

Original Research

Social Media Addiction And Usage Amongst Dental Students In Saudi Arabia – A Comparative Study

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ABSTRACT:

Background: Social media has infiltrated the lives of entire studying and working professionals throughout the globe. It has become an important and established tool for expression, communication and transfer of knowledge. The aim of this study to evaluate the usage and addiction of various social media platforms among dental students of Saudi Arabia. **Material and methods:** A cross-sectional, descriptive questionnaire-based study was conducted on 420 students of final year and internship across various dental colleges of Saudi Arabia. Demographic details, usage frequency details and Social Media Addiction Scale developed by Arsalanand Kirik was used to collect the data. Responses were recorded in 5-point Likert Scale and the data were analysed by SPSS Version 20. **Results:** A total of 485 students were mailed the questionnaire out of which 420 replies were found to be valid and included in the study. Around 226 (53.8%) participants were in their final year and 194 (46.2%) of them in their internship. Significant number of final-year students used social media platform to communicate and connect with the patients whereas the students in their internship believe social media can affect the success of dental professional. **Conclusion:** Social media is being used extensively by internship students as compared to final year dental students. The usage is mixed, for both personal and professional reasons. A large majority of the dental students believe that social media presence is important for their success as a dental professional.

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INTRODUCTION

With time, luxury become a necessity and the same has happened with the world of internet. The digital explosion of social media platform has penetrated the professional, social and personal existence of humans across the globe. The world is in a state of constant connectivity and perpetual association with friends, families and the unknown through the internet. Various social media platforms and networking sites like Facebook, Instagram, WhatsApp, Twitter, LinkedIn, Gmail, Yahoo, Snapchat and many more have gained enormous popularity in the recent years and there is no looking back.¹ These apps are mostly used to share information, build opinions, provide casual entertainment and exchange emotions with other people or group with a click of a button.^{2,3} The use of social media apps by healthcare professionals has been reported extensively in the literature. Around 90% of practicing doctors use Facebook for personal or professional purpose.⁴ Social media apps have a

wide range usage in dentistry. It is used for patient information, education and communication in clinic, college or hospital-based setups.⁵ It can also be used to connect with fellow dentist, researchers, teachers and like-minded people for content sharing and networking.⁶ Apart from that, social media can be effectively used for marketing and recruitment purpose.⁷ Students can utilize the information available on social media sites to increase their knowledge, learn new skills, become lifelong learners, foster social relationships and build an identity for themselves.⁸⁻⁹ On the contrary, all this constant affinity with internet can lead to loss of control in terms of time spent and type of content consumed for the person using it. Be it a dental student, dentist, healthcare professional or any random person, excessive and problematic usage of the social media apps can be detrimental to mental health.¹⁰⁻¹¹ Young individuals between the age of 18-24 years are more prone to become internet addicts than older people.

Incidentally, most of the dental students fall in this age bracket and are vulnerable for problematic internet use. Hence, this research intends to understand the manner of interaction and consumption of content by dental students during their final year and internship. The aim of this study was to analyse the usage and addiction of social media apps by dental students in Saudi Arabia.

MATERIAL AND METHODS

A cross-sectional online, questionnaire-based survey study was conducted amongst dental students from final year and internship in various dental colleges and universities across Saudi Arabia from the academic year 2020-21 and 2021-22. A total of 485 students were electronically mailed the questionnaire residing in different parts of Saudi Arabia. The study was approved by the Institutional Ethical Committee and consent was obtained from all the participants in the first part of the questionnaire. The questionnaire consisted of three parts. The first part consisted of informed consent and demographic details of the participants. The participants were informed about the aim and objectives of the study. The second part consisted of 22 questions regarding social media

usage, attitude and ethics. The third part of the questionnaire consisted of 22 questions based on social media addiction scale by Arsalan and Kirik.¹² All the questions were in the multiple-choice format and English language. The responses were recorded in 5-point Likert scale ranging from strongly agree, agree, neutral, disagree to strongly disagree. The students were given 30-days to respond to the questionnaire and 2-3 reminder emails were sent to get the maximum response rate. After filling the questionnaire, the participants were asked to mail it back to the principal researcher. The participants who gave informed consent and replied to all the questions completely were included in the study. Whereas those participants with incomplete forms and negative consent were excluded from the study. The replies of the questionnaire were collected, coded and analysed descriptively using SPSS version 20.0 (SPSS Inc., Chicago, IL, USA). Chi-square test was used to compare the social media usage between final year and internship students. Mann-Whitney U-test was used to compare the mean differences between the groups. A $p < 0.05$ was considered statistically significant.

