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The Socio-economic and Psychological Impact of COVID-19 Pandemic on Malaysian Private Dentists: An Exploratory Study

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KEYWORDS

COVID-19 pandemic, Malaysian private dentists, socio-economic and psychological impact

ABSTRACT

The global COVID-19 Pandemic combined with nationwide economic depression and public fear had caused dental clinics in Malaysia to experience a significant reduction in patient visits with a potential impact on the socio-economic and psychological status of Malaysian private dentists. This study assesses the socio-economic and psychological impacts of the COVID-19 pandemic on Malaysian private dentists. A cross-sectional online questionnaire included demographic profile, socioeconomic factors and psychological status was used. Participation was voluntary. Descriptive statistics on the three variables were generated. Pearson Chi-square test was used to check for significant difference ($p<0.05$). In all, 95 private dentists voluntarily participated. Male and female participants were equally represented, mostly in the 22-25 group (62%). The Job Insecurity Scale measurement showed 58% and 48.5% participants respectively, were socio-economically and psychologically affected. The Financial Threat Scale showed 44.4% of respondents were financially affected, while 51% (measured by the General health questionnaire) displayed affected health. The socio-economic-psychological aspect was found to be statistically significant ($p =0.018$). Within the limitation of sample size, participating private dentists were found to be socio-economically and psychologically affected by the COVID-19 pandemic.

INTRODUCTION

In December 2019, a new pathogen said to originate from Wuhan, China had spread to Europe and around the globe [1]. In March 2020, a pandemic warning was officialised by the World Health Organisation (WHO). By January 5, 2021, a total of 85.7 million cases with 1.85 million deaths have been reported worldwide. Meanwhile by 8th September 2022, 604 million and 6.49 million cumulative cases and deaths have been reported around the globe, respectively [2]. The United States led with the highest cumulative cases and deaths (93.5M cases with 1.04 M deaths), followed by India (4.5M cases and 0.5M deaths) and Brazil (34.5M cases with 0.68M deaths) [3]. As of 7 September 2022, the Ministry of Health Malaysia reported a confirmed cumulative cases of 4.8M with 0.036M total deaths [4]. After two years, COVID-19 remained to be vigilantly monitored not only by the WHO and worldwide healthcare systems, but also the Ministry of Health Malaysia.

This new coronavirus, Severe Acute Respiratory Syndrome-Coronavirus-2 (Sars-CoV-2), was found to be highly infectious, appeared asymptomatic but potentially lethal and responsible for causing acute respiratory syndrome (COVID-19) [5]. The incubation period of Sars-CoV-2 is two weeks, while the clinical manifestation of COVID-19 is observed through cough, fever and dyspnoea [5], but can also include anosmia, ageusia and diarrhoea [6]. The main infection route for Sars-CoV-2 [7] is airborne via airborne droplets caused by sneezing or coughing and direct contact contamination.

Since the pandemic announcement, partial or total lockdowns, border controls and stricter standard operating procedures (SOP) have been imposed by all nations to contain the spread of the disease. Healthcare workers including dentists were

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required to wear personal protective garments when treating patients leading to an increase in operating costs for health facilities. In reviewing global guidelines provided by different developed countries including the United Kingdom, the United States and Ireland to their registered dental practitioners amid the COVID-19 outbreak, Saqib et al. [8] discovered that current dental practices globally are limited only to the provision of emergency treatments. This had caused many practitioners to face financial constraints, losses or closure of clinics due to high additional expenses incurred and fewer dental services sought.

Like other dentists globally, the COVID-19 pandemic has also impacted dentists in Malaysia. While the costs of materials and equipment for those in government services are supported through the government budget, private practitioners had to bear the increased costs of special equipment themselves. The prolonged official functionality orders issued by governing agencies for almost two years had in turn caused a reduction in dental visits and service utilisation, thus leading to a decrease in financial income among the private dental clinics.

Mental health issues among health care workers (HCW) in the COVID-19 situation have also been well-documented. Various contributory factors mentioned include social and physical distancing, fear of contagion, increased need for infection control procedures, concerns for self/family wellbeing, prevalent cynicism, decreased access to personal protective equipment (PPE), along with issues of financial insecurity and potential loss of income [8-10]. In the case of many dentists, not only were they facing financial woes but also psychological distress. The fear of getting infected by a COVID-19 patient created a high psychological tension [11-13].

Given the above situation, this exploratory study attempts to assess the socio-economic and psychological impact of the COVID-19 pandemic among Malaysian private dentists after a year of the pandemic.

