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Exploring Clinical Decision-Making in Static Computer-Assisted Guided Implant Placement: A Survey of Clinicians in Australia and New Zealand

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ABSTRACT

Background: Static computer-assisted guided implant placement (sCAIP) has been shown to enhance accuracy and predictability; however, little is known about the multifactorial decision-making processes impacting use among clinicians.

Methods: An exploratory cross-sectional electronic survey was distributed to implant practitioners across Australia and New Zealand, including general dentists and specialists (periodontists, prosthodontists, oral surgeons, and oral and maxillofacial surgeons) involved in implant placement. Items covered demographics, training profiles, clinical experience, utilisation patterns, and attitudes towards sCAIP, with free-text reflections. Quantitative data were analysed using descriptive statistics, factor analysis, and t-tests; qualitative data underwent thematic analysis.

Results: Thirty-three respondents completed the survey, with 90.9% reporting current use of sCAIP. Sixteen respondents (48.5%) were classified as analytical decision-makers and 17 (51.5%) as intuitive. Factor analysis identified seven components that explained 84.2% of the variance in decision-making, including surgical complexity and soft tissue conditions, case timing, aesthetic site sensitivity, cost, anatomical risk, training exposure, and clinical experience. Internal consistency across items was high (Cronbach's alpha, $\alpha = 0.95$). Analytical decision-makers placed significantly more weight on anatomical risk and bone quality compared to intuitive decision-makers ($p = 0.038$, $d = 0.93$). Intuitive decision-makers reported higher levels of training exposure ($p = 0.04$, $d = 0.80$). Thematic analysis revealed three key influences on sCAIP use: clinician capability, surgical planning and risk mitigation, and restorative outcomes. In addition, several barriers were identified including financial cost, workflow integration, and attitudinal factors.

Conclusion: Clinicians with an analytical decision-making style placed greater emphasis on anatomical risk and were more likely to adopt sCAIP in complex or high-risk cases. Because intuitive clinicians reported higher training exposure, education alone did not explain these patterns, indicating that cognitive style and risk appraisal are central determinants of sCAIP adoption.

1 | Background

The use of dental implants to replace missing teeth demands precise integration of surgical and prosthetic planning to ensure long-term clinical success [1]. Errors in implant positioning or prosthetic design can predispose patients to biological complications such as bone loss, mucosal recession, and peri-implantitis [2, 3], or mechanical complications such as

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Clinical Relevance

Understanding how clinicians balance anatomical risk, case complexity, and their own cognitive style can inform training programs that build structured risk appraisal and digital planning competence. Targeting these skills, rather than focusing solely on technical guide use, may support more consistent and clinically appropriate adoption of sCAIP in routine practice.

prosthetic fracture or screw loosening [4, 5]. The use of digital technologies, particularly static computer-assisted guided implant placement (sCAIP), has become increasingly common to enhance the accuracy and predictability of implant positioning.

Previous studies have examined clinician knowledge, attitudes, and practices regarding computer-guided implant surgery across geographic contexts. Ashy reported a high level of clinician interest in computer-guided implant surgery in Saudi Arabia, yet use was substantially lower due to financial constraints and limited access to training and digital planning resources [6]. Similarly, Lahoti et al. reported that dental practitioners in Central India recognised the enhanced accuracy and predictability offered by guided implant surgery but faced barriers related to cost, infrastructure, and integration to existing workflows [7]. While these studies offer insights into clinician attitudes and barriers to adoption, they do not specifically examine the multifactorial cognitive and contextual factors that might influence how clinicians decide whether to use sCAIP in clinical practice.

sCAIP involves the transfer of a virtual implant plan to the surgical site using a 3D-printed guide based on radiographic and intraoral scan data [8]. The technique allows clinicians to consider anatomical constraints and prosthetic requirements simultaneously and can be implemented via partially guided or fully guided protocols [9]. sCAIP can be delivered via partially guided protocols, where drilling is guided but implant placement is manual, or via fully guided protocols where the guide controls both drilling and implant insertion. Despite these advantages, several factors, including operator error, manufacturing inaccuracies, and software limitations, may influence accuracy [10, 11].

