

Program Director Perception Regarding Digital and Social Media (DSM) Misinformation in Dental Education.



Daniel Aclan DMD, Wai-Yin Chan DMD, MS, MPH
NYU Langone Dental Medicine, Advanced Education in Pediatric Dentistry Residency, San Diego, CA

NYU Langone Dental Postdoctoral
Residency Programs

INTRODUCTION

- In recent years, the emergence of social media platforms have revolutionized information dissemination and networking across various professional domains, including healthcare and dentistry.¹
- According to a survey conducted by the Pew Research Center in 2021 seven-in-ten Americans use social media of some kind.²
- The unrestricted nature of digital social media (DSM) platforms allows for the rapid dissemination of dental information, with no requirement of rigorous peer-review or expert oversight.³
- As dental education endeavors to keep pace with the digital age, it is imperative to evaluate the risks associated with social media and implement strategies to safeguard the integrity of dental knowledge and practice.

PURPOSE

- This study examines how personal DSM use among pediatric dental residency program directors may influence their perceptions of DSM's role in dental education.
- It aims to assess potential biases and explore how program directors perceive both the educational benefits and risks of misinformation associated with DSM.

METHOD

- This cross-sectional study surveyed pediatric dental program directors and associate directors throughout the country via email.
- The survey assessed demographics, personal DSM use, and attitudes toward DSM and misinformation in dental education.
- Statistical analyses included descriptive statistics, chi-squared tests, and ordered logistic regression to explore associations.
- Survey items measured beliefs about DSM misinformation, its impact on dental education, and existing curricula or strategies to address it.
- A four-point Likert scale was used to evaluate social media opinions, and ordered logistic regression analyzed how participant characteristics influenced responses.

Table 1: Program directors' responses (categorized according to theme) regarding guidelines for DSM use at pediatric dental training programs.

Theme		Example
General university policy	Generic	“must abide by university policy”
No current policy	Informal expectations	“We casually speak with the residents about the benefit and risk of utilizing DSM and how to filter out wrong from right information...”
		“The residents are well-informed ... We informally discuss this topic”
		“Residents... are capable of using their own judgment”
	Plan to make policy in the future	“We will need to implement a policy in the future, but we do not have a policy at this time.”
		“We do not have a policy in place”
	No policy	“We do not use digital social media in our curriculum.”
		“We don't use social media in residency”
Use DSM as supplemental material	Supplemental material	“sometimes look for Youtube videos/photos online to supplement some of our ... topics.”
DSM not valid	Quality of information	“Do not believe the DSM is a valid source of information - evidence based or not.”
		“... there is risk with training philosophy and consistency”
		“misinformation is a chronic condition, and it is difficult to validate...”
	No CODA standard	“Not part of CODA education standards or AAPD guidelines (yet)”

Table 2: Program Directors agreement with various DSM statements

	Strongly agree	Agree	Disagree	Strongly disagree
Dental education on DSM is valuable	0 (0%)	13 (72%)	4 (22%)	1 (6%)
There are risks in integrating DSM into pediatric dental education	6 (33%)	11 (61%)	1 (6%)	0 (0%)
The educational content on DSM competes with traditional education resources	1 (6%)	3 (16%)	12 (67%)	2 (11%)
Misinformation on DSM poses a threat to dental education	10 (56%)	8 (44%)	0 (0%)	0 (0%)

Table 3: Demographics and their opinion of if digital social media is valuable for dental education.

