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Authors	Cush, Maeve;Domingos, Marcia;Hayes, Martina;Roberts, Anthony
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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Determining dental students' and dental hygiene students' perceptions of eating disorders and their management

Précis

There is a need for development within the dental curriculum to improve the teaching and training regarding the diagnosis and management of eating disorders.

Abstract

Statement of the problem: Pathological tooth surface loss (TSL) is an increasing challenge for dental healthcare professionals (DHCPs). Patients with eating disorders (EDs) may present with TSL and future DHCPs should be aware of the medical, dental and general management of patients with EDs who may present with TSL.

Purpose of the study: Determine perceptions of undergraduate students at Cork University Dental School and Hospital (CUDSH) regarding their training and the management of eating disorders.

Methods: A questionnaire was distributed to final year dental (FYD; n=47) and dental hygiene (FYDH; n=14) students approaching the end of their studies at University College Cork.

Results: A response rate of 40% for FYD (n=19) and 86% for FYDH (n=12) students showed no obvious trends differentiating between perceptions of FYDs and FYDHs. The perceived confidence of students in managing patients with EDs varied widely. A number of respondents perceived inadequate training in relation to oral manifestations (32%) and dental management (16%) of patients with EDs. In relation to the medical management (90%), personality traits (71%) and psychological needs (81%), students perceived a requirement for further training. A total of 77% of respondents were unaware of local support services available to ED patients, with 94% also unaware of Eating Disorder Centre Cork (EDCC).

Conclusion: There is a need for improvement within the dental curricula in education regarding patients with EDs, specifically their comprehensive management by DHCPs and surrounding services.

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Dr Maeve Cush
BDS MFDS
Senior House Officer
Dublin Dental University Hospital

Dr Marcia Domingos
BSc MSc BDS
Dental Practitioner
Tech Town Dentistry
Ontario
Former dental student, UCC

Dr Martina Hayes
BDS MFDS PhD
Senior Lecturer Restorative Dentistry
Cork University Dental School and Hospital

Prof. Anthony Roberts
BSc BDS FDS (Rest Dent) PhD
Professor in Restorative Dentistry
Cork University Dental School and Hospital

Corresponding author: Dr Maeve Cush, Dublin Dental University Hospital, Lincoln Place, Dublin
E: maeve.cush@dental.tcd.ie

Introduction

Eating disorders (EDs) can be described as "a group of psychopathological disorders affecting patient relationship with food and his/her own body, which manifest through disorders or chaotic eating behaviour".[1,2] The most common types of EDs are listed in **Table 1**.[3]

Table 1: Common eating disorders.

Common types of eating disorders	Summary of subtype
Anorexia nervosa (AN)	▸ Persistent restriction of energy intake (food) leading to a person becoming significantly underweight ▸ Intense fear of gaining weight or of becoming fat ▸ Undue influence of body shape and weight on self-evaluation
Bulimia nervosa (BN)	▸ Repeated episodes of binge eating ▸ A sense of a lack of control over eating during the episode ▸ Inappropriate compensatory behaviours aimed at preventing weight gain ▸ Self-evaluation is unduly influenced by body shape and weight
Binge eating disorder (BED)	▸ Repeated episodes of binge eating ▸ A sense of a lack of control over eating during the episode

Potential effects of these disorders can be severe. The mortality rate associated with anorexia nervosa for females aged 15 to 24 years is 12 times higher than the rate of all other causes of death in this group.[4,5]

EDs can have severe consequences for patients' oral health, such as lesions of the mucosa, periodontium and dentition, and symptoms such as xerostomia and oral pain.[2,6,7] Early detection and intervention are important for the treatment and recovery of patients with EDs to avoid or minimise oral health sequelae.[8-10]

Research has identified the lack of educational training pertaining to the oral and physical manifestations of EDs, skills in patient approach, and knowledge of referral agencies as a barrier to ED-specific comprehensive care among practising dentists.[4] Limited literature exists regarding dental practitioners' attitudes towards the management skills in approaching the ED patient and patient referral to the appropriate services. Previous studies have indicated that although dental and dental hygiene educational programmes include these health issues within their curricula, more dental hygiene students reported inclusion in comparison to dental students.[11]

Aim

The purpose of this study was to identify the knowledge and awareness of final year dental (FYD) and dental hygiene (FYDH) students regarding the appropriate management of a patient with an ED and the resources available. The study aimed to identify if there are weaknesses in the curricula for dental students and dental hygiene students in relation to ED management.

