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ADULT PATIENTS' LIVED EXPERIENCE OF DENTAL ANXIETY DURING ROUTINE DENTAL CARE: A QUALITATIVE META-SYNTHESIS

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Abstract

Background: *Dental anxiety affects a substantial proportion of adults and is associated with avoidance of care and poorer oral health outcomes. Qualitative research has examined patients' subjective experience of this phenomenon, but individual studies are small and dispersed across differing populations, and, to the author's knowledge, their findings have not previously been synthesised.*

Objective: *To integrate qualitative evidence on adult patients' lived experience of dental anxiety during routine dental care, using as an interpretive anchor the six themes identified in the author's phenomenologically informed primary study of 12 adult patients in Pakistan.*

Method: *PubMed/MEDLINE was searched on 1 October 2026 with no lower date limit, supplemented by a Pakistan-focused PubMed search and a targeted search of Pakistani dental journals. Studies were eligible if they reported primary qualitative or mixed-methods data on adult patients' first-person experience of dental anxiety. Included studies were appraised with the CASP Qualitative Studies Checklist and synthesised using thematic synthesis adapted as a best-fit framework synthesis; reporting followed the ENTREQ statement.*

Results: *Of 315 records screened, 11 studies (eight qualitative and three mixed methods) from seven countries were included, contributing approximately 830 adults whose accounts were analysed qualitatively. All six themes of the primary study were supported by multiple independent studies. The moderating role of the dental practitioner and team was the most consistently reported theme (clear support in 9 of 11 studies), and every study offered at least partial*

support for powerlessness and the struggle for control. A seventh theme not identified in the primary study emerged: shame, concealment, and the burden of disclosure (5 studies). Prayer was recorded as a coping strategy in one study, but only as a frequency count; no included study examined religious or spiritual coping qualitatively, including the two conducted in Muslim-majority Türkiye and Pakistan. Apart from one mixed-methods study, research on dental anxiety in Pakistan was exclusively quantitative, although its findings were consistent with the synthesised themes.

Conclusion: *The lived experience of dental anxiety appears broadly consistent across countries and study designs, converging on a narrative of losing, and attempting to regain, control, in which the conduct of the dental team is the principal reported moderator and in which shame frequently inhibits disclosure. These findings support trauma-informed, patient-centred dental care and identify the meaning of religious coping, and the role of shame, as priorities for future qualitative research, particularly in Pakistan, where qualitative evidence is almost entirely lacking.*

INTRODUCTION

Dental anxiety affects a substantial share of adult populations worldwide and remains among the most consistently reported reasons for avoiding or delaying dental care (Appukuttan et al., 2015; Eitner et al., 2006). Its consequences extend beyond the clinical encounter: avoidance tends to be self-perpetuating, and patients who delay care over extended periods may later present with more extensive, and frequently more anxiety-provoking, treatment needs (Peric & Tadin, 2024).

In Pakistan, dental anxiety operates within a health system in which access to dental care is already constrained. The country has approximately one dentist for every 10,850 people, against a World Health Organization-recommended ratio of 1:7,500; curative dental services are available at the primary care level in only a few places; and problems of affordability and access are more pronounced in rural than in urban areas (Basharat & Shaikh, 2016). Survey studies have reported high to severe dental anxiety in more than a fifth of university students (Shaikh & Kamal, 2011) and in about one in five patients attending a tertiary dental hospital in Islamabad (Abbas et al., 2022). Higher anxiety has been consistently associated with female gender and, in some samples, with lower socioeconomic status and previous traumatic dental experiences (Abbas et al., 2022; Muneer et al., 2022; Nauman et al., 2026). In a survey of 400 patients, fear of pain was, together with time constraints, the most frequently cited barrier to seeking care after cost (Shah, 2024). This literature, however, is almost entirely quantitative: it establishes how common dental anxiety is in Pakistan and what it is associated with, but not how Pakistani patients experience it.

A single qualitative study, however methodologically rigorous, describes one group of participants in one clinical and cultural context, interviewed by one research team. The author's primary study (Assignment 1), a phenomenologically informed reflexive thematic analysis of 12 adult patients with high dental anxiety in Pakistan, identified six themes: anticipatory anxiety preceding the appointment, the embodied experience of anxiety, powerlessness and the struggle for control, the practitioner as a central moderating factor, a personal repertoire of coping strategies, and a spectrum of severity underpinned by a shared wish to be understood. These findings were interpreted against a literature that is predominantly quantitative, built on standardised anxiety scales and prevalence surveys. Moreover, the study's own limitations, including reliance on a single coder, the absence of member-checking, and a smaller-than-planned sample, indicate that its themes, while richly described, constitute a single account rather than an established pattern. A logical next step is therefore not the collection of further primary data but a synthesis-level inquiry: do the same themes recur across the wider qualitative literature on dental anxiety, generated from different samples, in different countries, by different research teams? Qualitative meta-synthesis is suited to this question. Rather than pooling numerical effect sizes, as a quantitative meta-analysis would, a meta-synthesis systematically locates, appraises, and reinterprets the findings of multiple qualitative studies,

treating each study's themes and quotations as data for further analysis (Thomas & Harden, 2008). The approach has already been applied in adjacent areas of oral health; for example, Afroz et al. (2025) synthesised qualitative accounts of oral healthcare barriers among individuals with severe mental illness, illustrating how the approach can surface patterns that no single primary study could establish independently. This review therefore aimed to synthesise the qualitative literature on adult patients' lived experience of dental anxiety during routine dental care, and to examine the extent to which the six themes identified in the primary study are corroborated, qualified, or extended by that wider literature. The review had four objectives: (a) to identify and appraise primary qualitative and mixed-methods studies reporting adult patients' first-person experience of dental anxiety; (b) to synthesise their findings using a transparent and reproducible method; (c) to compare the resulting synthesis with the six themes identified in the primary study; and (d) to identify convergences, tensions, and gaps capable of informing both clinical practice and future qualitative research. The review question was: How do adult dental patients experience dental anxiety during routine dental care, as reported across the existing qualitative literature, and how does this experience compare with the themes identified in a phenomenologically informed primary study of the same phenomenon?

