LIFESTYLE OF HEALTH WORKERS FROM PEDIATRIC UNITS DURING THE PANDEMIC: A CROSS-SECTIONAL STUDY

ESTILO DE VIDA DE PROFISSIONAIS DE SAÚDE PEDIÁTRICOS NA PANDEMIA: ESTUDO TRANSVERSAL

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RESUMO

O objetivo deste estudo foi avaliar o estilo de vida dos profissionais de saúde de unidades pediátricas da Bahia, Brasil, comparando o escore total e o escore de cada domínio do Questionário de Estilo de Vida Fantástico com sexo, faixa etária e perfil profissional. Participaram 407 profissionais de saúde de quatro unidades de saúde pediátricas, neste estudo transversal. O questionário Fantástico e um questionário sociodemográfico foram respondidos por meio de formulário do Google durante a pandemia de COVID-19. Os homens obtiveram significativamente pontuações mais baixas que as mulheres nos domínios 'tabaco e tóxicos' (p=0,046) e 'álcool' (p<0,001), e mais altas no domínio 'sono, cinto de segurança, estresse e sexo seguro' (p=0,01). Os profissionais de saúde mais jovens (18 a 34 anos) alcançaram pontuações significativamente superiores aos mais velhos (35 a 64 anos) no domínio 'tabaco e tóxicos' (p=0,03). Os profissionais de saúde de assistência direta (por exemplo, enfermeiros e médicos) obtiveram pontuações superiores aos profissionais de saúde de cOVID-19, o estilo de vida da maioria dos trabalhadores foi classificado como muito bom (56,02%). Nossos achados alertam para mudanças no estilo de vida dos profissionais, principalmente quanto ao uso de tabaco, álcool, condições relacionadas ao sono, estresse, sexo seguro e comportamentos de segurança no trânsito. Estudos futuros são recomendados para entender melhor os determinantes e condicionantes do uso do tabaco pelos profissionais de saúde, permitindo o direcionamento de ações no contexto da saúde pública.

Palavras-chave: Comportamentos de saúde. Profissionais de saúde. Saúde ocupacional. Saúde Pública. COVID-19.

ABSTRACT

This study aimed to assess the lifestyle of health workers in pediatric units of Bahia, Brazil, by comparing the total and domain scores of the Fantastic Lifestyle Questionnaire (FLQ) according to sex, age group, and employment profile. This cross-sectional study included 407 health workers from four pediatric health units in Bahia. The FLQ and a sociodemographic questionnaire were answered via Google Forms during the COVID-19 pandemic. Men scored significantly lower than women in the 'tobacco and toxics' (p = 0.046) and 'alcohol' (p < 0.001) domains but higher in the 'sleep, seat belt, stress, and safe sex' domain (p = 0.01). Younger health workers (18 to 34 years old) scored significantly higher than older workers (35 to 64 years old) in the 'tobacco and toxics' domain (p = 0.03). Direct healthcare workers (e.g., nurses and doctors) scored significantly higher than indirect healthcare workers (e.g., administrators) in the 'tobacco and toxics' domain (p = 0.04). Despite the COVID-19 pandemic, the lifestyle of most workers was classified as very good (56.02%). Our findings indicate changes in the lifestyle of health workers, especially concerning the use of tobacco, alcohol, and conditions related to sleep, stress, safe sex, and traffic safety behaviors. Future studies are recommended to understand better the determinants and conditioning factors of tobacco use by health workers and design targeted public health initiatives.

Keywords: Health behavior. Health personnel. Health Occupations. Public Health. COVID-19.

Introduction

Lifestyle comprises the habits and behaviors influenced or changed by socialization and is a construct related to general health and quality of life¹. Due to its complexity, the lifestyle construct is best understood through a context-specific assessment encompassing life domains and particular contexts of the individual¹. Some specific populations, including

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health workers, have been the target of scientific investigations focusing on lifestyle assessment²⁻⁴.