RESULTS

Table 1: Distribution of participants in the study.

	Number of participants	Percentage
Final year	226	53.8%
Internship	194	46.2%
Total	420	100%

Table 2: Participant response regarding usage, attitude and ethics of social media engagement in dentistry.

Questions	Final year, n (%)	Internship n (%)	p-value
1. Do you use social media and social networking sites?			
Yes	224 (99.11)	193(99.48)	0.23
No	2 (0.89)	1 (0.52)	
2. What social media platform do you use most?			
WhatsApp	164 (72.56)	151(77.84)	0.14
Facebook	15(6.63)	11(5.67)	
Snapchat	5(2.21)	3(1.54)	
Instagram	42(18.60)	29(14.95)	
3. Which device do you use most often for social media?			
Mobile	194(85.84)	180(92.79)	0.11
Computer/laptop	11(4.87)	4(2.07)	
Tablet	6(2.66)	3(1.54)	
All	15(6.63)	7(3.60)	
4. On average, how many minutes do you spend on social media platforms per day?			
30-60 min	115(50.89)	30(15.46)	0.038*
1-2 h	67(29.64)	127(65.47)	
3-4 h	30(13.28)	31(15.98)	
>4 h	14(6.19)	6(3.09)	
5. How often do you post professional content on your social media profiles?			
Regularly	12(5.30)	21(10.82)	0.45
Sometimes	54(23.90)	74(38.14)	
Rarely	148(65.50)	80(41.24)	
Never	12(5.30)	19(9.80)	

6. Do you keep your professional and personal posts private?			
Yes	184(81.41)	171(88.14)	0.42
No	42(18.59)	23(11.86)	
7. Are you aware of certain codes of conduct to be followed in social media use as health professionals?			
Yes	125(55.31)	115(59.27)	0.51
No	101(44.69)	99(51.03)	
8. Professionally, what is your main purpose of using social media?			
Marketing	8(3.54)	11(5.67)	0.042*
Communication	186(82.30)	135(69.58)	
Connecting with patients	22(9.74)	19(9.80)	
Improving public image	10(4.42)	29(14.95)	
9. Do you post individual patient cases on social media platforms?			
Regularly	12(5.30)	20(10.30)	0.14
Sometimes	25(11.06)	32(16.50)	
Rarely	39(17.26)	21(10.83)	
Never	150(66.38)	121(62.37)	
10. Do you post patient's personal details (name, age, address) along with the post of the case?			
Always	1(0.44)	0(0)	0.17
Sometimes	4(1.77)	4(2.07)	
Rarely	19(8.40)	5(2.57)	
Never	202(89.39)	185(95.36)	
11. Do you take prior informed consent of the patients before posting their case on social media sites?			
Always	82(36.28)	102(52.58)	0.53
Sometimes	85(37.61)	76(39.17)	
Rarely	29(12.83)	11(5.67)	
Never	30(13.28)	5(2.58)	
12. Has use of social media contributed to your success as a dental professional?			
Positively	58(25.66)	57(29.38)	0.09
Negatively	52(23)	50(25.77)	
Neutral	55(24.34)	36(18.56)	
Not sure	61(27)	51(26.29)	
13. Do you feel fellow colleagues posting their advanced or special cases on social media may affect your success as a dental professional in comparison?			
Always	10(4.42)	11(5.67)	0.57
Sometimes	112(49.56)	108(55.67)	
Rarely	8(3.54)	5(2.57)	
Never	96(42.48)	70(36.08)	
14. Do you provide medical/dental advice on social media platforms before, if ever, meeting the patient?			
Always	24(10.62)	31(15.98)	0.13
Sometimes	152(67.26)	143(73.71)	
Rarely	24(10.62)	12(6.19)	
Never	26(11.50)	8(4.12)	
15. Do you keep patients being able to see your posts in mind when you post personal content?			
Always	22(9.73)	23(11.86)	0.07
Sometimes	134(59.30)	132(68.04)	
Rarely	52(23)	28(14.43)	
Never	18(7.97)	11(5.67)	
16. Do you engage with patients in personal conversations on social media platforms?			
Always	3(1.33)	1(0.51)	0.39
Sometimes	10(4.43)	4(2.06)	
Rarely	15(6.63)	7(3.60)	
Never	198(87.61)	183(94.32)	
17. Do you experience patients coming to you with prior health information gathered on social media?			
Always	39(17.26)	31(15.98)	0.22