Methods

Design

This review adopted a qualitative meta-synthesis design, following the thematic synthesis method described by Thomas and Harden (2008) and reported with reference to the ENTREQ statement (Tong et al., 2012). Because the phenomenon under review has been investigated using diverse qualitative approaches, including grounded theory, thematic analysis, and qualitative content analysis, thematic synthesis was preferred to meta-ethnography: it accommodates findings from methodologically heterogeneous studies, including the qualitative strands of mixed-methods studies, whereas meta-ethnography is oriented primarily toward developing higher-order theory from conceptually rich primary studies. Because the final stage of synthesis was organised around the themes of the author's primary study, the approach also incorporates elements of best-fit framework synthesis (Carroll et al., 2011), as described under Synthesis Method.

Search Strategy

PubMed/MEDLINE was searched on 1 October 2026. The search combined three concept blocks with Boolean operators: the condition (“dental anxiety”, “dental fear”, “dental phobia”, or odontophobia in the title or abstract, or the MeSH term Dental Anxiety); qualitative design terms (qualitative, phenomenolog*, “grounded theory”, “thematic analysis”, “focus group*”, or interview*); and population terms (adult* or patient*). Results were limited to English-language records published up to 30 September 2026, with no lower date limit so that earlier foundational qualitative studies could be captured. The complete search string, as executed, is reported in Appendix A. As a check on sensitivity, the search was confirmed to retrieve all four studies identified in an earlier, unstructured scoping search for this review. Because the main search was not designed to capture literature specific to Pakistan, a supplementary PubMed search combining the condition terms with Pakistan and its major cities, in the title, abstract, or author affiliation, was run on the same date (Appendix A). To identify studies published in Pakistani journals that are incompletely indexed in PubMed, a targeted, non-systematic web search of the Journal of the Pakistan Dental Association, the Pakistan Oral & Dental Journal, the Journal of the Pakistan Medical Association, and related outlets was also conducted. Pakistani studies that did not meet the eligibility criteria but described the local prevalence, correlates, and service context of dental anxiety were used to inform the Introduction and Discussion.

Eligibility Criteria

Studies were included if they satisfied five criteria: (a) participants were adult (18 years or older) dental patients or former patients; (b) participants were recruited on the basis of dental anxiety or fear, or the study's primary aim concerned dental anxiety or fear; (c) the study reported primary qualitative data, or mixed-methods data with a clearly reported qualitative component; (d) the focus was on patients' first-

person experience, perception, or meaning-making in relation to dental anxiety during dental care, rather than solely its prevalence or correlates; and (e) the study was peer-reviewed and published in English. Studies were excluded if they reported exclusively professional, student, or observer perspectives; employed a purely quantitative design; sampled children, adolescents, or parents reporting on their children; sampled a population defined by another condition or trauma history (for example, survivors of torture or sexual abuse) rather than by dental anxiety; evaluated patients' experience of a specialist dental-anxiety treatment programme rather than of dental care itself; or were unavailable in full text. One study of specialist dentists' experience of anxious patients (Murray et al., 2019) met the first exclusion criterion; in line with a decision taken at the screening stage to keep the synthesis centred on patients' own voices, it was excluded from the core synthesis but retained as a narrative comparator for the practitioner-related theme.

Study Selection

Study selection followed the PRISMA 2020 approach (Page et al., 2021) and is summarised in Figure 1. All records were screened by title and abstract against the eligibility criteria, the remaining reports were sought in full text, and each retrieved report was assessed in full against the criteria. The two PubMed searches identified 318 records (285 from the main search and 33 from the Pakistan-focused search), of which three were duplicates, leaving 315 records for screening. Of these, 301 were excluded at title and abstract screening, most commonly because of a quantitative design or a focus other than patients' experience of dental anxiety (n = 148), because they concerned children, adolescents, or parents (n = 50), or because they were not primary research (n = 49). Fourteen reports were sought in full text, of which three could not be retrieved (Appendix B). The remaining 11 reports were assessed in full and all met the eligibility criteria. Neither the Pakistan-focused PubMed search nor the targeted search of Pakistani journals identified any further eligible study: apart from Taqi et al. (2023), which was retrieved by both PubMed searches, all Pakistani studies identified used quantitative or experimental designs. The author's primary study is not counted among the included studies; it serves as the interpretive anchor against which they were compared. A record-level screening log is available as supplementary material.