Health workers often deal with critical circumstances related to caring. For example, they may experience stressful situations, technical problems related to working activities, night shifts with possible double shifts, and short rest time. These conditions are associated with changes in physiological homeostasis that directly affect the lifestyle and routine of health workers, including diet, physical activity behavior, sleep, physical and mental health status, and social well-being^{5–8}. A healthy lifestyle encompasses several behaviors, such as smoking avoidance, limited alcohol consumption, regular physical activity (i.e., at least 150 to 300 minutes per week), balanced diet, safe sexual behaviors, effective stress management, safe traffic behaviors, and good sleep quality. These behaviors are associated with risk factors that impact morbidity and mortality^{1,9}.

Although lifestyle has been investigated in health workers¹⁰, to our knowledge, studies neither focused on specific groups nor considered the demands and specificities of different healthcare units (e.g., pediatrics). High exposure to stressors related to caring for children is among the demands encountered by those working in the pediatric field 11-13. We believe that health workers in pediatrics units might be more susceptible to illness, which may interfere in lifestyle-related behaviors due to the collaborative effort of parents of children. Therefore, understanding their lifestyle is crucial for developing and adopting coping strategies. The COVID-19 pandemic impacted public health with a high number of cases and deaths, particularly in Brazil¹⁴. Although the pandemic directly affected the daily life of the population, health workers were severely affected in aspects related to living conditions, behaviors, and health¹⁵. During the pandemic, workers directly or indirectly involved in health care were continuously exposed to contamination due to specific duties of the profession and working conditions. Problems and difficulties faced by health workers also include the risk of disease and death, physical fatigue, stress, long working hours, different provision of care, and care related to work and personal health protection¹⁶. Therefore, understanding the lifestyle of health workers is fundamental, especially given the pandemic context. This study aimed to assess the lifestyle of health workers in pediatric units of Bahia and compare the total and domain scores of the Fantastic Lifestyle Questionnaire (FLQ) between sex, age, and employment profile.

Methods

This cross-sectional study is reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)¹⁷. We followed the ethical recommendations of the Declaration of Helsinki. This study was approved by the research ethics committee on Human Beings of State University of Bahia (n° 45657021.6.0000.0057). All participants signed the informed consent form.

Participants and Setting

We included professionals working at four pediatric health units from three different municipalities within the State of Bahia (northeast Brazil); different standards of childcare were provided. Only active professionals were included in this study, whereas professionals on social security leave or pregnant were not included.

Data collection occurred between July and August 2021. Although professionals were facing the COVID-19 pandemic, vaccination campaigns prioritized health workers, which reduced the number of confirmed cases and deaths.

Sample size

According to data from November 2020 provided by the Human Resources Department of the participating health units, the four included pediatric units had 3,204 health workers. The sample size was calculated using the OpenEpi software (https://www.openepi.com), considering an alpha of 5%, statistical power of 80%, and confidence interval of 95%. We also considered an estimated prevalence of 27% of sedentary lifestyle among health workers in northeast Brazil¹⁸ for an expected effect of 0.5. A minimum sample size of 362 health workers was estimated.

Variables and instruments

Lifestyle – The FLQ assessed the lifestyle of participants. This self-applicable instrument is validated to Brazilian Portuguese¹⁹ and comprises 25 questions divided into nine domains: 1) family and friends; 2) activity; 3) nutrition; 4) tobacco and toxics; 5) alcohol; 6) sleep, seatbelt, stress, and safe sex; 7) type of behavior; 8) insight; and 9) career. Most questions are scored on a 5-point Likert scale as follows: zero (0) for the first column, one (1) for the second, two (2) for the third, three (3) for the fourth, and four (4) for the fifth column. For dichotomous questions, the score could be zero (0) for the first column or four (4) for the last column. The sum of all points resulted in a total score that classified lifestyle into five categories: excellent (85 to 100 points), very good (70 to 84 points), good (55 to 69 points), regular (35 to 54 points), or needing improvement (0 to 34 points). The FLQ showed good psychometric properties in Brazilian young adults (Cronbach's alpha of 0.60 considering the grouping of domains). Also, the FLQ showed high intraclass reproducibility (R = 0.92), attesting the ability to assess the lifestyle of adults¹⁹.

