



Do Dental and Dental Hygiene Students Differ in Their Interest in Behavioral Science Topics?  
An Analysis of Survey Data from 2000-2021

Ammar Hussain & Marita R. Inglehart  
University of Michigan - School of Dentistry, Ann Arbor, MI



ABSTRACT

AIMS

RESULTS

**Objectives:** The Commission for Dental Accreditation requires dental and dental hygiene graduates to be competent to successfully interact with patients. The objectives were (a) to assess dental and dental hygiene students’ interest in taking a Behavioral Science course and learn about specific topics, (b) to compare the interest of dental vs. dental hygiene students in this material, and (c) to analyze the trends in their interest from 2000 to 2021.

**Methods:** Between 2000 and 2021, 1977 dental and dental hygiene students responded to a survey at the beginning of a Behavioral Science class.

**Results:** The students enjoyed interacting with people very much (5-point scale with 5=very much: Mean=4.57) and thought they would enjoy very much to interact 1:1 with patients in their future profession (Mean=4.78). They were very interested in taking the course (Mean=4.39). They were most interested in learning how to handle patients (3-point scale with 3=very interested: Mean=2.89) and how to establish rapport with patients (Mean=2.89), and least interested in learning how social support affects patients’ oral health and oral health care utilization (Mean=2.54). Dental students thought they enjoyed more to interact 1:1 with their patients in their professional lives than dental hygiene students (4.80 vs. 4.69;p=0.013), while dental hygiene students were more interested in taking the Behavioral Science course (4.60 vs. 4.37;p<0.001). Between 2000-2020, the students became more interested in an introduction to dental health issues (r=0.06;p<0.05), but less interested to learn about dental fear (r=-.07;p<0.001), handling patients (r=-0.09;p<0.001) and learning about treatment cooperation (r=-0.08;p<0.001).

**Conclusions:** These findings can provide a basis for discussing how to best introduce pre-doctoral dental students and dental hygiene students to behavioral science related aspects of their future profession.

INTRODUCTION

- The Commission of Dental Accreditation requires that dental schools and dental hygiene programs prepare their graduates to be competent in communicating effectively with patients and dental team members (1, 2).
- One interesting question is how interested these two student groups are in taking this course and in the specific topics covered.
- A second interesting question is whether dental and dental hygiene students differ in the degree to which they are interested in these topics.
- Many social and educational events occur over time. For example, in 2000. the US Surgeon General published his first report on oral health. The question then is how educational, political and health related events shape students’ interest in these topics.

The objectives were

- (a) to assess students’ interest in taking a Behavioral Science course and learn about specific topics,
- (b) to compare the interest of dental vs. dental hygiene students in this material, and
- (c) to analyze the trends in their interest from 2000 to 2021.

METHODS

This research was determined to exempt from Institutional Review Board (IRB) oversight by the Health Sciences and Behavioral Sciences IRB of the University of Michigan.

- Respondents:**
- Between 2000 and 2021, 1,580 dental and dental hygiene students responded to a survey at the beginning of a Behavioral Science class.
- Procedure:**
- From 2000 to 2021, the students in the Dent 518 Behavioral Science I and the Dhyg 252 Behavioral Science courses responded to surveys that asked them how interested they were to take the course and how interested they were in any of the topics covered during the first class.

Table 1:  
Frequencies of dental vs. dental hygiene students by year

Year	Dental students	Dental hygiene students
2000	104	36
2001	0	31
2002	105	0
2004	104	36
2006	92	0
2007	104	30
2008	104	36
2009	105	31
2010	106	0
2011	0	30
2015	106	32
2016	109	32
2017	108	31
2019	108	0
All years	1255	325

The **first objective** was to assess students’ interest in taking a Behavioral Science course and learn about specific topics covered in this course. **Table 2** shows that on average, students enjoyed interacting with people very much (5-point scale with 5=very much: Mean = 4.57) and thought they would enjoy very much to interact 1:1 with patients in their future profession (Mean=4.78). They were very interested in taking the course (Mean = 4.39). They were most interested in learning how to handle patients (3-point scale with 3 = very interested: Mean = 2.89) and how to establish rapport with patients (Mean = 2.89), and least interested in learning how social support affects patients’ oral health and oral health care utilization (Mean = 2.54).