Comparative studies suggest that sCAIP generally offers superior placement accuracy compared to freehand methods [12], with benefits evident for both experienced and novice clinicians [13, 14]. Nonetheless, sCAIP has not become standard practice for all cases. Its adoption may be influenced by clinician experience, confidence, perceived clinical benefit, financial cost, equipment access, and case complexity. For example, less experienced clinicians may benefit from guided protocols in terms of reduced deviation and improved predictability, while more experienced clinicians may still choose sCAIP for complex cases or those with elevated aesthetic risk.

Despite increasing interest and reported benefits of sCAIP, no studies have systematically examined the multifactorial decision-making processes that influence clinicians' use of sCAIP in the Australian and New Zealand context. Understanding how clinicians integrate clinical, cognitive, and contextual factors is critical for developing targeted strategies to support effective implementation, wider adoption and improved outcomes.

To address this gap, the present study applies Decision Theory as a guiding framework. Decision Theory provides a structured model for decisions under uncertainty, which is directly relevant to implant surgery where clinicians must evaluate anatomical risk, prosthetic demands and workflow constraints [15–17]. Dual-process models within Decision Theory distinguish between two complementary reasoning styles: an analytical mode that is deliberate, evidence-based, and systematic, and an intuitive mode that relies on experiential knowledge and rapid judgement [18]. These cognitive styles may influence whether clinicians perceive the added planning time and cost of sCAIP as justified relative to the expected reduction in risk. By evaluating cognitive style and clinical factors together, this study uses Decision Theory to explain why sCAIP is chosen in some cases but not others.

This cross-sectional survey study aims to identify the key clinical and non-clinical factors influencing sCAIP use among clinicians practising in Australia and New Zealand. The findings are intended to support education, clinical practice improvements, and where appropriate, the adoption of digital implant technologies.

2 | Methods

2.1 | Study Design and Participants

The study received ethics approval from the Human Research Ethics Committee (Approval number: H24377). A cross-sectional, electronic survey was distributed to clinicians in Australia and New Zealand who practice in implant dentistry in Australia or New Zealand. This included general dentists and specialists in periodontics, prosthodontics, oral surgery, and oral and maxillofacial surgery. The survey was available between 20th of February 2025 until the 30th of April 2025. Respondents were recruited via professional networks, dental organisations, email invitations, and social media platforms. Due to the broad distribution through professional networks and social media, the total number of invitations distributed is unknown. As an exploratory and descriptive study, no formal sample size calculation was conducted. The focus was on capturing initial patterns of reasoning and adoption behaviour within the Australasian implant community to inform larger future studies. The survey was anonymous, and participation was voluntary, with consent implied by completion.

2.2 | Questionnaire

The questionnaire consisted of both closed and partially closed-ended questions. It was structured into sections that captured: (1) demographic details (age, gender, practice location); (2) implant training background (courses, certification, mentorship); (3) experience levels with implant procedures; (4) use and frequency of sCAIP protocols (partially and fully guided); (5) Likert-scale ratings of influencing factors; and (6) open-ended questions about reasoning and barriers.

Decision-making orientation (analytical vs. intuitive) was determined using a mixed-methods approach integrating quantitative survey items and qualitative responses. A subset of Likert-scale items reflecting clinical judgement style, risk assessment and reliance on formal training was combined into a composite decision style score for each participant. Participants scoring above a pre-determined threshold, based on validated Decision Theory framework [19], were classified as analytical decision-makers characterised by deliberate, systematic evaluation of clinical factors. Those below the threshold were classified as intuitive decision-makers relying more on experiential, heuristic judgement. Open-ended free-text responses were thematically analysed to supplement quantitative classification. Respondents emphasising structured planning, evidence-based reasoning, and formal education were coded as analytical, while those highlighting clinical experience, heuristics, or 'gut feelings' were coded as intuitive. Two independent researchers performed classification and resolved discrepancies through discussion to ensure consistency.

