Dental Professionals' Perspectives on Integrating Special Healthcare Needs Clinics in Dental Colleges: A Cross-Sectional Survey

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Abstract:

Background: Individuals with Special Health Care Needs (SHCN) experience complex oral health problems and face significant barriers to accessing appropriate dental care due to limited training, inadequate infrastructure, and lack of organized services. Dental colleges, as tertiary care and training centres, may help address these challenges through dedicated SHCN clinics.

Aim: To assess dentists' perceptions regarding the need, feasibility, benefits, and challenges of establishing SHCN clinics in dental colleges.

Materials and Methods: A cross-sectional, questionnaire-based study was conducted among dental professionals from various specialties and practice settings. A structured questionnaire assessing demographics, exposure to SHCN patients, oral health problems, management challenges, and perceptions regarding SHCN clinics was distributed electronically. Data from 106 respondents were analyzed using descriptive statistics.

Results: Most respondents reported encountering SHCN patients in routine practice and experiencing difficulty in their management. Commonly reported oral health problems included dental caries, gingivitis, periodontal disease, malocclusion, and dental anomalies. Key challenges were lack of specialized training, time constraints, complex medical histories, caregiver-related stress, and inadequate infrastructure. A majority of dentists considered SHCN clinics in dental colleges to be important, feasible, and beneficial, citing improved access to care, trained personnel, interdisciplinary collaboration, enhanced student learning, and research opportunities.

Conclusion: The study highlights a clear perceived need for establishing dedicated SHCN clinics in dental colleges. Such clinics may improve access to comprehensive oral healthcare for individuals with special needs while strengthening dental education, clinical training, and research.Keywords: anterior open bite, malplacement, orthognathic surgery, camouflage.

Keywords: Special Health Care Needs; SHCN clinics; Dental colleges; Questionnaire study; Dentist perception

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INTRODUCTION:

One of the most common medical illnesses worldwide, oral diseases significantly affect overall health and quality of life. Individuals with Special Health Care Needs (SHCN), a term that covers a broad range of physical, intellectual, developmental, sensory, and medical impairments, face greater difficulties in accessing oral care,necessitating changes in standard healthcare practices.[1,2]

The WHO estimates that 15% of the global population has a disability, highlighting the size of this vulnerable community.[3] Dental caries, periodontal disease, malocclusion, dental abnormalities, xerostomia, bruxism, traumatic dental injuries, and oral infections are more common among those with SHCN.[4,5] Due to limited motor skills, cognitive impairments, communication challenges, and long-term medication use, these problems are often worsened by difficulties in maintaining dental hygiene.[6] Additionally, during dental treatment procedures, behavioral and environmental factors are just as important as clinical issues. Dental care is especially challenging for many patients with SHCNs, as they may be sensitive to noise and unfamiliar environments, may exhibit anxiety or attention-seeking behaviours, require comfort with dental staff, and may need a quiet or private clinical setting.[7,8]

Even though the need for specialised care is recognised, the population with SHCNs still have limited access to appropriate dental and oral healthcare services, particularly in low-income countries. Barriers such as poor infrastructure, a shortage of skilled personnel, time constraints, complex medical histories, and a lack of interdisciplinary support persist.[9]These challenges are intensified,especially due to the absence of organised special care dentistry services and limited exposure during dental training.[10]

Dental colleges are ideally positioned to address this gap by establishing specialised SHCN clinics, as they are primary centres for tertiary care and education. These clinics can enhance clinical training, foster multidisciplinary collaboration, promote research, and improve access to comprehensive care.[11] There is limited data on dentists' opinions regarding the necessity, feasibility, and challenges of establishing SHCN clinics in dental schools. Assessing these perspectives is essential for guiding policy development, curriculum design, and infrastructure planning.

MATERIALS AND METHODS:

Study Design and Study Population

A descriptive, cross-sectional questionnaire-based study was conducted to assess dentists' perceptions regarding the need for establishing Special Health Care Needs (SHCN) clinics in dental colleges. Dental professionals from various specialities and practice settings were invited to participate in the study; participation was voluntary.

