

Article

Career Stage Influences Self-Reported Familiarity, Perceptions, and Adoption Readiness Regarding Lithium Disilicate Restorations: Evidence from an Eastern European Dental Cohort

Alfred Mark Sallai ¹, Codruța-Eliza Ille ^{1,2,*} , Ioana-Cristina Talpoș-Niculescu ^{3,*}, Flavio Santoro ⁴ and Elisabeta Maria Vasca ⁵

¹ Department of Prosthodontics, Faculty of Dental Medicine, “Victor Babeș” University of Medicine and Pharmacy, Revoluției din 1989 Blvd. No. 9, 300580 Timișoara, Romania; sallai.mark@umft.ro

² TADERP Research Center—Advanced and Digital Techniques for Endodontic, Restorative and Prosthetic Treatment, “Victor Babeș” University of Medicine and Pharmacy, Revoluției din 1989 Blvd., No. 9, 300041 Timișoara, Romania

³ Discipline of Oro-Dental Diagnosis and Ergonomics, Faculty of Dental Medicine, “Victor Babeș” University of Medicine and Pharmacy, Revoluției din 1989 Blvd. No. 9, 300580 Timișoara, Romania

⁴ Studio Dentistico Prato Tooth Prof. A. Santoro, 59100 Prato, Italy; flaviosantoro82@gmail.com

⁵ Department of Dentistry, Faculty of Dental Medicine, “Vasile Goldis” Western University of Arad, 86 Liviu Rebreanu Street, 310048 Arad, Romania; vasca.elisabeta@uvvg.ro

* Correspondence: ille.codruta@umft.ro (C.-E.I.); ioana.talpos-niculescu@umft.ro (I.-C.T.-N.)

Abstract

(1) Background: This pilot study investigated the influence of career stage on knowledge, perceptions, and readiness to adopt lithium disilicate restorations among 132 dentists from Eastern Europe. (2) Methods: Dentists completed a 24-item questionnaire covering three domains: knowledge and training, clinical perceptions and advantages, and perceived barriers and limitations. These clinicians were grouped into early-career (25–34 years), mid-career (35–50 years), and late-career (>50 years) practitioners. Age-group differences were assessed at both the domain and individual-item levels. (3) The knowledge and training domain exhibited a significant age-dependent gradient ($p < 0.001$) with a very large effect size ($\omega^2 = 0.45$, 95% CI [0.33, 0.55]). This pattern was found for most constituent items ($p < 0.001$), with the proportion of agreement decreasing significantly with increasing career stage. Translucency evaluation and education adequacy followed a different trend ($p < 0.001$), with significantly lower agreement in late-career clinicians versus younger groups but no significant differences between these strata. In contrast, composite scores in the remaining domains were comparable across strata. Perceived cost-effectiveness, however, varied significantly across age groups ($p < 0.001$), reaching its highest levels among mid-career dentists and the lowest among late-career practitioners. Significant intergroup differences were also observed for laboratory communication challenges ($p < 0.001$), with significantly lower levels reported for later-career dentists. Conclusions: Our findings suggest that career stage substantially influences self-reported familiarity and preparedness regarding lithium disilicate restorations, whereas perceptions of their clinical advantages and limitations remain largely consistent across generations of dentists.

Keywords: lithium disilicate; dental ceramics; restorative dentistry; dentists; dental education; continuing; knowledge; attitudes; practice



Academic Editor: Iole Vozza

Received: 14 June 2026

Revised: 2 July 2026

Accepted: 7 July 2026

Published: 10 July 2026

Copyright: © 2026 by the authors.

Licensee MDPI, Basel, Switzerland.

This article is an open access article

distributed under the terms and

conditions of the [Creative Commons](#)

[Attribution \(CC BY\)](#) license.

1. Introduction

With a unique interlocking microstructure of rod-like crystals suspended in a glassy matrix, lithium disilicate ($\text{Li}_2\text{Si}_2\text{O}_5$) provides an optimal balance between aesthetics, mechanical strength, and compatibility with digital workflows [1–3]. This high-performance glass has therefore become a leading prosthetic material in contemporary dentistry. From a mechanical point of view, it ranks well above feldspathic ceramics and below polycrystalline zirconia [4,5]. However, lithium disilicate exhibits favorable biomechanical behavior and efficient force distribution, with very high clinical survival rates reported for single-unit crowns up to ten years after placement [5–7]. It also provides appropriate translucency for the aesthetic area without experiencing low strengths of conventional feldspar ceramics [5–11]. In fact, its translucency is within the same range as that reported for enamel and dentin at the same thickness [12,13]. In addition, this dental biomaterial is well-suited for workflows involving Computer-Aided Design and Computer-Aided Manufacturing (CAD/CAM). This feature has promoted its widespread use, allowing for intraoral scanning, digital design, rapid milling, and controlled crystallization [13,14]. Overall, lithium disilicate can be recommended for adhesive partial restorations and single-tooth crowns but lacks robust supporting evidence for short bridges [5,15].

In recent years, clinicians increasingly prefer ceramic restorations over conventional metal-based restorations for single-unit crowns, with lithium disilicate holding a dominant position among restorative material options [16]. Despite growing clinical evidence on these materials, several key aspects remain underexplored. Most available studies on lithium disilicate offer short-to-medium-term outcomes (3 to 5 years) [8–11]. Long-term clinical data spanning more than a decade remain scarce, particularly in posterior load-bearing regions subjected to high occlusal forces [4,6,7]. There is also limited information on its use in pediatric and geriatric populations [4,17], as well as long-term tracking and comprehensive cytotoxicity data [5,12,18]. Arguably, one of the most important unresolved issues is how clinicians' age and career stage influence their perspectives on lithium disilicate restorations. The existing literature supports that younger practitioners are more receptive to technological innovations and digital workflows. In contrast, senior clinicians tend to rely on accumulated clinical experience when evaluating new treatment approaches [19,20]. Despite these general trends, there is little information on intergenerational differences in lithium disilicate use and their underlying factors. Moreover, the major gap for Eastern Europe on this topic is not only clinical, but also systemic [4,21–23].

In this context, we hypothesized that dentists at different career stages may demonstrate different self-reported familiarity, perceptions, and experiences regarding lithium disilicate. To this end, we investigated differences in familiarity with lithium disilicate, confidence in digital technologies, treatment planning approaches, and restorative decision-making across 132 clinicians practicing in Arad County and representing diverse professional and demographic characteristics. Both individual responses and broader conceptual constructs were analyzed to identify potential differences between career-stage groups. The present study addresses a gap in the literature by investigating intergenerational differences in dentists' self-reported familiarity, perceptions, and clinical experiences regarding this material. Furthermore, it contributes real-world evidence from an Eastern European setting, addressing a region where data on the adoption and clinical utilization of lithium disilicate remain scarce.