Method

An electronic survey was distributed to FYD and FYDH students to assess their self-efficacy and ability to appropriately manage an individual with an ED in a dental setting.

Recruitment

Ethical approval was granted from the Social Research Ethics Committee, University College Cork (UCC). FYD and FYDH students were invited to participate in an online survey to determine their knowledge and awareness of, and confidence regarding, patients who have been diagnosed with an ED. The survey was sent to the UCC emails of all FYD (n=45) and FYDH (n=14) students.

Data collection

The questionnaire was distributed in May 2017 via UCC Blackboard Learn, an academic website used to access lecture notes and online discussions. Students were reminded to complete the questionnaire by their class representative.

Data analysis

Results were analysed on a Microsoft Excel spreadsheet. Each response was entered and answers were collated.

Results – overview

The response rate was 31 from a total of 59 (52.5%). Nineteen out of a total of 45 FYD students (42%) responded and 12 from 14 FYDH students (86%). There was no data collected on the gender or nationality of responders. The response rate of this study was higher than that of the McDermott (2016) study, which investigated a similar topic in a similar location (36.5%).[12] A 2007 study by DeBate *et al.* had a response rate of 46%.[4] The questionnaire was categorised into four main themes: confidence; training; awareness of EDs; and, onward referral knowledge. For the appropriate questions, a five-point Likert scale was used. The scores correlated to:

1 – Very little
2 – Little
3 – Average
4 – Good
5 – A great deal

With questions regarding confidence, scores correlated to:

1 – Not at all confident
2 – Not confident
3 – Average
4 – Fairly confident
5 – Extremely confident

Main theme 1: Confidence

Q. *How would you rate your confidence in discussing a suspected eating disorder with the patient?*

Only 5% of dental students felt that they were "extremely confident" discussing an ED with a patient, 16% felt they were "fairly confident", and 47% gave their confidence an "average" value. Some 26% felt "not confident", and 5% "not at all" confident.

Dental hygiene student results showed that 8% were "extremely confident" approaching a patient suspected to have an ED, 25% were "fairly confident", and 33% gave their confidence an "average" value. The remaining 34% were split evenly between "not confident" and "not at all confident".

Main theme 2: Training

Q. *In relation to your teaching/training at dental school about patients with*

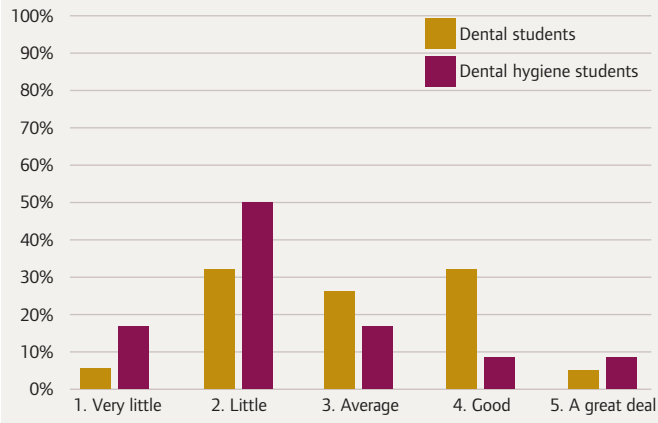

FIGURE 1: Response distribution to the question: "In relation to your teaching at dental school about patients with eating disorders, how much did you learn about their personality traits?"