Sociodemographic, health, and work-related characteristics - We developed a specific questionnaire consisting of 39 self-applicable and multiple-choice questions related to sex (women or men), age (18 to 34 and 35 to 64 years, based on the median age distribution), and employment profile (indirect healthcare workers [administrators, administrative assistants, stretchers, janitors, sanitation assistants, nutrition professionals, managers, and receptionists] or direct healthcare workers [nurses, doctors, nursing technicians, physiotherapists, social workers, psychologists, speech therapists, and physical educators]).

Procedures

A link to access the questionnaires via Google Forms platform and a document containing the informed consent form were sent via e-mail, message apps, and formal means of communication used by the units to the targeted population. We conducted a test among our research group to verify the consistency of questions and guarantee access to the Google Forms platform and the informed consent document.

Statistical analysis

Descriptive statistics (relative and absolute frequencies, mean and standard deviation, and minimum and maximum values) were presented for the FLQ scores. The Shapiro-Wilk and Levene tests assessed data normality and homogeneity, respectively, while the Man-Whitney U test compared the scores obtained in each domain of the FLQ according to sex, age, and employment profile. Data were analyzed using the SPSS version 20.0 for Windows (IBM Corp, CA, USA). A significance level of 5% was set for all analyses.

We obtained 407 responses in the questionnaires. Most participants were women (81.8%), aged between 18 and 34 years (51.6%) and worked with direct healthcare (68.8%). According to the lifestyle classification based on the FLQ total score, most workers were in the 'very good' category (56.02%), and a minority in the 'regular' category (3.19%). **Table 1** shows the comparison between sex for the total and domain scores of the FLQ. Men had significantly lower scores than women in 'tobacco and toxics' (p = 0.046) and 'alcohol' (p < 0.001) domains but scored higher in 'sleep, seatbelt, stress, and safe sex (p = 0.01) domains.

							Sex								
			Wor	nen				Men							
	М	Me	Sd	Mi	Ma	Ra	М	Me	Sd	Mi	M a	Ra	р		
Total	74.4 5	75	9.62	40	96	7	72.16	72	10.99	43	93	1.3	0.14		
F	6.53	7	1.66	0	8	7	6.26	6	1.79	0	8	1.4	0.23		
Α	3.21	3	2.17	0	8	7	3.30	3	2.22	0	8	1.5	0.97		
Ν	7.35	8	2.94	0	12	7	6.78	6	2.98	0	12	1.3	0.11		
Т	14.5 1	15	1.17	9	16	7	14.12	14.5	1.57	8	16	1.3	0.04		
A	11.1 1	12	1.44	3	12	7.2	9.27	10	3.06	1	12	1.0	<0.00 1		
S	15.0 4	15	2.92	7	20	6.5	15.92	16	2.54	9	20	2	0.01		
Т	4.98	5	1.85	0	8	7	4.86	5	1.78	1	8	1.4	0.46		
Ι	8.49	9	2.19	2	12	7	8.67	9	2.65	1	12	1.5	0.34		
С	3.23	3	0.90	0	4	7	2.97	3	1.11	0	4	1.3	0.08		

 Table 1. Comparison between sex for the total and domain scores of the Fantastic Lifestyle
 Questionnaire

Notes: M- mean; Me – median; SD – standard deviation; Mi – Minimum; Ma – Maximum; R – Rank; p – p value of Man-Whitney U (2-tailed); F – Family and friends; A – Activity; N – Nutrition; T – Tobacco and toxics; A – Alcohol; S – Sleep, seatbelt, stress, and safe sex; T – Type of behaviour; I – Insight; C – Career.
 Source: authors

Table 2 shows the comparison between age groups for the total and domain scores of the FLQ. Younger workers (18 to 34 years) scored significantly higher in the 'tobacco and toxics' domain (p = 0.03) than older workers (35 to 64 years).