2. Materials and Methods

2.1. Study Design and Participants

This study employed a cross-sectional design to evaluate human factors influencing the adoption of lithium disilicate restorations among dentists of different ages and career

stages. Ethical approval was obtained from the Ethics Committee of the Faculty of Dentistry, “Vasile Goldiș” Western University of Arad (Approval No. 123, Date 2 March 2026). The survey was conducted between March and June 2025. This three-month period provided sufficient time for participant recruitment and questionnaire completion.

Dentists were recruited through professional networks and direct invitations distributed within Arad County. Participation was voluntary and anonymous. All participants responded to a survey incorporating 24 declarative items related to the use of lithium disilicate restorations. The questionnaire items were developed based on a comprehensive review of the contemporary literature on lithium disilicate restorations, adhesive dentistry, and clinicians’ adoption of digital restorative workflows. Item selection was guided by the principal educational, clinical, and practical aspects reported to influence the use of lithium disilicate restorations. The preliminary questionnaire was independently evaluated by experienced prosthodontists and restorative dentists to assess content validity, clinical relevance, clarity, and comprehensiveness. Based on their feedback, minor modifications in wording and item organization were introduced to improve clarity while preserving the intended meaning of each question. Because this investigation was designed as an exploratory pilot study, formal construct validation and pilot psychometric testing were not performed.

The questionnaire was administered anonymously through Google Forms. Of the 180 dentists invited to participate, 20 declined participation and 28 submitted incomplete questionnaires that were excluded according to the predefined exclusion criteria. As a result, 132 completed questionnaires were included in the final analysis, corresponding to a response rate of 73.33%. The items were classified into three conceptual domains reflecting: (i) knowledge and training (items 1–8); (ii) clinical perception and advantages (items 9–16); and (iii) perceived barriers and limitations (items 17–24). These domains were selected to capture the principal educational, clinical, and practical factors influencing the acceptance and utilization of lithium disilicate restorations. Details about these items are given in Table 1. Questionnaire data were collected at a single time point, without follow-up evaluations or interventional procedures.

Table 1. Likert-scale items used in the study.

Item No.	Survey Item
Items related to knowledge and training	
1	I feel fully confident in my ability to properly prepare a tooth for a lithium disilicate crown.
2	I have a strong understanding of the clinical differences and specific indications between lithium disilicate and zirconia restorations.
3	I am up to date with current adhesive cementation protocols required for lithium disilicate and other all-ceramic restorations.
4	I feel confident in selecting the appropriate translucency and opacity for lithium disilicate restorations based on clinical and esthetic requirements.
5	My formal education adequately prepared me for the clinical use of advanced ceramic materials such as lithium disilicate.
6	I possess a strong understanding of the mechanical properties of lithium disilicate, including flexural strength and fracture behavior.
7	I am confident in my ability to perform appropriate occlusal adjustment and polishing procedures for lithium disilicate restorations.
8	I actively pursue continuing education opportunities, including courses, workshops, and webinars, related to advanced ceramic restorative materials.

Table 1. *Cont.*

Item No.	Survey Item
Items related to clinical perception and advantages	
9	Lithium disilicate restorations provide significantly superior esthetic outcomes compared with conventional restorative options.
10	The long-term durability of lithium disilicate crowns is excellent for the majority of clinical indications.
11	The clinical benefits of lithium disilicate restorations, including superior esthetics and biocompatibility, justify their higher financial cost.
12	Lithium disilicate restorations demonstrate superior gingival biocompatibility compared with metal-based restorative materials.
13	The long-term chromatic stability of lithium disilicate restorations represents a major clinical advantage.
14	Patients are significantly more satisfied with the final esthetic appearance of lithium disilicate restorations compared with traditional alternatives.
15	The minimally invasive tooth preparation associated with lithium disilicate veneers is a substantial advantage for preserving natural tooth structure.
16	When properly indicated and executed, the risk of fracture for lithium disilicate crowns is very low.
Items related to perceived barriers and limitations	
17	The high cost to patients is a primary factor limiting my use of lithium disilicate restorations.
18	Identifying a dental laboratory that consistently provides high-quality lithium disilicate restorations is challenging.
19	Most of my patients do not actively request metal-free restorations and remain satisfied with conventional restorative options.
20	The financial investment required for office equipment and materials necessary for lithium disilicate systems represents a significant barrier to adoption.
21	Concerns regarding catastrophic fracture risk and limited intraoral repairability reduce my willingness to use lithium disilicate restorations.
22	The clinical time required for lithium disilicate restorations (e.g., adhesive cementation) is substantially greater than that required for metal-ceramic restorations.
23	Communication with the dental laboratory for lithium disilicate restorations is more complex and demands greater effort than for conventional restorations.
24	My current clinical workflow is optimized for metal-ceramic restorations, and transitioning to lithium disilicate systems would be inefficient for my practice.

Item no., item number. Items 1–8 were assigned to the knowledge and training domain, items 9–16 to the clinical perceptions and advantages domain, and items 17–24 to the perceived barriers and limitations domain.

Inclusion criteria were: (i) licensed dental practitioners; (ii) actively practicing dentistry at the time of the survey; and (iii) provision of informed consent. Because the survey was administered exclusively to licensed dentists, questionnaire comprehension was considered inherent to the target population. Data from general practitioners and specialists were analyzed jointly, as the objective was to evaluate the overall responses of practicing dentists. All participants completed the questionnaire independently, and no requests for clarification were recorded during data collection.

Dentists were excluded if they were not actively practicing dentistry, submitted incomplete questionnaires, or declined participation. Final-year dental students were also excluded to ensure a homogeneous study population composed exclusively of licensed practitioners with independent clinical responsibility for restorative treatment planning and material selection.

2.2. Statistical Analysis

The dentists were stratified based on their age into three categories: (i) 25–34 years, early-career dentists ($n = 36$); (ii) 35–50 years, mid-career dentists ($n = 72$); and (iii) >50 years, late-career dentists ($n = 24$). Age categories broadly reflect differences in training era, educational exposure, and adoption of contemporary restorative technologies [18,24,25].

As a result, we used generational cohorts as a proxy for career stage, although age and professional experience are not synonymous. Because this investigation was conceived as a pilot exploratory study, no formal a priori sample size calculation was performed. The study was intended primarily to generate preliminary evidence and identify trends that may inform larger confirmatory investigations.