Study Instrument

Data were collected using a structured, predesigned questionnaire developed to evaluate dentists' perspectives on care for the population withspecial healthcare needs. The questionnaire demonstrated apparent validity and was formulated based on a review of existing literature and expert input. It consisted of sections assessing demographic details, professional background, clinical exposure to SHCN patients, commonly encountered oral health problems, challenges faced during management, approaches used in practice, and opinions regarding the feasibility, importance, benefits, and challenges of establishing SHCN clinics in dental colleges. The domains assessed and the structure of the questionnaire used in the study are summarised in Table 1. The questionnaire included multiple-choice questions and Likert-scale responses, with provisions for additional comments.

Data Collection

The questionnaire was distributed electronically using an online survey platform. Before participation, informed consent was obtained electronically from all respondents. Confidentiality and anonymity of responses were ensured. A total of 106 complete responses were received and included in the final analysis.

Inclusion and Exclusion Criteria

Dentists actively involved in clinical practice, academics, or both were included in the study.

Incomplete or duplicate responses were excluded from the analysis.

Statistical Analysis

The collected data was compiled and entered into a spreadsheet for analysis. Descriptive statistics were used to summarise the responses. Frequencies and percentages were calculated to assess dentists' exposure to SHCN patients, perceived challenges, and opinions regarding the establishment of SHCN clinics in dental colleges.

RESULTS

The survey included 106 dental professionals who represented a variety of dental specialities and practice environments. Figure 1 shows the distribution of dental specialities, with general dentists making up the largest group (50%), followed by paediatric dentists (19.8%) and prosthodontists (10.4%). Figure 2 illustrates the respondents' professional roles: 52.8% of them were academicians, 38.7% were private practitioners, and 22.6% were consultant specialists. The majority of participants (51.9%) were in the 25–35 age range, according to the age distribution of participants (Figure 3), and the evaluation of clinical experience (Figure 4) revealed that 67.9% had 0–5 years of experience, indicating early-career exposure to Special Health Care Needs (SHCN) patient care.

Exposure to SHCN Patients

Table 2 and Figure 5 summarise the exposure to SHCN patients in ordinary dental practice. In their professional practice, the majority of respondents (69.9%) reported coming into contact with patients with SHCNs; the remaining respondents did not report any such exposure. People with neurodevelopmental problems, long-term systemic illnesses, and physical or sensory impairments comprised the SHCNs community. Figure 7 illustrates that 89.3% of dentists who had treated SHCN patients said it was difficult to manage them.

Oral Health Problems Observed

Table 3 and Figure 6 summarise the oral health issues that are frequently seen in patients with SHCNs. The most common condition reported was a high caries index (85.3%), followed by gingivitis and elevated periodontal risk (64%). Of the responders, 40% reported orofacial and dental abnormalities, while 54.7% reported dental crowding and malocclusion. These results show that SHCN patients have a significant burden of oral illness as well as unmet treatment and preventative needs.

Challenges in the Management of Patients with SHCNs

The difficulties in managing SHCN patients are shown in Figure 8 and Table 4, in which parental emotions and stress during treatment were the most cited challenge (68.7%), followed by time constraints during dental procedures (62.7%), a lack of SHCN patient management training (58.2%), and complicated medical histories (53.7%). 38.8% of respondents said the infrastructure was inadequate. These obstacles were thought to have a detrimental effect on the effectiveness and calibre of dental care provided.

Perceptions Regarding the Establishment of SHCN Clinics

Table 5 summarises dentists' opinions about the opening of SHCN clinics in dentistry schools, and Figures 10–12 illustrate these opinions. The creation of SHCN clinics was deemed possible by nearly all respondents (99.1%) (Figure 10). Additionally, 32.1% of respondents thought establishing such clinics was significant, and 65.1% thought it was extremely important (Figure 12). The availability of qualified faculty and support personnel (81.1%), better access to dental care for SHCN patients (71.7%), improved learning opportunities for dental students (66%), interdisciplinary collaboration (59.4%), and expanded research scope (53.8%) were among the perceived advantages of SHCN clinics, as shown in Figure 11.

DISCUSSION:

The current study quantitatively shows that SHCN patients are commonly encountered by dentists in theirregular dental practice, even in their early careers. The results show a glaring disconnect between clinical need and professional readiness, with nearly 70% of respondents reporting SHCN exposure and over 90% reporting management challenges. Similar difficulties have been documented in earlier research, highlighting dental

professionals' lack of training and confidence in handling SHCN patients.[5,12]

The high rates of periodontal disease (64%) and dental caries (85.3%) among SHCN patients are consistent with research showing that people with special needs have much worse oral health outcomes because of poor oral hygiene, dietary factors, medication side effects, and physical or cognitive limitations.[5,13] These results support the necessity for forms of continuous care that are preventive in nature.