Sometimes	147(65.04)	125(64.43)	
Rarely	23(10.18)	18(9.28)	
Never	17(7.52)	20(10.31)	
18. Is it easier to handle patients who have prior information gathered on online than those without?			
Always	45(19.91)	38(19.59)	0.08
Sometimes	133(58.85)	128(65.98)	
Rarely	29(12.83)	12(6.18)	
Never	19(8.41)	16(8.25)	
19. Overall, what is your opinion of the effect of social media on dentistry?			
Positively	138(61.06)	122(62.89)	0.19
Negatively	12(5.31)	13(6.70)	
Neutral	52(23.01)	45(23.19)	
Not sure	24(10.62)	14(7.22)	
20. Is two way of communication beneficial between doctor and patients?			
Yes	212(93.80)	186(95.88)	0.46
No	14(6.20)	8(4.12)	
21. Are dental social media logos a new way to attract patients and make dental social accounts interesting?			
Yes	195(86.28)	172(86.66)	0.023*
No	31(13.72)	22(11.34)	
22. Do you blindfold or hide patient's eyes or face while uploading their cases and photographs on social media?			
Yes	135(59.73)	142(73.20)	0.26
No	91(40.27)	52(26.80)	

Table 3: Social media addiction scale by Arsalanand Kirik

	Strongly disagree, n (%)	Disagree, n (%)	Neutral, n (%)	Agree, n (%)	Strongly agree, n (%)	p-value
1. I connect with my friends using social media?						
Final Year	9(3.98)	10(4.42)	7(3.10)	178(78.77)	22(9.73)	0.12
Internship	6(3.10)	11(5.67)	5(2.58)	157(80.92)	15(7.73)	
2. I believe that new media technologies change human life						
Final Year	2(0.88)	7(3.09)	2(0.88)	11(4.86)	207 (91.59)	0.22
Internship	1(0.51)	3(1.55)	1(0.51)	10(5.15)	180(92.78)	
3. I read personal blog posts and search content						
Final Year	13(5.75)	15(6.64)	67(29.65)	124(54.87)	7(3.09)	0.47
Internship	7(3.60)	18(9.28)	38(19.59)	116(59.80)	15(7.73)	
4. I freely share my ideas on social networking sites						
Final Year	8(3.54)	12(5.31)	4(1.77)	140(61.95)	62(27.43)	0.35
Internship	2(1.03)	6(3.09)	6(3.09)	139(71.65)	41(21.14)	
5. I look at the photographs shared on social networking sites?						
Final Year	9(3.98)	10(4.42)	4(1.77)	176(77.88)	27(11.95)	0.19
Internship	4(2.06)	8(4.12)	3(1.55)	156(80.41)	23(11.86)	
6. I search for my friends using social networking sites?						
Final Year	10(4.42)	20(8.86)	45(19.91)	146(64.60)	5(2.21)	0.17
Internship	11(5.67)	23(11.85)	35(18.04)	116(59.80)	9(4.64)	
7. I wonder whether my friends read my posts?						
Final Year	42(18.59)	45(19.91)	36(15.93)	54(23.89)	49(21.68)	0.42
Internship	35(18.04)	42(21.65)	29(14.95)	48(24.74)	40(20.62)	
8. I wonder who views my personal profile?						
Final Year	27(11.95)	68(30.09)	22(9.73)	72(31.86)	37(16.37)	0.61
Internship	26(13.40)	62(31.96)	17(8.76)	65(33.51)	24(12.37)	
9. I am not aware of the time navigating social media						
Final Year	10(4.42)	11(4.87)	7(3.09)	157(69.47)	41(18.14)	0.53
Internship	2(1.03)	6(3.09)	2(1.03)	149(76.81)	35(18.04)	
10. I follow the content into which I am interested on social media						
Final Year	5(2.21)	9(3.98)	4(1.77)	192(84.96)	16(7.08)	0.15