Participant Characteristics	Overall N=18	Is DSM Valuable?		P-value
		Disagree N = 5	Agree N = 13	
Type of Residency Program				0.5
Combined University and Hospital based	5 (28%)	1 (20%)	4 (31%)	
Community-based	2 (11%)	0 (0%)	2 (15%)	
Hospital based	8 (44%)	2 (40%)	6 (64%)	
University-based	3 (17%)	2 (40%)	1 (7.7%)	
Age *				
	48 [31, 69]	44 [31, 69]	49 [40, 66]	0.5
Gender				>0.9
Female	10 (56%)	3 (60%)	7 (54%)	
Male	8 (44%)	2 (40%)	6 (46%)	
Year Graduated from Dental School*	2002 [1981,2019]	2003 [1981, 2019]	2001 [1983, 2011]	0.8
Year Graduated from Dental Residency*	2009 [1983, 2021]	2008 [1,983, 2021]	2009 [1993, 2016]	>0.9
Practice Location				0.8
Midwest	2 (11%)	0 (0%)	2 (15%)	
Northeast	5 (28%)	1 (20%)	4 (31%)	
South Atlantic	1 (5.6%)	1(20%)	0 (0%)	
South Central	3 (17%)	1(20%)	2 (15%)	
Southwest	1 (5.6%)	0 (0%)	1 (7.7%)	
Western	6 (33%)	2 (40%)	4 (31%)	
Race				0.6
Asian	4 (22%)	2 (40%)	2 (15%)	
Other/Multiracial	2 (11%)	0 (0%)	2 (15%)	
White	12 (67%)	3 (60%)	9 (69%)	
Ethnicity				>0.9
Hispanic/Latino	2 (11%)	0 (0%)	2 (15%)	
Non-Hispanic	12 (67%)	5 (100%)	11 (85%)	
Number of DSM Used	3 [1,7]	5 [1.00, 7.00]	3 [1.00, 6.00]	0.7
Time spent using DSM				0.054
Rarely	4 (22%)	2 (40%)	2 (15%)	
Monthly	1 (5.6%)	1 (20%)	0 (0%)	
Weekly	2 (11%)	1 (20%)	1 (7.7%)	
Daily	11 (61%)	1 (20%)	10 (77%)	
Time spend watching dental content on DSM				>0.9
30 min or less	16	5 (100%)	3 (23%)	
More than 30 min, [range]	2	0 (0%)	13 (100%)	

RESULTS

- The study had an 18% response rate, with 18 fully completed surveys used for analysis.
- Out of 100 emails sent 7 were bounced back.
- Respondent demographics included 13 respondents who felt DSM was valuable and 5 who did not (Table 2)
- Findings indicated a positive but statistically insignificant association between personal DSM use and opinion on the value of DSM in dental education (table 3, p=.054)
- All respondents acknowledged concerns about DSM misinformation poses a risk to dental education (table 2)

DISCUSSION

- This study explored pediatric dental residency program directors' perceptions of DSM's role in education, focusing on misinformation and digital literacy.
- While results were not statistically significant due to the low response rate, findings suggested that directors who frequently use DSM may be more likely to recognize its value.
- All respondents expressed concern about DSM misinformation, aligning with broader healthcare literature on the rapid spread of false information.⁴
- The study highlighted a potential need for digital literacy training in residency curricula to help students critically evaluate online dental content.
- A lack of standardized approaches to DSM across residency programs suggests a gap in regulatory oversight and formal guidelines.
- Some directors reported informal policies or future plans to integrate DSM-related education.
- The absence of accreditation requirements from organizations like CODA or AAPD leaves program directors to individually determine how to address DSM in their curricula.
- Findings support the need for structured policies and curriculum development to ensure a consistent and evidence-based approach to DSM in dental education.

CONCLUSIONS

- This study highlights the growing role of DSM in dental education, emphasizing both its potential benefits and the challenges posed by misinformation. While there may be a link between personal DSM use and awareness of its impact, the results were not statistically significant.
- The consensus on the need to address misinformation, coupled with the variability in DSM policies across programs, suggests the need for formal guidelines. Establishing standardized approaches could help ensure that future dental professionals are equipped to critically assess digital information while maintaining educational integrity and patient care.

REFERENCES

1. Chou WS, Oh A, Klein WMP. Addressing Health-Related Misinformation on Social Media. *JAMA*. 2018;320(23):2417-2418. doi:10.1001/jama.2018.16865
2. Auxier B, Anderson M. Social media use in 2021. Pew Research Center. Published April 7, 2021. <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>
3. Sharka R, Diego JS, Nasseripour M, Banerjee A. Digital and social media risks: perspectives on dental education and the profession. *Br Dent J*. 2022;233(9):947. doi:10.1038/s41415-022-5097-6
4. Sharka R, San Diego JP, 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 (Basel)*. 2021;9(5):53. Published 2021 May 8. doi:10.3390/d9050053

Funding by Hansjorg Wyss Department of Plastic Surgery, Division of Dental Medicine, NYU Grossman School of Medicine

Acknowledgment: Special thank you to Tanya Oei, Manual Vasquez Sanchez, MS, Shivam Patel, DDS and Sarah Park, DDS for help throughout this research process.