THE SMILE GUARDIANS

ORAL HEALTH KNOWLEDGE, ATTITUDES, AND PRACTICES AMONG CAREGIVERS OF INDIVIDUALS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES (IDD) IN KARACHI, PAKISTAN

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Background

- Oral diseases affect over 3.5 billion people globally[1]. In Pakistan, more than 60% suffer from dental caries[2], with nearly 80% of individuals with intellectual and developmental disabilities (IDD) experiencing neglected oral health issues[3].
- Caregivers play a vital role in maintaining oral hygiene for individuals with IDD[4], yet many lack the training, awareness, and support needed to provide effective care—especially in low-resource settings like Karachi[5].
- There is a clear research gap in understanding caregivers' preparedness for oral health. This study aims to assess their knowledge and practices to help develop practical educational training programs.

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Objectives

- To explore the level of current awareness and training of caregivers in oral health care specific to individuals with IDD.
- To examine how caregiver education and years of experience influence their oral health knowledge and confidence.
- To develop targeted educational and training programs based on identified caregiver knowledge gaps and preferences, aiming to enhance caregiver competency and improve oral health outcomes among individuals with IDD.

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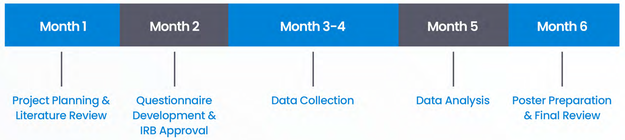
Methodology

Study Design	A cross-sectional study.
Study Setting & Eligibility Criteria	Conducted at selected special needs centers in Karachi, Pakistan, involving 120 professional caregivers providing care to individuals with intellectual and developmental disabilities (IDD). **Inclusion Criteria:** Professional caregivers aged 18 years or older, with direct caregiving experience for individuals with IDD. Ability to understand and independently complete the questionnaire **Exclusion Criteria:** Caregivers not actively involved in daily caregiving tasks. Caregivers unable to comprehend or complete the survey.
Data Collection	A self-administered, validated questionnaire used in both hard copy & online (google form) formats to collect the data.
Data Analysis	Descriptive stats summarized demographics and responses. Chi-square tests explored association between education, confidence level, experience, and oral health knowledge.
Ethical Consideration	✓ IRB approval (AIDM/ERC/01/2025/02) was granted by host institution. ✓ Informed consent was obtained from all participants.

Project Timeline



Questionnaire Domains

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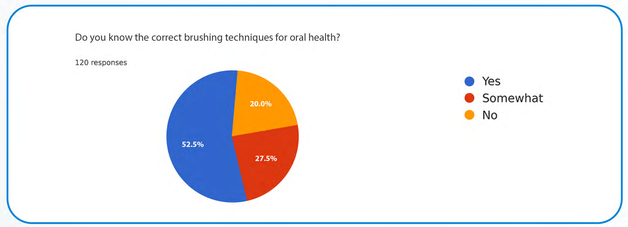
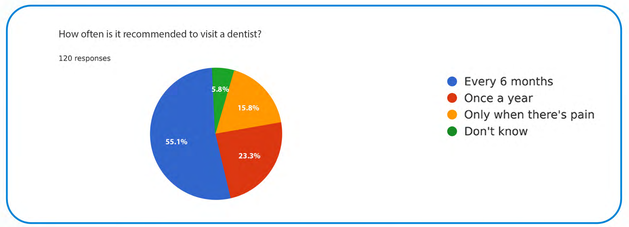
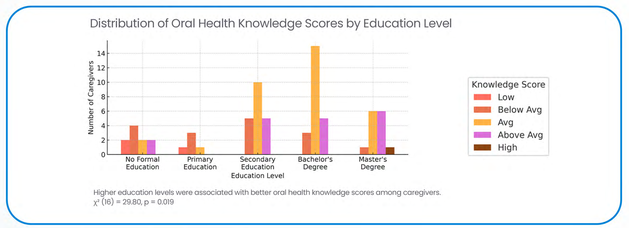
Results

A **total of 120 professional caregivers** participated in the study from six special centers. Among them, 36 (30%) were male and 84 (70%) were female. Participants ranged in age from 21 to 55 years, with the majority falling between 31 and 40 years. In terms of educational background, the highest proportion had completed secondary education (n = 54; 45%), followed by bachelor's degree holders (n = 40; 33.3%), master's degree holders (n = 16; 13.3%), and those with no formal education (n = 10; 8.3%).

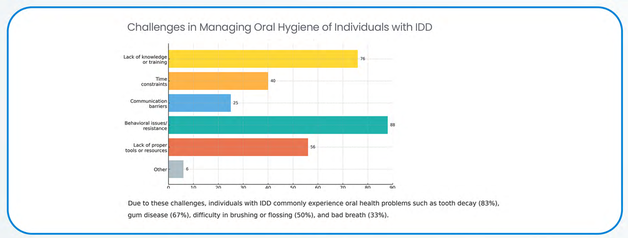




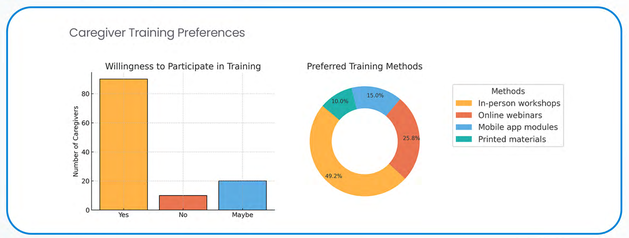
Caregiver confidence improved with experience, with the highest confidence levels observed in caregivers with multiple years of hands-on practice.
χ^2 (12) = 37.96, p < 0.001



Higher education levels were associated with better oral health knowledge scores among caregivers.
χ^2 (16) = 29.80, p = 0.019



Due to these challenges, individuals with IDD commonly experience oral health problems such as tooth decay (83%), gum disease (67%), difficulty in brushing or flossing (50%), and bad breath (33%).



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Discussion

- While 76% of caregivers across all education levels acknowledged the importance of oral health on overall well-being, 48% lacked knowledge of correct brushing techniques, and 45% were unaware of recommended dental visit intervals highlighting key gaps in practical knowledge.
- Caregivers with a bachelor's degree or higher and greater experience demonstrated significantly better knowledge and confidence, reinforcing the value of formal education and hands-on experience.

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Conclusion

To bridge these gaps, structured training programs that integrate both technical and behavioral strategies are essential. With 90% of caregivers open to further learning, particularly through in-person sessions, these findings highlight the need for targeted educational efforts. Public health initiatives and policy reforms must prioritize caregiver support, recognizing that empowering caregivers directly improves oral health outcomes for individuals with IDD.

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SCAN TO ACCESS

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- STUDY QUESTIONNAIRE
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