Internship	4(2.06)	7(3.61)	2(1.03)	172(88.66)	9(4.64)	
11. I follow the latest events and news from social media						
Final Year	20(8.85)	30(13.27)	33(14.60)	124(54.87)	19(8.41)	0.37
Internship	14(7.21)	26(13.40)	30(15.47)	114(58.77)	10(5.15)	
12. Social media sites cement my friendship						
Final Year	14(6.19)	25(11.06)	7(3.09)	142(62.84)	38(16.82)	0.88
Internship	12(6.19)	25(12.89)	18(9.28)	118(60.82)	21(10.82)	
13. I comment on the photographs my friends share						
Final Year	11(4.87)	67(29.65)	40(17.70)	90(39.82)	18(7.96)	0.76
Internship	9(4.64)	65(33.50)	28(14.43)	87(44.85)	5(2.58)	
14. I prefer social media over television						
Final Year	21(9.30)	17(7.52)	2(0.88)	180(79.65)	6(2.65)	0.89
Internship	3(1.55)	10(5.15)	5(2.58)	165(85.05)	11(5.67)	
15. I feel that I have a poor communication with people whenever I do not access to social networking sites						
Final Year	12(5.31)	18(7.97)	14(6.19)	141(62.39)	41(18.14)	0.11
Internship	5(2.57)	9(4.64)	9(4.64)	139(71.65)	32(16.50)	
16. I believe that new social media has a connective power						
Final Year	2(0.88)	4(1.77)	2(0.88)	11(4.87)	207(91.60)	0.73
Internship	0(0)	1(0.52)	0(0)	4(2.06)	189(97.42)	
17. I believe that social media has changed learning habits						
Final Year	15(6.64)	21(9.30)	6(2.65)	176(77.87)	8(3.54)	0.25
Internship	10(5.15)	15(7.73)	5(2.58)	131(67.53)	33(17.01)	
18. I spend my free time surfing the internet						
Final Year	22(9.73)	56(24.78)	9(3.98)	131(57.97)	8(3.54)	0.37
Internship	16(8.25)	35(18.04)	6(3.09)	124(63.92)	13(6.70)	
19. I believe that social networking sites are instructive						
Final Year	11(4.87)	65(28.76)	67(29.65)	68(30.08)	15(6.64)	0.55
Internship	5(2.57)	62(31.96)	50(25.77)	66(34.02)	9(4.64)	
20. I participate in events on social networking sites						
Final Year	24(10.62)	64(28.32)	44(19.47)	69(30.53)	25(11.06)	0.37
Internship	17(8.76)	55(28.35)	40(20.62)	60(30.93)	22(11.34)	
21. I find new friends through social media						
Final Year	4(1.77)	8(3.54)	5(2.21)	192(84.96)	17(7.52)	0.91
Internship	6(3.09)	8(4.12)	4(2.06)	164(84.54)	12(6.19)	
22. I think that I am being followed or stalked by someone on social media						
Final Year	15(6.64)	55(24.34)	15(6.64)	124(54.86)	17(7.52)	0.46
Internship	11(5.67)	53(27.32)	12(6.19)	100(51.54)	18(9.28)	

RESULTS

A total of 485 students pursuing Bachelor of Dentistry in Saudi Arabia were mailed the questionnaire out of which 420 replies were found to be valid and included in the study. Around 226 (53.8%) participants were in their final year and 194 (46.2%) of them in their internship as shown in Table 1. The mean age of the participants was 21.67 ± 2.14 years in this study. More than 99% of the dental students in both internship and final year used the social media applications with WhatsApp being the most common around 72.56% in final year and 77.84% in internship. This usage was followed by Instagram, Facebook and Snapchat in both the groups. The difference was found to be statistically non-significant. However, the average time spent on these apps was found to be more and statistically significant in the internship students than final year students. Around 30-60 mins were spent by 50.89% of the students in final year and 1-2 hours were spent by 65.47% of the students in their