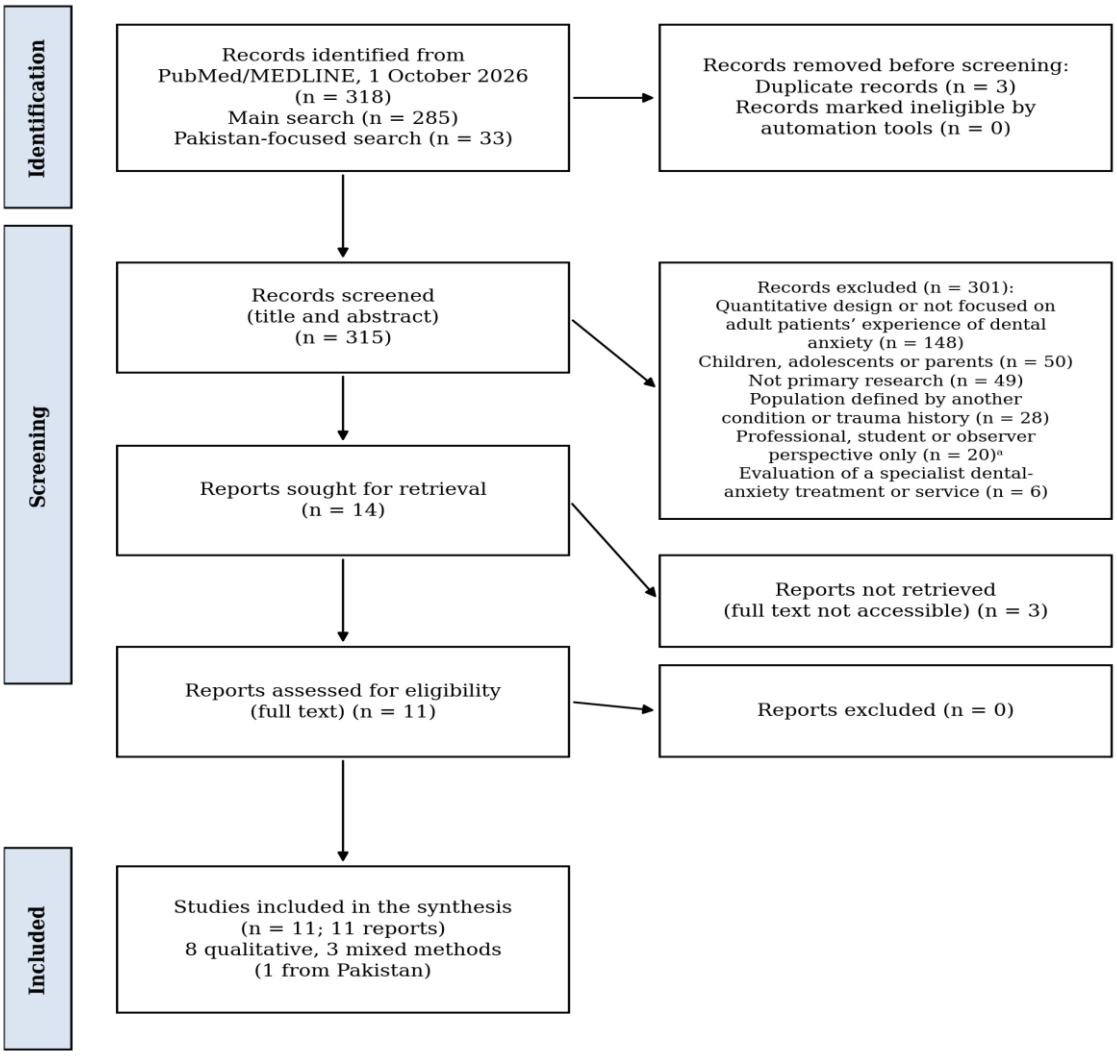


Figure 1: PRISMA 2020 flow diagram of study selection

Data Extraction

For each included study, the following were extracted into a standardised form: country, setting, aim, design, data collection and analytic approach, sample size and characteristics, and all reported themes, categories, and supporting participant quotations. For mixed-methods studies, only the qualitative findings were extracted, although sample characteristics from the quantitative strand were recorded for context.

Quality Appraisal

Each included study was appraised using the CASP Qualitative Studies Checklist (Critical Appraisal Skills Programme, 2024), which comprises ten questions addressing clarity of aims, appropriateness of qualitative methodology, research design, recruitment strategy, data collection, the researcher–participant relationship, ethical issues, rigour of analysis, clarity of findings, and value of the research. For the three mixed-methods studies, the checklist was applied to the qualitative component only. Each question was rated Yes, No, or Can't tell; Can't tell was recorded where the published report did not provide sufficient information. Item-level ratings are presented in Table 3. Consistent with the guidance of Thomas and Harden (2008), no study was excluded on methodological grounds alone; appraisal was used to

contextualise each study's contribution, and findings from studies with thinner qualitative data were interpreted with corresponding caution.

Synthesis Method

Synthesis followed the three stages described by Thomas and Harden (2008), with one adaptation. In the first stage, findings and illustrative quotations from each included study were extracted and coded line by line. In the second stage, codes of related meaning were grouped into descriptive themes that remained close to the language used in the original studies. In the third stage, Thomas and Harden (2008) recommend generating new analytical themes inductively; here, the descriptive themes were instead mapped against the six themes previously developed in the author's primary study, an approach consistent with best-fit framework synthesis (Carroll et al., 2011). This adaptation was chosen in order to examine whether the primary study's themes represent an idiosyncratic account or a pattern recurring across the wider literature. Descriptive themes that did not map onto the six a priori themes were developed inductively into new themes rather than being forced into the framework, and primary-study themes that lacked support in the wider literature were recorded as gaps. Support for each theme was classified, for each study, as clear, partial (an indirect or less developed correspondence), or not identified (Table 2).

Results

Overview of Included Studies

The 11 included studies were published between 2002 and 2026 and were conducted in seven countries: the United States (k = 4), Sweden (k = 2), and one study each in Denmark, Finland, Pakistan, Türkiye, and the United Kingdom (Table 1). Eight used qualitative designs, including grounded theory (k = 2), qualitative content or thematic analysis of interviews or focus groups (k = 5), and thematic analysis of written narratives (k = 1); three used mixed methods. Together they contributed approximately 830 adults whose accounts were analysed qualitatively, although this total is dominated by one trial-based study in which 499 participants gave brief interview accounts (Konneker et al., 2025); the median qualitative sample was 22. Table 1 also summarises the author's primary study, which serves as the anchor against which the wider literature is examined, and Murray et al. (2019), which is retained narratively as a practitioner-side contrast. Table 2 maps the contribution of each study to the themes of the synthesis.