Quantitative data were analysed using SPSS (v29.0) (IBM SPSS Statistics, Chicago, IL, USA). Descriptive statistics summarised clinician characteristics. Chi-square and *t*-tests evaluated group differences. Normality and equal variance assumptions for *t*-tests were checked and met for all relevant variables. Exploratory factor analysis (Principal Component Analysis with Varimax rotation) identified latent dimensions of decision-making. Qualitative responses were thematically coded and interpreted. Some participants did not complete all survey items; analyses were performed using available data (complete case analysis).

Potential sources of bias included self-selection of respondents with greater interest in digital dentistry and the absence of a calculable response rate due to the open distribution strategy.

2.3 | Handling of Correlated Data

Each respondent represented one unit of analysis and no correlated data adjustments were required.

2.4 | Reporting Guidelines Compliance

This study followed the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines; the completed checklist is provided as Appendix S1.

3 | Results

3.1 | Participant Characteristics

A total of 33 clinicians responded to the survey. Respondents were aged between 30 and 59 years. The gender distribution included 22 males (66.7%), 9 females (27.3%), 1 non-binary respondent, and 1 who preferred not to say. The majority practiced in capital cities (69.7%), while others were based in regional cities (24.2%) and large or small towns. Of the 33 participants, 16 (48.5%) were classified as analytical decision-makers and 17 (51.5%) as intuitive decision-makers (Table 1).

TABLE 1 | Demographic characteristics of participants.

Category	Subcategory	*N* (%)
Age	30–39	9 (27.3)
	40–49	9 (27.3)
	50–59	9 (27.3)
	60 and over	6 (18.1)
Sex	Male	22 (66.7)
	Female	9 (27.3)
	Non-binary	1 (3.0)
	Prefer not to say	1 (3.0)
Practice location	Capital city	23 (69.7)
	Regional city (more than 100 K)	8 (24.3)
	Large town (50 k–99,999)	1 (3.0)
	Small **t**own (< 50,000)	1 (3.0)
Specialty	General dentists	17 (51.5)
	Periodontist	8 (24.2)
	Prosthodontist	3 (9.1)
	Oral surgeon	2 (6.1)
	Other	3 (9.1)
Decision-making orientation	Analytical	16 (48.5)
	Intuitive	17 (51.5)

Note: Percentages may not total 100% due to rounding.

3.2 | Descriptive Statistics of Decision-Making Domains

Descriptive statistics for each decision-making domain are presented in Table 2. The highest mean scores were for site location ($M = 22.79$, SD = 5.56) and soft tissue considerations ($M = 20.00$, SD = 8.92), which suggested these factors were more consistently weighted in decision-making. Cost, patient expectations, and training exposure had lower means, indicating greater variability in their perceived importance across respondents.

3.3 | Factor Structure of Decision-Making

Exploratory factor analysis with Varimax rotation was used and showed seven components accounted for 84.2% of the total variance (95% CI [78.1%–90.3%]), supporting a robust multidimensional structure (Table 3, Figure 1). Communalities were high supporting strong construct representation. The extracted components showed there were multidimensional influences on clinician decision-making, which included: (1) Surgical

TABLE 2 | Group differences by decision-making orientation.

Decision-making domain	*N*	Mean	SD	Range (min–max)	IQR (25th–75th)
Soft tissue considerations	25	20.00	8.92	8.00–40.00	11.50–27.00
Surgical placement approach	25	18.24	7.59	6.00–30.00	11.00–24.00
Location of surgical site	24	22.79	5.56	6.00–30.00	20.50–26.00
Patient cost and expectation	25	10.40	5.39	4.00–20.00	5.50–14.00
Bone and proximity to vital structures	25	13.64	4.55	4.00–20.00	10.50–17.50
Training through courses, conferences, etc.	25	2.76	1.66	0.00–5.00	2.00–4.00
Experience with implant dentistry	25	7.40	2.60	2.00–10.00	5.50–10.00

TABLE 3 | Variance summary from factor analysis.