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						Age	!						
			18 to 34	years		_	35 to 64 years						
	Μ	Me	Sd	Mi	Ma	Ra	Μ	Me	Sd	Mi	Ma	Ra	_ р
Total	74	74	10.18	40	96	4.2	74.07	75	9.63	43	96	4	0.77
F	6.54	7	1.73	0	8	4.4	6.41	6	1.63	0	8	4	0.25
Α	3.28	3	2.21	0	8	4.3	3.17	3	2.15	0	8	4	0.76
Ν	7.39	8	2.99	0	12	4.3	7.10	7	2.91	0	12	4	0.38
Т	14.53	15	1.26	8	16	4.5	14.33	15	1.25	9	16	4	0.03
Α	10.83	11	1.82	2	12	4.2	10.72	12	2.13	1	12	4	0.55
S	15.12	16	2.95	7	20	4.2	15.28	16	2.79	7	20	4	0.62
Т	4.81	5	1.83	0	8	4	5.11	5	1.83	0	8	4.2	0.08
Ι	8.33	8	2.30	1	12	4.2	8.73	9	2.25	3	12	4	0.06
С	3 16	3	0.92	0	4	41	3 21	3	0.97	0	4	41	0.35

Table 2. Comparison between age	groups for the total	l and domain scores	s of the Fantastic
Lifestyle Questionnaire			

Notes: M- mean; Me – median; SD – standard deviation; Mi – Minimum; Ma – Maximum; R – Rank; p – p-value of Man-Whitney U (2-tailed); F – Family and friends; A – Activity; N – Nutrition; T – Tobacco and toxics; A – Alcohol; S – Sleep, seatbelt, stress, and safe sex; T – Type of behaviour; I – Insight; C – Career

Source: authors

Table 3 shows the comparison between employment profile for the total and domain scores of the FLQ. Direct healthcare workers scored significantly higher in the 'tobacco and toxics' domain (p = 0.04) than indirect healthcare workers.

	i unustre Effestyte Questionnuite												
	Employment Profile												
	1	ndirec	t health	care w									
	М	Me	Sd	Mi	Ma	Ra	М	Me	Sd	Mi	Ma	Ra	р
Total	73.72	74	8.99	47	95	2.5	74.18	74.	10.31	40	96	6	0.43
F	6.38	6	1.82	0	8	2.5	6.53	5 7	1.61	0	8	6	0.67
A	3.24	3	2.41	0	8	2.5	3,22	3	2.07	0	8	6	0.77
Ν	7.26	7	2.75	0	12	2.5	7.24	8	3.04	0	12	6	0.91
Т	14.20	15	1.46	8	16	2.3	14.54	15	1.14	10	16	6	0.04
Α	10.45	11	2.38	2	12	2.4	10.92	12	1.74	1	12	6	0.15
S	15.49	16	2.58	9	20	3	15.07	15	2.99	7	20	5.5	0.24
Т	4.99	5	1.87	0	8	3	4.94	5	1.82	0	8	6	0.82
Ι	8.64	9	2.27	1	12	3	8.47	9	2.29	2	12	6	0.54
С	3.07	3	1.00	0	4	2.4	3.24	3	0.91	0	4	6	0.10

Table 3. Comparison between employment profile for the total and domain scores of the Fantastic Lifestyle Questionnaire

Notes: M- mean; Me - median; SD - standard deviation; Mi - Minimum; Ma - Maximum; R - Rank;

p - p value of Man-Whitney U (2-tailed); F - Family and friends; A - Activity; N - Nutrition; T - Tobacco and toxics; A - Alcohol; S - Sleep, seatbelt, stress, and safe sex; T - Type of behaviour; I - Insight; C - Career. Source: authors

Discussion

This study assessed the lifestyle of health workers in pediatric units. We compared the total and domain scores of the FLQ according to sex, age, and employment profile. The lifestyle of most participants included was considered very good, which indicates an adequate lifestyle in general.

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Our findings corroborate the results of Fernandes et al.²⁰, who observed that most of the sample (health workers from the field of oncology in Recife, Brazil) had a lifestyle classified as excellent or very good. Another study showed that most health workers working with oncology, hemodialysis, neonatal intensive care, and urgency and emergency services in the north region of Minas Gerais had a healthy lifestyle⁸. As improved lifestyle is associated with better quality of life and minor damage to health, these studies demonstrate positive aspects related to the health of these professionals^{8,20}.