MATERIALS AND METHODS

This is a cross-sectional, descriptive, online exploratory questionnaire study that assesses the socio-economic and psychological impacts of the COVID-19 pandemic on selected urban Malaysian private dental practitioners. Participation was voluntary and consent was assumed to have been obtained once the respondent "clicked" on the button to start answering. This study was approved by the Institutional Research Ethics Committee, Faculty of Dentistry, Lincoln University College (Human Ethic No: LUCethics/FDent/009/2020).

Study sample

Initially, urban located Malaysian private dentists practising in all the states in Peninsula Malaysia and Borneo Sabah and Sarawak were sourced from the Malaysian Dental Council dentist directory website and those with email addresses were randomly contacted and invited to join the survey. Assistance was also sought from the national dental organisation (Malaysian Dental Association, MDA) to "blast" the questionnaire to their members listed in their database digitally. The selection of this method was based on the ground that everyone was in the state of official "lockdown" and only electronic communication was possible. As responses were slow in coming, some MDA members also took their own initiative to call their colleagues to join in the survey. The participants were also officially informed of the study objectives, which were included on the cover sheet of the google questionnaire form. This study only included dentists who owned and/or worked in private dental clinics. Due to the budget constraint of this study, only a one-time online "blast" was done. No further follow-up was carried out.

Survey instrument and data management

A modified questionnaire was developed based on items used in previously reported studies [12-14]. The questionnaire consisted of three sections, namely; Section A: demographic data of the respondents (including age, gender, field of expertise, location of practice and role in the private clinic). Section B: thirteen questions related to the socio-economic impact of the COVID-19 pandemic affecting dentists' economy or income and social impact on their lives and practices. Section C: three measurement types were used to assess the psychological impacts of the COVID-19 pandemic among respondents, namely; (a) Vander Elst Job Insecurity Scale [15] using a Likert scale of 1 to 5 (1- Strongly disagree, 2 Disagree, 3- Neutral, 4- Agree, 5-Strongly Agree), (b) Marjanovic's five-item Financial Threat Scale (FTS) [16] with a 1-5 Likert scale (1-Not at all 2-Slightly, 3-Somewhat, 4-Moderatey5-A great deal) and, (c) the General Health Questionnaire [17] of twelve items on a Likert scale of 1 to 4 (1-Never, 2- Sometimes, 3-Often, 4-Always).

The questionnaire developed was validated by two public health dental specialists and a clinical psychiatrist for content. It was then improved to

the satisfaction of the above experts and subsequently pretested on eight dentists who were excluded from the main study. Further modifications were done to the questionnaire item flow and easiness to answer before transferring to the online Google form and sharing the link with the sample identified as described above via emails. Data were collected from December 2020 until February 2021, a period after the first year of the COVID-19 pandemic experience. Responses received were collected and analysed using SPSS version 24 statistical software. Descriptive statistics were generated and the Pearson Chi-square test was utilised to test for association at p=0.05.

RESULTS

A) Demographic profile of participants

A total of 95 private dentists participated in this study with an almost equal distribution by gender (49.5% females and 50.5% males). Majority of the participants (91.4%) who voluntarily responded resided in Peninsula Malaysia, mostly practising in Selangor (23.2%), Penang (18.9%) and Kuala Lumpur (12.6%). The majority (67.4%) of the feedback received was from younger dentists, 24 to 35 years old, having between a year to 10 years in practice and may be consistent computer users. Slightly more than a third (37.9%) of respondents were 36 - 75 years old indicating that they have been in practice for more than 10 years. Data analysis also showed that 91.4% of the respondents were private general practitioners, while the remaining 8.6% were specialists in various disciplines (prosthodontists, oral surgeons, orthodontists, paediatric dentists and periodontists). At the time of this study, 22.1%, 41.1% and 36.8% of the respondents were locums or consultants, associates or owners of private clinics, respectively (Table 1).

Table 1 Demographic profile of respondents

Variables	n (%)
Gender	
Males	48 (50.5%)
Females	47 (45.5%)
Age	
24 -35	59 (62.1%)
36 and above	36 (37.9%)
Locations	
Peninsular Malaysia	87 (91.6%)
East Malaysia (Borneo)	8 (8.4%)
Practitioner type	
General dentist	87 (91.6%)
Specialist	8 (8.4%)
Practise type	
Locum/consultant	21 (22.1%)
Associate	39 (41.1%)
Owner	35 (36.8%)

B) Participants' COVID-19 pandemic impact on their socio-economic status

Table 2 shows COVID-19's socio-economic impact on the respondents' practice status. Findings showed that the majority of the respondents are concerned about four issues, namely; a decrease in their patient flow (76.8%), their financial status (87.4%), the rise in clinic operating expenses (87.4%) due to PPE materials compulsory policy and the lower financial returns (67.4%). It was also observed that 33.7% of respondents followed the recommendation to limit the use of aerosol-generating procedures.

