

Original Article

Assessing Dental Students' Views on Special-Care Dentistry: Insights from Universitas Indonesia

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ABSTRACT

This research aimed to explore how dental students at the Faculty of Dentistry, Universitas Indonesia, perceive special care dentistry (SCD). A descriptive cross-sectional approach was applied through an online self-completed questionnaire distributed to all preclinical and clinical students. The instrument covered four areas: demographic details, understanding of SCD, attitudes toward treating individuals with special needs, and opinions on SCD education. Statistical evaluation was performed using chi-square and Mann-Whitney tests. A total of 572 participants completed the survey. Clinical students displayed higher familiarity with SCD than preclinical students ($p = 0.008$). The type of program showed significant associations with self-assessed competence in treating special-needs patients independently after graduation ($p < 0.001$), the ability to refer patients to appropriate specialists ($p = 0.042$), perceived necessity for postgraduate training ($p < 0.001$), and the willingness to pursue such programs ($p = 0.004$). The majority of respondents viewed SCD positively. Therefore, improving SCD teaching and hands-on exposure in undergraduate and postgraduate curricula is recommended to strengthen students' preparedness to manage patients with special needs.

Keywords: Dental education, Attitudes, Persons with disabilities, Special care dentistry

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Introduction

Globally, over one billion people are estimated to have a disability, accounting for about 15% of the total population. Roughly 190 million adults and 93 million children under the age of 15 experience serious functional limitations or severe disabilities. This figure is expected to rise with population aging and the growing prevalence of chronic conditions [1]. Individuals with disabilities are more prone to oral diseases due to multiple barriers that limit access to adequate self-care and professional dental services [2, 3]. They often prefer empathetic, professional, and compassionate dental management that emphasizes prevention, rehabilitation, and maintenance of oral health [4]. Improving dentists' awareness and attitudes

toward this population can enhance the quality of dental care [5].

Providing oral care for patients with special needs is often challenging. A lack of accessible dental professionals remains a major limitation to obtaining treatment [6]. Previous research has indicated that some dentists hesitate to treat individuals with disabilities, resulting in higher levels of untreated oral disease. This reluctance is typically associated with insufficient training, lack of clinical experience, and limited confidence in managing such patients [4, 7]. Furthermore, systemic issues such as inadequate resources, equipment shortages, and ineffective policies within public healthcare also restrict service delivery [6].

Special care dentistry (SCD) emerged as a response to these difficulties. It provides dental services to patients whose physical, mental, developmental, or cognitive limitations make conventional treatment impractical [8]. Studies have shown that students exposed to both theoretical and clinical SCD training develop stronger confidence, awareness, and readiness to treat special-needs patients, thereby improving access to oral health care [9]. However, many institutions still provide minimal SCD instruction, leading to few professionals trained in this field and insufficient interdisciplinary cooperation [6, 10].

In Indonesia, the 2018 National Socioeconomic Survey (Survei Sosial Ekonomi Nasional/Susenas) conducted by the Central Bureau of Statistics (Badan Pusat Statistik/BPS) reported that 30.38 million Indonesians (14.2% of the total population) live with disabilities [11]. Data from the National Basic Health Survey (RISKESDAS) indicated that 22% of adults aged 18–59 years had disabilities [12]. Despite these statistics, access to healthcare for individuals with disabilities remains limited. A previous study investigating the perception of SCD among Jakarta dental practitioners revealed that most had not received formal SCD education during their undergraduate training and therefore rarely treated such patients. Although their general perception of SCD was low, most expressed interest and motivation to participate in related training programs [13].

Consequently, this study aimed to evaluate how dental students at Universitas Indonesia perceive SCD. The insights gained are expected to inform educational planning, foster student engagement, and support curriculum development in SCD across Indonesian dental schools.

Materials and Methods

Study design, setting, and participants

This investigation employed a cross-sectional approach using an online questionnaire distributed in October 2021 at the Faculty of Dentistry, Universitas Indonesia. The study complied with the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines [14]. Ethical clearance was granted by the Research Ethics Committee of the Faculty of Dentistry, Universitas Indonesia (Protocol ID: 010350721). All procedures were conducted following the principles of the Declaration of Helsinki. All undergraduate students enrolled in both preclinical and clinical stages ($n = 813$) were invited to take part. A Google Form link was shared via WhatsApp and Line messaging platforms. Participation was voluntary, and informed consent was obtained prior to

completion. Confidentiality of all responses was strictly maintained, and entries with missing or inconsistent data were excluded from analysis.