Component	Initial % variance	Rotated % variance	Cumulative % (rotated)
1	40.54	20.95	20.95
2	13.07	14.00	34.95
3	8.88	12.39	47.34
4	7.26	10.64	57.98
5	6.13	10.05	68.04
6	4.50	8.79	76.82
7	3.82	7.39	84.21

complexity and soft tissue conditions, (2) Timing of implant placement, (3) Aesthetic and site-specific sensitivity, (4) Cost and patient-related considerations, (5) Anatomical risk and bone morphology, (6) Training and educational exposure, (7) Clinical familiarity and procedural experience (Table 4).

3.4 | Internal Consistency and Reliability

Cronbach's alpha for the selected Likert-scale items was 0.95, indicating excellent internal consistency. To construct a meaningful composite scale representing clinical decision-making, eight items were retained based on both theoretical alignment and statistical performance. These items included soft tissue quality, adjacent teeth recession, loading protocol, grafting procedures, proximity to anatomical structures, bone quality, aesthetic sensitivity, and patient expectation. Each demonstrated a corrected item-total correlation ranging from 0.60 to 0.82, supporting internal consistency ($\alpha = 0.95$) (Table 5). Training-related items were excluded from the composite decision-making scale due to differing measurement levels and weak item-total correlation. Reported binary-coded training items were excluded from the summated scale due to inconsistent measurement levels and weak or negative item-total correlations.

3.5 | Group Differences in Decision-Making Style

Decision-making orientation influenced the weighting of specific clinical factors (Table 6). Clinicians with an analytical decision style placed significantly greater emphasis on anatomical risk and bone quality compared to clinicians with an intuitive decision style. The two decision styles showed a mean difference of 3.93 (95% CI [0.26–7.59]; $p = 0.04$, $d = 0.93$), indicating a large effect size. Intuitive clinicians reported significantly greater training exposure than analytical clinicians (mean difference = 1.26; 95% CI [0.09–2.42]; $p = 0.04$, $d = 0.77$). This indicates that formal training alone does not determine analytical reasoning style. Rather, cognitive orientation appears to be independent of training exposure, reinforcing the value of Decision Theory in understanding clinician variability. No other decision domains differed significantly between groups.

3.6 | Thematic Analysis of Open-Ended Responses

Analysis of free-text responses identified three key themes influencing sCAIP use: clinician capability, surgical planning and risk mitigation, and restorative outcomes. Participants frequently emphasised increased confidence and digital literacy gain through training and clinical experience ('I feel more confident with guided surgery after completing dedicated courses'). The importance of precise preoperative planning to visualise critical anatomy and reduce intraoperative risk was highlighted ('The guide helps me avoid vital structures and minimise surprises during surgery'). Finally, improved prosthetic outcomes through optimal implant positioning were valued ('Guided placement allows better emergence profiles, which positively impact aesthetics and function'). These qualitative insights illustrate the multifaceted considerations clinicians balance and underscore the perceived benefits of sCAIP beyond accuracy alone.

However, respondents also reported several barriers impacting adoption. Financial considerations such as software licensing costs and access to 3D printing facilities were noted, though cost-effectiveness was generally ranked lower in priority than clinical outcomes. Practical challenges including longer lab turnaround times and additional planning efforts were commonly cited. Several experienced clinicians expressed a perception that extensive digital guidance was less necessary given their proficiency with freehand techniques. These attitudes were reflected in several comments ('Experienced surgeons do not rely on computer guidance as much' and 'Having trained freehand, committing to digital workflow is a challenge'). The

