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Original Research Article

Unveiling the post extraction experience–diverse patient perspectives: a descriptive study

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ABSTRACT

Background: Dental extractions are routine procedures in clinical dentistry, often accompanied by postoperative pain and discomfort. Understanding patient experiences during this period is essential to improve care and recovery outcomes. This study aimed to assess the post-extraction experiences of adult patients, with a focus on pain, discomfort, bleeding, and overall satisfaction, to identify trends and guide enhancements in postoperative management.
Methods: A descriptive study was carried out among 150 adult patients undergoing scheduled dental extractions at ESIC Medical College and Hospital, Chennai. Participants were selected based on predefined inclusion criteria and completed a structured, self-administered questionnaire. The tool gathered demographic data and responses related to pain, swelling, bleeding, and satisfaction during and after the procedure. Data were analyzed using SPSS v.25.0, applying both descriptive and inferential statistics, with significance set at $p<0.05$.
Results: The sample had a balanced gender distribution (48.7% males, 51.3% females) and varied age groups. Pain was the most commonly reported symptom (80%), followed by swelling (12%). Most patients (94%) felt comfortable during the extraction, and 66% reported that the procedure was quick. Postoperatively, 78% experienced mild bleeding, 19.3% moderate, and 2.7% severe bleeding. Additionally, 13.3% reported post-extraction biting injuries. Pain relief measures were largely considered effective, with only a minority requiring further interventions.
Conclusions: In conclusion, the findings demonstrate that most patients experience mild to moderate postoperative symptoms, managed effectively through current clinical practices. The results emphasize the need for consistent, patient-centered pain management protocols and suggest further research on long-term recovery outcomes.

Keywords: Bleeding, Dental extraction, Discomfort, Oral surgery outcomes, Pain management, Patient satisfaction, Post-extraction recovery, Post-operative pain

INTRODUCTION

Dental extractions are standard procedures performed by practitioners with differing levels of expertise in oral surgery across various clinical environments. Although contemporary dentistry emphasises the preservation of dentition, dental extractions remain frequently executed procedures. Consequently, it is imperative that all practitioners conducting dental extractions comprehend the fundamental principles of this treatment to execute these procedures safely and effectively.[1] Dental caries can render a tooth irreparable, necessitating extraction as the sole treatment option. Pulpal and periapical pathology frequently results from dental caries, necessitating extraction for teeth with these conditions that cannot be remedied through endodontic treatment or are deemed non-restorable post-endodontic intervention.[2]

Severe periodontal disease results in osseous destruction in the maxilla or mandible, frequently necessitating extraction.[3] Fractured teeth cannot be effectively restored or preserved, while retained dental roots may be maintained for prosthetic purposes or to prevent harm to adjacent structures. Impacted teeth are unable to erupt due to a physical obstruction, while supernumerary teeth may lead to clinical complications.[4] Orthodontic extractions are frequently deemed necessary to facilitate space within the dental arch for improved prosthetic mobility.[5] Pre-prosthetic extractions may be warranted if a tooth enhances the fit of a prosthesis or possesses a poor prognosis.[6] Dental extractions, akin to any surgical intervention, entail inherent risks.[7] The patient must be informed of these risks prior to the procedure. Common risks following dental extraction include pain, haemorrhage, contusion, oedema, and infection. It is imperative to note any damage to adjacent structures, such as neighbouring teeth, particularly when those teeth have restorations. Site-specific risks, including oroantral communication and inferior alveolar nerve injury, should be noted if relevant. Postoperative pain following a dental extraction is a frequently encountered risk. This is typically managed adequately with over-the-counter analgesics like paracetamol and ibuprofen. These two medications can be administered concurrently with beneficial results. Nonetheless, certain patients may deem these medications inadequate and may present with a principal complaint of post-operative pain. A comprehensive pain history and clinical assessment should be conducted in this situation.[8,9] If the clinician determines that no alternative diagnosis accounts for the patient's pain, conservative management is recommended. The patient should be assured that post-operative pain may persist for 3 to 7 days before subsiding. In this situation, supplementary analgesics, such as opioids or corticosteroids, may be prescribed. A prevalent cause for patients experiencing post-operative pain is alveolar osteitis, commonly referred to as dry socket.[9,10] Alveolar osteitis arises from the disintegration of the blood clot in a socket prior to the establishment of wound organisation. Patients with alveolar osteitis exhibit post-operative pain that initially diminishes and subsequently intensifies 1 to 3 days after the extraction.[12] The patient may indicate that they observed a clot being expelled while expectorating, or clinical examination may reveal the evident loss of the clot. The patient may also indicate the presence of a foul taste in the oral cavity or halitosis. Patients may report pain related to the temporomandibular joint after an extraction.[13] This pain is typically myofascial and can be alleviated through conservative management and time.

