



Changes in Dental Students' Empathy Levels

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Abstract

Affective, or emotional, empathy is the ability to share the same emotions with other individuals. Within dentistry, emotional empathy helps build personal connections between patients and providers but can also cause distress, as providers may be more affected by patients' negative experiences.

Purpose: This study seeks to evaluate changes in empathy levels among dental students as they transition through multiple years of training and assessing whether this experience influences their capacity for emotional empathy.

Methods: The Toronto Empathy Questionnaire (TEQ) was administered to dental students to provide numerical data on empathy levels. The TEQ was administered each fall and spring semester to second-year (Class of 2028), third-year (Class of 2027) and fourth-year (Class of 2026) dental students to allow for longitudinal analysis of empathy scores.

Results: The Class of 2026 had significantly lower average empathy score in Spring 2024 than in Fall 2024 and Spring 2025, $p=0.007$, but there was no significant difference with Fall 2025 average empathy scores, $p=0.19$. There was no significant difference between the Class of 2027's average empathy scores in Fall 2024, Spring 2025, and Fall 2025, $p=0.696$. There was no significant difference between the Class of 2028's average empathy scores in Spring 2025 and Fall 2025, $p=0.25$.

Conclusion: Results show that the difference between empathy levels within different cohorts is not significantly different, however, empathy levels for each cohort may change over time. Further research will continue to gather data to evaluate dental students' empathy development.

Objectives

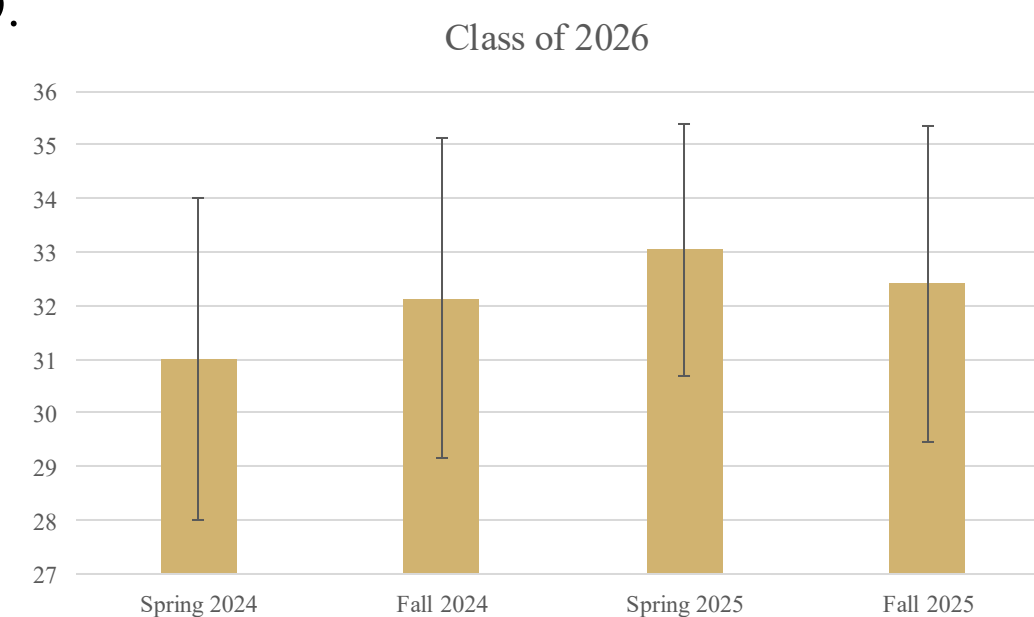
The study aims to examine longitudinal changes among dental students' empathy levels as a repeatable study is conducted throughout their dental education.

Methods

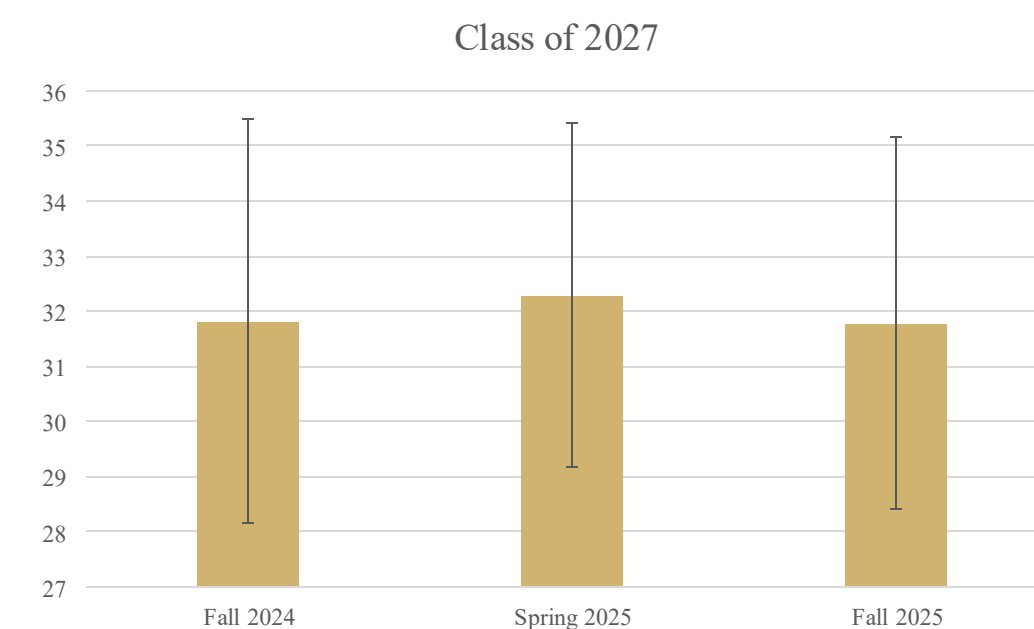
The Toronto Empathy Questionnaire (TEQ) was administered to second-year (Class of 2028), third-year (Class of 2027), and fourth-year (Class of 2026) dental students in a classroom setting. The TEQ was chosen due to its evidence-based validity and reliability, as well as its ability to provide numerical data on dental students' empathy levels at a given point in time. Each cohort's average TEQ scores were compared to prior semesters using ANOVA and t-tests to evaluate longitudinal trends.