The homogeneity of groups in terms of sex distribution was assessed using a Chi-square (χ^2) test of independence based on a 2×3 contingency table [26,27]. Likert responses were converted into numerical values using a five-point scale: Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly agree (5). For each survey item, response distributions across age strata were assessed using χ^2 tests of independence based on 5×3 contingency tables. Significant results were followed by the Marascuillo post hoc procedure. Cronbach's Alpha coefficients were calculated for each domain separately and then for the pooled data from the full 24-item instrument. Composite scores were subsequently computed for each domain as the sum of Likert responses divided by the number of items. This approach enabled higher-order analyses of clinician readiness for lithium disilicate crown adoption. All items were coded on a consistent 5-point scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating greater readiness and more favorable attitudes toward lithium disilicate adoption.

One-way analysis of variance (ANOVA) was applied to compare composite domain scores across age strata. Prior to ANOVA, we tested the assumptions of normality and equal variance (homoscedasticity) using the Shapiro–Wilk test and Levene's test, respectively. In case of heteroscedastic data, the robust Welch's ANOVA variant was applied. For significant overall effects, post hoc pairwise comparisons were performed using the Games–Howell procedure. Effect sizes were quantified using omega squared (ω^2). A p value less than 0.05 was considered statistically significant [28]. Statistical analyses were performed using Statistica 13.5 software (Tibco Software Inc., Carlsbad, CA, USA).

3. Results

The study population included predominantly mid-career dentists, followed by early-career and late-career dentists. The distribution of males and females across age groups is shown in Table 2. A χ^2 test of independence revealed a similar distribution of sexes across different age categories ($p = 0.955$).

Table 2. Distribution of males and females across age groups.

Age Group	Female	Male	Total
25–34 years	20 (28.57%)	16 (25.81%)	36 (27.27%)
35–50 years	38 (54.29%)	34 (54.84%)	72 (54.55%)
>50 years	12 (17.14%)	12 (19.35%)	24 (18.18%)

Data in the second, third, and fourth columns are presented as absolute counts with the corresponding percentages in parentheses. These percentages represent the proportion contributed by each age category to the total number of respondents within each column category. Abbreviations: 25–34, early-career dentists (25–34 years); 35–50, mid-career dentists (35–50 years); >50, late-career dentists (>50 years).

The distribution of Likert scores across age groups is presented in Supplementary Table S1. Internal consistency analysis demonstrated excellent reliability for the knowledge and training domain (Cronbach's $\alpha = 0.91$), good reliability for the clinical perceptions and advantages domain ($\alpha = 0.84$), and acceptable-to-good reliability for the perceived barriers and limitations domain ($\alpha = 0.79$). The full 24-item instrument showed strong overall psychometric performance ($\alpha = 0.88$).

The results of χ^2 analysis are given in Table 3. We found significant differences in the response of dentists to knowledge and training measures (items 1–8). These items

revealed a pattern exhibiting complete concordance and statistical significance across all analyses, with response patterns being mostly dictated by an age gradient. Thus, early-career dentists (25–34 years) and mid-career dentists (35–50 years) were significantly more likely to be confident in preparing a tooth for a lithium disilicate crown (item 1) than late-career dentists (>50 years). Moreover, early-career practitioners (25–34 years) were significantly more prone to select higher-confidence Likert categories for this item than mid-career practitioners (35–50 years). Similar patterns were identified for the variables ‘knowledge of indications’ (item 2), ‘adhesive protocols’ (item 3), ‘mechanical properties’ (item 6), ‘clinical adjustment’ (item 7), and ‘continuing education’ (item 8).

Table 3. χ^2 analysis of age-group differences across questionnaire items.

Item No.	Variable	<i>p</i> -Value	Significant Pairwise Differences
1	Confidence preparation	<0.001 ***	A, B, C
2	Knowledge of indications	<0.001 ***	A, B, C
3	Adhesive protocols	<0.001 ***	A, B, C
4	Translucency evaluation	<0.001 ***	B, C
5	Education adequacy	<0.001 ***	B, C
6	Mechanical properties	<0.001 ***	A, B, C
7	Clinical adjustment	<0.001 ***	A, B, C
8	Continuing education	<0.001 ***	A, B, C
9	Aesthetic superiority	0.101	n/a
10	Durability	0.189	n/a
11	Benefits vs. cost	<0.001 ***	A, B, C
12	Biocompatibility	0.274	n/a
13	Chromatic stability	0.846	n/a
14	Patient satisfaction	0.587	n/a
15	Minimally invasive	0.781	n/a
16	Fracture risk	0.745	n/a
17	Cost barrier	0.177	n/a
18	Lab availability	0.349	n/a
19	Patient demand	0.244	n/a
20	Equipment cost	<0.001 ***	B, C
21	Fear of fracture	0.440	n/a
22	Clinical time	0.151	n/a
23	Lab communication	<0.001 ***	B, C
24	Workflow	0.228	n/a

Item no., item number; n/a, not applicable. Age-group comparisons: A: 25–34 vs. 35–50; B: 25–34 vs. >50; C: 35–50 vs. >50. Items 1–8 were assigned to the knowledge and training domain, items 9–16 to clinical perceptions and advantages, and items 17–24 to perceived barriers and limitations. Values marked with asterisks (*) in the third column denote significant intergroup differences (χ^2 test, ***— $p \leq 0.001$; **— $p \leq 0.01$; and *— $p \leq 0.05$). Significant pairwise differences were assessed with the Marascuillo post hoc procedure. Abbreviations: Item no., item number; n/a, not applicable; 25–34, early-career dentists (25–34 years); 35–50, mid-career dentists (35–50 years); >50, late-career dentists (>50 years).

The age-related gradient became less pronounced for the variables ‘translucency evaluation’ (item 4) and ‘education adequacy’ (item 5). For the former variable, late-career clinicians (>50 years) reported significantly lower levels of confidence in the selection of optical parameters compared to mid-career practitioners (35–50 years) and early-career practitioners (25–34 years). However, no significant differences were observed for the latter two strata. The same pattern was observed for the variable ‘education adequacy’ (item 5).

Most items related to clinical perceptions and advantages (items 9–16) showed a similar distribution of Likert score categories across groups. The frequency distribution of Likert responses for the variable ‘benefits vs. cost’ (item 11), however, differed significantly between groups and followed a significant inverted U-shaped age pattern. Mid-career

clinicians (35–50 years) reported significantly more favorable perceptions of the benefit-to-cost ratio of lithium disilicate crowns than both early-career clinicians (25–34 years) and late-career clinicians (>50 years), with half of them concentrated in the “Agree” category (score 4). When compared to the former stratum, late-career practitioners (>50 years) were significantly more likely to select neutral response categories.