internship which has been found to be statistically significant as shown in Table 2. Around 65.50% of final year and 41.24% of internship students rarely posted professional contents on their social media profiles. Around 81.41% and 88.14% of the final year and internship students respectively kept their professional and personal posts private. Around 55.31% of final year and 59.27% of internship students were aware of certain codes of conduct to be followed in social media use as health professionals. Around 82.30% of final years and 69.58% of internship students used social media as a professional mode of communication which has been found to be statistically significant. Around 66.38% and 89.39% of final year students & 62.37% and 95.36% of internship students never posted individual patient cases or details on social media platforms. More number of internship students, around 52.58% and 36.28% of final year students take consent of the patients before posting their case on social media

sites. Around 27% of final year students were not sure and 29.38% of internship students positively believed that social media has contributed to their success as a dental professional. Sometimes the students from both the groups provide medical/dental advice on social media platforms before, if ever, meeting the patient however most of them never engage with patients in personal conversations. Students from both the groups sometimes experience patients coming to them with prior health information gathered on social media and also found it easier to handle such patients. According to 61% final year students and 62.89% internship students, social media has positive effect on dentistry. All these findings have been found to be statistically non-significant. Around 86% of the students from both the groups find dental social media logos a new way to attract patients and make dental social accounts interesting which has been found to be statistically significant as shown in Table 2. Around 91.59% of final year and 92.78% of internship student strongly agree that new media technologies change human life. Around 69.47% of final year and 76.81% of internship students agree that they not aware of the time navigating social media. Around 57.97% of final year and 63.92% of internship student agree that they spend their free time surfing the internet. All these findings have been found to be statistically non-significant as shown in Table 3.

DISCUSSION

The present study was conducted to evaluate the usage and addiction of social media apps by final year dental students and those in their internship in various dental colleges across Saudi Arabia. In this study it has been found that more than 99% of the dental students use social media and social networking sites. More than 70% of the students used WhatsApp followed by 15% Instagram as the most familiar social media platform for communication. More than 85% of the students in both the groups owned a smartphone and used it for social media engagements. A study conducted by Alosaimi et al¹³ found that around 71% dental students owned smartphone in private colleges of Saudi Arabia. Similar studies conducted by Sen et al¹⁴, Makkar et al¹⁵, Kumar et al¹⁶, Deogade et al¹⁷ found that 100% dental students owned smartphones. This surge in the usage of smartphone can be attributed to the better availability of fast speed internet, rise of e-learning platforms, requirements of interpersonal communication, leisure and entertainment. In this study it has been found that 51% of final year students spend 30-60 mins and 65% of internship students spend 1-2 hours on social media platforms per day. This finding is distinctive and alarming. This can be attributed to the study pattern of the two groups of students. The final year students have more studies, exam pressure, laboratory work and clinical engagements as compared to the students in their internship. This keeps their screen-time on social media apps less as compared to

internship students. In a similar study conducted in Malaysian and Finnish universities, it was found that 25.3% of the students used social media more than 20 hours per week.¹⁸ Students from different fields of study have been found to spend 3-4 hours per day on social media platforms.¹⁹⁻²¹ Excessive and prolonged usage of internet can lead to problematic internet use (PIU) which can further lead to various psychosocial problems like stress, anxiety, depression, unusual eating, less sleep and even poor oral hygiene.²²⁻²³ College students are very vulnerable to suffer from PIU especially those staying away from home as parental control and monitoring is missing. Also in the colleges, the internet is easily available along with the necessity of surfing information for the course, communicating with friends and family.²⁴ All this makes the usage of internet a necessary evil. In this study, on the brighter side it has been found that most of the students never post patients personal details, images or treatment over the internet nor do they establish personal communication with them. Almost half of them are aware of certain codes of conduct to be followed in social media use as health professionals. Unanticipated ethical consequences have been reported by social media activities of some healthcare students.⁵ Student sometimes come across patients who have found information regarding their problem on social media and find such patients easy to treat. Overall, the dental students believed that social media has a positive impact on dentistry but were sceptical regarding its contribution in their success as a dental professional. The literature evidence is also not conclusive about the effect of social media on healthcare education. Some studies find a positive impact and some report a negative impact of social media on education.^{17,25-27} This can be attributed to the variety of usage based on individual preferences. Social media in dentistry can be used for formal education, information gathering, information sharing, patient management, practice management, oral-health promotion, marketing, communication, entertainment, lifestyle or empty scrolling to while away the time. The digital usage can be defined on this large spectrum based on the requirements of the individual using it. Hence the impact of usage lies on the temperament of person using it.

