Stress of the 5th Year Dental Student during Pandemic Spread of Virus Covid-19 in Thailand.

Prachaya Chivaratanond[1], Laddawun Sununliganon[*1], Juthamas Kankloy[1], Krongkaew Chaibang[1], Pakwan Ekkawinsakul[1], Nattawut Supachawaroj[1] and Keskanya Subbalekha[2]

[1]Department of Oral Surgery, College of Dental medicine, Rangsit University, Pathum Thani, Thailand
[2]Department of Oral Surgery, Faculty of Dentistry, Chulalongkorn University, Bangkok, Thailand
[*]Corresponding author, E-mail: laddawan.su@rsu.ac.th

Abstract

Dental students are known to experience certain stress during their training, which a peak stress level is reported in the fifth year. Currently, the COVID-19 pandemic situation has affected them in all dimensions including stress. This research is a cross-sectional study on fifth-year dental students in Thailand that aimed to evaluate the effect of the COVID-19 pandemic on stress levels in the fifth-year dental students in Thailand. However, this study is a preliminary report of the dental students who are currently studying in Bangkok and its vicinity. Stress level, related factors, and source of news were collected from June to December 2020 through online questionnaires. Order regression statistic was used to analyze the stress level and related factors. Participants included 179 students from 6 universities, which was accounted for 35.87% of the population. The participants consisted of 129 (72.07%) females and 50 (27.93%) males with an average age of 23.7 (21-34) years. The results indicated that 41.31% of these students had high stress (level 3) and 38.55% had severe stress (level 4). Regarding stress contributing factors, the odds ratio of the concern about the inadequate time for clinical practice and deterioration of health were 7.198 and 2.353 ($p<0.001$), respectively. The main sources of news were Twitter, followed by Facebook. The emergent COVID-19 pandemic that brought preventive measures required during the outbreak increased the stress in the 5th year dental students. Expectantly, a realization of their stress level and stress contributing factors can urge for appropriate intervention to reduce their stress. Besides, effective sources of news will be helpful to guide them through this difficult period.

Keywords**:** *COVID-19, Dental student, Stress, Thailand*

1. Introduction

From late December 2019, an outbreak of COVID-19 has a tremendous effect on the health, psycho-social, and economy of the people worldwide. Many countries have been immobilized from a lockdown strategy to prevent the spreading of disease that causes deterioration in the economic status and people's quality of life. A social distancing policy was adopted, and it markedly changed their way of life. All of the above affects anxiety, depression, and stress in all groups of populations, especially health care professionals (Sher, 2020).

The dentistry program consists of laboratory and lecture parts. This field is divided into two levels. First is the preclinical level that provides knowledge for the next level of patient care. In general, the preclinical level starts from the first year to the third year and included the fourth year in some universities. Second is the clinical level, which includes patient's treatment under supervision. The clinical level starts from the fifth year to the sixth year and includes the fourth year in some universities.

In all curriculums, the fifth-year dental students often submit to stress from clinical practice with a certain amount of work required for graduation in a limited time (Weraarchakul & Weraarchakul, 2014). Stress is a common situation that dental students confront (Kaewsutha et al., 2014; Weraarchakul & Weraarchakul, 2014). In general, stress-provoking factors in dental students could be distinguished into three distinctive categories. First was faculty-related factors such as a bureaucratic administration system. The second was study-related factors such as having to pass exams. The last one was student-related factors such as personality, characteristics, or health behaviors (Gorter et al., 2008).

Kaewsutha et al. (2014) reported that 63% of the fifth-year dental students had psychological problems, which were the highest among other college years (Kaewsutha et al., 2014). This situation is probably caused by additional pressure in clinical work. The learning method is changed from lecturing in the classroom to practicing in the clinic. These changes require the application of knowledge to more delicate

work, which increases the responsibility. Students need to accomplish the minimal requirement in the clinic together with research and field works in dentistry. Additionally, uncontrollable factors might occur such as lacking patients' compliance and stress from living conditions of individual students. These factors contribute to stress and psychological problems (Kaewsutha et al., 2014; Weraarchakul & Weraarchakul, 2014).