The distribution of proportions across the Likert categories was independent of the age cohort for most variables in the perceived barriers and limitations domain; that is, ‘cost barrier’ (item 17), ‘lab availability’ (item 18), ‘patient demand’ (item 19), ‘fear of fracture’ (item 21), ‘clinical time’ (item 22), and ‘workflow’ (item 24). However, we identified a significant age-dependent variation in the distribution of Likert categories for the variable ‘equipment cost’ (item 20). Early-career practitioners (25–34 years) and mid-career practitioners (35–50 years) were significantly more likely to consider equipment costs as a highly restrictive, active barrier than late-career dentists (>50 years). In contrast, no significant differences existed between the younger age strata. We also identified significant differences for the variable ‘lab communication’ (Item 23). Late-career clinicians (>50 years) reported significantly fewer difficulties in laboratory communication than both early-career practitioners (25–34 years) and mid-career practitioners (35–50 years), with a similar distribution of Likert scores between the latter two groups.

The mean values of composite scores across different conceptual domains and age strata are illustrated in Figure 1. Despite being normally distributed for all domains (Shapiro–Wilk test, $p \geq 0.096$), the datasets analyzed were heteroscedastic in the knowledge and training domain and the clinical perceptions and advantages domain (Levene’s test; $p \leq 0.018$) but not for the perceived barriers and limitations domain (Levene’s test; $p = 0.614$). As a result, the Welch ANOVA approach was used for all domain-level evaluations. We found significant age-group differences in the ‘knowledge and training’ domain, accompanied by a very large effect size (Welch ANOVA; $p < 0.001$, $\omega^2 = 0.45$, 95% CI [0.33, 0.55]). Early-career clinicians had significantly higher composite scores than both mid-career practitioners and late-career dentists. Moreover, mid-career clinicians scored significantly higher than the late-career dentists. In contrast, no significant differences were observed across age groups for the other two domains (Welch ANOVA; $p \geq 0.127$, $\omega^2 \leq 0.03$, 95% CI [0.00, 0.08]).

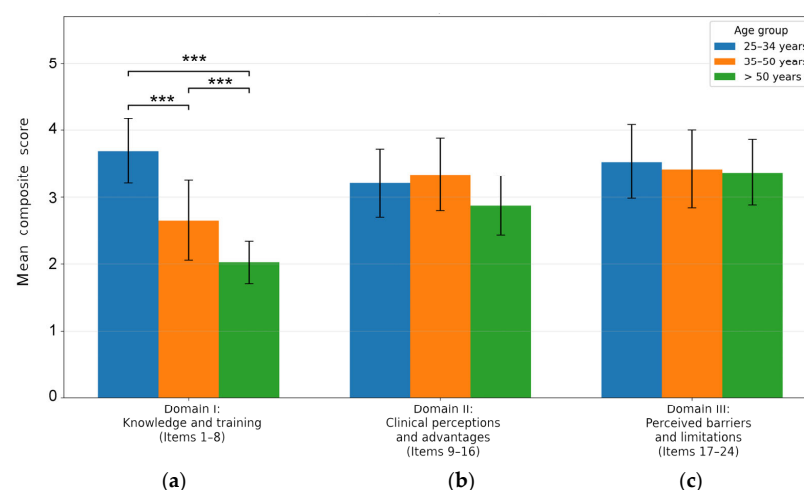


Figure 1. Composite scores for the knowledge and training domain (a), the clinical perceptions and advantages domain (b), and the perceived barriers and limitations domain (c). Values are given as mean composite scores (bars) with one standard deviation (error bars). Overall age-group differences were assessed using the Welch ANOVA test, with the Games–Howell procedure used for post hoc analysis (** $p \leq 0.01$; * $p \leq 0.05$; ns = not significant). Abbreviations: 25–34, early-career dentists (25–34 years); 35–50, mid-career dentists (35–50 years); >50, late-career dentists (>50 years).

4. Discussion

To our knowledge, this is the first study investigating career-stage differences in self-reported familiarity, confidence, and preparedness regarding lithium disilicate restorations. Our findings support a marked age-related gradient in the knowledge and training domain, whereas perceptions of clinical advantages and barriers remained largely consistent across career stages. A significant age-dependent gradient was observed in the composite score for this domain, accompanied by a very large effect size. These data may suggest that early- and mid-career dentists exhibit significantly higher self-assessed familiarity, greater self-confidence, and higher perceived preparedness regarding lithium disilicate-based restorations than their older counterparts. However, greater self-confidence should not be interpreted as evidence of superior clinical competence. Younger clinicians may overestimate their preparedness, while more experienced practitioners may report lower confidence despite possessing substantial practical expertise. The present findings should therefore be interpreted as reflecting differences in self-reported familiarity, confidence, and perceived preparedness rather than objectively verified clinical ability.

Our results indicate that age-related differences in self-reported familiarity and perceived training adequacy may be a major determinant of readiness to adopt lithium disilicate crowns, with progressively lower readiness and self-perceived training levels with increasing age. Although age categories reflect differences in educational exposure and training era, chronological age cannot fully capture professional experience. Variables such as years since graduation, postgraduate specialization, participation in continuing education, and restorative workload may independently influence clinicians' self-reported familiarity with lithium disilicate restorations. Educational factors may contribute to this generational variation in perceptions of lithium disilicate restorations. For example, Menta et al. found a direct association between lithium disilicate-based ceramics knowledge and higher postgraduation qualifications, but an inverse relationship with time since graduation in a survey involving 206 Brazilian dentists. Interestingly, a substantial proportion of these practitioners delegated restorative material selection to the dental laboratory technician, potentially increasing variability in prosthetic treatment planning [24].

The large effect size indicates that career stage explains a substantial proportion of the variability in self-reported familiarity with lithium disilicate. From a practical perspective, this finding may suggest that educational interventions should be targeted rather than uniform. Particular emphasis should be placed on supporting late-career clinicians through continuing professional development focused on contemporary adhesive protocols, digital workflows, and material-specific competencies. In contrast, broad educational interventions targeting clinicians' perceptions of lithium disilicate may yield limited additional benefits—as supported by the negligible effect sizes of the remaining domains.

As key technical pillars underlying clinical success with lithium disilicate restorations [29], confidence in tooth preparation (item 1), familiarity with adhesive cementation protocols (item 3), and understanding of mechanical properties (item 6) are sensitive indicators of age-related differences in education, training recency, and adaptation to evolving restorative paradigms. Our results revealed significantly lower confidence in tooth preparation for lithium disilicate crowns among late-career dentists. As an interpretive hypothesis, we propose that this trend may reflect a perceived difficulty in transitioning from the feather-edge or knife-edge preparations traditionally used for gold or porcelain-fused-to-metal (PFM) restorations to the distinct geometries required for glass-ceramics. Furthermore, inadequate tooth preparation has been associated with an increased risk of restoration fracture, potentially contributing to less favorable clinical perceptions of the material [30]. Interestingly, undergraduate students trained in modern protocols achieved high survival rates with lithium disilicate restorations [31]. These observations suggest that recent educa-

tional exposure may contribute to greater self-confidence in tooth preparation, although the influence of cumulative clinical experience and continuing professional education cannot be ruled out.

