

Student profile and quality of life: considerations from an investigation into the medicine and nursing courses at two universities in Minas Gerais

Perfil do estudante e qualidade de vida: considerações a partir de uma investigação nos cursos de medicina e enfermagem de duas universidades em Minas Gerais

Marcelo Vieira Peres¹, Bruna Eduarda Ribeiro Costa², Stephanie Oliveira Cardoso de Sá³, Marco Túlio Menezes Carvalho⁴, Pietra Giovanna Cabral Ladeira⁵, Mariana Guedes Lopes Bacelar⁶, Mateus Goulart Alves⁷

Peres MV, Costa BER, Sá SOC, Carvalho MTM, Ladeira PGC, Bacelar MGL, Alves MG. Student profile and quality of life: considerations from an investigation into the medicine and nursing courses at two universities in Minas Gerais / *Perfil do estudante e qualidade de vida: considerações a partir de uma investigação nos cursos de medicina e enfermagem de duas universidades em Minas Gerais*. Rev Med (São Paulo). 2024 Mayo-Jun;103(3):e-223400.

ABSTRACT: Entering academic life is often accompanied by new and increased responsibilities, activities, and demands. Especially in courses focused on healthcare, such as Medicine and Nursing, the workload is typically extensive, and the pressure of dealing with human lives can make this phase challenging for many students. Consequently, the result is often a shift in the lifestyle of these individuals, who, finding themselves with less time, more stressed and tired, struggle to maintain a routine with healthy habits. Thus, during this period, inadequate nutrition, sedentary behavior, and irregular sleep are frequently observed; practices that often persist into adulthood. The objective of this study is to analyze the demographic, clinical, and psychosocial profile of this group, identifying crucial nuances for the implementation of care and the promotion of a healthier academic life. This is an analytical, quantitative, cross-sectional study conducted in higher education institutions in a city in the interior of Minas Gerais, Brazil. The target audience was students enrolled in Nursing and Medicine courses who underwent data collection through a validated and authorized structured instrument for demographic, clinical, behavioral, and psychosocial characterization. The study obtained a final sample of 86 participants. Among them, 8% had hypertension, 2% had diabetes mellitus, and 35% had some mental illness. Additionally, 48% were alcohol consumers, 7% were smokers, and 26% were sedentary. Finally, 66% of the participants reported having a stressful life, and 42% did not have a healthy diet. In light of the above, it is evident that university routines can negatively impact various aspects of students' lives, both physical and mental. Therefore, it is indisputable to pay attention to this scenario and seek strategies for care and promotion of a healthier academic life.

KEY WORDS: Medicine, Nursing; Healthy Lifestyle; Health Promotion; Profile.

RESUMO: O ingresso na vida acadêmica é acompanhado, muitas vezes, por novas e maiores responsabilidades, atividades e cobranças. Sobretudo em cursos voltados para a área da saúde, como na Medicina e na Enfermagem, a carga horária costuma ser extensa e a pressão por lidar com vidas humanas pode acabar tornando essa fase desafiadora para muitos estudantes. Dessa forma, o resultado, geralmente, é uma mudança no estilo de vida desses indivíduos, que ao se verem com menos tempo, mais estressados e cansados, possuem dificuldade em manter um cotidiano com hábitos saudáveis. O objetivo desse estudo é analisar o perfil demográfico, clínico e psicossocial desse grupo, identificando nuances cruciais para a implementação de cuidado e promoção de uma vida acadêmica mais saudável. Trata-se de um estudo analítico, quantitativo e de corte transversal, desenvolvido em unidades educacionais de ensino superior de uma cidade do interior de Minas Gerais. O público-alvo foram estudantes matriculados nos cursos de Enfermagem e Medicina, que passaram por coleta de dados por instrumento estruturado de caracterização demográfica, clínica, comportamental e psicossocial, validado e autorizado. O estudo obteve uma amostra final de 86 participantes. Dentre eles, 8% possuíam hipertensão arterial, 2% diabetes mellitus e 35% alguma doença mental. Além disso, 48% eram etilistas, 7% tabagistas e 26% sedentários. Por fim, 66% dos participantes relataram ter uma vida estressante e 42% não possuem uma alimentação saudável. Diante do exposto, é possível identificar que a rotina universitária pode afetar negativamente diversos fatores da vida dos estudantes, tanto físicos como mentais. Desse modo, é indiscutível a necessidade de se atentar a esse cenário e buscar estratégias de cuidado e promoção de uma vida acadêmica mais saudável.