Questionnaire survey

The questionnaire, prepared in English, was adapted from a previously validated survey instrument [15]. Its content validity was evaluated by a panel of experts to ensure precision and completeness. Several revisions were made after a pilot test to improve clarity.

The finalized instrument contained four key components:

1. Participant information
2. Perception of treating individuals with special needs
3. Perception of special care dentistry (SCD)
4. Perception of SCD-related education

In total, 19 questions were included. Demographic information comprised two items—gender and level of study. For clinical students, two additional questions were asked about experience with special-needs patients and the types of cases treated. Another item evaluated self-rated capability to manage special-needs patients upon graduation.

Perceptions of SCD included four questions addressing awareness, definitions, terminology, and prior exposure. Attitudes toward managing patients with special needs were assessed through one Likert-scale item (1 = very uncomfortable to 5 = very comfortable). Referral preferences toward general or SCD specialists were rated on a five-point scale (1 = never to 5 = always), with higher scores reflecting more positive attitudes toward patient management and referral.

The educational aspect included eight questions. One asked about the adequacy of SCD instruction during dental training. Students who had participated in SCD-related clinical activities received a follow-up item regarding whether this training sufficiently prepared them for future practice. Additional questions explored opinions on theoretical courses, clinical practice, and postgraduate opportunities in SCD.

Validity and reliability of the questionnaire

To test clarity and readability, a pilot study was performed among 12 preclinical students not involved in the main study. Participants reviewed the questionnaire for language precision and ease of completion. Minor revisions were applied based on their feedback. The average time to complete the form was approximately 10 minutes.

Reliability of the “managing patients with special needs” domain was further analyzed among 80 clinical students using Cronbach’s alpha [16]. These data were

not included in the main results. The alpha coefficients for items related to experience, post-graduation ability, and referral practice were 0.83, 0.89, and 0.70, confirming internal consistency.

Statistical analysis

All responses were entered into Microsoft Excel 2010 and analyzed using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics (percentages, means, and standard deviations) were used to summarize participant characteristics. When data did not follow a normal distribution, the Mann–Whitney test was employed to compare perception differences related to study level and clinical experience. Chi-square tests were conducted to examine associations between academic program, clinical exposure, and perceptions of SCD and its training aspects. A p-value of less than 0.05 with a 95% confidence interval was considered statistically significant.

Results and Discussion

Of the 813 dental students invited to join the survey, 572 completed it, resulting in a 70% participation rate. The respondents' demographic data, along with their views on and experiences with special care dentistry (SCD), are shown in **Table 1**. Female students made up roughly six times the number of males, and the majority were preclinical students (65%). Within the clinical group, 80 students (40%) reported having treated patients with special needs, most commonly older adults (77.5%). A considerable portion of participants were able to define SCD (71.3%) and had some awareness of the discipline (55.1%). Roughly 43.7% preferred the expression special care dentistry over alternative terms, and 24% learned about SCD mainly from the internet. Students expressed varying confidence in their readiness to manage patients with special needs after graduation—only 31.6% (agree or strongly agree) believed they could do so independently.

Table 1. Characteristics of participants, their perceptions, and SCD-related training (N = 572).

Survey Item	N (%)
Gender	
Male	84 (14.7)
Female	488 (85.3)
Study Program	
Preclinical	372 (65)
Clinical	200 (35)
Perceptions of Special-Needs Patients	
Have you provided care for patients with special needs? (N = 200)	
No	120 (60)
Yes	80 (40)
Which categories of patients have you treated? (N = 80)	
Elderly	62 (77.5)
Physically disabled	23 (28.8)
Intellectually disabled	20 (25)
Complex medical conditions	16 (20)
Infectious disease	11 (13.8)
Psychological or behavioral disability	10 (12.5)
Blind	4 (5)
Deaf	3 (3.8)
I feel confident working independently with special-needs patients after graduation.	
Strongly disagree	19 (3.3)
Disagree	142 (24.8)
Neutral	230 (40.2)
Agree	170 (29.7)