Adhesion is essential for the clinical success of lithium disilicate restorations because it creates a resilient tooth–restoration complex [8]. Consistent with previous reports [32], older dentists showed lower familiarity with contemporary adhesive protocols than younger clinicians. The complexity of modern adhesive systems—from multistep etch-and-rinse to simplified universal adhesives—may lead to procedural uncertainty among older clinicians who were trained during a time when mechanical retention was the primary goal [32,33]. Our analysis also revealed significantly higher understanding of the mechanical properties of restorative materials—such as flexural strength and fracture toughness [34]—in mid-career dentists and early-career dentists. A potential explanation for this disparity is that older practitioners may still be evaluating all-ceramic systems through the lens of early, more brittle ceramics or the traditional PFM gold standard [30]. Unlike PFM restorations, the performance of monolithic lithium disilicate restorations depends on their material properties and adhesive bonding rather than a rigid metal substructure [35]. Moreover, the observed differences in educational adequacy and continuing education (items 5 and 8) may account for the age-dependent disparities identified across the technical competency items.

The variables ‘translucency evaluation’ (item 4) and ‘education adequacy’ (item 5) exhibited a threshold-like pattern, with late-career clinicians reporting significantly lower confidence than both younger groups. Unlike the procedural–technical items (e.g., 1, 3, 7), translucency assessment and perceived adequacy of education are areas where accumulated experience or available continuing education may not fully compensate for a limited undergraduate curriculum in dental optics and advanced ceramic aesthetics. Contemporary undergraduate curricula and continuing professional development programs place greater emphasis on optical properties, including translucency, fluorescence, opalescence, and shade communication. As a result, younger clinicians may have received more comprehensive training in aesthetic material selection and color science during both undergraduate and postgraduate education [36–38].

We observed no age-related differences at the composite-domain level or across most clinical perception and advantage items (items 9–16). This pattern may indicate broad professional agreement regarding the favorable aesthetic performance and long-term survival of lithium disilicate restorations [3]. Interestingly, all three age groups agreed on the aesthetic superiority of this material (item 9), although the confidence in choosing the correct translucency and opacity (item 4) was significantly lower in the late-career group. This observation may have important restorative implications. For example, modern lithium disilicate systems offer a range of opacities to manage different clinical scenarios, such as discolored stumps or the need for maximum light transmission in thin veneers [39]. Insufficient familiarity with these material options may result in suboptimal esthetic outcomes, such as restorations appearing grayish when excessively translucent over darker tooth structures or overly opaque and artificial when excessive opacity is selected [39].

A significant inverted U-shaped relationship was observed for the variable ‘benefits versus cost’ (item 11). This pattern implies that clinicians at different stages of their professional careers may evaluate the value proposition of lithium disilicate restorations differently. The favorable perception among mid-career clinicians may be associated with greater clinical experience and economic stability, allowing them to prioritize clinical performance over initial cost. Indeed, existing evidence supports that dentists reach peak professional confidence, clinical experience, openness to new technologies, and earning potential during mid-career [40,41]. The more neutral responses observed in the late-

career stage may indicate a more conservative and balanced clinical perspective developed through decades of practice [42].

Composite domain scores were comparable within the perceived barriers and limitations domain. This finding may reflect similar challenges related to the adoption of lithium disilicate restorations, irrespective of career stage. Interestingly, the only significant intergroup differences were found for the variables 'equipment cost' (item 20) and 'lab communication' (item 23). These variables exhibited a common threshold-like age pattern, with similar perceptions among early- and mid-career dentists and significantly lower perceived barriers among late-career clinicians. These outcomes may stem from the financial demands of establishing, expanding, and equipping a dental practice and a longer time to amortize major investments and achieve greater economic stability [43–46]. Given the similarity between younger age groups, financial considerations appear to remain influential throughout much of the active professional career of a dentist.

The significantly lower prevalence of laboratory communication difficulties among late-career clinicians may be associated with long-standing collaborations and greater familiarity with laboratory workflows. Over time, established professional relationships and greater familiarity with laboratory workflows may facilitate more effective communication and reduce misunderstandings [47]. The analogous response patterns observed among early- and mid-career practitioners suggest that communication challenges may persist until stable collaborative networks and well-developed communication strategies are established [48,49]. Our findings thus suggest that the lower implementation barriers reported by late-career clinicians may originate from established technical networks and mature clinical–laboratory collaborations rather than greater digital orientation.

One novelty of our study is that, at the item level, generational differences were largely confined to technical skills, continuing education, and procedural confidence. In many previous works, age or years of experience appeared as factors associated with material choice [50], but the effects were often heterogeneous and dependent on the clinical scenario. In our data, the contrast was much more consistent. That is, late-career clinicians reported lower confidence in technical competencies, although perceptions of esthetics and biocompatibility were similar across age groups [24]. Another notable finding was that the highest levels of acceptance and confidence were observed among mid-career clinicians (35–50 years), who scored slightly higher than the early-career group (25–34 years) on some composite measures. Mid-career clinicians may combine relatively recent curricular exposure to modern ceramics with a higher caseload and a more stable relationship with laboratories and digital workflow. Indeed, greater restorative activity is associated with more frequent use of lithium disilicate for anterior restorations and dual resin cements [19]. In addition, clinician-related factors contribute to the adoption of digital dentistry and restorative material selection despite considerable variability in implementation across practice settings [42,51,52]. From an educational perspective, the present findings suggest that high-yield educational strategies should not simply reiterate the general advantages of ceramics. Instead, these initiatives should focus on specific areas, including current adhesive protocols, translucency/opacity selection, minimally invasive preparation, finishing and polishing, case selection, and integration with laboratory and digital workflows.