PALAVRAS-CHAVE: Medicina, Enfermagem; Estilo de Vida Saudável; Promoção da Saúde; Perfil.

¹ Universidade do Estado de Minas Gerais. Unidade Acadêmica de Passos. Passos/MG. Brasil. <https://orcid.org/0000-0002-6849-8277>, marceloperes2018@gmail.com

² Universidade do Estado de Minas Gerais. Unidade Acadêmica de Passos. Passos/MG. Brasil. <https://orcid.org/0000-0002-3040-9099>, brunaeduarda.br@gmail.com.

³ Universidade do Estado de Minas Gerais. Unidade Acadêmica de Passos. Passos/MG. Brasil. <https://orcid.org/0000-0002-3748-6484>, stephaniecs13@icloud.com

⁴ Universidade do Estado de Minas Gerais. Faculdade Atenas. Campus Passos. Unidade Acadêmica de Passos. Passos/MG. Brasil. <https://orcid.org/0000-0001-9816-8407>, marco.carvalho@uemg.br

⁵ Faculdade Atenas. Campus Passos. Passos/MG. Brasil. <https://orcid.org/0000-0001-6705-8352>, pietra.ladeira.passos@uniatenas.edu.br

⁶ Faculdade Atenas. Campus Passos. Passos/MG. Brasil. <https://orcid.org/0000-0002-5645-5747>, mariana.bacelar.passos@uniatenas.edu.br

⁷ Universidade do Estado de Minas Gerais. Faculdade Atenas. Campus Passos. Unidade Acadêmica de Passos. Passos/MG. Brasil. <https://orcid.org/0000-0003-0680-6817>, mateus.alves@uemg.br

Correspondence: Mateus Goulart Alves. Avenida Juca Stocler, 1160. Bairro Belo Horizonte. Passos/MG. CEP: 37901-106. mateus.alves@uemg.br

INTRODUCTION

The transition to academic life is a challenging period, in which students often encounter not only an intense workload and high demands, but also self-criticism and persistent pressure, as they navigate the complexities of adult life in the university setting. This phase, often marked by stress and difficulties, can lead to significant changes in lifestyle habits, impacting both the mental and physical health of students¹.

Academic courses in health fields, such as Nursing and Medicine, often have a significant impact on students' lives. The complexity and demands of their subjects – with exhaustive assessments and academic work – combined with the challenging nature of clinical practices, shape the students' experiences in various ways. The high workload and specific responsibilities of caring for human lives contribute to creating an especially challenging environment. Recent studies, such as one conducted in Montreal with students in the health field, highlight that these students often seek psychological support due to the anxiety from trying to balance academic activities with hobbies and physical exercise, emphasizing academic pressure as a significant stressor².

In this context, students often experience prolonged exposure to a sedentary lifestyle, poor dietary habits, increased energy intake, and the use of tobacco and/or alcohol. Studies such as the one by Sousa et al.³ demonstrate there are significant concerns, particularly during the first years of university life, including the risks of developing cardiovascular diseases, as many students begin to adopt disordered lifestyles and navigate new life dynamics, where reconciling a new daily routine with healthy habits becomes challenging.

Furthermore, another crucial factor to be considered is sleep, which is an essential component of overall health and influences various physiological mechanisms. The interaction between sleep, metabolism, appetite regulation and hormonal and immunological functions demonstrates its importance in maintaining the body's homeostasis. Thus, individuals with impaired sleep may experience direct impacts on their mental and cognitive performance, which can, in turn, adversely affect their academic performance and learning.⁴

Quality of life, defined by the World Health Organization (WHO) as an individual's perception of their position in society in relation to cultural values and expectations, emerges as a fundamental element. This concept indisputably correlates with physical and mental health, as well as with factors such as eating and sleep disorders. Therefore, it is notable that poor quality of life among healthy students in the academic context is closely linked to these variables.