The outbreak of COVID-19 creates stress and anxiety for people all over the world, including Thailand, from the danger of disease and its prevention measures. The pandemic affects dental students in all dimensions. Classroom activities have been prohibited, and online platforms have been utilized to facilitate social distancing policy. Clinical sessions have been halted from time to time, resulting in a huge impact on dental students in clinical years. They had to achieve minimum requirements within a shorter period to compensate for the lost time.

As there is evidence of the highest stress level in fifth-year dental students in Thailand, this study aimed to evaluate stress levels, contributing factors, and sources of news in fifth-year of Thai dental students during the pandemic of COVID-19. These preliminary results reported the situations during this pandemic in fifth-year dental students who are currently studying in Bangkok and its vicinity in Thailand.

2. Objectives

1) To evaluate stress levels in the fifth-year dental students who are currently studying in Bangkok and its vicinity in Thailand during the pandemic of COVID-19

2) To assess factors contributing to stress in the fifth-year dental students who are currently studying in Bangkok and its vicinity in Thailand during the pandemic of COVID-19

3) To assess the source of news that the fifth-year dental students who are currently studying in Bangkok and its vicinity in Thailand receive during the pandemic of COVID-19

3. Materials and Methods

This cross-sectional research was carried out on the fifth-year dental students in Thailand. These preliminary results were obtained from those who are currently studying in 6 Faculty of Dentistry located in Bangkok and its vicinity. According to Jirojanakul (2014), the required sample is approximately 15-30% of the population (Jirojanakul, 2014).

3.1 Data collection

Online questionnaires were utilized via the Google Form application from June to December 2020. The universities in Bangkok and its vicinity includes Chulalongkorn University, Mahidol University, Thammasat University, Srinakharinwirot University, Rangsit University, and Western University. The questionnaires were distributed to participants by representatives from each university.

The questionnaire consisted of 42 questions were divided into 3 parts including personal information, stress level evaluation proposed by Suanprung Hospital (20 questions: Mahatnirunkul et al., 1998), factors related to stress during the COVID-19 pandemic, and sources of news. Participant's information sheet and informed consent were included in this form.

The stress level was gauged from the stress evaluation form as follows.

A score between 0 to 23 was rated as low-level stress that could diminish in a short time. It was common stress in daily life that inspired a person to succeed and was beneficial. Adaptation could overcome this level of stress.

A score between 24 to 41 was rated as moderate level stress in daily life as a result of pressured stimuli or situations. A person might feel anxious or fearful, but no danger or loss occurs. It could be diminished by relaxing activities such as exercise, music listening, reading, and hobby.

A score between 42 to 61 was rated as high-level stress. A person was troubled by something or his surrounding situation that resulted in anxiety, fear, and contradictory feeling. He could not solve or adapt to the situation. High-level stress would affect daily life or cause diseases such as hypertension and gastric ulcers. A person with high-level stress should be in a hurry to reduce his stress by doing breathing exercises, joining relaxing activities, talking with trustworthy people, or solving the causes of his stress. If he could not manage the stress by himself, he should consult with professionals.

A score of 62 and above was rated as severe stress level. It might be a result of long-term high-level stress or crisis in a person's life such as severe or chronic illness, disability, loss of lovable things. This level of stress resulted in physiological and psychological illness. A person could not find happiness in life. His thoughts would be muddled, his decisions would not be accurate, and his impulse control would be impaired. These might harm a person himself and the people around him. Help from professionals is needed hastily.

Factors related to the COVID-19 pandemic that contributed to stress were rated in each question from score 1 (did not cause stress) to 3 (caused severe stress).

3.2 Data analysis

Descriptive statistics and order regression analysis were applied using Statistical Package for Social Sciences (SPSS for IOS, version 25.0; SPSS Inc., Chicago, IL, USA).