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inferences regarding the relationship between career stage and perceptions of lithium disilicate restorations. Second, the study was conducted in a single Eastern European region; hence, the findings should be interpreted within the context of the local educational system and clinical practice environment. Differences in undergraduate curricula, access to digital technologies and CAD/CAM systems, laboratory infrastructure, and opportunities for continuing professional education may limit the generalizability of these findings to other

countries and healthcare settings. Third, age was used as a pragmatic surrogate for career stage rather than a direct measure of professional experience. This approach may not fully capture differences in years of clinical practice, specialty training, continuing education activity, or restorative workload. As these variables were not collected, residual confounding cannot be excluded. Fourth, findings may have limited generalizability because they were derived from a specific national context—a single Romanian county. Differences in educational systems, laboratory infrastructure, CAD/CAM availability, reimbursement models, and continuing education opportunities may limit the transferability of these findings to other countries and healthcare settings. In addition, unmeasured confounding factors, such as postgraduate specialization, practice setting, prosthodontic workload, laboratory accessibility, and engagement in continuing professional education, may have influenced the observed findings. Future multicenter studies incorporating objective measures of clinical performance and additional professional variables are warranted to validate and extend these findings.

5. Conclusions

Within this Eastern European cohort, career stage appeared to influence dentists' self-reported familiarity, confidence, and perceived preparedness regarding lithium disilicate restorations. Early- and mid-career clinicians reported significantly higher levels of familiarity with adhesive protocols, material properties, tooth preparation requirements, and continuing education activities than late-career practitioners, highlighting the importance of recent educational exposure. In contrast, perceptions of the clinical advantages and most barriers associated with lithium disilicate restorations remained largely consistent across career stages. Significant age-related differences were limited to perceptions of cost-effectiveness, equipment costs, and laboratory communication. Overall, these findings underscore the important role of continuing professional development in maintaining confidence and perceived preparedness regarding contemporary ceramic restorative materials and support the need for targeted educational initiatives to reduce generational disparities in clinical practice.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/app16146919/s1>, Table S1: Distribution of Likert scores per each item and age category.

Author Contributions: Conceptualization, C.-E.I. and I.-C.T.-N.; methodology, C.-E.I., I.-C.T.-N. and A.M.S.; software, A.M.S.; validation, C.-E.I., I.-C.T.-N. and E.M.V.; formal analysis, A.M.S. and C.-E.I.; investigation, A.M.S., C.-E.I., I.-C.T.-N., F.S. and E.M.V.; resources, C.-E.I. and I.-C.T.-N.; data curation, A.M.S.; writing—original draft preparation, A.M.S.; writing—review and editing, C.-E.I., I.-C.T.-N., F.S. and E.M.V.; visualization, A.M.S.; supervision, C.-E.I. and I.-C.T.-N.; project administration, C.-E.I.; funding acquisition, C.-E.I. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study received approval from the Institutional Ethics Committee at the Arad County Emergency Clinical Hospital (approval No. 123/2 March 2026).

Informed Consent Statement: Informed consent form was signed by each participant in the study.

Data Availability Statement: All the data generated or analyzed in this study are included in this published article.

Acknowledgments: We would like to acknowledge VICTOR BABES UNIVERSITY OF MEDICINE AND PHARMACY, TIMISOARA, for their support in covering the costs of publication for this research paper.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

CAD/CAM	Computer-Aided Design/Computer-Aided Manufacturing
Li ₂ Si ₂ O ₅	Lithium Disilicate
PFM	Porcelain-Fused-to-Metal
ANOVA	Analysis of Variance
χ^2	Chi-Square Test
SD	Standard Deviation
ω^2	Omega Squared
α	Cronbach's Alpha

References

1. Chafii, A.; Wahid, H.O.; Tissent, R. Indication of glass-ceramics enriched with lithium disilicates: Systematic review of the literature. *Eur. J. Dent. Oral Health* **2025**, *6*, 350. [\[CrossRef\]](#)
2. Villalobos-Tinoco, J.; Floriani, F.; Rojas-Rueda, S.; Mekled, S.; Conner, C.; Colvert, S.; Jurado, C.A. Enhancing smile aesthetics and function with lithium disilicate veneers: A brief review and case study. *Clin. Pract.* **2025**, *15*, 66. [\[CrossRef\]](#) [\[PubMed\]](#)
3. Zarone, F.; Di Mauro, M.I.; Ausiello, P.; Ruggiero, G.; Sorrentino, R. Current status on lithium disilicate and zirconia: A narrative review. *BMC Oral Health* **2019**, *19*, 134. [\[CrossRef\]](#) [\[PubMed\]](#)
4. Mihali, S.G.; Talpoş, Ş.; Loloş, D.; Loloş, B.A.; Hojda, A.R.; Mitariu, L. Long-term performance of feldspathic and lithium disilicate restorations in pediatric anterior dental trauma. *Children* **2025**, *12*, 1019. [\[CrossRef\]](#) [\[PubMed\]](#)
5. Laumbacher, H.; Scholz, K.J.; Knüttel, H.; Rosentritt, M. Clinical outcomes and complications of tooth- and implant-supported lithium (di)silicate based single crowns: An overview of systematic reviews. *J. Dent.* **2025**, *142*, 106004. [\[CrossRef\]](#) [\[PubMed\]](#)
6. Fasbinder, D.; Neiva, G.; Heys, R. Clinical evaluation of lithium disilicate chairside CAD/CAM crowns after 10-years. *Int. J. Prosthodont.* **2025**, *38*, 645–656. [\[CrossRef\]](#) [\[PubMed\]](#)
7. AlMashaan, A.; Aldakheel, A. Survival of complete coverage tooth-retained fixed lithium disilicate prostheses: A systematic review. *Medicina* **2023**, *59*, 95. [\[CrossRef\]](#) [\[PubMed\]](#)
8. Abdulrahman, S.; Von See Mahm, C.; Talabani, R.; Abdulateef, D. Evaluation of the clinical success of four different types of lithium disilicate ceramic restorations: A retrospective study. *BMC Oral Health* **2021**, *21*, 625. [\[CrossRef\]](#) [\[PubMed\]](#)
9. Malament, K.A.; Natto, Z.S.; Thompson, V.; Rekow, D.; Eckert, S.; Weber, H.-P. Ten-year survival of pressed, acid-etched e.max lithium disilicate monolithic and bilayered complete-coverage restorations: Performance and outcomes as a function of tooth position and age. *J. Prosthet. Dent.* **2019**, *121*, 782–790. [\[CrossRef\]](#) [\[PubMed\]](#)
10. Teichmann, M.; Göckler, F.; Weber, V.; Yildirim, M.; Wolfart, S.; Edelhoff, D. Ten-year survival and complication rates of lithium-disilicate (Empress 2) tooth-supported crowns, implant-supported crowns, and fixed dental prostheses. *J. Dent.* **2017**, *56*, 65–77. [\[CrossRef\]](#) [\[PubMed\]](#)
11. Spies, B.C.; Patzelt, S.B.M.; Vach, K.; Kohal, R.-J. Monolithic lithium-disilicate single crowns supported by zirconia oral implants: Three-year results of a prospective cohort study. *Clin. Oral Implants Res.* **2016**, *27*, 1160–1168. [\[CrossRef\]](#) [\[PubMed\]](#)
12. Al-Johani, H.; Haider, J.; Satterthwaite, J.; Silikas, N. Lithium silicate-based glass ceramics in dentistry: A narrative review. *Prosthesis* **2024**, *6*, 478–505. [\[CrossRef\]](#)
13. Fu, L.; Engqvist, H.; Xia, W. Glass-ceramics in dentistry: A review. *Materials* **2020**, *13*, 1049. [\[CrossRef\]](#) [\[PubMed\]](#)
14. Al-Haj Husain, N.; Dürr, T.; Özcan, M.; Brägger, U.; Joda, T. Mechanical stability of dental CAD-CAM restoration materials made of monolithic zirconia, lithium disilicate, and lithium disilicate-strengthened aluminosilicate glass-ceramic with and without fatigue conditions. *J. Prosthet. Dent.* **2022**, *128*, 73–78. [\[CrossRef\]](#) [\[PubMed\]](#)
15. Kelly, J.R.; Benetti, P. Ceramic materials in dentistry: Historical evolution and current practice. *Aust. Dent. J.* **2011**, *56*, 84–96. [\[CrossRef\]](#) [\[PubMed\]](#)
16. Cuzic, C.; Rominu, M.; Pricop, A.; Urechescu, H.; Pricop, M.O.; Rotar, R.; Cuzic, O.S.; Sinescu, C.; Jivanescu, A. clinician's guide to material selection for all-ceramics in modern digital dentistry. *Materials* **2025**, *18*, 2235. [\[CrossRef\]](#) [\[PubMed\]](#)
17. Aslan, Y.U.; Uludamar, A.; Özkan, Y. Retrospective analysis of lithium disilicate laminate veneers applied by experienced dentists: 10-year results. *Int. J. Prosthodont.* **2019**, *32*, 471–474. [\[CrossRef\]](#) [\[PubMed\]](#)
18. Al-Dulaijan, Y.A.; Aljubran, H.M.; Alrayes, N.M.; Aldulaijan, H.A.; AlSharief, M.; Aljofi, F.E.; Ibrahim, M.S. Clinical outcomes of single full-coverage lithium disilicate restorations: A systematic review. *Saudi Dent. J.* **2023**, *35*, 403–422. [\[CrossRef\]](#) [\[PubMed\]](#)