The university environment warrants attention, as many of the eating, sleeping, and physical activity habits students develop during this period will persist into adulthood. This period is unique and crucial for the development and consolidation of healthy lifestyle habits⁵.

Therefore, considering that entering college often coincides with the transition from adolescence to adulthood, it is imperative to examine the impacts of these changes, including academic competition and pressure for results, which can increase levels of stress, anxiety, and depression among students. Thus, this

article aims to explore the demographic, clinical and psychosocial profile of these students, identifying crucial nuances for the implementation of care strategies and promotion of a healthy academic life.

MATERIALS AND METHODS

This is an analytical, quantitative and cross-sectional study. The research was carried out in two higher education institutions, one public and one private, in a city in the interior of the state of Minas Gerais. The sample consisted of university students enrolled in Nursing and Medicine courses, with an eligible population of 1115 university students. The inclusion criteria were being over 18 years old and being regularly enrolled in the specified courses. The exclusion criterion was being absent during the data collection period.

The data were collected between September and October 2023, and students were recruited through classrooms visits and public invitation via social media. Researchers conducted individual interviews in the Skills Laboratory rooms of both universities, overseen by the supervisor and collaborating professors. For this purpose, a structured instrument for demographic, clinical, behavioral, and psychosocial characterization was adapted, validated, and authorized by Melo⁶.

Demographic variables included age in years, biological gender, ethnicity, sexual orientation, and marital status. Clinical variables encompassed inquiries about family or personal histories of hypertension, diabetes, stroke, acute myocardial infarction, dyslipidemia, mental illness, and use of continuous medication. Behavioral and psychosocial variables covered questions about smoking, alcohol consumption, healthy eating, physical exercise, leisure activities, and stress levels.

For data analysis, a database was created in a spreadsheet in Excel for Windows. To ensure data reliability, each researcher independently entered the data. After validating the corrected spreadsheet, the data were transferred to the definitive database using the software Statistical Package for Social Science (SPSS) version 17.0. Qualitative variables are described by absolute (n) and relative frequency (%), and quantitative variables are described by mean, median, minimum and maximum values.

Data confidentiality was ensured, and participant anonymity was guaranteed by assigning identification numbers. Furthermore, prior approval was obtained from the Research Ethics Committee (CEP) (CAAE: 51582821.0.0000.9528 — Opinion: 4,964,170). All participants signed the Informed Consent Form (TCLE) and received a copy signed by the researchers and the participant, according to the guidelines recommended by the National Health Council in Resolution 466/2012.

RESULTS

The study had a final sample of 86 participants, representing 7.7% of the eligible sample universe, with no refusals or losses recorded. Individual interviews were conducted using a structured questionnaire designed to evaluate the students' self-perception of their demographic, clinical and psychosocial characteristics.

The demographic data, illustrated in table 1 below, showed

that 69% of the participants were female; the mean age was 24 years old; 76% identified as white, 2% as black, 21% as mixed race and 1% as indigenous; 92% reported being single, 7% married and 1% widowed; 83% reported being heterosexual; and 74% reported having an active sex life.

Table 1 - Characterization of participants in relation to demographic profile

Variables	n	%
Higher Education Institution		
Public	35	41
Private	51	59
Course		
Nursing	25	29
Medicine	60	71
Period		
1st to 4th	23	52
5th to 8th	21	47
9th to 12th	01	01
Gender		
Male	27	31
Female	59	69
Marital Status		
Married or in a Stable Union	06	07
Single	79	92
Widowed	01	01
Color		
White	65	76
Black	02	02
<i>Pardo</i>	18	21
Indigenous	01	01
Occupation		
No paid employment	54	63
Paid employment	15	17
Scientific initiation/monitoring scholarship	11	13
Others	06	07
Family monthly income		
Mean (min. - max)	R\$6,138.00 (R\$1,320.00-R\$50,000.00)	
Individual monthly income		
Mean (min. - max)	R\$842.00 (R\$0.00-R\$4,800.00)	
Age		
Average (min. - max)	24 (18-47)	
Religion		
Catholic	52	60
Evangelical	12	14
Spiritist	08	09
Atheist	03	03
Other	11	13
Sexual Orientation		
Heterosexual	70	83
Homosexual	10	12
Bisexual	04	05
Active Sex Life		
Yes	64	74
No	22	26
Living arrangements		
Alone	27	31
Family	27	31
Friends	23	27
Relatives	04	05
Others	05	06