Strongly agree	11 (1.9)
Perceptions of Special-Care Dentistry	
Can you provide a brief definition of Special-Care Dentistry?	
No	164 (28.7)
Yes	408 (71.3)
Are you familiar with Special-Care Dentistry?	
No	257 (44.9)
Yes	315 (55.1)
There is debate over the terminology for this specialty. Which term do you prefer?	
Special-Care Dentistry (SCD)	250 (43.7)
Special-Needs Dentistry (SND)	227 (39.7)
Unsure	95 (16.6)
How did you first learn about Special-Care Dentistry?	
Never heard of it	191 (33.4)
Internet	137 (24)
University academic staff/seminar	108 (18.9)
Reading materials (books/journals)	102 (17.8)
Friends/relatives	32 (5.6)
Mass media (television/radio)	2 (0.3)
Training Program for Special-Care Dentistry	
Have you received clinical training for treating special-needs patients?	
No	537 (93.9)
Yes	35 (6.1)
The training I received prepares me to treat special-needs patients after graduation (N = 35)	
Strongly Disagree	0 (0)
Disagree	7 (20)
Neutral	9 (25.7)
Agree	15 (42.9)
Strongly Agree	4 (11.4)
Should your program include theoretical teaching in Special-Care Dentistry?	
No	25 (4.4)
Yes	547 (95.6)
In which years should theoretical teaching in Special-Care Dentistry be included?	
First Year	128 (22.4)
Second Year	191 (33.4)
Third Year	340 (59.4)
Fourth Year	398 (69.6)
Fifth Year	352 (61.5)
Sixth Year	355 (62.1)
Should your program include clinical training in Special-Care Dentistry?	
No	35 (6.1)
Yes	537 (93.9)

In which years should clinical training in Special-Care Dentistry be conducted?	
First Year	117 (20.5)
Second Year	144 (25.2)
Third Year	226 (39.5)
Fourth Year	334 (58.4)
Fifth Year	413 (72.2)
Sixth Year	415 (72.6)
Should your program offer postgraduate training in Special-Care Dentistry?	
No	59 (10.3)
Yes	513 (89.7)
Would you pursue postgraduate training in Special-Care Dentistry if given the opportunity?	
No	103 (18)
Yes	469 (82)

Nearly all respondents stated that they had never received formal SCD instruction (93.9%). However, 95.6% expressed the need for didactic education in this field, ideally during the fourth year of study (69.6%). Similarly, 93.9% believed that clinical training should be part of the curriculum, with most preferring it to take place in the sixth year (72.6%). Furthermore, 89.7% thought that postgraduate SCD training should be offered, and 82% were willing to enroll if such programs became available (**Table 1**).

Students' comfort levels in treating special-needs patients are summarized in **Table 2**. The highest comfort scores were reported for patients with visual impairments (3.7 ± 0.8), whereas the lowest were for patients with behavioral or psychological conditions (3.1 ± 0.1). Their perceptions of referral practices are summarized in **Table 3**. Only 12.1% stated they would always refer a patient to a specialist for a second opinion, and 19.4% indicated they would refer when lacking proper treatment facilities.

Table 2. Students' comfort levels when treating patients with special needs (N = 572).

Patient Category with Special Needs	Response N (%)					Mean \pm SD
	Very Uncomfortable	Uncomfortable	Neutral	Comfortable	Very Comfortable	
Elderly	19 (3.3)	22 (3.8)	139 (24.3)	346 (60.5)	46 (8)	3.6 \pm 0.8
Physical Disability	18 (3.1)	23 (4)	173 (30.2)	303 (53)	55 (9.6)	3.6 \pm 0.8
Intellectual Disability	18 (3.1)	68 (11.9)	244 (42.7)	220 (38.5)	22 (3.8)	3.2 \pm 0.8
Medically Complex Conditions	21 (3.7)	66 (11.5)	208 (36.4)	255 (44.6)	22 (3.8)	3.3 \pm 0.8
Infectious Disease	38 (6.6)	159 (27.8)	251 (43.9)	116 (20.3)	8 (1.4)	2.8 \pm 0.8
Behavioral or Psychological Issues	20 (3.5)	112 (19.6)	217 (37.9)	196 (34.3)	27 (4.7)	3.1 \pm 0.1
Visual Impairment	17 (3)	22 (3.8)	138 (24.1)	315 (55.1)	80 (14)	3.7 \pm 0.8
Hearing Impairment	21 (3.7)	54 (9.4)	186 (32.5)	257 (44.9)	54 (9.4)	3.4 \pm 0.9

Table 3. Students' perceptions regarding referral to SCD specialists (N = 572).