In our study, when comparing the total and domain scores of the FLQ in health workers from pediatric units according to sex, age, and employment profile, some domains may be discussed and can be potentially associated with the lifestyle. Therefore, future studies with health workers from pediatric units are needed. The discussion was divided into specific topics according to lifestyle domains to facilitate understanding: (i) Use of tobacco and alcohol; (ii) Sleep, seat belt, stress, and safe sex; (iv) Age and tobacco use; and (v) Employment profile and tobacco use.

Use of tobacco and alcohol

We observed that men scored significantly lower than women in the 'tobacco and toxics' and 'alcohol' domains. Our findings suggest that the excessive use of tobacco and other drugs might negatively affect the lifestyle of men compared with their women peers, a result that corroborates previous epidemiological studies with health workers. In a study²¹ conducted with 675 health workers from Montes Claros, Minas Gerais (Brazil), the authors observed that alcohol use was higher among men²¹. Likewise, according to findings from a survey investigating the lifestyle of the general Brazilian population, men had a higher prevalence of tobacco use than women²². A systematic review and meta-analysis conducted with 457,415 health workers from 63 countries also observed a significantly higher prevalence of tobacco use among men than women²³.

The use of psychoactive drugs, such as tobacco and alcohol, may impact mental health, morbidity, and mortality. Although they can be associated with stress relief, which directly affects the lifestyle and health conditions of workers, tobacco and alcohol use in this population should be further investigated²⁴, especially considering the implications of the COVID-19 pandemic. Despite some similarities between our findings and previous studies, the scarcity of evidence encompassing health workers from pediatric units did not allow a contextualized discussion.

Sleep, seat belt, stress, and safe sex

According to our findings, men scored significantly higher in the 'sleep, seat belt, stress, and safe sex' domain than women. A better lifestyle among men, compared with women, may be significantly influenced by issues involving this lifestyle domain. Given the complexity and heterogeneity in all behavioral aspects involved in this domain, careful interpretation is needed.

Although pediatric care has specificities compared to other types of care and considering a complex lifestyle domain (i.e., sleep, seat belt, stress, and safe sex), literature lacks evidence to explain the differences in the FLQ scores observed between men and women found in our study. One possibility is that the pediatric context might discourage unhealthy behaviors and endorse new models of masculinity²⁵. Therefore, the pediatric environment might be more friendly to men with a greater tendency to safe behaviors.

The 'sleep, seat belt, stress, and safe sex' domain must be further investigated mainly because it also encompasses sleep-related issues. The quality of sleep might be associated with the lifestyle of health workers, especially those working in shifts, night shifts, and rotating working hours. In this sense, exposure to these working conditions might lead to sleep disturbances and stress, which might influence lower scores in this complex FLQ domain^{4,8}. Furthermore, considering that sleep pattern was altered during the COVID-19 pandemic in the general population, this alteration may have been greater in health workers.

The validation and translation of FLQ into Brazilian Portuguese¹⁹ emphasizes that the dimensions related to the lifestyle construct are difficult to measure. The assessment of elements encompassed by each dimension is also challenging. The variety of elements included in the 'sleep, seat belt, stress, and safe sex' domain demonstrates the complexity of assessing the impact of each element on lifestyle.

Age and tobacco use

We observed that younger health workers (18 to 34 years old) scored higher in the 'tobacco and toxics' domain than older health workers (35 to 64 years old). As this study was conducted with health workers, the use of tobacco was concerning. Tobacco use might affect the lifestyle of older health workers and justify the significantly low score compared with younger peers. Younger and older health workers may have different mechanisms for coping with stress and anxiety²⁶ and may adopt high- or low-risk behaviors, such as the use of tobacco or other drugs. Younger workers usually have low time of service in health services, which might reduce their exposure to conditions related to stress and anxiety. This could also explain the low consumption of tobacco and other drugs by the younger population. However, we might consider the possibility of tobacco use from another source or context, such as cultural influences. In this sense, further investigations should consider controlling factors, such as family, friends, and colleagues attitudes regarding smoking habits. In a study conducted with 5,882 health workers from a hospital in Spain, tobacco use was also high among older participants (53 years old)²⁷. Another study conducted with 21,858 health professionals from 41 psychiatric hospitals found that cigarette use was significantly associated with advanced age²⁸. Finally, a study conducted with 516 workers from the Family Health Strategy in Alto Uruguai, State of Santa Catarina (Brazil), observed that smoking habit was more frequent among workers from 40 to 50 years old²⁹. Therefore, our findings reinforce the possible relationships between smoking habits and aging and health behaviors of older workers. In addition, we should consider the possibility of older people who started smoking in their youth, which may also explain our findings.