Source: Survey data (2023)

As for the clinical profile of the participants, it was found that 8% had high blood pressure, 2% had diabetes mellitus, and 35% had a mental illness. In terms of family history, 75% had a first-degree relative with high blood pressure, 56% with

diabetes mellitus, 30% with a cerebrovascular accident (CVA), 33% with acute myocardial infarction and 52% with mental illness. Additionally, 45% of participants reported continuous medication use. The data are illustrated in Table 2 below.

Table 2 - Characterization of the clinical profile of the participants

Variables	n	%
Past Pathological History		
Systemic Arterial Hypertension	07	08
Diabetes Mellitus	02	02
Cerebrovascular Accident	01	01
Acute Myocardial Infarction	00	00
Dyslipidemia	04	05
Kidney disease	06	07
Mental disease	30	35
Family History		
Systemic Arterial Hypertension	64	75
Diabetes Mellitus	48	56
Cerebrovascular Accident	26	30
Acute Myocardial Infarction	29	33
Kidney disease	17	20
Mental disease	54	52
Continuous medication use		
Yes	39	45
No	47	55

Source: Survey data (2023)

In terms of the psychosocial profile, the study revealed that 7% of participants were smokers, with a mean of four cigarettes consumed per day and 48% reported alcohol consumption, with 18% consuming alcohol at least once a week.

Physical activity was reported by 74% of participants, while 69% engaged in leisure activities. Regarding stress levels, 66% of participants reported experiencing a stressful life, and 58% reported maintaining a healthy diet, as indicated in Table 3.

Table 3 - Characterization of participants in relation to psychosocial profile

Variables	n	%
Smoking		
Yes	06	07
No	80	93
Smoking – Time		
Mean (min. - max)	1 year 3 months (1 year-2 years)	
Smoking - Cigarettes/day		
Mean (min. - max)	04 (01-15)	
Alcoholism		
Yes	41	48
No	45	52
Alcoholism – Time		
Mean (min.- max)	3 years and 4 months (9 months-20 years)	
Alcoholism – Frequency		
Once a week	18	21
Twice a week	15	17
3 times a week	04	05
4 or more times a week	01	01
Physical activity		
Yes	64	74
No	22	26
Healthy eating		
Yes	49	58
No	36	42
Leisure activity		
Yes	59	69
No	27	31
Stressful life		
Yes	57	66
No	29	34

Source: Survey data (2023)

DISCUSSION

The assessment of sociodemographic aspects is crucial for determining the characteristics of a population and developing appropriate care strategies. Our evaluation of the demographic profile of university students revealed a predominance of females, with 59 (69%) participants, which is consistent with several current studies. This trend highlights the progressive growth of female participation in academic life, including health-related fields, as demonstrated by the study by Minella⁷.

As for clinical factors, a study by Tibelle et al.⁸ demonstrated that 81.1% of students had a family history of systemic arterial hypertension (SAH), diabetes, dyslipidemia, acute myocardial infarction and stroke. The authors emphasized that knowledge of family antecedents can help prevent these diseases among other family members. Similarly, a study by Pereira et al.⁹ showed that nearly half of the students evaluated had a family history of hypertension. In the present research, 75% of students had a family history of hypertension, 56% of diabetes mellitus, 30% of CVA and 33% of acute myocardial infarction. Therefore, given the high prevalence of these diseases in the students' families, special attention should be directed to their habits and to the implementation of preventive measures.

In the study by Lacerda et al.¹⁰, participants reported various preexisting health problems, including depression, asthma, hypothyroidism, diabetes mellitus, and other conditions. Among those who reported depression, three (50%) had been diagnosed for more than five years, two (33.3%) for one year and one student (16.7%) had been diagnosed seven months before the research. In the present study, 35% of participants reported a history of mental illness.