Results

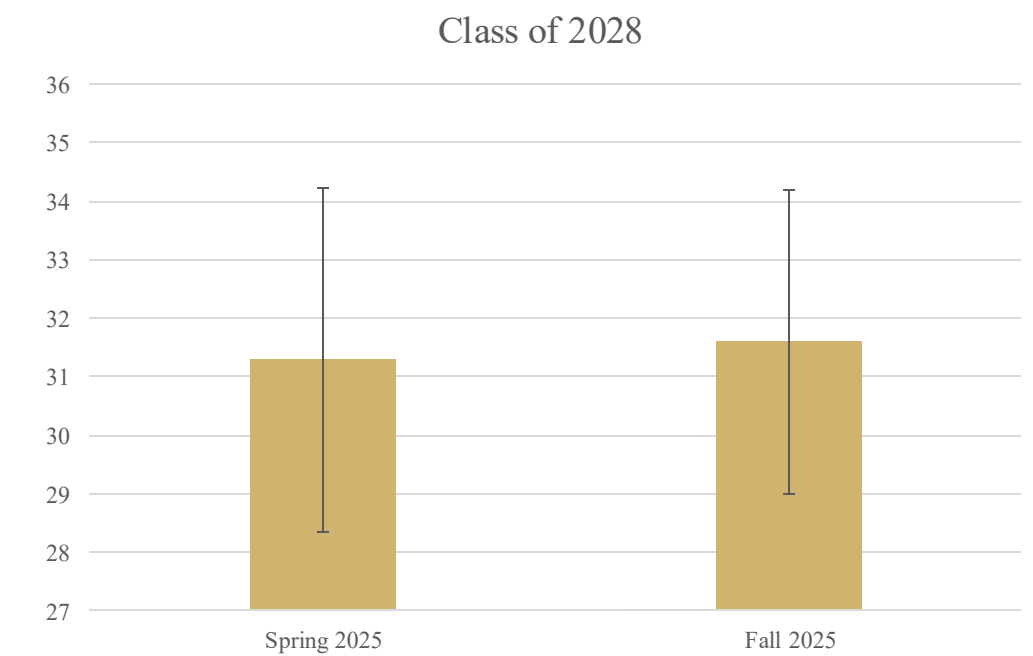
The Class of 2026 had significantly lower average empathy score in Spring 2024 ($M=31.0$, $SD=3.0$, $n=102$) than in Fall 2024 ($M=32.1$, $SD=3.0$, $n=42$) and Spring 2025 ($M=33.1$, $SD=3$, $n=20$), $F(3,192) = 4.17$, $p=0.007$. The average empathy score in Fall 2025 ($M=32.4$, $SD=2.9$, $n=32$) was not significantly different from the other data collection points, $p=0.19$.



There was no significant difference between the Class of 2027's average empathy scores in Fall 2024 ($M=31.8$, $SD=3.7$, $n=69$), Spring 2025 ($M=32.3$, $SD=3.1$, $n=52$), and Fall 2025 ($M=31.8$, $SD=3.4$, $n=39$), $F(2, 157) = 0.36$, $p=0.696$.



There was no significant difference between the Class of 2028's average empathy scores in Spring 2025 ($M=31.3$, $SD=2.9$, $n=75$) and Fall 2025 ($M=31.6$, $SD=2.6$, $n=66$), $t(139)=-0.67$, $p=0.25$.



Conclusion

Empathy is affected by many various factors that can change over time. The goal of this study is to create a repeatable research method to gather more longitudinal data regarding empathy development in dental students. We are also exploring ways to achieve high response rates while keeping responses voluntary, anonymous, and honest. Additionally, we began a related study to obtain situational-based data regarding students' empathy and burnout. We hope to use our research to gather comprehensive insights into empathy development among dental students.

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