Employment profile and tobacco use

Our findings showed that direct healthcare workers scored significantly higher in the 'tobacco and toxics' domain than indirect healthcare workers. Several factors may be related to tobacco use, which may influence the lifestyle of indirect healthcare workers. A study conducted with 5,882 health workers from a hospital in Spain observed that smoking habit was significantly higher among indirect than direct healthcare workers²⁷. The meta-analysis developed by Martínez et al.³⁰ analyzed surveys conducted in 45 hospitals in Catalonia and observed that tobacco use by indirect healthcare workers and nursing technicians was higher than other direct healthcare workers from a university hospital in southern Brazil and observed that smoking habit was more frequent among indirect than direct healthcare workers.

The feeling of well-being and relaxation produced by consuming psychoactive substances (e.g., tobacco and alcohol) might present harmful consequences for general health. Despite the scientific and widespread knowledge of their effects, health workers may use these substances to relieve stress and resolve daily situations. Although the implications of the COVID-19 pandemic might also have intensified tobacco use, further investigations

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are needed. Studies assessing whether education, sociodemographic, and economic profiles interfere with tobacco use may be valuable.

Some limitations must be considered. As a cross-sectional study, it is not possible to establish causal relationships. Also, we only included active health workers, excluding those who were on sick or paid leave. Greater participation of all workers from units would be an asset, whether from direct or indirect healthcare profiles. Due to the medium- and long-term implications of the COVID-19 pandemic, we recommend further analyses to better understand the characteristics related to tobacco, alcohol, sleep conditions, stress, and traffic safety behaviors in this population, particularly among sexes.

Our results were not discussed considering similar evidence due to the lack of studies using the FLQ to investigate the lifestyle of health workers from pediatric units. To our knowledge, this is the first study to consider different employment profiles from four pediatric settings and compare lifestyle elements according to sex, age, and employment profile. Although no significant differences were observed between groups in the physical activity domain, the low mean values indicate inadequate physical activity behavior. This information is the starting point for exploring the long-term impacts of the pandemic on motivation and engagement in physical activity practices among health workers.

Conclusion

Despite the COVID-19 pandemic and its impacts on health and life conditions, the overall lifestyle of health workers from pediatric units was classified as good, according to the FLQ. Our findings indicate that men, older health workers, and those from indirect healthcare profiles scored significantly lower in the 'tobacco and toxics' domain. Nevertheless, conditions related to stress, sleep, and safe behaviors may also impact the lifestyle of women health workers. Personal, institutional, and governmental initiatives focusing on the comprehensive care of health workers are still needed. Future cohort studies considering the post-pandemic period are recommended to better understand the lifestyle profiles of health workers of pediatric units and design targeted public health initiatives. Last, exploring physical activity behaviors is a starting point to understand the lifestyle of this population.