Table 1: Characteristics of the included studies, the anchor study, and the practitioner comparator

Study	Country	Design / analysis	Qualitative sample	Focus
Abrahamsson et al. (2002a)	Sweden	GT; in-depth interviews	n = 18 patients of a dental-phobia clinic[a]	Coping with dental fear and avoidance
Wang et al. (2017)	UK	Focus groups and interviews; thematic analysis	n = 14 dentally anxious adults	Triggers and preferred anxiety-reduction techniques
Moore et al. (2004)	Denmark	Qualitative analysis of clinical records and interviews	n = 30 specialist-clinic patients	Embarrassment in phobic dental anxiety
Siegel et al. (2012)	USA	In-depth interviews; thematic coding	n = 118 African American adults with oral symptoms	Types of dental fear as barriers to care
Kurki et al. (2021)	Finland	Diagnostic interviews; theory-driven content analysis	n = 7 dentally anxious adults	Components of dental fear before, during, and after treatment

Study	Country	Design / analysis	Qualitative sample	Focus
Taqi et al. (2023)	Pakistan	MM; survey and interviews; content analysis	Quant. n = 100; Qual. n = 25	Dental fear across specialties
Höglund et al. (2024)	Sweden	Classical GT; semi-structured interviews	n = 10 dentally anxious adults	Recognition of anxiety by dental staff
Valastro et al. (2024)	USA	Qualitative descriptive case study; interviews	n = 22 adults with moderate anxiety	Perceptions of oral health care
Daly et al. (2025)	USA	Thematic analysis of written narratives (two studies)	n = 17 parents; n = 58 adult patients	Memories of dental visits across levels of fear
Konneker et al. (2025)	USA	MM; semi-structured interview debriefs within a trial	n = 499 dentally anxious adults	Origins of anxiety and coping strategies
Sürücü et al. (2026)	Türkiye	Explanatory sequential MM; thematic analysis	Quant. n = 415; Qual. n = 12	Multi-layered experience of dental anxiety
Author's primary study (Assignment 1)	Pakistan	Phenomenologically informed reflexive thematic analysis	n = 12 adults with high anxiety	Anchor study; themes examined against the studies above
Murray et al. (2019)	UK	Interpretative phenomenological analysis	n = 6 specialist dentists	Contrast only; practitioner perspective

Note. GT = grounded theory; MM = mixed methods; Quant. = quantitative strand; Qual. = qualitative strand. [a]Same participants also reported in Abrahamsson et al. (2002b), which could not be retrieved in full text.

Methodological Quality

Overall methodological quality was moderate to high (Table 3). All studies stated clear aims, used qualitative methods appropriate to an experiential research question, and reported clear findings of evident value. The most frequent weakness concerned the researcher–participant relationship: only two studies (Sürücü et al., 2026; Valastro et al., 2024) explicitly discussed reflexivity or the researchers' influence on the data. Rigour of analysis was generally supported by independent or team-based coding, and two studies reported respondent validation (Valastro et al., 2024; Wang et al., 2017). The qualitative components of two studies were comparatively thin: Konneker et al. (2025) coded brief interview debriefs collected within a clinical trial and reported findings largely as frequencies, and Daly et al. (2025) analysed anonymous written reflections against an a priori coding framework without the opportunity to probe. Findings from these studies are therefore treated as corroborative rather than as primary sources of interpretation.

Table 3: Methodological quality of included studies (CASP Qualitative Studies Checklist

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Abrahamsson et al. (2002a)[a]	Y	Y	Y	Y	Y	CT	CT	Y	Y	Y
Wang et al. (2017)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y
Moore et al. (2004)	Y	Y	CT	Y	CT	CT	Y	Y	Y	Y
Siegel et al. (2012)	Y	Y	Y	Y	Y	CT	CT	Y	Y	Y
Kurki et al. (2021)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y
Taqi et al. (2023)	Y	Y	CT	Y	Y	CT	Y	Y	Y	Y
Höglund et al. (2024)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y
Valastro et al. (2024)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Daly et al. (2025)	Y	Y	Y	CT	CT	CT	Y	Y	Y	Y
Konneker et al. (2025)	Y	Y	CT	Y	CT	CT	Y	Y	Y	Y
Sürücü et al. (2026)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note. Y = yes; N = no; CT = can't tell. Q1 clear aims; Q2 qualitative methodology appropriate; Q3 design appropriate; Q4 recruitment appropriate; Q5 data collection addresses the research issue; Q6 researcher–participant relationship considered; Q7 ethical issues considered; Q8 rigorous analysis; Q9 clear statement of findings; Q10 value of the research. For mixed-methods studies, only the qualitative component was appraised. [a]Appraisal based on the information available to the reviewer; the original report should be consulted to confirm items rated CT.

Synthesised Themes

Table 2: Contribution of included studies to the themes of the synthesis

Theme	Abr	Wang	Moore	Sieg	Kurki	Taqi	Hög	Val	Daly	Konn	Sür
1. Anticipatory anxiety	✓	–	–	✓	✓	✓	(✓)	(✓)	(✓)	–	✓
2. Embodied experience	–	–	(✓)	(✓)	✓	✓	✓	(✓)	✓	–	✓
3. Powerlessness and control	(✓)	✓	✓	(✓)	✓	✓	(✓)	(✓)	(✓)	(✓)	✓
4. Practitioner and team as moderators	(✓)	✓	✓	✓	✓	✓	✓	✓	✓	–	✓
5. Personal coping repertoire	✓	(✓)	–	(✓)	✓	–	✓	✓	(✓)	✓	(✓)
6. Spectrum of severity; wish to be understood	(✓)	✓	(✓)	–	(✓)	–	✓	(✓)	✓	✓	✓
7. Shame, concealment, and disclosure (new)	(✓)	–	✓	–	✓	✓	✓	–	–	–	–

Abr = Abrahamsson et al. (2002a); Wang = Wang et al. (2017); Moore = Moore et al. (2004); Sieg = Siegel et al. (2012); Kurki = Kurki et al. (2021); Taqi = Taqi et al. (2023); Hög = Höglund et al. (2024); Val = Valastro et al. (2024); Daly = Daly et al. (2025); Konn = Konneker et al. (2025); Sür = Sürücü et al. (2026).