19. Suganna, M.; Nayakar, R.P.; Alshaya, A.A.; Khalil, R.O.; Alkhunaizi, S.T.; Kayello, K.T.; Alnassar, L.A. The digital era heralds a paradigm shift in dentistry: A cross-sectional study. *Cureus* **2024**, *16*, e53300. [[CrossRef](#)] [[PubMed](#)]
20. van der Zande, M.M.; Gorter, R.C.; Aartman, I.H.A.; Wismeijer, D. Adoption and use of digital technologies among general dental practitioners in the Netherlands. *PLoS ONE* **2015**, *10*, e0120725. [[CrossRef](#)] [[PubMed](#)]
21. Lolos, D.; Buzatu, R.; Oancea, R.; Dinu, S.; Tudor, A.; Mihali, S.G. Clinical outcomes of layered lithium disilicate restorations: A retrospective analysis. *Rom. J. Oral Rehabil.* **2024**, *16*, 674–681. [[CrossRef](#)]
22. Lempel, E.; Gyulai, S.; Lovász, B.V.; Jeges, S.; Szalma, J. Clinical evaluation of lithium disilicate versus indirect resin composite partial posterior restorations—A 7.8-year retrospective study. *Dent. Mater.* **2023**, *39*, 1095–1104. [[CrossRef](#)] [[PubMed](#)]
23. Behera, R.; Mishra, L.; Divakar, D.D.; Al-Kheraif, A.A.; Singh, N.R.; Lukomska-Szymanska, M. The one-year in vivo comparison of lithium disilicate and zirconium dioxide inlays. *Materials* **2021**, *14*, 3102. [[CrossRef](#)] [[PubMed](#)]
24. Menta, A.G.; Soares, R.D.O.B.; Emmanuelli, B.; Rodrigues, C.; Marchesan, D.G. Dentists' attitudes towards the dental ceramic choice for metal-free restorations: A questionnaire survey. *J. Health Sci.* **2021**, *23*, 99–105. [[CrossRef](#)]
25. Makhija, S.K.; Lawson, N.C.; Gilbert, G.H.; Litaker, M.S.; McClelland, J.A.; Louis, D.R.; Gordan, V.V.; Pihlstrom, D.J.; Meyerowitz, C.; Mungia, R.; et al. Dentist material selection for single-unit crowns: Findings from the national dental practice-based research network. *J. Dent.* **2016**, *55*, 40–47. [[CrossRef](#)] [[PubMed](#)]
26. Zaharia, C.; Kis, A.M.; Drăghici, G.A.; Nica, D.V.; Dinu, S.; Olariu, I. In vitro efficacy of ultrasonic debridement with adjunctive St. John's Wort on multispecies dental biofilms. *Medicina* **2026**, *62*, 563. [[CrossRef](#)] [[PubMed](#)]
27. Negru, M.C.; Banta, A.M.; Voicu, M.; Nica, D.V.; Talpoș-Niculescu, I.C.; Olariu, I. Demographic, geographic, and temporal patterns of adult dental emergency presentations in Arad County, Western Romania. *Healthcare* **2026**, *14*, 1366. [[CrossRef](#)] [[PubMed](#)]
28. Vilcea, A.; Borta, S.M.; Popețiu, R.O.; Alexandra, R.L.; Pilat, L.; Nica, D.V.; Pușchiță, M. High ADMA is associated with worse health profile in heart failure patients hospitalized for episodes of acute decompensation. *Medicina* **2024**, *60*, 813. [[CrossRef](#)] [[PubMed](#)]
29. Rojas-Rueda, S.; Villalobos-Tinoco, J.; Conner, C.; Colvert, S.; Nurrohman, H.; Jurado, C.A. Bonding protocols for lithium disilicate veneers: A narrative review and case study. *Biomimetics* **2025**, *10*, 188. [[CrossRef](#)] [[PubMed](#)]
30. Gracis, S.; Thompson, V.P.; Ferencz, J.L.; Silva, N.R.F.A.; Bonfante, E.A. A new classification system for all-ceramic and ceramic-like restorative materials. *Int. J. Prosthodont.* **2015**, *28*, 227–235. [[CrossRef](#)] [[PubMed](#)]
31. Fotiadou, C.; Manhart, J.; Diegritz, C.; Folwaczny, M.; Hickel, R.; Frasheri, I. Longevity of lithium disilicate indirect restorations in posterior teeth prepared by undergraduate students: A retrospective study up to 8.5 years. *J. Dent.* **2021**, *105*, 103569. [[CrossRef](#)] [[PubMed](#)]
32. AlMalki, W.D.; Ingle, N.; Assery, M.; Alsanea, J. Dentists' knowledge, attitude, and practice regarding evidence-based dentistry practice in Riyadh, Saudi Arabia. *J. Pharm. Bioallied Sci.* **2019**, *11*, S507–S514. [[CrossRef](#)] [[PubMed](#)]
33. Breschi, L.; Maravic, T.; Mazzitelli, C.; Josic, U.; Mancuso, E.; Cadenaro, M.; Pfeifer, C.S.; Mazzoni, A. The evolution of adhesive dentistry: From etch-and-rinse to universal bonding systems. *Dent. Mater.* **2025**, *41*, 141–158. [[CrossRef](#)] [[PubMed](#)]
34. Lile, I.E.; Cojocariu, C.; Pasca, C.; Stăncioiu, A.A.; Vaida, L.L.; Marian, D. Flexural strength of different restorative materials used for direct restoration in pediatric dentistry: An in vitro study. *Biomimetics* **2026**, *11*, 16. [[CrossRef](#)] [[PubMed](#)]
35. Yun, Y.; Kang, H.; Kim, E.C.; Park, S.; Lee, Y.S.; Yun, K. Fundamental properties and clinical application of 3d-printed bioglass porcelain fused to metal dental restoration. *Int. J. Mol. Sci.* **2023**, *24*, 7203. [[CrossRef](#)] [[PubMed](#)]
36. Menini, M.; Rivolta, L.; Manauta, J.; Nuvina, M.; Kovacs-Vajna, Z.M.; Pesce, P. Dental color-matching ability: Comparison between visual determination and technology. *Dent. J.* **2024**, *12*, 284. [[CrossRef](#)] [[PubMed](#)]
37. Capa, N.; Malkondu, O.; Kazazoglu, E.; Calikkocaoglu, S. Evaluating factors that affect the shade-matching ability of dentists, dental staff members and laypeople. *J. Am. Dent. Assoc.* **2010**, *141*, 71–76. [[CrossRef](#)] [[PubMed](#)]
38. Vasluiianu, R.I. A multidimensional analysis of shade selection difficulty for indirect restorations among dental students and professionals. *Clin. Exp. Dent. Res.* **2024**, *10*, e890. [[CrossRef](#)] [[PubMed](#)]
39. Dejak, B.; Konieczny, B.; Szczesio-Włodarczyk, A.; Stopa, W. Influence of prosthetic substrate, cement, and opaquer liner on color matching of translucent zirconia- and lithium-based ceramics. *Materials* **2026**, *19*, 1451. [[CrossRef](#)] [[PubMed](#)]
40. Choi, J.; Yu, S.H.; Kim, S.Y. Factors associated with dental revenue and income of self-employed dentist by using a quantile regression method. *Korean J. Health Policy Admin.* **2015**, *25*, 240–250. [[CrossRef](#)]
41. Ellman, C. Summary of: Clinical decision making by dentists working in the NHS General Dental Services since April 2006. *Br. Dent. J.* **2010**, *209*, 514–515. [[CrossRef](#)] [[PubMed](#)]
42. Kontakou Zoniou, A.; Antoniadou, M.; Saridou, S. Selection of resin-based dental restorative materials: A pilot study on professional characteristics, knowledge, and selection criteria. *Appl. Sci.* **2025**, *15*, 7987. [[CrossRef](#)]
43. Parthasarathy, P.R.; Patil, S.R.; Dawasaz, A.A.; Baig, F.A.H.; Karobari, M.I. Unlocking the potential: Investigating dental practitioners' willingness to embrace artificial intelligence in dental practice. *Cureus* **2024**, *16*, e55107. [[CrossRef](#)] [[PubMed](#)]

