2025 Research Aid Award
Dr. Bushra Kanwal, University of Illinois, Chicago

1. A short biography

I was born and raised in Southern India, where I graduated from dental school in 2014 and a residency in Orthodontics in 2018. During dental school, I was recognized as the Best Outgoing Student, and I was honored with a gold medal for achieving the highest score in Orthodontics during my postgraduate training. Following my residency, I practiced Orthodontics in India and Saudi Arabia for five years. These experiences enriched my clinical expertise and gave me valuable insights into the socio-cultural dimensions of orthodontic care across diverse populations. During this time, I was also awarded the Membership in Orthodontics from the Royal College of Surgeons, Edinburgh in recognition of my demonstrated competency in Orthodontics. Currently, I am a second-year Orthodontic resident at the University of Illinois, Chicago. My research focuses on raising awareness about the prevalence, hospitalization trends, and healthcare costs associated with the treatment of cleft lip and palate. I am passionate about using data to drive meaningful improvements in patient care and health interventions. Outside dentistry, I enjoy expressing my creativity through art. I work with resin and jesmonite to craft personalized gifts for my loved ones, an activity that brings me joy and balance.

2. A brief description of the project

This project aims to analyze nationwide hospitalization costs related to surgical interventions in patients with cleft lip and palate using data from 2019 to 2022. By applying machine learning models, specifically artificial neural networks, the study seeks to identify patient and hospital-level factors that contribute to increased healthcare utilization and poor outcomes. The goal is to develop predictive tools that help clinicians and policymakers stratify and triage patient risk, optimize resource allocation, and implement targeted interventions for high-risk populations.

3. A statement of how Orthodontic education will benefit your award?

Receiving the AAOF research grant has significantly enriched my orthodontic education by allowing me to engage deeply in clinically meaningful and data-driven research. Through this project, I have been able to explore the intersection of orthodontics, craniofacial anomalies, and healthcare policy, thus broadening my understanding of the challenges faced by patients with cleft lip and palate beyond traditional orthodontic treatment. Conducting this research has enhanced my analytical skills and reinforced my commitment in contributing to the field not only as a clinician but also as a researcher and advocate.

4. Why the AAOF foundation is important to your career?

The AAOF Foundation plays a pivotal role in advancing my career by supporting high-impact research and fostering academic excellence in orthodontics. Its investment in my project will help facilitate research in collecting nationwide data to make the treatment of cleft lip and palate widely available for larger communities and high risk cohorts. The Foundation's commitment to innovation and evidence-based care aligns closely with my professional goals, enabling me to contribute meaningfully to both clinical practice and the scientific community.

5. How foundation funding is expected to or has benefitted your career?

Foundation funding has affirmed the value of my research and strengthened my commitment to academic orthodontics. It has opened avenues for professional networking, mentorship, and visibility within the orthodontic research community. This recognition not only enhances the credibility of my work but also motivates me to pursue future contributions that align with the Foundation's mission of advancing the specialty through innovation and scholarship.