The most frequent issue (68.7%) was parental stress and emotional load, underscoring the psychosocial complexity of SHCN dental treatment.14 This finding is consistent with previous publications that highlight behavioural management issues and caregiver anxiety as significant obstacles to effective therapy. The structural shortcomings of the current dental education and service delivery systems are further reflected in time constraints and a lack of training.

Respondents enthusiastically supported team-based care and training-based solutions, which is encouraging. The literature supporting interdisciplinary and competency-based approaches to special care dentistry is consistent with the strong desire for formal training (75%) and trained supporting staff (75%).15 Strong professional consensus is demonstrated by the nearly complete agreement (99.1%) regarding the viability of SHCN clinics.

The perceived advantages, in particular, better access to care, more student learning, and research opportunities, highlight the combined clinical and educational significance of SHCN clinics. According to international recommendations in special care dentistry, establishing such clinics within dental colleges may therefore be a viable way to enhance oral healthcare delivery, increase dental education, and promote inclusive, patient-centred care.[16]

CONCLUSION:

The findings of this study demonstrate a strong perceived need for establishing dedicated Special Health Care Needs (SHCN) clinics in dental colleges. A majority of dental professionals routinely encounter patients with SHCNs and experience considerable difficulty in managing them due to inadequate training, time constraints, complex medical histories, caregiver-related stress, and limited infrastructure. The high burden of oral diseases among SHCN patients further highlights existing gaps in care delivery. The overwhelming support for the feasibility and importance of SHCN clinics reflects professional consensus that dental colleges are well-positioned to provide structured, multidisciplinary, and patient-centred care. Integrating SHCN clinics within dental college infrastructure may improve access to quality oral healthcare for individuals with special needs while enhancing dental education, clinical training, and management protocols, thereby contributing to more inclusive and equitable oral health systems.

TABLES

Table 1: Questionnaire Used to Assess Dentists' Perspectives on Establishing SHCN Clinics

Section	Domain Assessed	Questionnaire Items
Section I	Demographic and Professional Details	Age, gender, dental speciality, type of practice (academician, private practitioner, consultant), and years of clinical experience
Section II	Exposure to SHCN Patients	Encounter with SHCN patients in routine practice (Yes/No); types of SHCN encountered (e.g., neurodevelopmental disorders, chronic illnesses, physical or sensory disabilities)
Section III	Oral Health Problems in SHCN Patients	Commonly observed dental problems such as high caries experience, gingivitis/periodontal disease, dental anomalies, and malocclusion (multiple responses permitted)
Section IV	Challenges in SHCN Patient Management	Difficulties faced during treatment including lack of specialized training, time constraints, complex medical histories, caregiver-related stress, and inadequate infrastructure (multiple responses permitted)
Section V	Existing Management Approaches	Use of training or courses in SHCN care, availability of trained supporting staff, infrastructure modifications, and referral to specialised centres
Section VI	Perception of SHCN Clinics in Dental Colleges	Opinion on feasibility of establishing SHCN clinics (Yes/No); perceived importance (Likert scale)
Section VII	Benefits of SHCN Clinics	Perceived benefits include improved access to care, availability of trained faculty and staff, interdisciplinary collaboration, enhanced student learning, and research opportunities
Section VIII	Open-ended Feedback	Additional comments or suggestions regarding the establishment of SHCN clinics in dental colleges

Table 2: Exposure of Dentists to SHCN Patients (n = 106)

Variable	Response	Frequency (%)
Encounter SHCN patients in routine practice	Yes	≈88%
	No	≈12%
Types of SHCN encountered	Neurodevelopmental disorders	Common
	Chronic systemic illnesses	Common
	Physical/sensory disabilities	Common

Table 3: Oral Health Problems Observed in SHCN Patients

Oral Health Problem	Dentists Reporting (%)
High caries experience	≈80%
Gingivitis / Periodontal disease	≈70%
Dental crowding/ Malocclusion	≈65%
Orofacial / Dental anomalies	≈60%