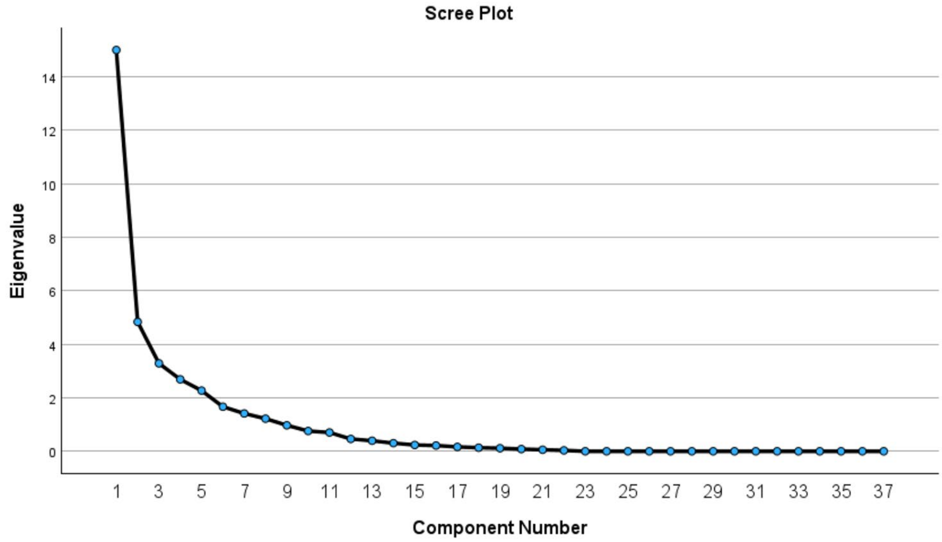

FIGURE 1 | A scree plot was generated to visually inspect component retention criteria. An inflexion point is observed at Component 7, supporting retention of seven components based on Kaiser's criterion (eigenvalue > 1). These components collectively explained 84.2% of the total variance in clinician decision-making for sCAIP.

TABLE 4 | Summary of extracted components.

Component label	Strongly loading items (loading > 0.60)
Surgical complexity and soft tissue	Adjacent teeth recession (0.86), Soft tissue quality (0.80), Grafting procedures (0.78)
Timing of implant placement	Delayed placement (0.86), Late placement (0.85), Early placement (0.81)
Aesthetic and site-specific sensitivity	Anterior/posterior site (0.82), Aesthetic sensitivity (0.78), Proximity to vital structures (0.63)
Cost and patient considerations	Cost to patient (0.92), Certification (−0.74), High patient expectation (0.51)
Bone quality and anatomical risk	Bone quality (0.82), Proximity to vital structures (0.58)
Training exposure and clinical experience	Conferences (0.87), Self-directed learning (0.87), Mentorship (0.78)
Procedural experience	Implant experience (0.84), Clinical access (0.59)

TABLE 5 | Internal consistency and item analysis for decision-making scale.

Item	Corrected item-total correlation	Cronbach's alpha if item deleted
Soft tissue quality	0.78	0.94
Adjacent teeth recession	0.78	0.94
Loading protocol	0.82	0.94
Grafting procedures	0.70	0.95
Proximity to anatomical structures	0.70	0.95
Bone quality	0.78	0.95
Aesthetic sensitivity	0.60	0.95
Patient expectation	0.70	0.95

findings demonstrate that barriers to sCAIP adoption encompass not only financial and logistical factors but also attitudinal workflow-related challenges.

4 | Discussion

This study offers valuable insights into the multifaceted factors influencing clinicians' decisions to adopt sCAIP within a subset of the implant dentistry community in Australia and New Zealand. Our findings reveal that decision-making is complex and inherently multifactorial as evidenced by the seven-factor model encompassing surgical complexity, soft tissue and bone quality, anatomical constraints, training exposure, and patient expectations. The prominence of site-specific procedural risk and anatomical considerations highlights the clinical prudence exercised by clinicians who appear to reserve sCAIP use for cases where precision and accuracy are essential, particularly in aesthetically sensitive or anatomically challenging scenarios. Understanding these nuances advances the field of implant dentistry by moving beyond simplistic, unidimensional predictors of technology adoption to a multi-dimensional decision framework grounded in real-world clinical judgement.

TABLE 6 | Group differences by decision style code.