4. Results and Discussion

The participants were collected as a proportion from a total number of fifth-year students in each university, namely Chulalongkorn University, Mahidol University, Thammasat University, Srinakharinwirot University, Rangsit University, and Western University, at 34, 38, 28, 16, 30, and 33 respondents, respectively. A total number of 179 (35.87%) from 316 students participated in this study. Fifty participants (72.1%) were female and 129 (27.9%) were male, the average age was 23.7 years, ranging from 21-34, and SD was 1.461.

Section 1 Personal information

Table 1 Frequencies and percentage of personal information (n=179)

Personal Information		Frequencies	Percentage
Religion	Buddhism	161	89.94
	Christian	11	6.15
	Muslim	3	1.68
	Others	4	2.23
Medical problem	No	151	84.36
	Yes	28	15.64
Sibling (including participant)	0	4	2.23
	1	33	18.44
	2	80	44.69
	3	52	29.05
	4	9	5.03
	5	1	0.56
Student monthly income	Below 5,000	18	10.06
	5,001-10,000	61	34.08
	10,001-15,000	62	34.64
	15,001-20,000	19	10.61
	More than 20,001	19	10.61
Parent/ Guardian monthly income	Below 20,000	10	5.59
	20,001-100,000	71	39.66
	100,001-500,000	72	40.22
	More than 500,000	26	14.53
Expense affects since the pandemic spread of virus COVID-19	Income is greater than an expense	66	36.87
	Income equal to an expense.	51	28.49
	Income is lesser than an expense, but not in trouble because of adequate reserve money	49	27.37
	Income is lesser than an expense and in trouble because of inadequate reserve money	13	7.26
Occupation	Government officials/state enterprise employee	43	24.02

Personal Information		Frequencies	Percentage
	Company employee	41	22.91
	Merchants	53	29.61
	Freelance	27	15.08
	Business owner	14	7.80
	Others	1	0.56
Hometown	Bangkok	101	56.42
	A provincial city that is Amphoe Muang	47	26.26
	A provincial city that is not Amphoe Muang	31	17.32
Living conditions	Stay at home with both parents	126	70.39
	Stay at home with one parent	16	8.94
	Stay with a relative, not with parents	3	1.68
	Stay at a dormitory and do not stay with any family member or relative	34	18.99
Cumulative GPA	1.01-2.00	2	1.12
	2.01-3.00	52	29.05
	3.01-4.00	125	69.83
	Average = 3.19, Min = 2.00, Max = 3.90, S.D. = 0.390		

The table shows that most of the participants were female (72.07%), 23 years old (47.49%), Buddhism (89.94%), and did not have a medical problem (84.36%). Most of them had 2 siblings (44.69%). Generally, they had income about 10,001-15,000 baht (34.64%) and about 5,001-10,000 baht (34.08%) per month. Their parents mostly had income about 100,001-500,000 baht (40.22%) and 20,001-100,000 baht (39.66%) per month. Moreover, most respondent's situation during the COVID-19 pandemic was that their income was greater than an expense (36.87%). The majority of their parents were merchants (29.61%) and their hometown most likely resided in Bangkok (56.42%). Most of them were staying home with both parents (70.39%) and have a cumulative GPA of about 3.01-4.00 (69.83%).

Section 2 Stress evaluation (SPST-20)

Table 2 Stress level (n=179)

Stress Level	Frequencies	Percentage
Level 1 (score 0-23)	3	1.68
Level 2 (score 24-41)	33	18.44
Level 3 (score 42-61)	74	41.34
Level 4 (score more than 62)	69	38.55

The table shows that most participants had stress level 3 (41.34%), followed by level 4 (38.55%), level 2 (18.44%), and level 1 (1.68%).

