



ABSTRACT

Objective: This study sought to evaluate U.S. dental (DDS/DMD) and dental hygiene (DH) programs' curricular content regarding eating disorder detection, intervention, and referral services.

Methods: A 25 item questionnaire was distributed electronically via Qualtrics to 400 dental doctoral deans and dental hygiene program directors in the United States between June and December 2022. Responses were analyzed using descriptive statistics and comparisons between DDS/DMD and DH programs were carried out using chi-squared and non-parametric tests (e.g., Wilcoxon).

Results: Complete responses were received from 11 DDS/DMD and 57 DH programs. The vast majority (96%) of programs included eating disorder-related courses and lectures, with DDS/DMD and DH programs devoting similar times on this topic (medians times were 135 and 90 minutes, respectively; P=0.2). Virtually all respondents (99%) agreed that early detection of eating disorders is important and oral health professionals have a crucial role in this regard. However, only half of programs reported referring patients for eating disorder-related evaluations, 32% had identified appropriate referral agencies, and only 9% had established a point person for such referrals. Most respondents (57%) suggested that the COVID pandemic worsened issues related to eating disorders.

Conclusions: The study's results affirm the importance of eating disorders as topic needing more attention in the oral health professionals' training curricula and highlight several areas where specific curricular interventions can be made.

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BACKGROUND

- AIM: To evaluate US dental DDS, DMD, and DH programs curricular content regarding eating disorder detection, intervention, and referral services.**
- The oral cavity is one of the first places to display clinical signs of systemic disease and nutritional deficiency.^{1,2}
- Oral manifestations of eating disorders can include dental caries, periodontal disorders, salivary adenopathy, hyposalivation and soft tissue disorders.³
- Studies have found significant alteration in salivary flow and pH, salivary gland enlargement, and a higher accumulation of disease-favoring oral irritants.⁴
- 9% of the US population will have an eating disorder in their lifetime with a reported mean age of onset as 12.5 years old.^{5,6}
- Age of onset for anorexia and bulimia nervosa is decreasing in younger generations.⁷
- Rates of recovery, improvement, and chronicity are more favorable in younger patients.⁸
- Early intervention can be prognostically favorable, but research is still limited.⁸
- Eating disorder related medical admissions have increased significantly during the COVID-19 pandemic.⁹

METHODS

A 25-item questionnaire was distributed electronically via Qualtrics to 400 dental doctoral deans and dental hygiene program directors in the United States between June and December 2022. Responses were analyzed using descriptive statistics and comparisons between DDS/DMD and DH programs were carried out using chi-squared and non-parametric tests (e.g., Wilcoxon).

Curricular Inclusion (Didactic and Clinical Education)

- Questions analyzing curricular inclusion in both didactic and clinical settings for both DDS/DMD and DH programs were included.

Screening, Interventional, Referral Resources and Training

- Designated screening/detection training, any interventional training, and any knowledge of referral resources, services, or a point person for patients indicating signs and/or symptoms of an eating disorder.

Attitudes

- Assessing individual's attitudes regarding eating disorders as a public health issue, emerging psychosocial problem, and the differing roles and responsibilities of oral health professionals.

COVID-19

- Beliefs of relative eating disorder time trends and prevalence to determine perception on eating disorder rate exacerbation as an effect of the COVID-19 pandemic.

RESULTS

- DDS/DMD and DH programs devote similar times on eating disorder-related courses and lectures
- Complete responses were received from 11 DDS/DMD and 57 DH programs.
- The vast majority (96%) of programs included eating disorder-related courses and lectures,
- Virtually all respondents (99%) agreed that early detection of eating disorders is important and oral health professionals have a crucial role in this regard
- Only half of programs reported referring patients for eating disorder-related evaluations
- 32% of programs had identified appropriate referral agencies, and only 9% had established a point person for such referrals
- Most respondents (57%) suggested that the COVID pandemic worsened issues related to eating disorders

Table 1. Curricular Material in Specific Domains

Characteristic	N	Percent Distribution (%)
Oral manifestations of disordered eating behaviors		
Yes	66	97
No	2	3
Patient education regarding disordered eating behaviors		
Yes	61	90
No	7	10
Patient education regarding patient-specific home care for those with disordered eating behaviors		
Yes	62	91
No	6	9
Interventional/Patient Approach Skill Training on eating disorders		
Yes	33	50
No	33	50
Clinical simulation on oral manifestations of disordered eating behaviors		
Yes	8	12
No	60	88

Table 2. Attitudes and Beliefs on Eating Disorders, Oral Health Professional's Role, and COVID-19 Effects

Characteristic	N	Percent Distribution (%)
Eating disorders are a serious health condition		
Strongly Agree	55	81
Agree	12	18
Neither Agree nor Disagree	1	1
The COVID 19 epidemic has exacerbated issues related to eating disorder prevalence, detection, and/or treatment		
Strongly Agree	19	28
Agree	20	29
Neither Agree nor Disagree	28	41
Disagree	1	2
Early detection and intervention of eating disorders is important		
Strongly Agree	50	74
Agree	17	25
Neither Agree nor Disagree	1	1
Oral health professionals have a _____ responsibility to attempt to identify patients with eating disorders		
Professional		
Strongly Agree	49	72
Agree	19	28
Legal		
Strongly Agree	24	35
Agree	21	31
Neither Agree nor Disagree	15	22
Disagree	6	9
Strongly Disagree	2	3
Oral health professionals can have a crucial role in early identification and intervention for the treatment of eating disorders		
Strongly Agree	50	74
Agree	17	25
Disagree	1	1