Domain	Mean (analytical)	Mean (intuitive)	*t*	*p*	Cohen's *d* [95% CI]	SE
Soft tissue considerations	21.73	16.89	1.28	0.21	0.54 [−0.31, 1.38]	0.42
Surgical placement approach	18.53	17.33	0.36	0.72	0.15 [−0.68, 0.98]	0.42
Site location	23.86	20.89	1.24	0.23	0.53 [−0.33, 1.38]	0.42
Cost/expectation	11.27	9.33	0.83	0.41	0.35 [−0.49, 1.18]	0.42
Bone & anatomy	14.93	11.00	2.21	0.04	0.93 [0.05, 1.79]	0.42
Training exposure	2.21	3.46	−2.21	0.04	−0.77 [−1.48, −0.05]	0.42
Implant experience	7.93	6.44	1.36	0.19	0.57 [−0.28, 1.41]	0.42

Our results align with and extend existing literature affirming the clinical benefits of sCAIP. Prior research has demonstrated that guided protocols improve implant placement accuracy and reduce complications relative to freehand techniques [8, 20]. In a systematic review and meta-analysis, Bover-Ramos et al. confirmed the superiority of fully guided approaches in achieving optimal aesthetic and functional outcomes [21]. However, our study advances understanding by revealing that clinicians' decisions to use sCAIP are shaped by a complex interplay of factors beyond accuracy alone. These factors include anatomical and procedural complexity, such as soft tissue quality and bone morphology, along with patient expectations and clinician experience; all of which featured prominently in our seven-factor model. In addition, we identified decision-making style differences, where analytical clinicians placed greater emphasis on anatomical risk and bone quality, whereas intuitive clinicians reported greater exposure to formal training activities. This suggests that educational experiences alone do not determine analytical reasoning style and cognitive approach and experience integration may be equally important.

Studies offering international perspectives document high clinician interest in computer-guided implant surgery accompanied by lower usage, primarily due to financial, infrastructural, and training barriers [6, 7]. Ashy identified reduced surgical stress and skill demands as key perceived benefits [6], while Lahoti et al. found enhanced accuracy and predictability, particularly in complex cases, as primary advantages [7]. Both studies focus largely on clinician attitudes and barriers but do not investigate the cognitive and contextual factors underpinning decision-making processes. Our findings extend this literature by applying Decision Theory to elucidate how multiple clinical and non-clinical considerations integrate to shape adoption behaviours in the Australasian context.

The application of Decision Theory provides a valuable lens to interpret variability in clinician decision-making styles. Analytical decision-makers reported greater emphasis on anatomical risk and bone quality, consistent with dual-process cognitive theories, which describe decision-making as a balance between intuitive, heuristic processing and deliberate, analytical reasoning [22]. While causality cannot be established, this suggests that experiences alone do not determine analytical reasoning style, where cognitive approach and experience integration may be equally important.

Thematic analysis highlighted critical enablers of sCAIP adoption including enhanced surgical confidence, improved visualisation of critical anatomy, and more predictable prosthetic outcomes related to emergence profile and implant angulation. These findings are similar to other studies showing improved accuracy, which may serve to minimise risk and achieve optimal restorative-driven outcomes [8, 23]. However, there is little evidence indicating superior clinical outcomes [24]. Barriers such as the financial cost of planning software and 3D printing, limited access to digital infrastructure, and difficulties integrating new workflows remain significant obstacles to sCAIP adoption. Similar challenges have been reported elsewhere, highlighting the need for systemic solutions including shared digital resources, mentorship programs, and affordable, user-friendly and integrated planning platforms [25, 26].

Additionally, our findings show that attitudinal and workflow factors, including clinician confidence and perceived necessity, significantly impact technology adoption. This attitudinal barrier is reflected in comments from several experienced clinicians expressing that their proficiency with freehand techniques reduces reliance on digital guidance, for example, 'experienced surgeons do not rely on computer guidance as much' and 'having trained freehand, committing to digital workflow is a challenge'. These findings illustrate that barriers to sCAIP adoption encompass not only financial and logistical factors but also attitudinal and workflow-related challenges, highlighting areas for targeted education and training.