44. Mühlemann, S.; Sandrini, G.; Ioannidis, A.; Jung, R.E.; Hämmerle, C.H.F. The use of digital technologies in dental practices in Switzerland: A cross-sectional survey. *Swiss Dent. J.* **2019**, *129*, 700–707. [[CrossRef](#)] [[PubMed](#)]
45. Dobros, M.; Katsaliaki, K. Applying marketing tools in dental practice: The case of greek dentists. *Oral Health Dent. Manag.* **2017**, *16*, 1–8.
46. Brown, L.J.; Kiyak, H.A.; Milgrom, P.; Conrad, D.A.; Roberts, M.C. Retirement savings of dentists in private practice. *J. Am. Dent. Assoc.* **1999**, *130*, 1077–1084. [[CrossRef](#)] [[PubMed](#)]
47. Nusairat, F.T.; Al-Shogran, S.W.; Almortadi, N.; Alzoubi, K.H. Enhancing communication between dental laboratories and clinics: The role of information technology systems in a developing country. *Clin. Cosmet. Investig. Dent.* **2024**, *16*, 441–451. [[CrossRef](#)] [[PubMed](#)]
48. Afzal, H.; Ahmed, N.; Lal, A.; Al-Aali, K.A.; Alrabiah, M.; Alhamdan, M.M.; Albahaqi, A.; Sharaf, A.; Vohra, F.; Abduljabbar, T. Assessment of communication quality through work authorization between dentists and dental technicians in fixed and removable prosthodontics. *Appl. Sci.* **2022**, *12*, 6263. [[CrossRef](#)]
49. Nilsson, M.S.; Pilhammar, E. Professional approaches in clinical judgements among senior and junior doctors: Implications for medical education. *BMC Med. Educ.* **2009**, *9*, 25. [[CrossRef](#)] [[PubMed](#)]
50. Alsahli, A.; Baig, M.R.; Baskaradoss, J.K.; Alsanea, S.; AlMousawi, A. Factors influencing the selection of materials and luting agents for single-crown restorations. *Dent. J.* **2025**, *13*, 207. [[CrossRef](#)] [[PubMed](#)]
51. Dimitrova, M. The role of digital innovations in shaping contemporary fixed prosthodontics: A narrative review. *Oral* **2025**, *5*, 84. [[CrossRef](#)]
52. Lam, W.Y.H.; Ling, Z.; Mao, K.; Park, J.M.; Zandinejad, A.; da Fonte Porto Carreiro, A.; Mangano, F.G.; Platt, J.A.; Schwendicke, F. Digital dentistry in clinical practice: A scoping review of current capabilities and future directions. *Int. Dent. J.* **2025**, *76*, 109296. [[CrossRef](#)] [[PubMed](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.