Table 4: Challenges Faced in Managing SHCN Patients

Challenges Identified	Dentists Reporting (%)
Lack of specialized training	≈70%
Time constraints during procedures	≈65%
Complex medical history	≈60%
Caregiver-related emotional stress	≈55%
Inadequate infrastructure	≈50%
Difficulty in overall management	≈78%

Table 5: Dentists' Perceptions Regarding Establishment of SHCN Clinics

Perception / Benefit	Dentists Agreeing (%)
SHCN clinics are important /very important	≈85%
SHCN clinics are feasible in dental colleges	≈80%
Improved access to care for SHCN patients	≈90%
Availability of trained faculty and staff	≈80%
Interdisciplinary collaboration	≈75%
Enhanced learning opportunities for students	≈85%
Increased research opportunities	≈70%

FIGURES

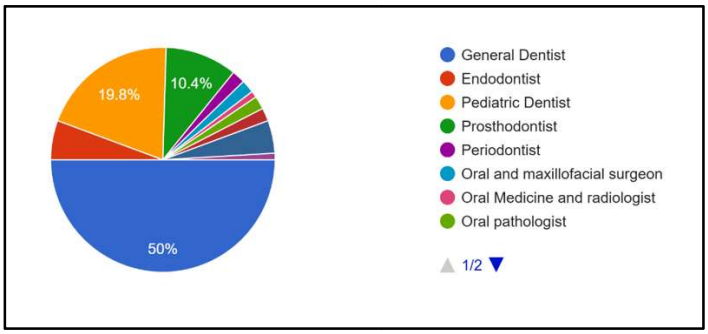

Figure 1. Distribution of dental specialities among study participants (n = 106)

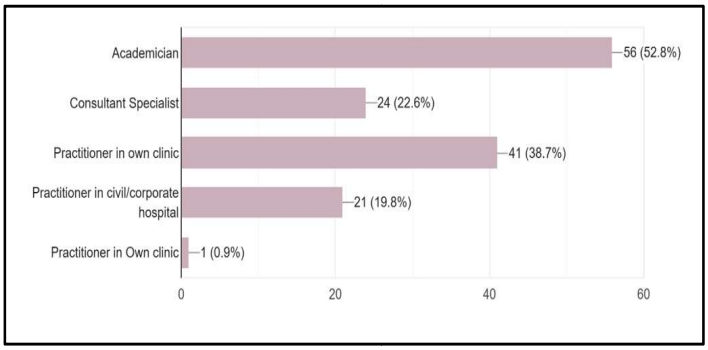

Figure 2. Professional roles of respondents (academicians, private practitioners, consultant specialists, and hospital-based practitioners)