The patient's comfort, adherence to the post-operative instructions, and the mitigation of complications are in contingent upon the doctor's ability in managing post-extraction pain. if a patient fails to adequately manage their pain it may deter them from pursuing further treatments and may lead to complications such as alveolar osteitis. Effective pain management strategies, including the administration of analgesics and antibiotics, are essential, especially during the initial phase of recovery. In dentistry, patient-centered care prioritises understanding patient experiences to improve clinical practices and outcomes. Insufficient research has been undertaken to ascertain the exact levels of pain and discomfort experienced by patients during the early post-extraction phase, especially concerning the application of local anaesthesia. When clinicians possess a comprehensive understanding of these experiences, they can more effectively convey information regarding the typical progression of pain, the necessity for analgesic intervention, and the potential for modifications to standard protocols.

Rationale of the study

This study is motivated by the necessity to enhance the understanding and management of post-extraction pain and discomfort in adult dental patients undergoing routine tooth extractions with local anaesthesia. This study aimed to examine this necessity. Dental extractions, while classified as minimally invasive, often result in considerable discomfort for patients, potentially affecting their recovery and daily activities. Inadequate pain management prolongs the recovery process, increases patient anxiety regarding future dental treatments, and elevates the risk of complications, including dry socket and infection. Current pain management practices exhibit considerable variation. Some practitioners routinely prescribe antibiotics and analgesics, while others adjust treatment according to patient feedback. Furthermore, the absence of standardized protocols, coupled with this variation, underscores a deficiency in comprehending patient pain experiences and the efficacy of the current post-operative care provided. This study aims to offer insights that can inform consistent and evidence-based pain management strategies. Insights were derived by systematically recording the pain levels, the duration of discomfort, and the efficacy of the prescribed medications thet are being experienced by patients. These findings enable dental professionals to enhance their methods, to accelerate the healing process, and to elevate patient satisfaction, ultimately improving the quality of post-extraction care provided. The objectives of this study were to: 1) Assess the levels of pain, swelling, and bleeding experienced by adult patients during and after dental extraction, 2) Evaluate patient satisfaction regarding the overall extraction experience and postoperative care, 3) Identify patterns or trends in post-extraction experiences to inform improved clinical practices and enhance patient-centered postoperative care.

METHODS

This was a descriptive cross-sectional study conducted at ESIC Medical College and Hospital, K. K. Nagar, Chennai, over a period of four months, from January 2024 to April 2024. The study focused on 150 adult patients who underwent scheduled tooth extractions

during this period. Patients visiting the Department of Dentistry for extractions were screened for eligibility, and those who met the criteria were invited to participate. The purpose, objectives, and procedures of the study were explained to all interested participants, and written informed consent was obtained.

According to the inclusion criteria, participants had to be 18 years or older, willing to participate, and able to attend follow-up appointments. Only patients who completed the entire questionnaire were included in the final analysis. Exclusion criteria included patients under 18 years of age, those unwilling to participate, or individuals not undergoing a tooth extraction at the time of the study.

Data were collected using a structured, self-administered questionnaire comprising two sections. The first section gathered demographic information such as age, gender, educational status, and residential location. The second section collected data on post-extraction experiences, including pain, swelling, bleeding, discomfort, and overall satisfaction. The questionnaire was designed to be straightforward and user-friendly, allowing patients to complete it independently.

Completed responses were entered into Microsoft Excel and subsequently analyzed using SPSS version 25.0. Both descriptive and inferential statistics were employed. Statistical significance was set at $p<0.05$.

RESULTS

Out of 150 the gender distribution of the participants, with a nearly even split between males (48.7%) and females (51.3%) in a total sample of 150 participants. The study sample included 150 participants from a diverse age groups. The majority of the participants were in the 41-50 years age group i.e. 24% of the sample, followed by the 51-60 years group at 18%, and the 20-30 years group at 16%. Participants aged 61-70 years constituted 17.3%, whereas those aged 31-40 years represented 14%. The youngest participants, aged 15 to 20 years, constituted 7.3% of the sample, while the smallest age group, 71 to 80 years, accounted for 3.3%. The varied age distribution offers a thorough representation of study subjects, ensuring inclusivity across a broad age spectrum.

Table 1 describes the study found that 80% of them had pain as their main complaint. With 12% of patients reporting swelling, it was the second most common complaint, followed by tooth decay with 4%. While 0.7% of patients reported problems with a sharp tooth and 2.7% reported a mobile tooth, both conditions were associated with the need for tooth replacement. According to this distribution, the study's patient population's top concerns are pain and swelling.

