Evaluation of Current Knowledge of Genetics among Dental Students, Residents and Dental Hygiene Students

Carla McGruder, BS (Advisor: Dr. Jacqueline T. Hecht, PhD)

Genetic testing and genomic sequencing is increasingly available in clinical settings. To provide personalized patient care, dental health professionals must have a greater understanding of genetics. The Commission on Dental Accreditation (CODA) credentials all dental schools in the United States and currently does not mandate genetics training for official approval of programs. There is little information about dental genetics education and no known studies that have evaluated dental students, residents and dental hygiene students’ knowledge of human genetics. It is crucial to assess genetics knowledge of this population to ascertain if dental schools are preparing students for the future of personalized dentistry.

This study assessed the genetics knowledge of future dental health professionals using a genetic assessment tool at the University of Texas Houston School of Dentistry. Participants included 240 dental students, 64 dental hygiene students, and 89 dental residents. The reference group included 155 medical students and 14 genetic counseling students. The overall response rate was 81%. Of the 15 study groups, 3 out of 12 groups from the dental school population and 2 out of 3 groups from the reference population received a passing score of 70%. Participants with no previous genetic courses scored significantly lower than those with three or four genetics courses (p<0.01). Participants who “strongly agree” when asked about the relevancy of genetics to oral healthcare scored significantly higher than those who “strongly disagree” (p<0.01). Based on this study, formal genetics education in dental school and dental residency programs is strongly recommended.

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