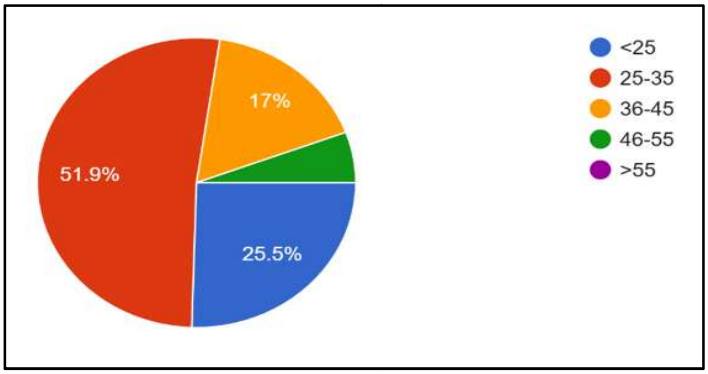

Figure 3. Age distribution of dental professionals participating in the study

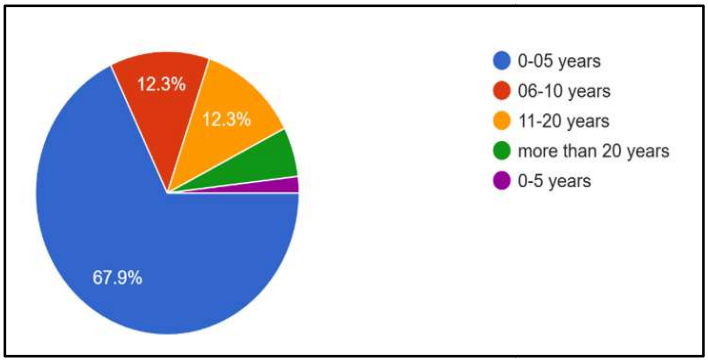

Figure 4. Years of clinical experience of study participants

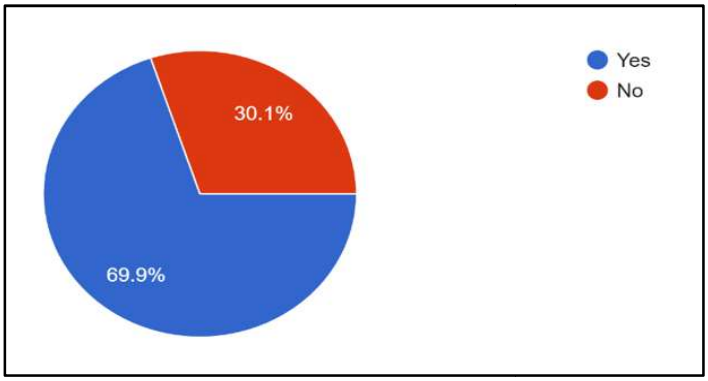

Figure 5. Encounter with children with Special Health Care Needs (SHCN) in routine dental practice

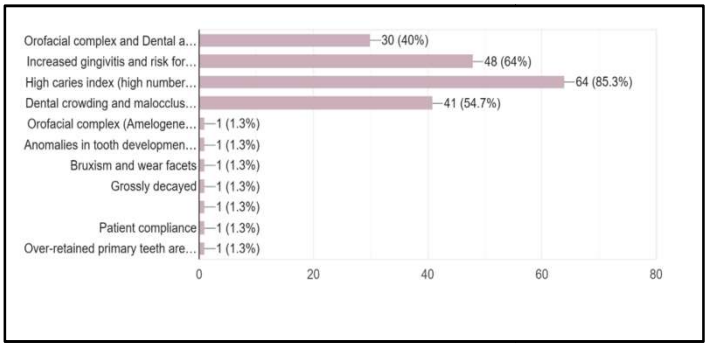

Figure 6. Common oral health problems observed in HCN patients(high caries index, gingivitis / periodontal disease, malocclusion, and dental anomalies)

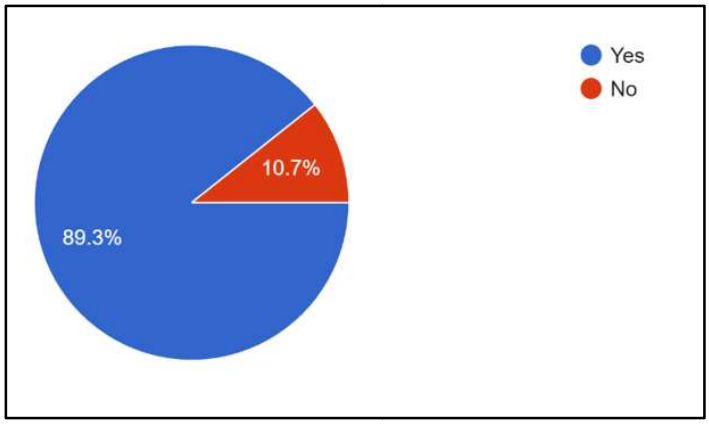

Figure 7. Difficulty faced by dentists in managing SHCN patients

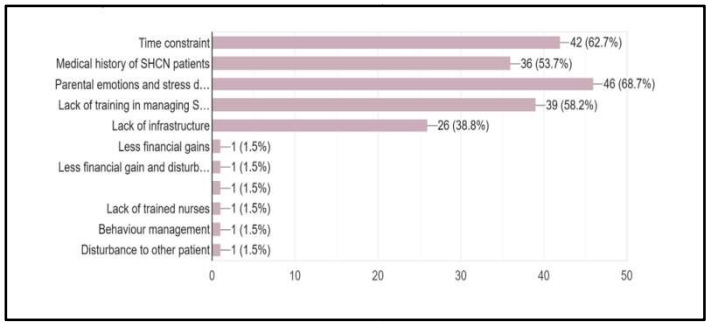

Figure 8. Challenges encountered during dental management of SHCN patients (parental stress, time constraints, lack of training, medical complexity, infrastructure)