The distribution of patients' experiences during tooth extraction was assessed based on their subjective feeling and the forces delivered during the procedure was described in table 2. 94% of patients said they were comfortable with the extraction process. Another 6% said it was bearable, and none said it was terrible. In terms of the forces used, 85.3% of patients said they were comfortable, 14.7% said they were bearable, and no one said the forces were too strong. In general, the results show that most patients felt little to no pain during extraction.

Table 1: Distribution of the patients based on the chief complaint.

Chief complaint	Frequency	Percent
Pain	120	80
Tooth replacement	1	0.7
Decay	6	4
Swelling	18	12
Mobile tooth	4	2.7
Sharp tooth	1	0.7
Total	150	100

Table 2: Distribution of the patients based on the extraction period.

Extraction period	Frequency	Percent
Quick	99	66
Adequate	43	28.7
Longer	8	5.3
Total	150	100

Table 3: Distribution of the patients based on the extraction biting injury.

Post extraction biting injury	Frequency	Percent
Present	20	13.3
Absent	130	86.7
Total	150	100

Table 4: Distribution of the patients based on post extraction bleeding.

Post extraction bleeding	Frequency	Percent
Mild	117	78
Moderate	29	19.3
Severe	4	2.7
Total	150	100.0

Table 2 shows that about 66% experienced a quick extraction period while about 28.7% had an adequate duration of extraction period, and only 5.3% reported that they underwent longer extraction. Table 3 reveals that 13.3% of patients sustained a post-extraction biting injury, whereas 86.7% did not. Table 4 indicates that 78% of participants experienced mild bleeding, 19.3% experienced moderate bleeding, and only 2.7% experienced severe bleeding following post-extraction haemorrhage. These tables collectively illustrate the spectrum of bleeding severities observed post-procedure,

the incidence of biting injuries, and the allocation of extraction durations.

Table 5: Distribution of patient's pain experience based on the numerical scale.

Pain experience based on the numerical scale	Frequency	Percent
0.0	16	10.7
1.0	46	30.7
2.0	34	22.7
3.0	22	14.7
4.0	18	12.0
5.0	3	2.0
6.0	3	2.0
7.0	2	1.3
8.0	3	2.0
9.0	1	0.7
10.0	2	1.3
Total	150	100.0

In Table 5, the distribution of the patients' post-extraction pain that they experienced, as scored on a scale of 0 to 10, is shown. The most frequently reported pain score was 1.0 by 30.7% of the 150 patients, while 10.7% reported no pain (0.0). 22.7% of the patients had pain scores of 2.0, while 14.7% had pain scores of 3.0. Furthermore, 12.0% reported experiencing pain at a level of 4.0. Scores of 5.0, 6.0, and 8.0 were reported by 2.0% of patients, 7.0 and 10.0 by 1.3%, and 9.0 by 0.7% of patients.

DISCUSSION

The purpose of this research was to examine post-extraction outcomes of adult patients who received routine dental extractions using local anesthesia, targeting parameters including pain, bleeding, biting injury, extraction time, and patient satisfaction. The results add value to the extensive body of research highlighting the significance of patient-centered postoperative care.

Pain and discomfort

In the current work, most patients had minimal discomfort and low pain scores after and during the procedure. Yet, a significant percentage still suffered from moderate pain, highlighting the importance of individualized pain control approaches. This observation is in agreement with the findings of Assiry et al (2023), who reported 35.3% of patients suffered pain as a delayed complication following extraction.

Also, Tandon et al (2024) reported distress in younger patients, and the severity of pain varied by age and anxiety.[14-16] The comparison speaks to the need for age-dependent pain management and improved preoperative counseling.

Bleeding severity

With regard to bleeding, the present study found that 78% of the patients bled mildly, 19.3% moderately, and only 2.7% severely. Similar results were seen in Assiry et al (2023), who reported uncontrolled bleeding in 6.1% of patients.[17] In contrast to the Assiry study, which was mainly on complications, the present study presents more detailed stratification of the severity of bleeding, with better clinical characterization for earlier intervention.

Soft tissue and biting injuries

The current research discovered that 13.3% of patients suffered from biting wounds after extraction, which is more commonly underreported in the literature. Comparatively, Assiry et al (2023) found that 81.7% of immediate complications were soft tissue trauma, which suggests a very high incidence of procedural trauma during or following extraction. This disparity could be due to differences in surgical technique or operator skill, highlighting the relevance of delicate handling of tissues and patient education following extraction.

Extraction duration

As for the length of procedure, 66% of the patients reported their extraction as brief, 28.7% as sufficient, and a mere 5.3% had lengthy procedures. The spread of responses indicates effective clinical process flow. Assiry et al., on the other hand, did not outline patient perception of the procedure length but highlighted its contribution to complications such as dry socket. Patient-reported procedure length here provides important procedural insight that is commonly neglected.