Section 3 Factors related to the COVID-19 pandemic that contribute to stress

Table 3 Descriptive of anxiety (n=179)

Anxiety	Mean	S.D.	Level
1. Concern about the effect of the COVID-19 pandemic on the time in your clinical practice period.	2.59	.486	High anxiety
1.1 You worry that you may not have adequate time for the clinical practice.	2.65	.565	High anxiety
1.2 You worry that your patients may fail appointments because of the COVID-19 pandemic.	2.46	.638	High anxiety
1.3 You worry that you may not be able to achieve the minimum requirements needed for graduation.	2.68	.567	High anxiety

Anxiety	Mean	S.D.	Level
2. Concern about the safety aspect of dental treatment from the COVID-19 spreading.	1.97	.676	Less anxiety
2.1 You worry that you may get infected with the COVID-19.	1.85	.728	Less anxiety
2.2 You worry that you may spread the COVID-19 to patients or other people.	1.93	.765	Less anxiety
2.3 You worry that you may spread the COVID-19 to your family members.	2.13	.817	Less anxiety
3. Concern about the effect of the COVID-19 pandemic on the financial aspect.	1.87	.685	Less anxiety
3.1 You worry about an education fee.	1.73	.769	Less anxiety
3.2 You worry about your family expenses.	1.93	.804	Less anxiety
3.3 You worry about an extra expense for additional protective equipment for the safety measure.	1.94	.725	Less anxiety
4.You worry that your health may deteriorate because you are unable to go out for a usual exercise.	1.85	.743	Less anxiety
5.You worry that you may receive too much news.	1.69	.647	Less anxiety
6.You worry that you may receive fake news.	1.80	.682	Less anxiety
7.You feel frustrated because you cannot travel as usual.	2.09	.705	Less anxiety
8.You feel frustrated because of the closing of many recreational areas, such as department stores, fitness centers, theaters, entertainment venues.	2.06	.740	Less anxiety

The level of the factors related to the COVID-19 pandemic that contribute to stress was divided into 3 groups. The division was performed by dividing the difference between the maximum and minimum score by 3 groups, which means that if the average score ranges from 1.00 to 1.66, that factor contributes to no anxiety but if the average score ranges from 1.67 to 2.33, that factor contributes to less anxiety. Lastly, if the average score ranges from 2.34 to 3.00, that factor contributes to high anxiety.

The table shows that contributing factors to stress during the COVID-19 pandemic in high anxiety levels are the concerns about the effect of the COVID-19 pandemic on the time in clinical practice period. Worry that they may not be able to achieve the minimum requirements needed for graduation has the highest average score of 2.68. Next is a worry that they may not have adequate time for the clinical practice with an average score of 2.65. Lastly, worry that their patients may fail appointments because of the COVID-19 pandemic have the least average score in high anxiety level for 2.46.

Contributing factors to stress during the COVID-19 pandemic that has the least average score is a worry that they may receive too much news in less anxiety level with an average score of 1.69.

Section 4 Source

Table 4 Frequencies and percentage of COVID-19 source of news (n=179)

COVID-19 Information source		Frequencies	Percentage
First-order	Facebook	67	37.43
	Twitter	75	41.90
	Line	7	3.91
	Youtube	1	0.56
	TV	13	7.26
	Phone	11	6.15
	Website	2	1.12
	Other	3	1.68
Second-order	Facebook	46	25.70
	Twitter	37	20.67
	Line	28	15.64
	Youtube	3	1.68
	TV	42	23.46
	Phone	15	8.38
	Website	3	1.68
	Other	5	2.79

COVID-19 Information source		Frequencies	Percentage
Third-order	Facebook	35	19.55
	Twitter	15	8.38
	Line	40	22.35
	Youtube	1	0.56
	TV	36	20.11
	Phone	41	22.91
	Website	3	1.68
	Other	8	4.47

From the table, the first choice for source of news that was used the most is Twitter (41.90%), followed by Facebook (37.43%). The second choice for source of news is Facebook (25.70%), followed by TV (23.46%) and Twitter (20.67%). The third choice for source of news is via telephone with their acquaintance (22.91%), followed by Line (22.35%), TV (20.11%), and Facebook (19.55%). The source of news that was used the least is Youtube (0.56%-1.68%).