The evaluation of psychosocial variables related to the students' diet revealed that 72% followed a mixed diet and 28% a vegetarian diet. A healthy diet, consisting of at least five servings of vegetables and fruits per day, was reported by 21% of individuals, and 16% consumed whole foods. In the present study, 58% of participants stated that they followed a healthy diet most of the time¹¹.

In a study conducted by Natarajan et al.¹¹, 470 (84%) individuals reported engaging in some form of aerobic exercise, and 228 (42%) participated in other types of exercise, such as strength training and yoga. Despite the high percentage of students engaged in physical exercise, only 66 (12%) met the recommended 150 minutes of aerobic exercise per week. Other studies have shown different data regarding physical activity, with a significant portion of students being active or very active, yet maintaining inadequate eating habits¹². In the present study, 74% of those interviewed reported engaging in an average of one hour and thirty minutes of physical activity at least four times a week.

In a study¹¹ conducted in 2020, 215 individuals (39%) reported that they were chronically stressed, and 28% stated they slept 6 to 8 hours per night. The authors found a significant association between chronic stress and insufficient sleep ($p=0.0001$). A small number of participants ($n=29.6\%$) reported that they had been diagnosed with mental health problems before starting their academic life. In the present survey, 66% of participants stated they had a stressful life.

In the study by Maurício et al.⁸, 121 university students reported using alcohol, representing a significant 36.2% of the students surveyed. Tobacco use was considered low, with only 18 students (5.4%) reporting usage. Hadaye and Dass¹³ also observed a low prevalence of tobacco and alcohol consumption, with usage rates of 5.5% and 5%, respectively. The test for nicotine dependence was applied in the study by Lacerda et al.¹⁰ and revealed that 5 students used tobacco, with 40% of them having very low dependence, 40% having low dependence and 20% having moderate dependence. Pereira et al.⁹ found similar results, noting that 7.9% of university students were smokers and 5.9% abused alcohol. In the present survey, 7% of respondents are smokers, using an average of 4 cigarettes per day, and 48% use alcohol, consuming it at least once a week.

Therefore, the present study was able to identify that the university routine and its excessive workload can negatively affect students' clinical, behavioral and psychosocial well-being.

CONCLUSION

The present study demonstrates that the academic routine significantly impacts students' quality of life, particularly in health courses like Medicine and Nursing, characterized by extensive workloads, highly complex academic activities, and significant pressure and demands due to the responsibility of dealing with human lives. These factors, combined with time constraints and stress and/or anxiety related to their routines, lead many students to develop unhealthy habits such as poor diet, sedentary lifestyles, smoking, alcohol consumption, irregular sleep patterns, among others. However, contrary to common belief, these habits are not abandoned at the end of academic life, often persisting into adulthood and posing a serious risk to the health of these individuals.

Therefore, considering the importance of physical and mental quality of life during academic years and, consequently, throughout adulthood, further studies are essential to evaluate the demographic, clinical, behavioral, and psychosocial profiles of this group and comprehend the factors that promote such outcomes. Additionally, it is imperative to develop and implement care strategies that promote a healthier academic environment for everyone, aiming to enhance the well-being and professional achievement of these individuals.

Acknowledgment: Institutional research support program (PAPq) of the da Universidade do Estado de Minas Gerais (UEMG).

Participation of each author in the text: Marcelo Vieira Peres: elaboration of the study, data collection, analysis and interpretation, writing of the article. Bruna Eduarda Ribeiro Costa: elaboration of the study, data collection, analysis and interpretation, writing of the article. Stephanie Oliveira Cardoso de Sá: elaboration of the study, data collection, analysis and interpretation, writing of the article. Marco Túlio Menezes Carvalho: elaboration of the study, data collection, analysis and interpretation, writing of the article.

Pietra Giovana Cabral Ladeira: elaboration of the study, data collection, analysis and interpretation, writing of the article. Mariana Guedes Lopes Bacelar: elaboration of the study, data collection, analysis and interpretation, writing of the article. Mateus Goulart Alves: elaboration of the study, data collection, analysis and interpretation, writing of the article, work supervision, data processing, review and editing of the text.