It is good to note that despite the rising clinic expenses, 95% continued to implement biosafety precautions, while 62.1% of dentists did not charge extra PPE materials cost onto patients' fees, or increased service charges (68.4%) as shown in Table 2. These gallant acts were done despite hardly any financial assistance from the government (78.9%) or private supporting agencies (87.4%) which is also demonstrated in Table 2. It is also worth noting that in Table 2, 87.4% of respondents stated that they were concerned about the financial drawbacks which is concurrent with the economic state of the county amidst the COVID-19 pandemic. It is also interesting that only 23.2% of private dentists at that time never gave a thought to any strategic plans to counter their loss.

C) The psychological impact of the COVID-19 pandemic on dentists

Tables 3, 4 and 5 illustrate various psychological impacts of the COVID-19 pandemic on dental practice as perceived by the participants. The Job Security Index (Table 3) showed that 71.6% (44.2% of participants chose agree while 27.4% of participants chose strongly agree) of them were confident then that they would be able to keep their job. Concurrent with the above-perceived confidence, only 28.4% (17.9 % of participants chose agree while 10.5% of the participants chose strongly agree) of the respondents remained insecure about the future of their job status. An almost equal proportion in the sample still felt they could lose their current job today (5.3%) or in the near future (7.4%).

Table 4 demonstrates the extent of the psychological impact of the COVID-19 pandemic on private dentists as measured by the Financial Threat Scale. Two-thirds (65.3%) of participants are giving a rating of 3 and above) of them felt at least some degree of financial uncertainty during this COVID-19 pandemic. This was shown by the high proportion of dentists who answered positively to

each of the financial threat questions posed, namely; 76.9% felt at risk and 73.6% felt threatened financially, while 74.8% and 72.6% worry or think about financial threat to a certain degree, respectively.

Table 2. Respondents' socio-economic impact of the COVID-19 pandemic

No.	Variables	Yes		No		Non-applicable	
		n	%	n	%	n	%
1.	Do you experience a decrease in number of patients?	73	76.8	21	22.1	1	1.1
2.	Do you reduce in frequency of doing non-emergency dental care?	37	38.9	54	56.8	4	4.2
3.	Did you limit aerosol procedures in your clinic?	32	33.7	59	62.1	4	4.2
4.	Did you face a lower financial return?	64	67.4	23	24.2	8	8.4
5.	Did your salary get reduced?	40	42.1	9	9.5	46	48.4
6.	Did you increase the price of providing services to patients?	22	23.2	65	68.4	8	8.4
7.	Did you implement biosafety precautions?	86	90.5	7	7.4	2	2.1
8.	Did you experience a rise in expenses in operating your clinic?	83	87.4	5	5.3	7	7.4
9.	Did you charge patients for PPE?	28	29.5	59	62.1	8	8.4
10.	Did you receive any financial help from any Government bodies?	13	13.7	75	78.9	7	7.4
11.	Did you receive any financial help from private bodies?	6	6.3	83	87.4	6	6.3
12.	Are you concerned about any financial issues during the COVID-19 pandemic?	83	87.4	9	9.5	3	3.2
13.	Do you have any strategic plan to tackle the economic challenge in dental practice during the COVID-19 pandemic?	12	12.6	22	23.2	61	64.2

Table 3: Respondents' perception on job insecurity during COVID-19

No	Variables	Strongly Disagree		Disagree		Neutral		Agree		Strongly agree	
		n	%	n	%	n	%	n	%	n	%
1.	Chances are, I will soon lose my job	16	16.8	42	44.2	32	33.7	3	3.2	2	2.1
2.	I am sure I can keep my job	0	0	3	3.2	24	25.3	42	44.2	26	27.4
3.	I feel insecure about the future of my job	14	14.7	29	30.5	25	26.3	17	17.9	10	10.5
4.	I think I might lose my job in the near future	19	20.0	41	43.2	28	29.5	6	6.3	1	1.1