Note. ✓ = clear support; (✓) = partial or indirect support; — = not identified in this synthesis. Theme 7 was not identified in the primary study and emerged inductively from the included studies. Murray et al. (2019) provides a practitioner-side contrast for Theme 4.

Theme 1: Anticipatory Anxiety Preceding the Appointment

In the author's primary study, anxiety began for most participants several days before the appointment, characterised by ruminative and catastrophising thought patterns and, for one participant, by pre-appointment online searching that intensified rather than reduced fear. This anticipatory quality was clearly reported in five of the 11 included studies and partially in a further three. Sürücü et al. (2026) described intense anxiety well before arrival at the clinic, accompanied by insomnia, palpitations, and stomach discomfort, with one participant describing efforts to talk themselves out of attending even after booking. Kurki et al. (2021) similarly reported constant fear and disturbed sleep before treatment, and Siegel et al. (2012) found that the anticipated pain of injections and the imagined sound, smell, and pressure of the drill were sufficient to keep participants from seeking care for symptomatic problems, often for years. Taqi et al. (2023) identified an "approach-related fear" in which the mere thought of approaching the dental office provoked anxiety, while Abrahamsson et al. (2002a) described an oscillation between avoidance and a "readiness to act" shaped by this pre-appointment state rather than by treatment itself. Behavioural expressions of anticipation, including repeated cancellation and rescheduling, were reported by Höglund et al. (2024), Valastro et al. (2024), and Daly et al. (2025). Across these studies, anticipatory anxiety functions as a distinct phase of the experience, with its own triggers and consequences, rather than merely an anxious mood preceding a fearful event.

Theme 2: The Embodied Experience of Anxiety

In the primary study, physiological experience was the first and most immediate register of anxiety, with participants reporting cardiac symptoms, sweating, and pre-syncopal sensations triggered by sensory cues. This theme was clearly supported in five studies and partially in three more. Taqi et al. (2023) identified physical reactions to dental procedures, notably a pounding heart and erratic breathing, as one of three overarching themes, and Kurki et al. (2021) documented strong and long-lasting physiological reactions, including palpitations, panic attacks, and sensations of choking or drowning during treatment. Höglund et al. (2024) described a category of involuntary signals, among them sweating, breath-holding, hyperventilation, pallor, fainting, and the urge to flee, which participants experienced as outside their control. In Daly et al. (2025), adults recalling frightening childhood visits described the persistence of these reactions decades later, with one writing that their body "remembers". Sensory triggers, particularly the sound and vibration of the drill, the smell of the clinic, and injections, recurred across studies (Siegel et al., 2012; Sürücü et al., 2026; Valastro et al., 2024). This convergence supports treating embodiment as a theme in its own right rather than as a secondary description of a primarily cognitive state, with implications for chairside management, including pacing, positioning, and sensory modification, in addition to pre-appointment preparation.

Theme 3: Powerlessness and the Struggle for Control

The third theme of the primary study centred on loss of control and an accompanying desire for agreed stop signals and step-by-step explanation. Every included study offered at least partial support, and five offered clear support. Moore et al. (2004) found that nearly half of patients attending a Danish specialist clinic named powerlessness in the dental situation, rather than pain, as their chief complaint, often grounded in distrust that the dentist would stop if asked. Taqi et al. (2023) described feelings of exposure and helplessness in the dental chair, and Wang et al. (2017) found that anxious patients in the United Kingdom sought preparedness, shared decision-making, and a tailored treatment plan, each functioning as a means of regaining control. In Sürücü et al. (2026), clear step-by-step communication was the factor most often said to restore a sense of control. The specific mechanism emphasised in the primary study, an agreed and honoured stop signal, also found support, although it was rarely examined in its own right. Participants in Kurki et al. (2021) described signalling for pauses or stopping procedures midway, and Konneker et al. (2025) recorded telling staff about anxiety or asking for breaks as a coping strategy.

Conversely, the importance of the stop signal was illustrated by its violation: a participant in Siegel et al. (2012) traced her fear of dentists to one who continued injecting despite repeated requests to stop. The wider literature thus frames control primarily in terms of information and shared decision-making, while the primary study and a minority of included studies identify the agreed stop signal as a concrete, procedural expression of that control; this specific mechanism remains under-examined.

Theme 4: The Practitioner and Dental Team as Central Moderators

The moderating role of the practitioner was the most consistently reported theme, with clear support in nine studies and partial support in a tenth. In the primary study, the same objective procedure was reported as tolerable or intolerable depending on how it was communicated, with dismissive language identified as the most harmful practitioner response and explicit validation of fear as the most helpful. Höglund et al. (2024) captured this in the core category of hope for "Fingerspitzengefühl", an intuitive tact enabling staff to notice anxiety and respond appropriately, and found that being seen and respected was of great importance to participants. Wang et al. (2017) reported that honest, non-minimising communication was preferred to reassurance that understated treatment, and Valastro et al. (2024) identified confidence in the provider and provider benevolence as central to managing anxiety. Negative practitioner behaviour was equally prominent: perceived lack of empathy was a category in Taqi et al. (2023), and insensitive or forceful dentists were described as the origin of fear in Siegel et al. (2012) and Daly et al. (2025). The included studies also extend this theme beyond the dentist to the whole team. Wang et al. (2017) identified teamwork as a distinct theme, participants in Sürücü et al. (2026) described how a calm or curt dental assistant raised or lowered their anxiety, and Höglund et al. (2024) framed recognition of anxiety as a task for all dental staff. This pattern is complemented from the practitioner's side: the interpretative phenomenological analysis by Murray et al. (2019) found that specialist dentists experience tension between their role as healers and their unintended role as a source of discomfort, suggesting that practitioners are frequently aware of, yet not always equipped to resolve, the moderating role that patients attribute to them.