Reasons for Referring Special-Needs Patients to a Specialist	Response N (%)					Mean \pm SD
	Never	Almost Never	Sometimes	Often	Always	
Seeking a second opinion	10 (1.7)	22 (3.8)	270 (47.2)	201 (35.1)	69 (12.1)	3.5 \pm 0.8
Feeling uneasy about performing the required procedure	34 (3.8)	146 (15.9)	279 (48.8)	91 (25.5)	22 (5.9)	3.1 \pm 0.8

Lack of knowledge on treating medically compromised patients	23 (4)	98 (17.1)	286 (50)	117 (20.5)	48 (8.4)	3.1 ± 0.9
Patient with intellectual disability	36 (6.3)	116 (20.3)	273 (47.7)	112 (19.6)	35 (6.1)	2.9 ± 0.9
Patient with physical disability	42 (7.3)	154 (26.9)	267 (46.7)	82 (14.3)	27 (4.7)	2.8 ± 0.9
Patient with psychological conditions preventing dental surgery	16 (2.8)	72 (12.6)	257 (44.9)	164 (28.7)	63 (11)	3.3 ± 0.9
Patient with behavioral challenges complicating treatment	19 (3.3)	65 (11.4)	247 (43.2)	183 (32)	58 (10.1)	3.3 ± 0.9
Lack of facilities equipped for disabled patients	30 (5.2)	59 (10.3)	195 (34.1)	177 (30.9)	111 (19.4)	3.4 ± 1.0

Associations between SCD perceptions and academic level or clinical experience are presented in **Table 4**. Significant differences were found between preclinical and clinical students regarding their ability to manage special-needs patients independently ($p < 0.001$) and their referral practices ($p = 0.042$). Clinical students demonstrated a better understanding of SCD than those in preclinical stages ($p = 0.008$). Concerning

educational perspectives, preclinical students showed stronger interest in postgraduate SCD training, with significant results for both the need for postgraduate education ($p < 0.001$) and interest in future enrollment ($p = 0.004$). No meaningful correlation was observed between gender or prior experience treating special-needs patients and any SCD-related variable.

Table 4. Perceptions of special care dentistry by study level (N = 572) and clinical experience with special-needs patients (N = 200).

Survey Items	Study Program		p Value	Clinical-Student Experience with Special-Needs Patients		p Value
	Preclinical, N (%) (N = 357)	Clinical, N (%) (N = 200)		No, N (%) (N = 120)	Yes, N (%) (N = 80)	
Perceptions of Special-Needs Patients						
Confidence in independently treating special-needs patients post-graduation (Mean ± SD) a	3.0 ± 0.8	3.1 ± 0.8	<0.001 *	2.7 ± 0.8	2.9 ± 0.8	0.070
Comfort level in providing care for special-needs patients (Mean ± SD) a	3.3 ± 0.7	3.3 ± 0.5	0.313	3.3 ± 0.6	3.3 ± 0.5	0.845
Likelihood of referring special-needs patients to specialists (Mean ± SD) a	3.2 ± 0.4	3.3 ± 0.5	0.042 *	3.2 ± 0.5	3.2 ± 0.5	0.301
Perceptions of Special-Care Dentistry						
Belief in having knowledge about special-care dentistry b			0.008 *			0.449
Yes	233 (62.6)	148 (74)		86 (71.7)	62 (77.5)	
No	139 (37.4)	52 (26)		34 (28.3)	18 (22.5)	
Ability to briefly define special-care dentistry b			0.056			0.563
Yes	255 (68.5)	153 (76.5)		94 (78.3)	59 (73.8)	
No	117 (31.5)	47 (23.5)		26 (21.7)	21 (26.3)	
Familiarity with special-care dentistry b			0.811			0.839
Yes	203 (54.6)	112 (56)		66 (55)	46 (57.5)	
No	169 (45.4)	88 (44)		54 (45)	34 (42.5)	
Training Program for Special-Care Dentistry						
Received clinical training for treating special-needs patients b			0.233			0.558