Although financial and logistical concerns were generally less influential than clinical factors in our cohort, the 'cost to patient' variable strongly loaded on one decision-making component and clinicians identified associated financial barriers. These challenges likely vary across practice settings and geographical locations. While private practitioners may experience direct financial pressures related to equipment investment and patient affordability, clinicians working in public health or academic environments often face limitations in infrastructure, access to digital technologies, and administrative support [27, 28]. Rural or regional settings can further compound these issues due to reduced availability of digital resources and training opportunities [29]. Recognising these issues is essential for developing strategies that address cost and access barriers, to facilitate adoption of sCAIP across diverse clinical contexts when it might improve patient outcomes.

While efforts were taken to minimise shortcomings, this study's limitations include a modest sample size and potential self-selection bias towards digitally engaged clinicians, which limit generalisability. Although modest, this sample size is comparable to other exploratory studies and is appropriate for hypothesis-generating exploratory factor analysis. Given the small, self-selected sample, the results should be viewed as indicative rather than definitive and require replication in larger samples. Nonetheless, this exploratory study provides the first Australasian data applying Decision Theory to implant dentistry, offering an important foundation for future, larger-scale investigations. The exclusive reliance on self-reported data, without objective clinical outcomes such as implant survival or complication rates, restricts conclusions about the clinical effectiveness of sCAIP. Nonetheless, the mixed-methods approach and application of a strong theoretical framework bring rich insights into clinician reasoning and attitudes.

Future research should include larger, more diverse samples and longitudinal designs to capture evolving clinician behaviours and outcomes over time. Integration of objective clinical metrics with decision-making data will be useful to fully understand the impact of sCAIP adoption on patient care. Qualitative studies can further help to understand nuanced clinician and patient perspectives, supporting comprehensive strategies for successful digital workflow integration.

5 | Conclusion

This study highlights that clinicians' decisions to use static computer-assisted implant placement (sCAIP) are driven by a complex, multifaceted interplay of clinical complexity, anatomical factors, prosthetic goals, cognitive styles, and personal experience. The robust seven-factor model identified reflects the multifactorial nature of clinical decision-making, consistent with Decision Theory's principles regarding balancing competing considerations under uncertainty.

Clinicians with an analytical decision-making style placed more emphasis on anatomical risks and were more likely to adopt sCAIP in complex cases. Education alone did not explain this pattern, suggesting cognitive approach and experience integration also play key roles. Training in implant dentistry should therefore build decision-making competence, risk appraisal, and digital planning skills alongside technical proficiency.

While clinical factors primarily drive adoption, financial and access barriers remain important considerations varying by practice context and geography. Addressing these challenges will be critical to ensuring equitable and widespread adoption of sCAIP.

Integrating qualitative insights with quantitative data provides a nuanced understanding of how clinicians weigh risks, benefits, and confidence in workflows, informing strategies to support clinical governance and enhance patient-centred care. Future research should aim to link clinician decision-making styles and sCAIP adoption directly with objective clinical outcomes, as well as investigate the impact of targeted educational interventions on cognitive reasoning and clinical practice.

As digital workflows become increasingly integral to implant dentistry, recognising and supporting the complexity of clinician decision-making processes is essential to improve safety and patient outcomes.

Author Contributions

Mathew Amen, Jake Ball: Concept/Design. Mathew Amen, Jake Ball: Data Collection. Mathew Amen, Jake Ball, Jing Sun: Data analysis/Interpretation. Mathew Amen, Jake Ball: Drafting of article. Jake Ball, Jing Sun, Anthony Dawson: Critical revision of article. Jing Sun, Jake Ball: Statistics. All Authors: Approval of final article.

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Ethics Statement

Approved by the Charles Sturt University Human Research Ethics Committee (H24377).

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data are available from the corresponding author upon request.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Appendix S1:** adj70042-sup-0001-AppendixS1.docx.