# Evaluation of sleep change and depressive and anxious symptoms in medical students of a university from Santa Catarina and their relationship with the use of electronic screens

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## Introdução/Fundamentos

Sleep plays a fundamental role in mental health and psychosocial harmony throughout life (ALFANO; GAMBLE, 2009; HARVEY, 2011). Besides, insomnia disorder affects a large portion of the population on an occasional, recurrent, or chronic basis and is among the most common complaints in medical practice (MORIN et al., 2015). The excessive use of electronic screens, especially before going to sleep, increases the time and the difficulty of initiating sleep (GRADISAR et al., 2013). When there is a complication of getting enough sleep, the emotional consequences are evident, which can put individuals at risk for a series of psychiatric disorders, such as anxiety and depression (PALMER; GAMBLE, 2017). Anxiety, which is characterized by fear, worry, and a constant feeling that something is wrong (MUNIR; TAKOV, 2019), has a strong relationship to a sleep disorder, which is believed to exacerbate anxiety symptoms, even without a previously defined cause for its occurrence (COX; OLATUNJI, 2016)

	Course phase, n(%)												
Symptoms	1st	2nd	3rd	4th	5th	6th	7th	8th	9 <u>a</u>	10th	11th	12th	P-value <sup>†</sup>
	n=21	n=22	n=23	n=21	n=22	n=22	n=19	n=20	n=19	n=19	n=18	n=17	
Uses more screen													
Strongly Disagree	-	5 (10.9)	2 (4.3)	5 (10.9)	2 (4.3)	7 (15.2)	3 (6.5)	3 (6.5)	3 (6.5)	7(15.2) <sup>b</sup>	7(15.2)b	2 (4.3)	<0.001
Mildly Disagree	-	5 (8.2)	7 (11.5)	7 (11.5)	11(18.0) <sup>b</sup>	8 (13.1)	5 (8.2)	3 (4.9)	4 (6.6)	3 (4.9)	3 (4.9)	5 (8.2)	
Neither Disagree/Agree	-	5 (11.1)	4 (8.9)	5 (11.1)	3 (6.7)	3 (6.7)	4 (8.9)	6(13.3)	4 (8.9)	3 (6.7)	5 (11.1)	3 (6.7)	
Mildly Agree	-	6 (13.3)	5 (11.1)	3 (6.7)	5 (11.1)	3 (6.7)	5(11.1)	5(11.1)	5(11.1)	2 (4.4)	3 (6.7)	3 (6.7)	
Strongly Agree	-	1 (4.0)	5 (20.0)	1 (4.0)	1 (4.0)	1 (4.0)	2 (8.0)	3(12.0)	3(12.0)	4(16.0)	-	4(16.0)	
1st Phase	21(95.5) <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	
Decisions													
very well	10 (7.4)	4 (2.9)	12 (8.8)	10(7.4)	12 (8.8)	14(10.3)	10(7.4)	13(9.6)	15(11.0) <sup>b</sup>	14(10.3)	15(11.0) <sup>b</sup>	7 (5.1)	<0.001
I postpone	8 (10.0)	13(16.3) <sup>b</sup>	7 (8.8)	6 (7.5)	8 (10.0)	6 (7.5)	7 (8.8)	5 (6.3)	4 (5.0)	4 (5.0)	2 (2.5)	10(12.5) <sup>b</sup>	
difficulty	3 (12.0)	4 (16.0)	4 (16.0)	5(20.0) <sup>b</sup>	2 (8.0)	2 (8.0)	2 (8.0)	2 (8.0)	-	1 (4.0)	-	-	
l can't	-	1 (50.0) <sup>b</sup>	-	-	-	-	-	-	-	-	1(50.0) <sup>b</sup>	-	
Blame													
no	10 (6.0)	11 (6.6)	17(10.2)	12 (7.2)	15 (9.0)	18(10.8)	13(7.8)	15(9.0)	14 (8.4)	14 (8.4)	15 (9.0)	12 (7.2)	0.002
large part	7 (13.2)	3 (5.7)	5 (9.4)	6 (11.6)	5 (9.4)	4 (7.5)	5 (9.4)	4 (7.5)	4 (7.5)	4 (7.5)	2 (3.8)	4 (7.5)	
most part	2 (12.5)	5 (31.3)	1 (6.3)	3 (18.8)	2 (12.5)	-	1 (6.3)	-	1 (6.3)	-	1 (6.3)	-	
always	2 (25.0)	3 (37.5)	-	-	-	-	-	1(12.5)	-	1 (12.5)	-	1 (12.5)	
Hot/cold sweat													
No	11(6.7)	12(7.4)	17(10.4)	13(8.0)	14(8.6)	14(8.6)	16(9.8)	16(9.8)	12(7.4)	17(10.4) <sup>b</sup>	12 (7.4)	9 (5.5)	0.012
Mild	6(13.6)	2(4.5)	2(4.5)	4(9.1)	2(4.5)	5(11.4)	3(6.8)	2(4.5)	6(13.6)	1(2.3)	4 (9.1)	5(11.4)	
Moderate	2(8.0)	4(16.0)	4(16.0)	3(12.0)	5(20.0) <sup>b</sup>	2(8.0)	-	1(4.0)	1(4.0)	1(4.0)	1 (4.0)	3(12.0)	
Severe	2(20.0)	4(40.0) <sup>b</sup>	-	1(10.0)	1(10.0)	1(10.0)	-	1(10.0)	-	-	-	-	

Table 1: Crossing data from the use of electronic screens and symptoms with statistically relevant data. Value obtained after application of the Linear by Linear association test; better indicating a statistically significant value after residue analysis. Source: Research data, 2020.

## Objetivos

To evaluate sleep disorders and depressive and anxious symptoms in medical students at a University in the Extreme South of Santa Catarina and their relationship with the use of electronic screens.

- To know the sleep quality of medical students;
- Recognize the factors that interfere with sleep;
- Identify the presence of anxious and depressive symptoms;
- Quantify the pattern of use of electronic devices;
- Understand the interference of the use of electronic devices in students' sleep habits.

#### Métodos

Quantitative, observational cross-sectional study., with collection of primary data associated with the use of questionnaires and scales. Beck's validated scales on anxiety and depression symptoms, questionnaires on sleep hygiene, and the use of electronic screens made by researchers were used and later applied in medical students of a university in Santa Catarina. After the questionnaire was applied, the data were computed in the software IBM SPSS Statistics 21, and data crossings were performed.

#### Resultados

Regarding the collected data, we had a predominance of females and most of them were not using psychiatric drugs at the time of collection; anxiety predominated among the symptoms. Despite the predominance of anxious symptoms, when crossing this with the use of electronic screens, depressive symptoms were the most prominent, such as tiredness and appetite change. Regarding sleep hygiene, there was a predominance of bedtime and wake-up times. About the use of electronic screens, 65% used it frequently during the day.

# Conclusões/Considerações Finais

As stated in the justification, given the statistically relevant data obtained, already reported and discussed, it is essential to develop measures that not only seek to monitor the students' mental health but also their performance, so that from these analyzes they do not look at their performance as just scores, but being aware of the problems that can permeate the performance variation. Finally, we also tried to understand that through these findings, one can find psychic problems such as those raised in the study and avoid them, thus aiming at good medical training. As stated in the justification, given the statistically relevant data obtained, already reported and discussed, it is essential to develop measures that not only seek to monitor the students' mental health but also their performance, so that from these analyzes they do not look at their performance as just scores, but being aware of the problems that can permeate the performance variation.

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