Yes	19 (5.1)	16 (8)	8 (6.7)	8 (10)
No	353 (94.9)	184 (92)	112 (93.3)	72 (90)
Support for including theoretical teaching in special-care dentistry b			1.000	0.444
Yes	356 (95.7)	191 (95.5)	113 (94.2)	78 (97.5)
No	16 (4.3)	9 (4.5)	7 (5.8)	2 (2.5)
Support for including clinical training in special-care dentistry b			0.054	0.880
Yes	355 (95.4)	182 (91)	110 (91.7)	72 (90)
No	17 (4.6)	18 (9)	10 (8.3)	8 (10)
Support for postgraduate training in special-care dentistry b			<0.001 *	0.729
Yes	347 (93.3)	166 (83)	101 (84.2)	65 (81.3)
No	25 (6.7)	34 (17)	19 (15.8)	15 (18.8)
Interest in pursuing postgraduate training in special-care dentistry if available b			0.004 *	0.298
Yes	318 (85.5)	151 (75.5)	87 (72.5)	64 (80)
No	54 (14.5)	49 (24.5)	33 (27.5)	16 (20)

a Mann–Whitney test; b Chi-square test; p < 0.05 considered significant.

Multiple investigations have highlighted that individuals with special needs tend to experience a greater burden of oral health problems [3]. In Indonesia, the proportion of people aged 35–44 years with disabilities grew notably from 7.9% in 2013 [17] to 20.3% in 2018 [12]. Dental professionals must therefore recognize their crucial role in addressing this growing public health concern. Strengthening academic programs and promoting deeper understanding of Special Care Dentistry (SCD) among dental students are key steps toward improving care delivery [18]. To date, this represents the first Indonesian study that explores how dental students perceive SCD. Consequently, it underscores the need for comprehensive SCD education within both preclinical and clinical phases of training.

The data revealed that 55.1% of respondents were aware of SCD. This level of awareness was lower than among Malaysian students (84.4%) [15] but exceeded that of Australian counterparts (46.5%) [19]. Greater awareness is essential to cultivating positive attitudes and responsible clinical behavior when dealing with patients with disabilities [9]. Student perspectives are shaped by multiple factors, such as supervised clinical practice, personal involvement, social context, and exposure to community-based programs [9, 20].

Exposure to SCD-related coursework during dental school has been shown to correlate strongly with professional readiness, empathy, and comfort when treating patients with special needs [21–23]. Conversely, practitioners lacking such preparation often report hesitation and discomfort in managing

these cases [13, 24]. This pattern was mirrored in the present findings: only 31.6% (agree and strongly agree) of respondents expressed confidence in treating special-needs patients independently, while 93.9% stated they had never received any formal clinical training. Moreover, 60% of those in clinical stages had not treated special-needs patients at all. A related study on Indonesian dentists also reported that 65.2% had neither SCD instruction during undergraduate studies nor professional experience in treating these patients [13]. These findings suggest a deficiency of theoretical and practical opportunities in SCD education [13, 22]. Developing structured SCD modules has been demonstrated to enhance students' technical abilities, understanding, and analytical judgment when working with people with disabilities [10, 25, 26]. Nevertheless, such a course is still absent from the curriculum at the Faculty of Dentistry, Universitas Indonesia, highlighting a pressing need for integration.

Most participants in this study expressed the need for SCD lectures (95.6%), ideally introduced in the fourth academic year (69.6%), along with clinical sessions (93.9%) scheduled in the sixth year (72.6%). Additionally, 82% stated that they would pursue postgraduate education in this field if available. Sound theoretical knowledge combined with hands-on training is crucial for building clinical confidence and ensuring competent, ethical treatment for special-needs patients [9, 13, 27, 28]. Postgraduate workshops and continuing education programs focusing on SCD can further increase practitioners' willingness to treat such patients and improve quality of care [15, 24, 29].

Therefore, integrating a cohesive and well-structured SCD curriculum covering both theoretical and practical dimensions at undergraduate and advanced levels is essential [23, 30]. The University of Malaya has already embedded SCD within its final-year program, helping students acquire essential skills, knowledge, and confidence to handle complex patient needs [22]. Studies have also shown that postgraduate training emphasizing geriatric and special-needs dentistry enhances professional capability and assurance in clinical practice [30]. Implementing a similar framework in Indonesia could significantly strengthen future dentists' competence in providing inclusive and equitable oral health care.

