

Comparison of the Effect of Covid-19 Pandemic on Psychological Adjustment, Vaccination Attitude and Sleep Quality of Medicine and Dentistry Students

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Introduction

A novel Coronavirus type (2019-nCoV) was identified as an etiological agent in cases of pneumonia of indefinite cause seen in the Chinese city of Wuhan on 31 December 2019 (Zhu et al., 2020). The virus subsequently spread rapidly across the world and led to the pandemic known as COVID-19. Although the virus was first seen in China, countries in the European and American continents are the most affected. The first case in Turkey was reported on 11 March 2020. Various precautions began being adopted as the number of cases increased, and a wide range of measures are still in place. As of 9 March 2022, the total number of reported cases in Turkey was 14,425,638, with 95,811 deaths.

The epidemic brought not only the risk of death from infection but also psychological pressure. According to the studies of the World Health Organization, the epidemic causes different psychological effects on different target groups. The Covid-19 outbreak can be emotionally challenging and stressful, especially for subgroups of the population at high risk for mental health problems, one such vulnerable group is college students. This study aimed to estimate the difference between psychological adjustment, vaccination attitude and sleep quality among students according to their specialties and gender during the Covid-19 pandemic.

Methods

This cross-sectional survey of college students was conducted in Bezmialem Vakıf University from 7 July to 2 September 2021. The survey was completed by 202 college students, 117 (57.9%) of whom were medicine students and 85 (42.1%) were dentistry students. 50% of the participants are female and 50% are male. Participants completed a self-administered anonymous web-based survey that includes questionnaires about sleep, anxiety, depression, Coronavirus anxiety and vaccination attitude with sociodemographic questions. We used Beck's Depression Inventory, Beck Anxiety Inventory, Pittsburgh Sleep Quality Index (PSQI), Coronavirus Anxiety Scale and Covid-19 Vaccination Attitude Scale.

Variables	Pittsburgh Sleep Quality Index (PSQI)			Beck Anxiety Inventory (BAI)			Beck Depression Inventory (BDI)			COVID-19 Vaccine Attitude Scale- Positive Attitude				COVID-19 Vaccine Attitude Scale-Negative Attitude				Covid-19 anxiety scale (CAS)		
	Mean	95% CI Lower-Upper	P-value	Mean	95% CI Lower-Upper	P-value	Mean	95% CI Lower-Upper	P-value	Mean	95% CI Lower-Upper	P-value	Mean	95% CI Lower-Upper	P-value	Mean	95% CI Lower-Upper	P-value		
Gender	Female	6,79	6,18-7,40	0,122	13,48	11,32-15,63	<0,001*	14,59	12,70-16,49	0,001*	3,9653	3,7227-4,2080	0,070	3,590	3,386-3,794	0,430	1,13	0,59-1,67	0,062	
	Male	6,11	5,48-6,73		7,62	5,74-9,51		11,21	9,03-13,39		3,7079	3,4498-3,9661		3,614	3,373-3,854		1,43	0,95-1,90		
Covid-19 Vaccine Status	Sinovac	7,29	6,50-8,07		9,38	7,22-11,54		12,84	10,29-15,38		4,2363	4,0303-4,4423		3,964	3,760-4,169		1,53	0,91-2,16		
	Biontech	5,86	5,39-6,44	0,033*	11,21	8,75-13,67	0,497	12,8	10,67-14,94	0,817	4,2682	4,0882-4,4483	<0,001*	3,902	3,741-4,063	<0,001*	1,13	0,65-1,60	0,045*	
	Not vaccinated	6,3	5,20-7,40		11,21	8,08-14,34		13,33	9,99-16,68		1,6970	1,4648-1,9291		1,927	1,587-2,268		1,15	0,12-2,18		
Faculty	medicine students	7,07	6,48-7,65	0,002*	10,22	8,54-11,90	0,694	13,39	11,65-15,13	0,157	4,0192	3,8094-4,2291	0,081	3,721	3,527-3,916	0,07	1,01	0,62-1,40	0,322	
	dentistry students	5,6	4,98-6,22		11	8,31-13,69		12,22	9,70-14,74		3,5853	3,2841-3,8865		3,438	3,180-3,695		1,65	0,99-2,30		
Covid-19 infection diagnosis	yes	6,75	5,74-7,78	0,35	15,03	9,43-20,63	0,078	17,30	12,23-22,37	0,023*	3,5455	3,0408-4,0501	0,17	3,139	2,715-3,564	0,01*	2,00	1,23-2,77	<0,001*	
	no	6,39	5,91-6,88		9,67	8,29-11,06		12,04	10,62-13,46		3,8935	3,7055-4,0814		3,692	3,526-3,858		1,14	0,74-1,53		

Results

A total of 202 students, 42.1% of whom were dentistry and 57.9% medical students, participated in our study. According to the sociodemographic questions asked to the participants, 90% of them do not have a specific health problem. 35.8% of them were vaccinated with Sinovac, 47.8% with Biontech, 16.4% of the students were not vaccinated at the time they participated in the survey. 83.7% of the students were not diagnosed with Covid-19 infection until the time of the survey. 70.3% of students had at least 1 relative diagnosed with Covid-19 infection, 26.7% did not. Among the coronavirus protection measures, 98% of the students follow the wearing mask, 97.5% hand washing, 73.3% follow the distance rule. Depression and anxiety symptom prevalence was 59.40% and 47.02%; 57.92% had poor sleep quality. According to the Pittsburgh Index, a significant difference was found in sleep quality between medicine and dentistry students ($p=0,002$). In addition, when compared according to faculties, a significant difference was found in subjective sleep quality ($p<0,001$) and daytime functions ($p<0,001$) in Pittsburgh Sleep Quality Index. When compared according to gender, significant differences were found between women and men in anxiety and depression. $P<0,001$ for Beck Anxiety Scale, the median of Beck Anxiety Scale found 13,48 for women and 7,62 for men; $p=0,001$ for Beck Depression Scale, the median found 13 for women and 10 for men. The results of the covid-19 anxiety scale were found to be higher in those diagnosed with covid-19 infection ($p<0,001$). A significant difference was found between the positive and negative attitudes of the Coronavirus vaccine attitude scale between those who were not vaccinated and those who had Sinovac or Biontech vaccines. ($p<0,001$)

Conclusion

Our study revealed a high prevalence of sleep disorders, depression and anxiety levels in university students during the Covid-19 pandemic. Females, medical school students, those who were diagnosed with infection, those who did not get vaccinated were at high risk of mental illness and poor sleep quality. Priority might therefore perhaps be attached to psychological support measures for members of these groups.

References