Theme 5: A Personal Repertoire of Coping Strategies

Participants in the primary study described individualised coping strategies ranging from distraction, such as audiobooks and podcasts, to breathing and self-talk, including one participant's account of reciting verses of the Qur'an to attain a sense of inner calm during treatment. The included studies documented similarly varied repertoires, with clear support in five studies. Konneker et al. (2025) identified 30 distinct coping strategies among 499 adults, distinguishing avoidant strategies, such as music, daydreaming, and phone use, from approach-oriented strategies, such as breathing techniques and coping self-talk. Kurki et al. (2021) described breathing, mindfulness, mental imagery, and forced exposure, while Valastro et al. (2024) identified avoidance as participants' primary strategy, alongside diversion, enduring, and practical adaptations such as morning appointments, and Höglund et al. (2024) described strategies to minimise contact, including requesting sedation and becoming an exceptionally compliant patient to shorten appointments. Abrahamsson et al. (2002a) situated individual coping within a broader ambivalence between avoidance and engagement. Religious coping, however, received little attention. Prayer appeared among the strategies recorded by Konneker et al. (2025) in a predominantly Black, United States sample, but only as a frequency count, without exploration of its meaning or function. No other included study, including the two conducted in Muslim-majority Türkiye and Pakistan, reported religious or spiritual coping. The gap identified by this synthesis is therefore not that religious coping is absent from the literature but that it has not been examined qualitatively: how patients use prayer or recitation during treatment, and what it means to them, remains undescribed.

Theme 6: A Spectrum of Severity and a Shared Wish to Be Understood

The primary study described dental anxiety as a continuum extending from situational unease to trauma-adjacent fear, unified by participants' shared wish for their distress to be believed rather than dismissed as exaggeration. Both elements were supported. Regarding the spectrum, Sürücü et al. (2026) contrasted the matter-of-fact accounts of participants with low anxiety with the intense distress of those with high

anxiety, and Daly et al. (2025) found that features of emotional fear memories, ubiquitous among adults recalling traumatic childhood visits, were also present to varying degrees across a general patient sample ranging from no fear to severe fear. At the severe end, past traumatic dental experiences were a recurrent origin of anxiety: three origins identified by Konneker et al. (2025) included traumatic visits in childhood and in adulthood, Sürücü et al. (2026) described the "psychological residue" of painful or neglectful care, and participants in Kurki et al. (2021) reported vivid memories and flashbacks. Regarding the wish to be believed, Höglund et al. (2024) found that participants experienced extreme disrespect when staff questioned or belittled their experience, often prompting them to change clinics, and Wang et al. (2017) found that patients did not want their concerns or the treatment minimised. Taken together, these studies suggest that dental anxiety is better understood as a continuum than as a single clinical category, and that validation matters at every point along it, not only where severity is high.

Theme 7: Shame, Concealment, and the Burden of Disclosure

One theme not identified in the primary study emerged inductively from the included studies, with clear support in four studies and partial support in a fifth. Moore et al. (2004) found that all but three of 30 patients at a specialist clinic expressed embarrassment about their fear or its consequences, including concealing their teeth during social interaction. Höglund et al. (2024) reported that feelings of guilt and shame, and a reluctance to burden staff, led several participants to hide their anxiety, with one man describing it as embarrassing that "a grown man does not dare go to the dentist". Kurki et al. (2021) similarly recorded shame about the fear itself, and Taqi et al. (2023), in a Pakistani sample, described a gendered pattern in which men were reluctant to admit fear while women spoke of it more openly. Abrahamsson et al. (2002a) framed dental phobia partly as a threat to self-respect. Shame thus acts as a barrier between patients' inner experience and the practitioner's awareness of it, and it helps to explain why the wish to be believed (Theme 6) so often goes unmet: patients who most need their anxiety to be recognised may be the least willing to disclose it. Höglund et al. (2024) found that participants wanted staff to ask about anxiety, but indirectly, so that an honest answer did not require an admission of weakness.

Discussion

This synthesis of 11 qualitative and mixed-methods studies from seven countries found that each of the six themes identified in the author's primary study is supported by independently conducted research, although the strength of support varied across themes and studies (Table 2). This convergence across national contexts, research teams, and analytic traditions is the central contribution of the present synthesis. It suggests that the phenomenon described in the primary study is unlikely to be an artefact of a single small sample or of one qualitative tradition, and that it reflects a recognisable pattern in how adult patients experience dental anxiety.

The most consistently supported finding was the moderating role of the dental team. Considered collectively, the included studies point toward a possible mechanism rather than a mere association: patients describe explanation, honesty, and validation as directly regulating their sense of control (Theme 3) and their sense of being believed (Theme 6). This finding is consistent with the trauma-informed care framework invoked in the primary study (Heaton & Cheung, 2024; Xu et al., 2024), in which predictability, collaboration, and the avoidance of re-traumatisation are central. The synthesis also qualifies the primary study's focus on the individual practitioner: participants across several studies described dental assistants and other staff as capable of raising or lowering their anxiety, which implies that communication training and anxiety-awareness should extend to the whole dental team.