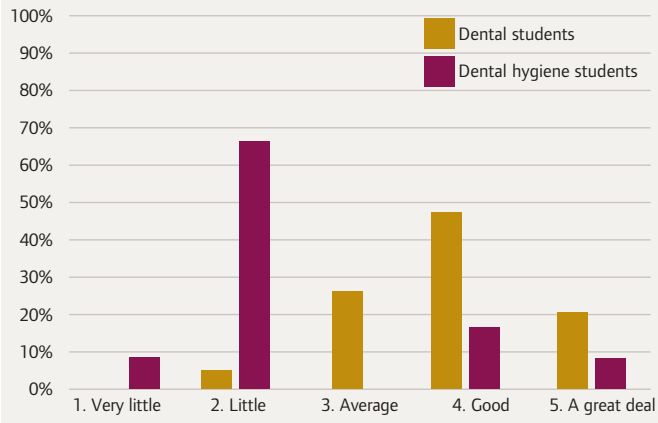

FIGURE 2: Response distribution to the question: "In relation to your teaching/training at dental school about patients with eating disorders, how much did you learn about their oral manifestations?"

eating disorders, how much did you learn about their personality traits, dental management, medical management, psychological needs and oral manifestations?

A total of 5% of FYD students felt that they were given "a great deal" of teaching/training about the personality traits of patients with EDs. Some 32% felt that the teaching/training provided a "good" level, 26% thought this aspect of their training was "average", and 32% thought they received "little" training. A total of 5% felt that the course provided "very little" training.

Some 16% of FYDH students felt that the teaching/training provided on personality traits of ED patients was "good" or equal to "a great deal". Some 17% thought this training was average, 50% thought it was equivalent to "little" and 17% to "very little" (**Figure 1**).

With regard to dental management of patients with EDs, 11% of dental students reported that they learned "a great deal". A majority of 53% felt they learned a "good" amount, 32% "average" and only 5% "little". No dental student participants felt that they were taught "very little" regarding the dental management of patients with EDs.

Results from FYDH students showed that 8% felt they learned "a great deal" on the dental management of EDs, 17% thought they learned a "good" amount, and 42% "average". The remaining 34% was split evenly between a value of "little" and "very little".

None of the dental students that participated in the survey felt that they learned "a great deal" about the medical management of EDs. Only 5% felt that they learned a "good" amount, 42% felt that their teaching/training was "average", 37% felt it was "little", and 11% scored it as "very little".

A total of 24% of dental hygiene students responded that their teaching/training during dental school, on medical management, was worth a value of "a great deal", "good" or "average" (8% allocated to each value). Some 42% gave their teaching/training on this topic a value of "little", and 33% scored it "very little".

None of the dental students who participated in the survey felt that they learned a great deal regarding the psychological needs of patients with EDs. A total of 21% felt that they had learned a "good" amount, 26% gave their teaching/training on the psychological needs of eating ED a score of "average", 42% thought this aspect of their training was "little", and 11% scored it "very little".

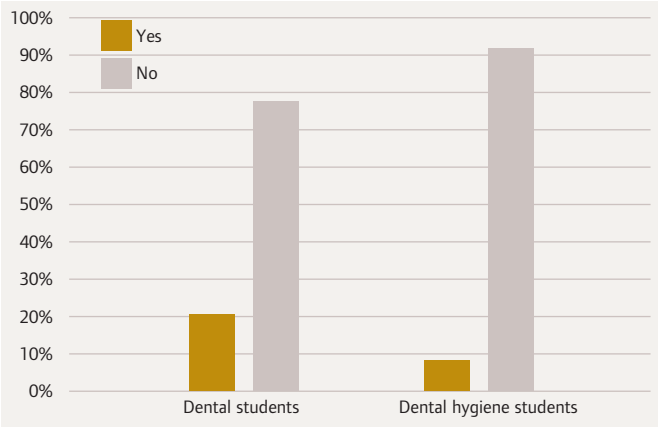

FIGURE 3: Response distribution to the question: "Have you personally managed a patient with a known or suspected eating disorder whilst you have been a student?"