In the study, social media addiction scale by Arsalan and Kirik¹² was utilized to understand the level of addiction of social media usage in dental students across Saudi Arabia. It was found that there was no difference in response to questions between the final year and internship students. The students utilized social media to connect with their friends. Around 90% of the students from both the groups strongly agree that new media technologies change human life. A similar study conducted by Varshney et al²⁸ and Sen et al¹⁴ found that more than 50% of the dental students think in the similar way. These new-age media technologies amalgamated with traditional

professionalism and learnings can be utilized for the upliftment of dental profession on the global scale. Also in this study, around 58% final year students and 64% internship students agree to spend their free time surfing the internet. More than 50% students from both the group feel that they are being stalked by someone over the internet. Around 69% final year and 77% internship students not aware of the time navigating social media. All these findings should be viewed cautiously and certain philosophy or policy should exist related to the use of social media by dental students in colleges. The limitation of this study lies in the fact that the usage of internet for education and educators have changed since Covid-19. With more classes and learnings being conducted online, we do not know the social media usage before and after the Covid-19 pandemic. Further research can be conducted to better understand the trends and priorities of dental students utilizing social media. However, the findings of this study can be useful in interpreting the dental students attitude and preferences with various social media platforms.

CONCLUSION

This multi-institutional study provides an interesting insight into the usage of social media by dental students. It can be concluded from this study that social media is being actively and extensively consumed by dental students across the various colleges of Saudi Arabia. The time spent on such platforms is more for internship students as compared to students in their final year. The dental students firmly believe that social media presence is an important factor for their success as a dental professional. However, excessive involvement over digital media can lead to distraction and addiction especially when used for non-academic or educational purposes. Social media if utilized with proper guidelines and philosophy, it can be an economical, constitutive and vital source of learning and skill development for dental students and professionals.