This table shows that Facebook, Line, and Twitter could have reached more than half of the participants.

Table 5 Frequencies and percentage of the cause of stress during COVID-19 pandemic (n=179)

COVID-19 stress source		Frequencies	Percentage
First-order	The effect of university suspension	98	54.75
	Online classroom	0	0
	Stress from studying unrelated to COVID-19	7	3.91
	Patient	18	10.06
	New normal lifestyle and dentistry	1	0.56
	Isolation and interrupted activity	26	14.53
	Family	0	0
	Financial	8	4.47
	Pandemic situation	5	2.79
	News	1	0.56
	Health	0	0
	Future	1	0.56
	Social and Politic	6	3.35
	Others	0	0
	No answer	8	4.47
Second-order	The effect of university suspension	63	35.20
	Online classroom	2	1.12
	Stress from studying unrelated to COVID-19	5	2.79
	Patient	23	12.85
	New normal lifestyle and dentistry	7	3.91
	Isolation and interrupted activity	23	12.85
	Family	1	0.56
	Financial	22	12.29
	Pandemic situation	10	5.59
	News	0	0
	Health	0	0
	Future	3	1.68
	Social and Politic	3	1.68
	Others	4	2.23
	No answer	13	7.26
Third-order	The effect of university suspension	52	29.05
	Online classroom	0	0
	Stress from studying unrelated to COVID-19	5	2.79
	Patient	20	11.17
	New normal lifestyle and dentistry	5	2.79
	Isolation and interrupted activity	27	15.08

COVID-19 stress source	Frequencies	Percentage
Family	3	1.68
Financial	13	7.26
Pandemic situation	13	7.26
News	1	0.56
Health	3	1.68
Future	1	0.56
Social and Politic	5	2.79
Others	7	3.91
No answer	24	13.41

The table shows that the problem that caused the participants to be stressed the most is the effect of university suspension (54.75% as the first cause that they thought of). They worried about the interrupted work that they could not continue during the closedown period. They would have to finish those work after the university reopens with little time remaining, which would make the workload increase and they would have less time to rest, or else they would have to extend their study and delay their graduations. The long period that they could not practice also made them unconfident with their knowledge and skill and also lose their motivation to continue studying.

The second most cause that participants chose as the most severe problem is isolation and interrupted activity (14.53%). They were stressed out from being alone as a result of social distancing and quarantine, unable to go out and play or eat outside.

The third cause that participants were worried about the most is their patient (10.06%). They were concerned that their patient would have to wait for the treatment during the closing, some steps might need to be redone, some of the patients might have symptoms, or their condition might have worsened. The participants were also worried that their patients would stop coming and the new patient would come less.

The second severe problem that was mentioned the most is still the effect of university suspension (35.20%). The second-order are isolation and interrupted activity (12.85 %) as much as about patient (12.85%), then follows by the financial problem (12.29%).

The third severe problem that was mentioned the most is still the effect of university suspension (29.25%). The second and third-order is the same as the most severe problem, and that is about isolation and interrupted activity (15.08%) follows by the patient factor (11.17%).

The result is correlated to the information from Table 3 that concerns the effect of the COVID-19 pandemic on the time in clinical practice period, which has the highest average score.