A total of 8% of dental hygiene students felt that their training with regard to the psychological needs of patients with EDs ranged from "very good" to "average", 50% felt the teaching they received was "little", and 25% felt it was "very little".

Figure 2 summarises results regarding teaching of ED oral manifestations.

Q. *Have you personally managed a patient with a known or suspected eating disorder while you have been a student?*

The majority of FYD and FYDH students (79% and 92%, respectively) had not experienced managing a patient with a known or suspected ED (**Figure 3**).

Sub theme: *Do you feel that more training is required for you to be confident in diagnosing patients with eating disorders?*

The majority of dental students (53%) thought more training is required, while just under half (47%) felt the opposite.

The vast majority of the dental hygiene students, however, indicated that more training is required for them to be confident in diagnosing ED patients. Only 17% felt that additional training was not needed.

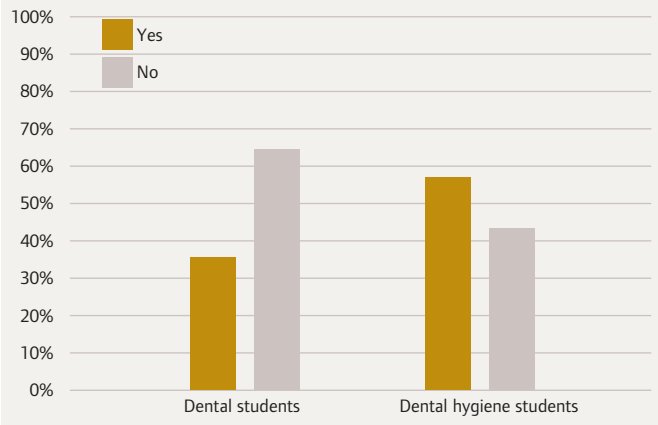

FIGURE 4: Response distribution to the question "Do you feel that more training is required for you to be confident in treating patients with eating disorders?"

Q. *Do you feel that more training is required for you to be confident in treating patients with eating disorders?*

The results to this question were opposing between the cohorts. Results from the dental students illustrated that 37% felt more training was required in order to feel confident treating patients with EDs, and 63% felt more training was unnecessary.

In contrast, 58% of dental hygiene students felt that more training in this topic was necessary, and 42% felt the opposite (**Figure 4**).

Main theme 3: Awareness

Q. *How would you rate your awareness of the prevalence of eating disorders in the general population?*

Results from FYD students showed that 69% felt that their awareness of EDs was either "good" or "average". The final third of participants were distributed evenly between "a great deal", "little" and "very little" (11% for each).

Results from FYDH students stated that only 8% felt that their awareness of the prevalence of EDs in the general population was "a great deal". One-quarter of participants rated their awareness as "good", and a further 25% as "average". Some 42% rated their awareness as "little", with no participants rating their awareness as "very little".

Main theme 4: Onward referral knowledge

Q. *If you were the first clinician to identify a potential eating disorder patient, are you aware of the support services available to them?*

The majority of both dental and dental hygiene students (79% and 75%, respectively) were not aware of the local support services available.

Q. *Have you heard of Eating Disorder Centre Cork?*

None of the dental students had heard of Eating Disorder Centre Cork (EDCC), and 83% of dental hygiene students were also unaware of the Centre.

Q. *As a clinician, do you know whether you could refer a patient to Eating Disorder Centre Cork?*

Results from both cohorts surveyed indicated that very few students (only 5% of dental students and 8% of dental hygiene students) knew whether they could or could not refer a patient to EDCC.

Table 2: Resources on eating disorders for dental health professionals.