References

- 1. Ramírez-Vélez R, Agredo RA. Fiabilidad y validez del instrumento "Fantástico" para medir el estilo de vida en adultos colombianos. Rev. de Salud Pública 2012;14(2):226–237.
- Fernandes M, Vieira F, Silva J, et al. Prevalence of anxious and depressive symptoms in college students of a public institution. Rev Bras Enferm 2018;71(suppl 5):2169–2175. DOI: 10.1590/0034-7167-2017-0752.
- 3. Diaz-Carrion EG, Failoc-Rojas VE. Estilos de vida en profesionales de salud de un hospital en Chiclayo, Perú 2017. Rev habanera cienc méd 2020;e2876–e2876.
- Cordeiro EL, Silva TM da, Silva EC da, Silva JE da, Alves RFG, Silva LRS da. Estilo de vida e saúde do enfermeiro que trabalha no período noturno. Rev. Enferm. UFPE on line 2017;11(9):3369–3375. DOI: 10.5205/reuol.11088-99027-5-ED.1109201707.
- Lima GKM de, Gomes LMX, Barbosa TL de A. Qualidade de Vida no Trabalho e nível de estresse dos profissionais da atenção primária. Saúde debate 2020;44(126):774–789 DOI: 10.1590/0103-1104202012614.
- da Silva Ribeiro I, da Penha Silveira R, Silveira Teixeira G, et al. Estilo de vida e bem-estar de estudantes da área da saúde. Enferm. actual Costa Rica 2018;34(34):67–81. DOI: 10.15517/REVENF.V0I34.30387.

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- Braga ACG, Valadares GV, David FS, Rosa LS. Visão interacionista das circunstâncias que interferem no estilo de vida de enfermeiros. Rev Bras Enferm 2019;72:74–79. DOI: 10.1590/0034-7167-2017-0062.
- Rocha SF, Silva CSOliveira e, Carrasco V, Andrade JMO, Almeida EWS de Almeida, Silva Junior RF da, et al. Estilo de vida dos trabalhadores da saúde atuantes no norte de Minas Gerais. Enfermagem em Foco 2020;10(5):143–148. DOI: 10.21675/2357-707X.2019.v10.n5.2266.
- Silva AMM, Brito I da S, Amado JM da C. Tradução, adaptação e validação do questionário *Fantastic* Lifestyle Assessment em estudantes do ensino superior. Cien Saude Colet 2014;19(6):1901–1909. DOI: 10.1590/1413-81232014196.04822013.
- 10. Hidalgo KD, Mielke GI, Parra DC, Lobelo F, Simões EJ, Gomes OG et al. Health promoting practices and personal lifestyle behaviors of Brazilian health professionals. BMC public health 2016;16(1):1–10. DOI: 10.1186/S12889-016-3778-2.
- Kasila K, Hallman M, Kautiainen H, Vanhala M, Kettunen T, et al. The gap between behavioral risk status and willingness to change behavior among healthcare professionals. Perspect. Public Health 2018;138(6):311–315. DOI: 10.1177/1757913917751564.
- 12. Lamb FA, Beck CLC, Coelho APF, Vasconcelos RO. Trabalho de enfermagem em pronto socorro pediátrico: entre o prazer e o sofrimento. Cogitare Enferm. 2019;24(0). DOI: 10.5380/CE.V24I0.59396.
- 13. Scholtz S, Nel EW, Poggenpoel M, Myburgh CPH, et al. The Culture of Nurses in a Critical Care Unit. Glob Qual Nurs Res 2016;3. DOI: 10.1177/233393615625996.
- Marson FAL. COVID-19 6 million cases worldwide and an overview of the diagnosis in Brazil: a tragedy to be announced. Diagn Microbiol Infect Dis 2020;98(2). DOI: 10.1016/J.DIAGMICROBIO.2020.115113.
- 15. Bastos VF, Silva NSS, Haikal DSA, Silveira MF, Pinho L, Brito MFSF et al. Physical education teachers of the basic public education of minas gerais in the pandemic of covid-19: working conditions, health and lifestyle. J Phys Educ 2022;33(1):e3324. DOI: 10.4025/JPHYSEDUC.V33I1.3324.
- Teixeira CF de S, Soares CM, Souza EA, Lisboa ES, Pinto ICM, Andrade LR de, et al. The health of healthcare professionals coping with the covid-19 pandemic. Ciênc. Saúde Colet. 2020;25(9):3465– 3474. DOI: 10.1590/1413-81232020259.19562020.
- 17. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PCe, Vandenbrouke JP et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: guidelines for reporting observational studies. Int J Surg 2014;12(12):1495–1499. DOI: 10.1016/J.IJSU.2014.07.013.
- Siqueira FV, Nahas MV, Facchini LA, Silveira DS, Piccini RX, Tomasi E, et al. Aconselhamento para a prática de atividade física como estratégia de educação à saúde. Cad Saude Publica 2009;25(1):203–213. DOI: 10.1590/S0102-311X2009000100022.
- Rodriguez Añez CR, Reis RS, Petroski EL. Versão brasileira do questionário Eestilo de vida fantástico": tradução e validação para adultos jovens. Arq Bras Cardiol 2008;91(2):102–109. DOI: 10.1590/S0066-782X2008001400006.
- Fernandes INM, Almeida KR de, Rocha FC, Andrade Neto GR de, Guedes MS, Gonçalves FF, et al. Análise do estilo de vida dos profissionais de saúde da oncologia. Rev enferm UFPE on line 2018;12(10):2583–2589. DOI: 10.5205/1981-8963-V12I10A237209P2583-2589-2018.
- 21. Magalhães NP, Sousa P da S, Pereira GV, Silveira MF, Brito MFSF, Rocha JSB, et al. Health-related habits among community health workers in Montes Claros, Minas Gerais, Brazil: a cross-sectional study, 2018. Epidemiol Serv Saude 2021;30(3):e2020976. DOI: 10.1590/S1679-49742021000300002.
- 22. Malta DC, Andrade SSC de A, Stopa SR, Pereira CA, Szwarcwald CL, Silva Junior JB da, et al. Estilos de vida da população brasileira: resultados da Pesquisa Nacional de Saúde, 2013. Epidemiol Serv Saúde 2015;24(2):217–226. DOI: 10.5123/s1679-497420150002000004.
- Nilan K, McKeever TM, McNeill A, Raw M, Murray RL. Prevalence of tobacco use in healthcare workers: A systematic review and meta-analysis. PLoS One 2019;14(7). DOI: 10.1371/JOURNAL.PONE.0220168.
- Syed IU. Clearing the Smoke Screen: Smoking, Alcohol Consumption, and Stress Management Techniques among Canadian Long-Term Care Workers. Int J Environ Res Public Health 2020;17(17):1– 15. DOI: 10.3390/IJERPH17176027.
- 25. Arreciado Marañón A, Rodríguez-Martín D, Galbany-Estragués P. Male nurses' views of gender in the nurse-family relationship in paediatric care. Int Nurs Rev 2019;66(4):563–570. DOI: 10.1111/INR.12541.
- 26. Hansson RO, Robson SM, Limas MJ. Stress and coping among older workers. Work 2001;17(3):247–256.
- 27. Ranchal-Sánchez A, Romero-Rodríguez E, Jurado-Castro JM, Ruiz-Gandara A, Vaquéro-Abellán M. Impact of a Comprehensive Anti-Smoking Program at a Regional University Hospital and Predictive