Section 5 Factor affecting stress level

Table 6 Anxiety factor affecting stress level

Predictor	B	Wald	p	Odds Ratio
Threshold Group 1	1.449	1.939	0.164	4.260
Threshold Group 2	4.628	22.305	0.000***	102.272
Threshold Group 3	7.032	43.132	0.000***	1132.413
1. Concern about the effect of the COVID-19 pandemic on the time in your clinical practice period.	1.974	30.394	0.000***	7.198
2. Concern about the safety aspect of dental treatment from the COVID-19 spreading.	-0.205	0.640	0.424	0.815
3. Concern about the effect of the COVID-19 pandemic on the financial aspect.	0.361	2.257	0.133	1.435
4. You worry that your health may deteriorate because you are unable to go out for a usual exercise.	0.856	12.808	0.000***	2.353
5. You worry that you may receive too much News.	0.049	0.032	0.859	1.051
6. You worry that you may receive fake News.	-0.277	0.874	0.350	0.758
7. You feel frustrated because you cannot travel as usual.	0.241	0.643	0.423	1.272
8. You feel frustrated because of the closing of many recreational areas, such as department stores, fitness centers, theaters, entertainment venues.	-0.351	1.469	0.225	0.704

Predictor	B	Wald	p	Odds Ratio
Model fitting information X^2 = 335.635, df = 8, p = 0.000				
Goodness of fit X^2 = 522.884, df = 490, p = 0.147				
Cox & Snell = 0.276, Nagelkerke = 0.309, McFadden = 0.145				

*Significant at 0.05 level, **significant at 0.01 level, ***significant at 0.001 level

The table shows the result of the stress level that was analyzed by the order logistic regression. The model fitting information is a significantly good fit at 0.001 level, while the goodness of fit is not significant, meaning that the data and model are properly fit. Also, the power of prediction ranges from 14.5% to 30.9%.

When considered from the stress threshold, it shows that the first threshold has a coefficient of 1.449 and not significant. The second threshold has a coefficient of 4.628 and significant at 0.001 level. The third threshold has a coefficient of 7.032 and significant at 0.001 level. It can be assumed that factors related to the COVID-19 pandemic that contribute to stress only affect the stress level to increase from level 2 to level 3 and from level 3 to level 4, but not affect the stress level to increase from level 1 to level 2.

When considered in each variable, it shows that only 1) Concern about the effect of the COVID-19 pandemic on the time in your clinical practice period and 2) You worry that your health may deteriorate because you are unable to go out for a usual exercise could predict stress level.

The details can explain as 1) Concern about the effect of the COVID-19 pandemic on the time in your clinical practice period have an odds ratio of 7.198, which means that when 1) Concern about the effect of the COVID-19 pandemic on the time in your clinical practice period increase, the stress level will have a possibility to increase about 7 times. While 2) You worry that your health may deteriorate because you are unable to go out for a usual exercise has an odds ratio of 2.353, which means when 2) You worry that your health may deteriorate because you are unable to go out for a usual exercise increase there will be a possibility to have more stress level about 2 times.

Discussion

In normal circumstances, dental students in their clinical years had been reported to be stressed out. In Thailand, a study by Weraarchakul and Weraarchakul (2014) in 237 of the fourth year to the sixth year dental students from Khon Kaen University discovered that Thai dental students had a high level of stress during the year of their clinical practice. Forty-six percent of students had stress at level 3 as it was graded from level 1 for low stress to level 4 for high stress (Weraarchakul & Weraarchakul, 2014). While the study by Malakul (2003) divided stress into five levels. They found that, from 456 dental students who were studying in the first year to the sixth year at Chulalongkorn University, 74.3% of them have higher stress than normal with most of them at the highest stress level as much as 29.4%. They also studied anxiety and depression in dental students, and 46.9% of the participants had one of the conditions or both (Malakul, 2003). Their results were in line with another study in 287 dental students of the first year to the sixth year dental students from Srinakharinwirot University, which reported that 37.3% of dental students had mental health problems, and the fifth-year students had problems the most with 63.0% of the fifth-year students having mental health problems (Kaewsutha et al., 2014), which was higher than a result from a study in 646 medicine students of the first year to the sixth year from Prince of Songkla University that reported that 29.1% of the participants with mental health problems (Kunadison & Pitanupong, 2010).