Table 4. Respondents' perception on financial threat during COVID-19

No	Variables	1 (Not at all)		2 (Slightly)		3 (Somewhat)		4 (Moderately)		5 (A great Deal)	
		n	%	n	%	n	%	n	%	n	%
1.	How uncertain do you feel?	10	10.5	23	24.2	40	42.1	11	11.6	11	11.6
2.	How much do you feel at risk?	6	6.3	16	16.8	30	31.6	26	27.4	17	17.9
3.	How much do you feel threatened?	5	5.3	20	21.1	38	40.0	18	18.9	14	14.7
4.	How much do you worry about it?	8	8.4	16	16.8	30	31.6	21	22.1	20	21.1
5.	How much do you think about it?	7	7.4	19	20.0	27	28.4	21	22.1	21	22.1

The psychological impact due to job insecurity and financial threat can be seen in the General Health Questionnaire responses (Table 5). Of the 12 questions posed, the positive responses indicated that reasonably good health outweighed the negative responses. It is encouraging to note that almost all of the respondents have not lost their work concentration (no participants have stated that they never have been able to concentrate in their job) since 95.8% often remain able to make rational decisions, 80% of participants have sometimes led a reasonably happy life, 85.3% are able to a certain degree enjoy their day-to-day activities and 97.9% said they were still able to face the problems caused by COVID-19 pandemic. In addition, 95.8% perceived they have sometimes contributed to curbing the spread of the pandemic by complying diligently with the national policy. Although in a lower proportion, findings nevertheless showed that 44.2% of respondents began to lose their confidence in continuing with their profession and a lower 22.1% began to question their self-worth during the pandemic. Perhaps the latter is the reasons why a substantial proportion of the respondents (76.9) have sometimes lost sleep over worries about their income or felt strained (86.3%), unhappy and depressed (74.7%) and unable to cope with the difficulties caused by the pandemic (65.3%).

Table 5. Respondent's perceived general health during COVID-19

No.	Variables	Always		Often		Sometimes		Never	
		n	%	n	%	n	%	n	%
1.	I am able to concentrate in doing my job	50	52.6	37	38.9	8	8.4	0	0
2.	I have loss of sleep over the worry of the current situation I am in	5	5.3	6	6.3	62	65.3	22	23.2
3.	I am playing a useful part in helping to curb the COVID-19 pandemic	36	37.9	22	23.2	33	34.7	4	4.2
4.	I am capable to making rational decisions when I am doing my job	60	63.2	31	32.6	3	3.2	1	1.1
5.	I feel constantly under strain amidst the COVID-19 pandemic	4	4.2	19	20.0	59	62.1	13	13.7
6.	I couldn't overcome the difficulties I face during the COVID-19 pandemic	6	6.3	5	5.3	51	53.7	33	34.7
7.	I am able to enjoy the day-to-day activities amidst the COVID-19 pandemic	14	14.7	28	29.5	39	41.1	14	14.7
8.	I am able to face the problems I met during the COVID-19 pandemic	18	18.9	44	46.3	31	32.6	2	2.1
9.	I am feeling unhappy and depressed during the COVID-19 pandemic	12	12.6	5	5.3	54	56.8	24	25.3
10.	I am losing confidence to continue my profession due to the COVID-19 pandemic	4	4.2	3	3.2	35	36.8	53	55.8
11.	I am thinking myself as a worthless individual during the COVID-19 pandemic	4	4.2	6	6.3	11	11.6	74	77.9
12.	I am feeling reasonably happy during the COVID-19 pandemic	10	10.5	30	31.6	36	37.9	19	20.0

When the positive and negative responses in all three measurements were combined, it was found that slightly less than two-thirds (63.4%) of the participants were found to be affected psychologically by the current pandemic. However, only the socio-economic aspect and job insecurity variables were found to be statistically significant (Pearson's Chi-Square test, $p = 0.018$).

DISCUSSION

Like their global counterparts [18-21], findings obtained in this study also showed that the COVID-19 pandemic impacted Malaysian private dentists both socio-economically and psychologically.

It was discovered that most of the dentists in this survey experienced an increase in their expenses for their use of new biosafety protocols and equipment, a similar pattern observed by Cavalcanti et al. [18] in their 2020 study. The investigators reported a phenomenon of an increase in the cost of post-COVID biosafety materials and equipment compared to the pre-COVID era. In addition, the increase in costs was not compensated since almost two-thirds of the clinics

did not impose additional costs for PPE materials on their patients or service fees. Since this study was done at the earlier phase of the pandemic, the novelty of not incurring extra charges may be because Malaysian dentists did not expect the pandemic to be prolonged and did not want to lose more patients post-pandemic period, especially their loyal clientele.