The synthesis extends the primary study in two respects. First, shame and concealment emerged as a distinct theme that the primary study did not identify. It is possible that the primary study's participants, who had volunteered to discuss their anxiety, were already past the point of concealment, or that shame was present in the data but subsumed within the themes of severity and the wish to be understood; a re-examination of the primary data with this lens would be worthwhile. Clinically, the finding suggests that relying on patients to volunteer their anxiety is insufficient, and that routine, indirect, and normalising enquiry, for example through a brief anxiety questionnaire completed before the appointment, may

enable disclosure without requiring an admission of weakness. The gendered pattern reported by Taqi et al. (2023) further suggests that men may be particularly unlikely to disclose.

Second, the synthesis refines rather than confirms the gap originally suspected in relation to religious coping. Prayer is recorded in the wider literature, but only as an item in a frequency count (Konneker et al., 2025); no included study explored its meaning, and studies from Muslim-majority settings did not report it at all. Because the primary study's account of Qur'anic recitation rests on a single participant, it should be treated as a hypothesis for future inquiry rather than as an established theme. Nevertheless, it identifies a specific and researchable question: how patients use religious practices to manage anxiety in the dental chair, and whether practitioners might acknowledge or accommodate such practices, particularly in settings such as Pakistan where religious coping is culturally salient.

The synthesis also identified a mechanism that warrants further study. The agreed stop signal, emphasised by participants in the primary study, was reported in only a minority of included studies, yet its violation was described as a formative source of enduring fear (Siegel et al., 2012). This suggests that the stop signal may function less as a general courtesy than as a test of trust; when honoured, it restores control, and when ignored, it confirms the patient's worst expectations. Its specific contribution has not, to the author's knowledge, been examined qualitatively.

Relevance to the Pakistani Context

Although only one included study was conducted in Pakistan, the available Pakistani evidence is consistent with the synthesised themes. Taqi et al. (2023) identified physical reactions to dental procedures, a sense of existential threat, perceived lack of empathy, and vulnerability in the dental chair, corresponding to Themes 2, 3, and 4. Pakistani quantitative studies point in the same direction. In a multi-centre sample of 400 adults in Karachi, clear explanations and involvement in decision-making were independently associated with lower anxiety, whereas the clinic environment, the sound and smell of the drill, and exposure to other patients' expressions of pain were associated with higher anxiety (Nauman et al., 2026). In Islamabad, a history of traumatic dental experience was associated with a greater need for sedation (Abbas et al., 2022). These associations correspond closely to Themes 2, 3, 4, and 6, suggesting that the experiential patterns described in the international literature are likely to be recognisable to Pakistani patients.

At the same time, several features of the Pakistani setting may shape how these themes are expressed, and none has yet been examined qualitatively. First, much of the international evidence comes from specialist dental-fear clinics and structured treatment programmes in Scandinavia and the United States, which are largely unavailable in Pakistan, where dentists are scarce relative to need and access is particularly limited outside cities (Basharat & Shaikh, 2016). Recommendations such as unhurried step-by-step explanation and a negotiated stop signal assume time that may not be available in high-volume public teaching hospitals, and their feasibility in such settings is an open question. The association between exposure to other patients' distress and higher anxiety (Nauman et al., 2026) further suggests that the physical organisation of care, for example treatment in shared clinical areas, may matter more in some Pakistani settings than the international literature implies. Second, cost and fear are intertwined: cost and fear of pain are leading barriers to care, and patients without formal education cite them more often (Shah, 2024), so that avoidance driven by anxiety may be difficult to separate from avoidance driven by affordability. Third, gender may shape both the experience and the disclosure of anxiety. Pakistani surveys consistently report higher anxiety among women (Muneer et al., 2022; Nauman et al., 2026), whereas Taqi et al. (2023) found men reluctant to admit fear; read alongside Theme 7, this suggests that shame and disclosure may be gendered in ways that warrant specific qualitative investigation.

Fourth, religious practice is likely to be more salient for many Pakistani patients than in the settings that dominate the literature, yet it is the least examined dimension of coping. The primary study's account of Qur'anic recitation, together with the frequency count of prayer reported by Konneker et al. (2025), indicates that religious coping occurs during dental care, but no study has explored how Pakistani patients use recitation, supplication, or other practices during treatment, or how practitioners respond to them. For practice in Pakistan, the synthesis suggests several low-cost measures: routine screening with a validated Urdu instrument, such as the Urdu version of the Index of Dental Anxiety and Fear (Farid et

al., 2020), which allows anxiety to be disclosed indirectly; brief, standardised explanations and an agreed stop signal that can be incorporated into busy clinics; training in communication and anxiety recognition for the whole dental team within undergraduate and postgraduate curricula; and respectful accommodation of patients' religious coping, for example by allowing a pause for silent recitation before a procedure. For research, a qualitative study of Pakistani patients across public and private settings, with deliberate attention to gender, socioeconomic status, and religious coping, is the clearest next step.

Tensions and Practical Implications

One tension warrants acknowledgement rather than resolution. Murray et al. (2019) report that practitioners experience the same encounters that patients describe as anxiety-inducing as a source of professional tension and discomfort. Interventions directed solely at patients, such as information leaflets or relaxation techniques, may therefore address only one side of a relational dynamic that also requires attention to how practitioners and their teams are supported in managing anxious encounters.

From a practical perspective, the synthesis strengthens the case for trauma-informed, patient-centred approaches to dental anxiety. Explaining each step before it occurs, agreeing upon and honouring a stop signal, enquiring about anxiety in a way that does not depend on spontaneous disclosure, and explicitly validating rather than minimising distress are not isolated recommendations arising from a single small study; their components are supported by research teams working across seven countries.

Strengths and Limitations

This synthesis has several strengths. It draws on studies from seven countries and multiple qualitative traditions; it used a fully reported and reproducible search, an established synthesis method (Thomas & Harden, 2008), and a widely used appraisal tool; and it was designed explicitly to examine, rather than restate, the primary study's themes against independent evidence, with provision for new themes to emerge.