Among all patient categories, elderly individuals were the most frequently managed by clinical students (77.5%). This observation is consistent with earlier data showing that over half of dentists in DKI Jakarta felt either confident (70.4%) or positive (61.2%) when working with older adults [13]. Since geriatric dentistry (GD) is a compulsory component in most dental programs [31], students tend to develop both familiarity and competence in this field, which strongly correlates with professional attitudes and confidence in caring for patients requiring special attention [9, 23]. Their constructive outlook may stem from exposure to training materials, direct contact, and greater familiarity with older patients, which together help diminish apprehension [9]. In contrast, limited clinical practice with individuals suffering from infectious conditions, intellectual disabilities, or behavioral disorders corresponds to reduced comfort levels among students. This likely results from insufficient classroom-based learning and restricted clinical experience, fostering hesitation toward treating such cases [21, 32]. Other challenges noted include extended treatment times, lack of patient cooperation or assistance, communication barriers, and anxiety about harming patients [32].

Dental students' sense of ease and positive perspective when managing special-needs patients are largely influenced by their previous exposure [9]. Findings showed that most respondents were comfortable treating visually impaired patients (3.7 ± 0.8), possibly because these patients often have companions assisting them. Likewise, 67.6% of dentists in DKI Jakarta reported confidence in treating patients with physical disabilities [13]. Further examination is needed to determine what specific factors drive these outcomes. Around 12.1% of participants indicated that they sought second opinions when treating special-care patients. The readiness to manage such individuals has been linked to consistent collaboration and

professional communication with SCD experts through formal support systems [33]. However, Indonesia currently lacks a structured clinical framework or referral network for handling these cases.

There was a significant difference between preclinical and clinical students in their perceived readiness to work independently with special-care patients after graduation and in their SCD understanding. Clinical students demonstrated higher awareness and confidence, likely due to greater exposure to SCD-related cases during their training. Incorporating didactic elements such as lectures, discussions, case presentations, and supervised practice is vital to prevent feelings of unpreparedness among graduates [26]. Hands-on clinical work further develops self-assurance and encourages students to treat special-care patients once in professional practice [34, 35].

According to the Commission on Dental Accreditation (CODA), a persistent concern is whether graduates are adequately equipped to manage patients with special needs. Therefore, revising standards to ensure dental graduates attain sufficient competence in evaluating and treating these patients is recommended [36]. In the present findings, both preclinical and clinical students expressed that SCD-focused postgraduate programs should be available, with many indicating willingness to pursue them. Clinical students, however, more frequently reported referring special-needs patients to specialists. Earlier research also suggested that many Indonesian dentists face challenges in treating special-care patients due to insufficient SCD instruction, leading to frequent referrals [13].

Dental practitioners must approach special-care patients with fairness and dignity to ensure equal access to oral healthcare. Yet, structural and educational barriers continue to impede access [35]. Enhancing dentists' SCD proficiency could reduce these disparities and expand access to appropriate dental services [15, 37]. Increasing the number of dentists capable and willing to manage these patients would help close the care gap and contribute to improved oral health and quality of life for this group [13].

This study faced certain limitations. The participant pool included mostly female students, reflecting the overall gender distribution at Universitas Indonesia, where males comprise only 10–15% of dental enrollees each year. Broader sampling from multiple universities and further examination of challenges dental students face in treating patients with special needs could enhance the generalizability of these findings. Nevertheless, the data indicate that while most students have a generally positive view of SCD, both

foundational and ongoing training—didactic and clinical—are necessary to strengthen their skills and confidence. Dental schools should therefore expand SCD learning opportunities and invest in continuous professional development. Despite its limitations, this study highlights essential areas for reform, particularly in advancing SCD education and preparedness within Indonesia's dental curriculum.

Conclusion

The findings of this research demonstrate that dental students generally hold positive perceptions toward Special Care Dentistry (SCD). Clinical students, in particular, displayed greater independence and understanding in managing patients with special needs after graduation compared to their preclinical counterparts. Many clinical students also indicated that they often needed to refer such patients to specialists, while both groups expressed interest in pursuing additional postgraduate education in SCD to build confidence and competence in providing care for this population.

These results highlight the necessity for a comprehensive review of dental curricula, including the revision of educational content, instructional strategies, and clinical components at both undergraduate and postgraduate levels. Incorporating continuous professional development programs and practical SCD training would strengthen students' understanding and equip future dentists to respond effectively to the increasing demand for dental care among individuals with special needs.

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