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Variables of Being a Smoker among Hospital Workers. Int J Environ Res Public Health 2020;17(22):1–12. DOI: 10.3390/IJERPH17228432.

- 28. Xia L, Jiang F, Rakofsky J, Zhang Y, Zhang K, Liu T, et al. Cigarette Smoking, Health-Related Behaviors, and Burnout Among Mental Health Professionals in China: A Nationwide Survey. Front Psychiatry 2020;11:1. DOI: 10.3389/FPSYT.2020.00706.
- Reisdorfer E, Delziovo CR, Gherardi-Donato EC da S, Silva ED da, Moretti-Pires RO. Problematic alcohol and tobacco use among healthcare professionals. SMAD, Rev. eletrônica saúde mental álcool drog 2016;12(4):214–221. DOI: 10.11606/ISSN.1806-6976.V12I4P214-221.
- Martínez C, Martínez-Sánchez JM, Antón L, Ricobenne A, Fu M, Quirós N, et al. Prevalencia de consumo de tabaco en trabajadores hospitalarios: metaanálisis en 45 hospitales catalanes. Gac Sanit 2016;30(1):55–58. DOI: 10.1016/J.GACETA.2015.08.006.
- Echer IC, Corrêa APA, de Fátima Lucena A, Ferreira SAL, Knorst MM. Prevalence of smoking among employees of a university hospital. Rev Lat Am Enfermagem 2011;19(1):179–186. DOI: 10.1590/S0104-11692011000100024.

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