Several limitations should also be acknowledged. First, only one database, PubMed/MEDLINE, was searched. Although it captured all studies identified in an earlier scoping search, relevant studies indexed only in CINAHL, PsycINFO, Scopus, or Web of Science, or reported in grey literature, may have been missed. Second, the search was restricted to English-language publications, which may under-represent studies from settings in which religious and culturally situated coping is more prominent; the apparent gap concerning religious coping may partly reflect this restriction. Third, three potentially eligible reports could not be retrieved in full text and were therefore excluded (Appendix B); their abstracts suggest findings broadly consistent with Themes 1, 3, 4, and 6. Fourth, screening, extraction, appraisal, and synthesis were conducted by a single reviewer without a second coder, which is a recognised threat to the trustworthiness of qualitative evidence syntheses. Fifth, the reviewer was also the author of the anchor study, and the synthesis was organised around that study's themes; this carries a risk of confirmation bias, which the inductive development of Theme 7 and the explicit recording of gaps were intended to mitigate. Sixth, the qualitative data in two studies were comparatively thin (Daly et al., 2025; Konneker et al., 2025), and the included studies varied in how they defined dental anxiety and in the treatments participants had experienced, so the synthesis addresses the general phenomenon rather than anxiety specific to any procedure. Seventh, the evidence base is predominantly Western: only one included study was conducted in Pakistan, and Pakistani journals were searched only through a targeted, non-systematic web search, so locally published qualitative studies may have been missed. The transferability of the findings to Pakistan therefore rests on the convergence between the international studies, the primary study, Taqi et al. (2023), and Pakistani quantitative evidence, rather than on direct qualitative evidence from Pakistani patients. Finally, only two included studies reported respondent validation; although member-checking is not universally regarded as a quality criterion in interpretive research, the themes reported here should be understood as researcher interpretations.

Conclusion

This meta-synthesis integrated 11 qualitative and mixed-methods studies from seven countries with the six themes identified in a phenomenologically informed primary study of adult patients' lived experience

of dental anxiety. Each of the six themes was supported by independent research, suggesting that they reflect a recognisable pattern rather than an isolated account. The conduct of the dental team emerged as the principal reported moderator of the experience, and a seventh theme, shame and concealment, was identified that the primary study had not captured. The synthesis also clarified that religious coping, although recorded in the literature, has not been examined qualitatively. These findings support trauma-informed, patient-centred dental care structured around explanation, negotiated control, routine and non-judgemental enquiry, and the explicit validation of distress, and they identify the meaning of religious coping, the role of shame, and the function of the agreed stop signal as priorities for future qualitative research. For Pakistan, where the existing evidence is almost entirely quantitative, the synthesis indicates that the same experiential patterns are likely to apply, but that their expression may be shaped by limited service capacity, cost, gender norms, and religious practice; qualitative research with Pakistani patients is needed to examine this directly.

Declaration of Generative AI Use

Generative AI (Claude, Anthropic) was used to assist with language editing, execution of the PubMed search, preliminary screening, data extraction, and drafting of tables. All screening and extraction decisions are documented in the supplementary screening log, and the author takes full responsibility for verifying them and for the content of this article.

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Appendices

Appendix A. PubMed/MEDLINE Search Strategy

Database: PubMed/MEDLINE (National Library of Medicine). Date searched: 1 October 2026. Limits: English language; publication date 1800/01/01 to 2026/09/30. Records retrieved: 285.

("dental anxiety"[tiab] OR "dental fear"[tiab] OR "dental phobia"[tiab] OR odontophobia[tiab] OR "Dental Anxiety"[MeSH Terms]) AND (qualitative[tiab] OR phenomenolog*[tiab] OR "grounded theory"[tiab] OR "thematic analysis"[tiab] OR "focus group*"[tiab] OR interview*[tiab]) AND (adult*[tiab] OR patient*[tiab]) AND english[lang]

Publication date limit applied as: 1800/01/01:2026/09/30[Date - Publication].

Supplementary Pakistan-focused search (PubMed/MEDLINE, 1 October 2026; no date or language limits). Records retrieved: 33, of which 3 duplicated records from the main search.

("dental anxiety"[tiab] OR "dental fear"[tiab] OR "dental phobia"[tiab] OR "Dental Anxiety"[MeSH Terms]) AND (Pakistan[tiab] OR Pakistan[ad] OR Pakistani[tiab] OR Karachi[tiab] OR Lahore[tiab] OR Islamabad[tiab] OR Rawalpindi[tiab] OR Peshawar[tiab] OR Multan[tiab] OR Faisalabad[tiab] OR Hyderabad[tiab] OR Quetta[tiab])

Targeted web search of Pakistani journals (1 October 2026): Journal of the Pakistan Dental Association, Pakistan Oral & Dental Journal, Journal of the Pakistan Medical Association, Journal of the College of Physicians and Surgeons Pakistan, and Pakistan Journal of Medicine and Dentistry, using combinations of “dental anxiety”, “dental fear”, “qualitative”, and “experience”. No additional eligible study was identified.

Appendix B. Potentially Eligible Reports Not Retrieved in Full Text

Table B1: Reports excluded because the full text could not be retrieved

Report	Design and sample (from abstract)	Reason for exclusion
Abrahamsson et al. (2002b), Scandinavian Journal of Caring Sciences	GT; n = 18 dental-phobia-clinic patients (same sample as Abrahamsson et al., 2002a)	Full text not accessible
Bernson et al. (2011), European Journal of Oral Sciences	GT; n = 14 adults with dental fear attending regular care	Full text not accessible

Report	Design and sample (from abstract)	Reason for exclusion
de Jongh & ter Horst (1993), Community Dentistry and Oral Epidemiology	Semi-structured interviews; n = 32 anxious patients	Full text not accessible