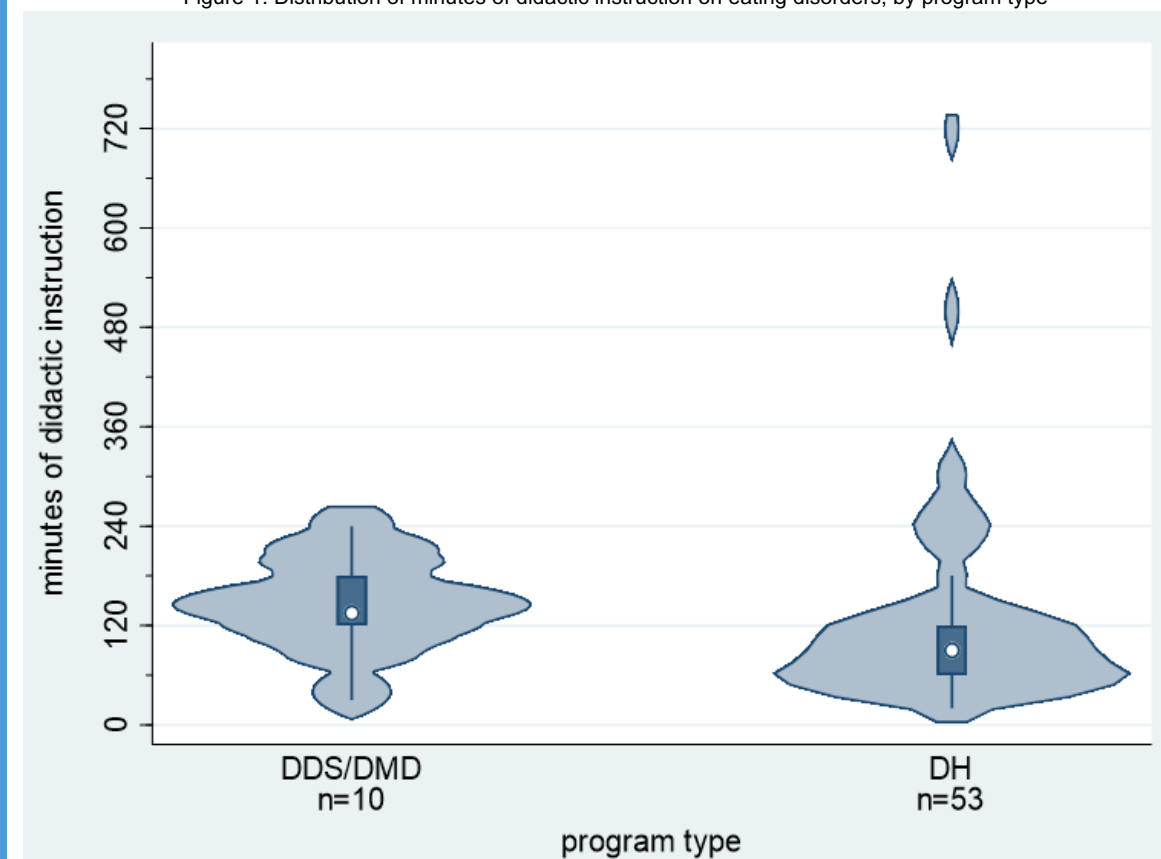
Table 3. Responsibility and Program Referral Methods

Characteristic	N	Percent Distribution (%)
Liability in _____ patients with eating disorders is an emerging issue in dentistry		
Identifying		
Strongly Agree	6	9
Agree	17	25
Neither Agree nor Disagree	36	53
Disagree	8	12
Strongly Disagree	1	1
Referring		
Strongly Agree	6	89
Agree	19	28
Neither Agree nor Disagree	35	52
Disagree	7	10
Strongly Disagree	1	1
Our program adequately prepares oral health professionals to _____ patients with suspected eating disorders		
Screen		
Strongly Agree	12	18
Agree	36	53
Neither Agree nor Disagree	7	10
Disagree	13	19
Consider appropriate interventions for		
Strongly Agree	8	12
Agree	24	35
Neither Agree nor Disagree	16	24
Disagree	18	26
Strongly Disagree	2	3
Make appropriate referrals for		
Strongly Agree	8	12
Agree	30	44
Neither Agree nor Disagree	12	18
Disagree	15	22
Strongly Disagree	3	4
Oral health professionals are at a higher risk for eating disorders		
Strongly Agree	3	5
Agree	5	7
Neither Agree nor Disagree	41	60
Disagree	17	25
Strongly Disagree	2	3

Table 4. Referral of Patients

Characteristic	N	Percent Distribution (%)
Referral agencies have been identified for patients presenting with oral manifestations of eating disorders		
Yes	22	32
No	33	49
Not applicable/I do not know	13	19
Patients who exhibit oral signs and symptoms of behaviors associated with eating disorders are referred for treatment		
Yes	34	50
No	19	28
Not applicable/I do not know	15	22
We have established a specific point person for referral to eating disorder clinics and/or treatment programs		
Yes	6	9
No	59	87
Not applicable/I do not know	3	4

Figure 1. Distribution of minutes of didactic instruction on eating disorders, by program type



SUMMARY

- This study' results affirm the importance for eating disorder as a topic needed more in oral health professionals' training
- Many patients in the general population have more regular contact with their dentist and hygienist than their primary care provider, therefore, it is crucial that oral health professionals are properly trained in this area.
- Those who treat pediatric and adolescent patients should pay particular attention as their patient demographic is at a much higher risk, but also has a much higher rate of recovery.
- Screening protocols, such as Child Eating Behavior Questionnaire (CEBQ) and SCOFF questionnaires, could be embedded in patient questionnaires at student clinics.
- Future directions and additional research can be done regarding the effectiveness of interventional strategies and training methodologies.

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