Similar to studies conducted in western [22] and also Asian [14] countries, this present study also observed that 76.8% of the participating dentists faced a reduction in patient flow compared to the pre-COVID era. The situation was more severe as the Standard Operating Procedures (SOP) during the pandemic did not encourage aerosol-based treatment to be done. Only emergency procedures were allowed and patients were generally in a state of anxiety and fear of infection. In addition, the vaccination program was not in full swing for the whole population while a total lockdown state was enforced. The reduction, however, appeared to be more severe than the 32% of Iraqi dentists who faced a decrease of 25-50% in patient flow [19]. In addition, 67.4% of study respondents also faced a lower financial return. Similarly, Mahdee et al. [19] reported that more than 75% of Iraqi dentists faced a similar 25-50% reduction in income.

Among the three criteria reported in terms of psychological impact, this study observed a significant association between socioeconomic impact and job insecurity, which is likely due to the lower financial return, reduced patient flow and a rise in operating expenses as demonstrated in the results. For the dentists who are either salaried employees or locums, they are probably worried they might lose their job if the pandemic continued to be prolonged. It is also to be noted that with a better understanding of the COVID-19 phenomenon, the Malaysian government, like several countries [8], have come up with economic response plans that include reopening or providing financial support for the business sector. Although the recovery may not be rapid [23], the reopening of the economic sector will hopefully provide an opportunity for the private dentist fraternity in Malaysia to make a rebound.

The findings above need to be interpreted with caution given the small sample size. Despite the rigorous efforts to seek initial assistance from the national dentistry organisations to help in attracting private practitioners to join the survey from this study, the pandemic situation failed to attract them. Many either did not think that the study was important or had other priorities. In part, this might be due to the timing of the study conducted as it was done amidst the peak pandemic time. Nevertheless, the findings from this study might be able to give some early indications of the issues and challenges of a pandemic of this size for future reference, which is important for the profession and nation to be better prepared for repeated calamity. A follow-up survey with bigger participation is called for after the pandemic has stabilised into an endemic status.

One of the main limitations of this study is that there is limited availability of previous reports pertaining to the assessment of both the socio-economic and psychological impact of the COVID-19 pandemic among private dentists locally or globally. Previous reports only either assessed the socio-economic or psychological impact, but never both at the same time. The findings from this study can thus be considered as a baseline for necessary follow-up studies, especially to look at the continuum of the situation from the post-first year pandemic to the endemic status.

CONCLUSIONS

In conclusion, owing to its small sample size, this study can be said to have successfully explored important early issues of COVID-19 and its impact on Malaysian dentists, economically and psychologically. A prolonged COVID-19 in future pandemic can have a deleterious impact on Malaysian private dentists, both socio-economically and psychologically. Future follow-up in the form of mental health and socio-economic studies among this target group should be done to assist them in getting back their confidence and improve their mental health as business rebound would still take time to happen given the overall financial woe facing the population and nation during post-pandemic. There is also a need to continue assessing the severity of the impact, as well as the financial and psychological support needed from relevant agencies to ensure business sustainability for all parties involved in the near future.

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DECLARATION OF INTEREST

None declared.