The result from this study was consistent with those previous studies. The fifth-year dental students who are currently studying in Bangkok and its vicinity in Thailand had a high level of stress the most as much as 41.34%. When compared to a study that also used the same stress evaluation form, however, this study found that there were more participants with severe stress as much as 38.55% while the study by Weraarchakul and Weraarchakul (2014) found only 12.7%. As a population with a high probability of pre-existing mental illness and risk of infection, the fifth-year dental students were a vulnerable population to psychological effects from COVID-19 (Sher, 2020; Srichannil, 2020).

However, participants with existing psychological health problems have yet to be excluded in this study, and this might affect the result of stress level to increase as they are already vulnerable to stressful situations. Dental students with anxiety and depression tend to have higher stress compared with dental

students without psychological health problems (Malakul, 2003). In our study, 2 participants (1.12%) were presented with existing depression, however, they showed a moderate stress level (level 2). Although depression was seemed to not affect this research, a further study might consider excluding participants with psychological health problems if they are likely to be confounding factors. Also, vary in severity of the pandemic situation in various places might affect the stress level differently as this study was conducted during the first pandemic when the zone of pandemic severity was yet to be defined. Further investigation into these topics might yield variation in intervention plans for different groups or places.

From the students' point of view, the stress mostly comes from the management of patients, increase in responsibility in the clinic, and difficulty in the learning of more complicated knowledge (Malakul, 2003). This study indicated that factors on "the concern about the duration for clinical practice" significantly affected stress ($p < 0.001$) with an odds ratio of 7.198. Interestingly, the concern on "unable to achieve the minimum requirements needed for graduation" (average score 2.68) was higher than the concern about "patients failing appointments" (average score 2.46). The majority of the participants at 54.75% worry about long-term suspension of the university. The answer included worries about "the work in progress that had to be postponed at the moment," "less remaining clinical period," "increasing workload and less resting time after the opening," "delayed graduations," "deterioration of skill after withhold," and "losing of study motive." While patient factors were mentioned the third at 10.06%, including worries about "patients having to wait for the treatment," "some of the patients might have symptoms," "their condition might have worsened," "the patient would stop coming," and "the new patient would come less."

Interestingly, the second most thing that made the participants stressed out was about "isolation and interrupted activities" as much as 14.53%. They were worried about being alone in a limited place for a long time without meeting someone face to face and could not participate in some activities normally, such as eating out, exercising outside, or going to the theater. We also found that "worries about deteriorating health because they are unable to go out for a usual exercise" affect stress level significantly ($p < 0.001$) with an odds ratio of 2.353. It conformed with other studies that mentioned isolation and disrupted lifestyle as stress contributing factors during the COVID-19 pandemic (Sher, 2020; Srichannil, 2020; Fu et al., 2021). From this research, however, this factor was not as important as the study aspect.

Although financial problems were not affected stress level, there were 7.26% of the students were in trouble because their family income was lesser than an expense and they had inadequate reserve money. Help might be needed in some cases to facilitate their studies.

Some participants also mentioned government and political issues as their concern. It was reasonable as lower confidence in pandemic control resulted in a higher level of anxiety (Pramukti et al., 2020).

When considered sources of news, social networking service applications including Facebook, Line, and Twitter could reach 83.24% of the fifth-year dental students. The faculty could use them for delivering announcements to the students as they could reach so many students.

5. Conclusion

Most of the fifth-year dental students were affected by the COVID-19 pandemic and presented with highly stressed (level 3) for 41.31%, followed by severely stressed (level 4) for 38.55%. The stress level was affected by "Concern about the effect of the COVID-19 pandemic on the duration for clinical practice" at an odds ratio of 7.198 and by "Worry that their health may deteriorate because they are unable to go out for a usual exercise" at an odds ratio of 2.353.

This study demonstrated that the stress level of the fifth-year dental students was affected by the COVID-19 pandemic. The results of this study might guide to an appropriate intervention to reduce their stress and prevent its consequential damage. Also, further investigation might be expanded to other college years as well to verify if the intervention is needed or not and whether the severity of the pandemic or existing psychological health problems affect the stress level or not.

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