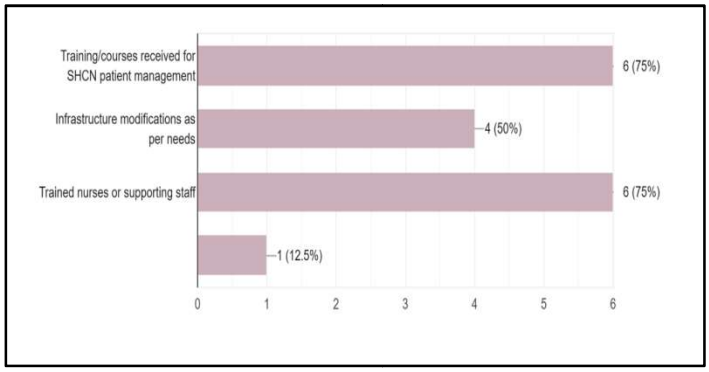

Figure 9. Approaches that aided dentists in managing SHCN patients (training/courses, trained supporting staff, infrastructure modifications)

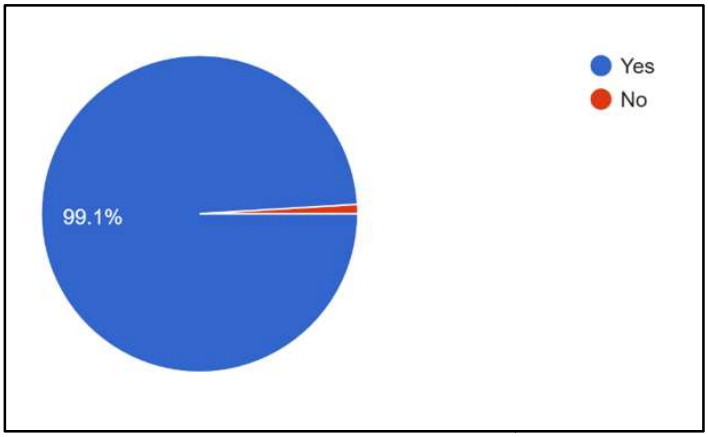

Figure 10. Dentists' perception regarding the feasibility of establishing SHCN clinics in dental colleges

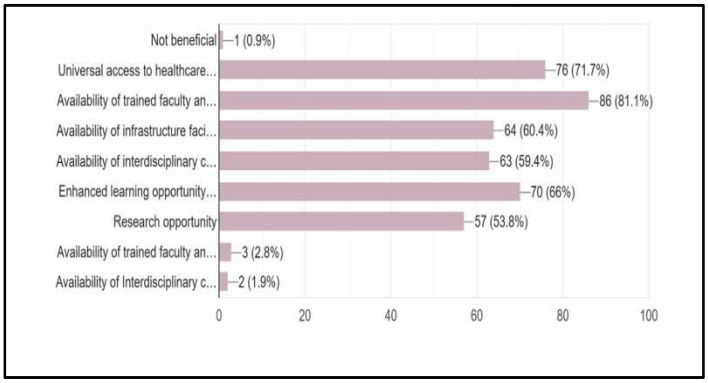

Figure 11. Perceived benefits of establishing SHCN clinics in dental colleges

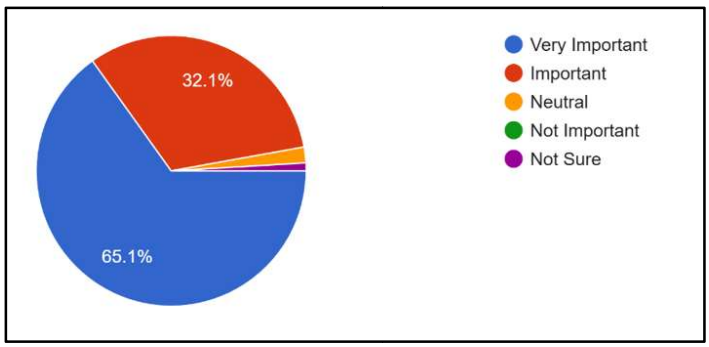

Figure 12. Importance attributed to establishing SHCN clinics in dental colleges

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