REFERENCES

- Balakrishnan V, Gan C L. Students' learning styles and their effects on the use of social media technology for learning. *Telematics and Informatics* 2016; 33: 808–821.
- Oakley, M.; Spallek, H. Social media in dental education: A call for research and action. *J. Dent. Educ.* 2012;76:279–287.
- Akakandelwa A, Walubita G. Students' social media use and its perceived impact on their social life: A case study of the University of Zambia. *J Afr Interdisciplinary Stud* 2018;26:1-8.
- Kenny, P.; Johnson, I.G. Social media use, attitudes, behaviours and perceptions of online professionalism amongst dental students. *Br. Dent. J.* 2016;221:651–655.
- Dobson, E.; Patel, P.; Neville, P. Perceptions of E-Professionalism among Dental Students: A UK Dental School Study. *Br. Dent. J.* 2019;226:73–78.
- Sharka, R.; San Diego, J.P.; Nasseripour, M.; Banerjee, A. Identifying Risk Factors Affecting the Usage of Digital and Social Media: A Preliminary Qualitative Study in the Dental Profession and Dental Education. *Dent. J.* 2021;9:53.
- Affendi, N.H.K.; Hamid, N.F.A.; Razak, M.S.A.; Nudin, I.I.I. The Pattern of Social Media Marketing by Dentist in Malaysia. *Malays. Dent. J.* 2020;1:24–42.
- Pereira, C.A. Dentistry and the Social Media. *RGO-Rev. GaúchaOdontol.* 2017;65: 229–236.
- De Peralta, T.L.; Farrior, O.F.; Flake, N.M.; Gallagher, D.; Susin, C.; Valenza, J. The use of social media by dental students for communication and learning: Two viewpoints. *J. Dent. Educ.* 2019;83:663–668.
- Gedam SR, Shivji IA, Goyal A, Modi L, Ghosh S. Comparison of internet addiction, pattern and psychopathology between medical and dental students. *Asian J Psychiatr.* 2016;22:105–10.
- Chern K-C, Huang J-H. Internet addiction: Associated with lower healthrelated quality of life among college students in Taiwan, and in what aspects? *Comput Hum Behav.* 2018;84:460–6.
- Kırık MA, Arsalan A, Cetinkaya A, Mehmam G. A Quantitative research on the level of social media addiction among young people in turkey. *Int J Sci Cult Sport* 2015;3:108-22.
- Alosaimi FD, Alyahya H, Alshahwan H, Al Mahyijari N, Shaik SA. Smartphone addiction among university students in Riyadh, Saudi Arabia. *Saudi Med J* 2016;37:675-83.
- Sen S, Sarode SS, Ilahi AI, Sarode SS, Deolia S, Sen RC. Assessing the of role of social media in dental education. *Int J Oral Health Med Res* 2016;3:10-5.
- Makkar N, Lawrence D, Veeresh DJ, Banik A, Kumar A, Mehar AS. Assessment of social media usage and its influence among dental faculty members in Devangere city-A cross sectional survey. *J Indian Assoc Public Health Dent* 2018;16:246-50.
- Kumar S, Kumar A, Badiyani B, Singh SK, Gupta A, Ismail MB. Relationship of internet addiction with depression and academic performance in Indian dental students. *Clujul Med* 2018;91:300-6.
- Deogade SC, Saxena S, Mishra P. Adverse health effects and unhealthy behaviors among dental undergraduates surfing social networking sites. *Ind Psychiatry J* 2017;26:207-14.
- Uma E, Nieminen P, Mani SA, John J, Haapanen E, Laitala ML, Lappalainen OP, Varghase E, Arora A, Kaur K. Social Media Usage among Dental Undergraduate Students-A Comparative Study. *Healthcare (Basel).* 2021 Oct 20;9(11):1408.
- Chaklader, M.A.; Zahir, Z.; Yasmeen, S. Original article effects of social media on academic performance of medical students of a selected tertiary medical college. *Bangladesh Med. Coll. J.* 2021;26: 30–35.
- Eri,s, H.; Havlio` glu, S.; Kaya, M. The Effect of Mobile Phone Use of Universty Students on Their Academic Success. *Eur. J. Sci. Technol.* 2021;27:433–438.
- Rajeh, M.T.; Sembawa, S.N.; Nassar, A.A.; Al Hebshi, S.A.; Aboalshamat, K.T.; Badri, M.K. Social media as a learning tool: Dental students' perspectives. *J. Dent. Educ.* 2021;85:513–520.
- Park S. Associations of physical activity with sleep satisfaction, perceived stress, and problematic Internet use in Korean adolescents. *BMC Public Health.* 2014;14:1143.

23. Wu C-Y, Lee M-B, Liao S-C, Chang L-R. Risk factors of internet addiction among internet users: an online questionnaire survey. *PloS one*.2015;10(10):e0137506.
24. Al-Gamal E, Alzayyat A, Ahmad MM. Prevalence of internet addiction and its association with psychological distress and coping strategies among university students in Jordan. *PerspectPsychiatr Care*. 2016;52(1):49–61.
25. Lahiry, S.; Choudhury, S.; Chatterjee, S.; Hazra, A. Impact of social media on academic performance and interpersonal relation: A cross-sectional study among students at a tertiary medical center in east india. *J. Educ. Health Promot*. 2019, 8.
26. Spallek, H.; Turner, S.P.; Donate-Bartfield, E.; Chambers, D.; McAndrew, M.; Zarkowski, P.; Karimbux, N. Social Media in the Dental School Environment, Part B: Curricular Considerations. *J. Dent. Educ*. 2015, 79, 1153–1166.
27. Saadeh, R.A.; Saadeh, N.A.; de la Torre, M.A. Determining the Usage of Social Media for Medical Information by the Medical and Dental Students in Northern Jordan. *J. Taibah Univ. Med. Sci*. 2020, 15, 110–115.
28. Varshney S, Menon I, Gupta R, Sharma A, Arora V, Bashir S. Addiction and usage of social media among dental students studying in dental institute of Ghaziabad, Uttar Pradesh. *J Indian Assoc Public Health Dent* 2022;20:86-94.