REFERENCES

1. Morales G, Guillen-Grima F, Muñoz S, Belmar C, Schifferli I, Muñoz A et al. Cardiovascular risk factors among first and third year university students. *Rev Med Chile*. 2017;145(3):299-308. Doi: <https://doi.org/10.4067/s0034-98872017000300003>
2. Conceição L de S, Batista CB, Dâmaso JGB, Pereira BS, Carniele RC, Pereira GS. Saúde mental dos estudantes de medicina brasileiros: uma revisão sistemática da literatura. *Avaliação: Rev Aval Educ Sup*. 2019;24:785-802. Doi: <https://doi.org/10.1590/S1414-40772019000300012>
3. Sousa LSN de, Macêdo LG do N, Moura JRA, Guimarães MR, Campelo RCV, Silva ARV. Change in blood pressure levels in college students. *Texto contexto - enferm [Internet]*. 2015Oct;24(4):1087-93. Doi: <https://doi.org/10.1590/0104-0707201500003730014>
4. Cruz MCA, Garcia TR, Macedo RM, Freitas YJF, Borges NMP, Silva ACSP, et al. Influência na qualidade de vida dos estudantes de Medicina relacionadas a má alimentação e sono. *Res Soc Dev*. 2021;10(2):1021-1393. Doi: <http://dx.doi.org/10.33448/rsd-v10i2.12393>
5. Perez PMP, Castro IRR, Franco AS, Bandoni DH, Wolkoff DF. Práticas alimentares de estudantes cotistas e não cotistas de uma universidade pública brasileira. *Ciênc. Saúde Coletiva*. 2016;21(2). Doi: <https://doi.org/10.1590/1413-81232015212.01732015>
6. Melo ES. Risco cardiovascular e sua associação com variáveis demográficas, clínicas e psicossociais em pessoas vivendo com HIV/aids. *Dissertação (Mestrado em Enfermagem Fundamental) – Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto*, 2016.
7. Minella LS. Medicina e feminização em universidades brasileiras: o gênero nas interseções. *Rev Estud Fem*. 2017;25:1111-28. Doi: <https://doi.org/10.1590/1806-9584.2017v25n3p1111>
8. Maurício TF, Moreira RP, Costa EC, Bernardo FMS, Lima PA, Viegas BJ. Avaliação da presença dos fatores de risco cardiovascular em estudantes universitários de países lusófonos. *Rev Cogitare Enf*. 2018;23(3):e55216. Doi: [dx.doi.org/10.5380/ce.v23i3.55216](https://doi.org/10.5380/ce.v23i3.55216)
9. Pereira CSR, Furlan MCR, Santos Junior AG, Barcelos LS, Maia ACF. Fatores de risco associados a níveis pressóricos elevados em universitários. *Rev Rene*. 2020;21:e42272. Doi: <https://doi.org/10.15253/2175-6783.20202142272>
10. Lacerda MS, Rossi MB, Abuchaim ESV, Barros ALBLD, Lopes JL. Fatores de risco modificáveis para doenças cardiovasculares e qualidade de vida em estudantes do primeiro ano de enfermagem. *Rev Gaúcha Enferm*. 2022;43:e20210066. Doi: <https://doi.org/10.1590/1983-1447.2022.20210066.pt>
11. Natarajan V, Sekar T, Chockalingam P. Prevalence of cardiovascular health risk behaviors in college-going women in a major metropolis in India. *Indian Heart J*. 2020;72(5):451-53. Doi: <https://doi.org/10.1016/j.ihj.2020.08.014>
12. Moraes HSC, Flores PVP, Cavalcanti ACD, Figueiredo LS, Tinoco JMVP. Risk factors for coronary artery disease in nursing students. *Rev Bras Enferm*. 2021;74(1):e20190824. Doi: <https://doi.org/10.1590/0034-7167-2019-0824>
13. Hadaye RS, Dass R. Avaliação de fatores de risco evitáveis de doenças cardiovasculares entre estudantes universitários: um estudo transversal. *Indian J Community Med*. 2021;46(3):450-53.

Received: 2024, March 28

Accepted: 2024, June, 12