Educational resources	Website
Eating Disorder Centre Cork	
▸ Website for general info	http://eatingdisordercentrecork.ie/
▸ Patient information leaflet	https://www.ucc.ie/en/media/academic/dentalschool/documents/patientinfoleaflets/EatingDisordersandOralHealthPatientInformation.pdf
BodyWhys	
▸ Website for general info	https://www.bodywhys.ie/
▸ Dental resource PDF	https://www.bodywhys.ie/wp-content/uploads/2018/01/BW-Dentist-A5-FINAL.pdf
SlainteCare	
▸ Action Plan 2019	https://assets.gov.ie/22606/4e13c790cf31463491c2e878212e3c29.pdf
Health Service Executive (HSE)	
▸ Summary of eating disorders	https://www2.hse.ie/conditions/mental-health/eating-disorders.html
▸ Making every contact count (encouraging healthy eating)	https://www.hse.ie/eng/about/who/healthwellbeing/making-every-contact-count/making-every-contact-count-framework.pdf
▸ Model of care	https://www.hse.ie/eng/services/list/4/mental-health-services/national-clinical-programme-for-eating-disorders/ed-moc.pdf
▸ A Vision for Change 2006	https://www.hse.ie/eng/services/publications/mentalhealth/mental-health---a-vision-for-change.pdf

Discussion

The results highlight the need for improved ED teaching to DHCPs. Dental professionals can play a fundamental role in identifying oral manifestations of an ED;[2] thus, their awareness of EDs is essential along with correct management. This study indicated that dental students and dental hygiene students had average or little awareness of the prevalence of EDs, respectively. Previous studies have identified a lack of educational training pertaining to the oral and physical manifestations of EDs, skills in patient approach and knowledge of referral services.[5]

Although greater attention has been paid in more recent years to including ED training within dental school curricula, the emphasis has only been on improving identification of oral manifestations of the disorder. At best, future DHCPs are being trained to identify oral and systemic health connections, but inadequate training continues on the ED patient approach and patient management. Surprisingly, the majority of dental students perceived that they did not require further training to feel confident treating patients with EDs, and approximately half felt the same regarding diagnosing patients with an ED. These results are unexpected, as when asked about their training, the general consensus was that knowledge of EDs was unsatisfactory. This mismatch in the results could be due to final-year students feeling overwhelmed with workload during the exam season when the questionnaire was answered.

Students must be aware of the severity of EDs, the professional and legal responsibility they have in identifying a patient with an ED, and their liability to appropriately refer patients.

These results indicate that FYDH students gave lower values to the amount of teaching/training provided in their dental hygiene curricula, across all ED-related topics. To almost every question, the majority of the dental hygiene participants scored their learning at a value of 2 (signifying little teaching/training on the topic). An exception to this trend was when asked about dental management of ED patients. Dental hygiene participants gave higher frequency to a score of 3 (signifying an average amount of teaching/training). This suggests again that all aspects of the teaching on EDs provided by dental and dental hygiene schools requires improvement.

The majority of FYDH students felt that more training is necessary. These results were the opposite of those seen from the dental students, but seem to indicate a positive outlook from the dental hygiene students as to a willingness to continue learning.

Limitations

This study included a small participant pool with a relatively low response rate. The study was non randomised, which could have introduced bias as students were aware that a fellow dental student was collecting the data.

Conclusion

Knowledge gained from this study will serve as a foundation for the development of an effective curriculum in this area. Dentists and dental hygienists should ensure that they promote patient-centred care and are aware of the educational resources and referral pathways available to professionals and their patients. **Table 2** summarises a number of educational resources, which may be useful to DHCPs.

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CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:

IDA irish dental association

CPD

1. The mortality rate associated with anorexia nervosa for females aged 15-24 years old is _____ times higher than the rate of all other causes of death:

- ○ A: 4
- ○ B: 8
- ○ C: 12

2. With regard to the dental management of patients with eating disorders, what percentage of dental students felt they learned a "great deal"?

- ○ A: 5%
- ○ B: 11%
- ○ C: 15%

3. What percentage of dental students thought more training is required to increase their confidence in diagnosing patients with eating disorders?

- ○ A: 47%
- ○ B: 50%
- ○ C: 53%