Table 2: Students’ interest in the course and topics covered

Table 2: Students’ interest in the course and the specific topics presented	1 & 2 <sup>1</sup>	3	4 & 5	Mean
How much do you enjoy interacting with people?	0% / 0.9%	4.3%	32% / 62.8%	4.57
When you think about your future profession, how much do you enjoy interacting 1:1 with patients?	0% / 0.1%	2.2%	17.8% / 80%	4.78
How interested are you in taking this course?	0% / 1.1%	8.1%	41.6% / 49.1%	4.39
Interest in specific topics	12	2	3	Mean
Introduction to Dental Health Issues	1.1%	28.4%	70.3%	2.70
Dental Fear	0.4%	17.4%	82.1%	2.82
Pain	0.4%	16%	83.6%	2.79
Oral health-related quality of life	0.4%	16%	83.6%	2.83
Facial Attractiveness	1.6%	32.7%	65.7%	2.64
Personality	1.4%	27%	71.6%	2.70
Social Support	1.5%	42.6%	55.9%	2.54
Professional Identity	0.8%	32.4%	66.8%	2.74
Decision Making	0.4%	19.1%	80.5%	2.80
Burnout	2.7%	31.5%	65.8%	2.63
Handling Patients	0.7%	10%	89.3%	2.89
Rapport	0.4%	9.8%	89.7%	2.89
Verbal Communication	1.3%	17.7%	80.9%	2.85
Non-Verbal Communication	1.1%	22.0%	86.9%	2.76
Tobacco Cessation	4.7%	35.8%	69.4%	2.55
Compliance	1.4%	24.5%	74.1%	2.73
Prevention	0.4%	15.8%	83.6%	2.88
Education	2.4%	28.4%	69.0%	2.67
Interviewing Techniques	3.3%	27.9%	68.8%	2.66
Giving Feedback	2.9%	31.7%	65.4%	2.63
Patient – Dentist Interaction	0.5%	19.7%	79.7%	2.79

The **second objective** was to compare the interests of dental vs. dental hygiene students in this material. **Table 3** shows that dental students thought they enjoyed more to interact 1:1 with their patients in their professional lives(4.80 vs. 4.69; p=0.013), while hygiene students were more interested in taking the Behavioral Science course (4.60 vs. 4.37; p<0.001).

DISCUSSION

Dental and dental hygiene students were very interested in the course itself. They were also interested in interacting with patients 1:1 as well as handing and establishing rapport with patients. One could expect students to be more interested In the surgical aspects rather than the patient interactions, but this was not the case. Overall, students were somewhat to very interested in each topic. The composition of dental/dental hygiene responses were not significantly different. It was interesting to see that over a span of 21 years, the students’ interests in the beginning of the course did not change overall.

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We want to thank the former students who responded to this survey.

Table 3: Dental vs. dental hygiene students’ average interest ratings

General interest	Dental students	Dental hygiene students	p
How much do you enjoy interacting with people?	4.59	4.55	0.401
When you think about future profession, how much enjoy interacting 1:1 with pts?	4.80	4.69	0.013
How interested are you in taking this course?	4.37	4.60	<0.001
Specific topics	Dental students	Dental hygiene students	p
Introduction to dental health issues	2.68	2.73	0.182
Dental fear	2.81	2.82	0.769
Pain	2.79	2.76	0.202
Oral health-related quality of life	2.83	2.83	0.909
Facial attractiveness	2.63	2.62	0.818
Personality	2.68	2.73	0.156
Social support	2.51	2.62	0.007
Professional identity	2.65	2.67	0.574
Decision making	2.82	2.75	0.069
Burnout	2.65	2.61	0.456
Handling patients	2.89	2.86	0.206
Rapport	2.91	2.85	0.080
Verbal communication	2.87	2.81	0.518
Nonverbal communication	2.74	2.78	0.278
Tobacco cessation	2.57	2.54	0.669
Compliance	2.75	2.73	0.602
Prevention	2.90	2.90	0.982
Education	2.67	2.66	0.842
Interviewing techniques	2.67	2.65	0.533
Patient - dentist interaction	2.79	2.81	0.595

The **third objective** was to analyze the trends in the students’ interest from 2000 to 2021. **Table 4** shows that between 2000-2020, the students became more interested in an introduction to dental health issues (r = 0.06; p<0.05), but less interested to learn about dental fear (r = -.07; p<0.001), handling patients (r=-0.09;p<0.001) and learning about treatment cooperation (r=-0.08; p<0.001).

Table 4: Correlations between the year the course was taken and the responses

	N	R	p
How much do you enjoy interacting with people?	1201	0.009	0.766
When you think about future profession, how much enjoy interacting 1:1 with pts?	1202	0.031	0.277
How interested are you in taking this course?	1203	0.012	0.672
Facial attractiveness	920	-0.019	0.571
How interested	1672	-0.050	0.042
Personality	1390	0.031	0.254
Professional Identity	1149	-0.031	0.290
Decision Making	1149	0.022	0.465
Burnout	1149	-0.025	0.393
Handling Patients	1676	-0.025	<0.001
Rapport	999	-0.049	0.124
Verbal Communication	1919	-0.044	0.055
Non-Verbal Communication	1150	-0.007	0.803
Tobacco Cessation	770	-0.043	0.237
Compliance	1502	-0.084	0.001
Prevention	1916	-0.029	0.200
Education	661	0.000	0.990
Interviewing Techniques	1916	0.023	0.322
Giving Feedback	243	0.005	0.942
Patient – Dentist Interaction	918	-0.011	0.740
Introduction to Dental Health Issues	1833	0.055	0.018
Dental Fear	1909	-0.071	0.002
Pain	1919	-0.011	0.002
Oral Health-Related Quality of Life	1887	0.030	0.195

CONCLUSIONS

These findings can provide a basis for discussing how to best introduce pre-doctoral dental students and dental hygiene students to behavioral science related aspects of their future profession.

REFERENCES

1. Commission on Dental Accreditation. Accreditation standards for dental education programs. American Dental Association. Chicago, IL. 2021
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