REFERENCES

1. Wang C, Horby PW, Hayden FG, Gao GF. A novel coronavirus outbreak of global health concern. The Lancet. 2020;395(10223):470-473.
2. Google.com. 2021. Covid 19 Cases In The World - Google Search. [online] Available at: <https://www.google.com/search?q=covid+19+cases+in+the+world&rlz=1C1GGRV_enIN751IN751&oq=covid+19+cases&aqs=chrome.5.69i57j0i433l3j0j0i433j0i131i433j0.6309j0j7&sourceid=chrome&ie=UTF-8> [Accessed 5 January 2021].
3. Google search 2022 (online). Covid19.who.int. Available at: Covid19.who.inthttps://www.google.com/search?q=covid+19+global+prevalence+in+2022&rlz=1C1CHBF_enMY936MY936&oq=&aqs=chrome.1.69i59i450l8.281987438j0j15&sourceid=chrome&ie=UTF-8 [Accessed 8 September 2022].
4. Google search 2022 (online) https://covidnow.moh.gov.my/. https://covidnow.moh.gov.my/deaths {assessed 8 September 2022]
5. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, Qiu Y, Wang J, Liu Y, Wei Y, Yu T. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. The Lancet. 2020;395(10223):507-513.
6. Russell B, Moss C, Rigg A, Hopkins C, Papa S, Van Hemelrijck M. Anosmia and ageusia are emerging as symptoms in patients with COVID-19: What does the current evidence say?. ecancermedicalscience. 2020;14.
7. Peng X, Xu X, Li Y, Cheng L, Zhou X, Ren B. Transmission routes of 2019-nCoV and controls in dental practice. Int J Oral Science. 2020;12(1):1-6.
8. Saqib Ali, Imran Farooq, Maha Abdelsalam, Jehan AlHumaid. Current Clinical Dental Practice Guidelines and the Financial Impact of COVID-19 on Dental Care Providers. Eur J Dent. 2020;14(suppl S1):S140–S145
9. Müller A, Melzow FS, Göstemeyer G, Paris S, Schwendicke F. Implementation of COVID-19 Infection Control Measures by German Dentists: A Qualitative Study to Identify Enablers and Barriers. Int J Environ Res Public Health. 2021;18(11):5710.
10. Bastani P, Mohammadpour M, Ghanbarzadegan A, Kapellas K, Do LG. Global concerns of dental and oral health workers during COVID-19 outbreak: a scope study on the concerns and the coping strategies. Systematic reviews. 2021; 10(1):1-9.
11. Westgarth D. Mental health in dentistry: Has the profession opened up through the years? BDJ In Pract. 2022;35(6):18–22.
12. Owen C, Seddon C, Clarke K, Bysouth T, Johnson D. The impact of the COVID-19 pandemic on the mental health of dentists in Wales. British Dental Journal. 2022; 232(1):44-54.
13. Shacham M, Hamama-Raz Y, Kolerman R, Mijiritsky O, Ben-Ezra M, Mijiritsky E. COVID-19 Factors and Psychological Factors Associated with Elevated Psychological Distress among Dentists and Dental Hygienists in Israel. Int J Environ Res Public Health. 2020;17(8):2900.
14. Ahmadi H, Ebrahimi A, Ghorbani F. The impact of COVID-19 pandemic on dental practice in Iran: a questionnaire-based report. BMC Oral Health. 2020; ;20(1):1-9.
15. Vander Elst T, De Witte H, De Cuyper N. The Job Insecurity Scale: A psychometric evaluation across five European countries. Eur J Work Organizational Psych. 2014;23(3):364-380.
16. Marjanovic Z, Greenglass ER, Fiksenbaum L, Bell CM. Psychometric evaluation of the Financial Threat Scale (FTS) in the context of the great recession. J Econ Psych. 2013;36:1-10.
17. Hankins M. The reliability of the twelve-item general health questionnaire (GHQ-12) under realistic assumptions. BMC Public Health. 2008;8(1):1-7.
18. Cavalcanti YW, Silva RO, Ferreira LD, Lucena EH, Souza AM, Cavalcante DD, Meneghim MD, Pereira AC. Economic impact of new biosafety recommendations for dental clinical practice during COVID-19 pandemic. Pesquisa Brasileira em Odontopediatria e Clínica Integrada. 2020; 31;20.
19. Mahdee AF, Gul SS, Abdulkareem AA, Qasim SSB. Anxiety, Practice Modification, and Economic Impact Among Iraqi Dentists During the COVID-19 Outbreak. Front Med (Lausanne). 2020;7:595028.
20. Ahmed MA, Jouhar R, Ahmed N, Adnan S, Aftab M, Zafar MS, Khurshid Z. Fear and Practice Modifications among Dentists to Combat Novel Coronavirus Disease (COVID-19) Outbreak. Int J Environ Res Public Health. 2020;17(8):2821.
21. Kar A, Bhaumik U, Nigam H, Rao VU. Challenges and mental health issues faced by dental health care personnel during COVID-19 pandemic and beyond− the way ahead. J Oral Med Oral Surg. 2020;26(4):22-24.

22. Patel N. Impact on Dental Economics and Dental Healthcare Utilization in [Internet]. SAGE Journals. 2020 [cited 2022Sep.4]. Available from: https://journals.sagepub.com/doi/full/10.1177/2320206820941365
23. Ross Scales. Financial and workforce impacts on dentistry will continue to be felt for some time. https://www.gdc-uk.org/news blogs/blog/detail/blogs/2021/03/11/ sourced on 15 February 2022

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