis among medical students only, the highest frequency was found in the good category. In the analysis by course year, the category good, which varies from 55 to 60 points, was the most frequent from the first to the fourth year, and the category very good, in the fifth and sixth years. Characteristics similar to those of this study were observed for sex, color and marital status.[12]

In the analysis by domain, it was observed that in all, except for physical activity, the QEVF score at T1 was higher than at T2 and T3, however, with statistical significance for sleep, seat belt, stress and safe sex; type of behavior; satisfaction with work/school. The physical activity score, on the contrary, increased throughout the first year of graduation. The questions referring to these domains where the significant reduction was observed, refers to the frequency with which you sleep well and feel rested, the ability to deal with everyday stress, leisure time, questions related to haste, anger and hostility and satisfaction with work/school.

The differences imposed on the student's routine in higher education may justify this reduction. Difficulties with time management to carry out tasks, the increase in the overload of academic activities, the demand for good performance and grades, new interpersonal relationships, tiredness, stress, poorer sleep quality, impulsivity, sense of urgency and even distance from home and commuting time are often present among university students and may be factors that compromise these domains.[2,13-14] In the physical activity domain, the QEVF presents questions regarding the weekly frequency of moderate or vigorous activities.

The significant increase in scores throughout the year may be related to the

offer of sports activities and the student's bond with the institution's athletic association. It is noteworthy that in this study 50.3% of the sample were medical students, the only full-time course,

Another study with students in the health area, including nursing and medical students, highlights that the large amount of time devoted to mandatory and extracurricular activities prevents the adoption of healthy habits that prevent students from becoming ill, which should be a cause for concern for institutions. in this area.[15]

Thinking about behavioral changes for the pursuit of a healthy lifestyle can be a choice between interesting and pleasant things that are bad for health, and tiring, uninteresting or tasteless things, but which are healthy. This is a misperception about the healthy EV that needs to be changed. The idea is not “to live to avoid death, but to enjoy life”, and this is what should motivate the individual to behavioral changes in the VE.[16]

The analysis of the QoL assessment instrument, WHOQOL-bref, occurs by domain, with no cutoff point, the higher the score, the better the QoL in that domain. In this study, at all times of data collection, the score was higher for the domain of social relationships. Exposure to new relationships and situations is a skill among university students, as they need to be prepared for questioning, disagreement between peers, dealing with criticism, praise, asking and granting favors. The lack of this skill can lead to difficulties in the learning process, in carrying out work and can lead to conflicts.[17]

At T1 and T2, the physical domain score was higher than the other domains and at T3, the environment domain score was higher than the others. The psychological domain had the lowest score at moments T2 and T3, and the environment domain at moment T1. For the physical and psychological domains, there was a significant reduction in scores throughout the year. These domains address aspects related to pain and discomfort, energy and fatigue, sleep and rest, activities of daily living, ability to work, positive and negative feelings, memory and concentration. It is possible that the beginning of university life, its demands and changes in the way of life of students, justifies the reduction in scores in these two domains.

In this study, the association between the QEVF categories and the WHOQOL-bref domains proved to be significant and positive, that is, the better the EVF, in the regular, good, very good and excellent categories, the greater the QOL for each of the domains of the WHOQOL-bref: physical, psychological, social relations and

environment, at all data collection moments, with no significant difference between these moments. It is important to remember that the concept of VE is a term related to habits and behaviors, which refers to the person's way of life, while QoL involves greater subjectivity because it refers to the individual's perception of his life, beliefs and values6 . It is expected that the association between these concepts is always positive, that is, the better the EV, the greater the QoL, but not necessarily.

Cross-sectional studies that also observed the association between EV and QOL found higher QOL scores in the physical, psychological, social relationships and environment domains for people with healthy habits such as physical activity, healthy eating and leisure time, sleep time , social interactions with family or friends and good mental health.[18-20] On the other hand, lower scores in QoL were associated with inadequate diet, smoking and alcohol consumption.19 weekly physical activity was associated with lower QoL.[18]

CONCLUSION

In the VE analysis, the total score of the FVSQL and the domains sleep, seat belt, stress and safe sex, type of behavior and work/school decreased during the first year. The activity domain score increased during the year.

In the analysis of QOL according to the WHOQOL-bref, the score of the physical and psychological domains were higher at the beginning of the course.

In the analysis of the impact between VS and QoL of university students during the first year of graduation, the better the VS, according to the QEVF, the higher the QoL, according to the physical, psychological, social relations and environment domains of the WHOQOL-bref at all times of data collection.

As a limitation, this study was carried out in a single educational institution and the sample was selected for convenience. Due to the small sample size, it was not possible to analyze the EV and QOL for each of the courses. On the other hand, considering that, among university students, changing habits is evident and widely researched, no other studies are found that seek an association between EV and QOL, especially with the longitudinal analysis.

Recognizing the impact that healthy VE generates on the perception of better QoL strengthens the development of practices and institutional programs for the promotion of healthy VE and for the prevention of physical and mental illnesses. Consequently, there is less illness, greater satisfaction, better academic performance and less dropout. Carrying out new research

with larger and multicenter samples may contribute to studies on this topic.

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