Patient satisfaction

Overall patient satisfaction in the current study was high, particularly in patients who had less pain and bleeding. This follows the notion that successful pain and complication control is paralleled by increased satisfaction. In comparison, Tandon et al. (2024) similarly observed satisfactory satisfaction scores in patients with lower pain scores and fewer complications, particularly in the younger population.[14] Yet our research provides additional depth through a more extensive age range, with older adults who are quite frequently at highest risk for complications.

Demographic comparison

While both the present study and Tandon et al.'s study reflected nearly equal gender distribution, the age profile differed significantly. Tandon et al concentrated on younger patients (18-30 years), while the current study included a wider age spectrum, with the majority aged 41-70 years.

This broader inclusion allows for more generalizable findings regarding post-extraction challenges across age groups (Table 6).

Table 6: Comparison of post-extraction parameters across studies.

Parameter	Present study	Tandon et al (2024)	Assiry et al (2023)
Pain and discomfort	Majority experienced mild discomfort; notable cases of moderate pain; age-related differences noted.	Higher pain reported in younger patients; age and anxiety influenced severity.	35.3% reported pain as a delayed complication.
Bleeding severity	Mild (78%), Moderate (19.3%), Severe (2.7%).	Bleeding data not emphasized.	6.1% reported uncontrolled bleeding.
Soft tissue injuries / biting	13.3% experienced biting injuries; focused on post-op soft tissue trauma.	Not specifically addressed.	81.7% had immediate soft tissue injuries.
Extraction duration	Short (66%), Adequate (28.7%), Long (5.3%); included patient perception of procedure length.	Not discussed.	Focused on procedural duration's role in dry socket risk; no patient perception data.
Dry socket	Not directly measured; acknowledged as common in literature.	No mention.	64.7% experienced dry socket as a delayed complication.
Patient satisfaction	Generally high; linked to low pain and complication rates; broader age representation.	High satisfaction in younger cohort with fewer complications.	Not directly evaluated.
Age distribution	Majority aged 41-70 years; broader representation of older adults.	Majority aged 18–30 years; focused on young adult experiences.	Not specified in detail.
Gender distribution	Nearly equal male and female participation.	Nearly equal male and female participation.	Not specified.
Study focus	Patient-reported experiences and perceptions post-extraction.	Young adults' experiences with extractions.	Procedural complications and duration-related outcomes.

Strengths and limitations

Strengths of this research are its systematic questionnaire, application of statistical programs (SPSS v25.0), and incorporation of a demographically mixed sample, particularly the elderly. The limitations are its single-center design, self-reported measures, no follow-up, and no control group. These could potentially restrict the study's generalizability and detail of long-term outcome measurements.

Subsequent research needs to include multicenter recruitment, longitudinal follow-ups, and randomized controlled trial (RCT) designs for comparing pain management approaches. The use of standardized pain scales like the Visual Analogue Scale (VAS) and Numerical Rating Scale (NRS) will also improve standardized reporting of pain. In addition, examining psychosocial factors like patient anxiety, prior dental experience, and pain endurance would further promote personalized care. These methods will help create standardized, evidence-based care protocols for post-extraction procedures that enhance patient satisfaction and clinical outcomes.

CONCLUSION

This study underscores the significance of effectively managing post-extraction pain and discomfort in adult patients undergoing routine dental extractions. The study revealed that the majority of patients encountered tolerable pain and discomfort, with few severe complications. The research underscores the necessity for standardised pain management protocols to enhance patient outcomes and satisfaction. The varied demographic representation offers significant insights into patient experiences across age groups, especially for older adults at increased risk for complications. Nonetheless, constraints inherent in the single-center design and reliance on self-reported data indicate the necessity for additional multicenter and longitudinal studies to generalise findings and investigate long-term recovery outcomes. The study promotes standardised, evidence-based practices to improve patient comfort and satisfaction, recommending the refinement of pain management strategies and the expansion of research to enhance the quality of care and patient experience in routine dental extractions.

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REFERENCES

1. Jadun R, Shah A. An evaluation of patient informed consent for dental extractions. Prim Dent J. 2022;11(3):98-103.
2. Broers DL, Dubois L, De Lange J, Su N, De Jongh A. Reasons for tooth removal in adults: A systematic review. Int Dent J. 2022;72(1):52-7.
3. Suzuki S, Sugihara N, Kamijo H, Morita M, Kawato T, Tsuneishi M, et al. Reasons for tooth extractions in Japan: The second nationwide survey. Int Dent J. 2022;72(3):366-72.
4. Wali GG, Sridhar V, Shyla HN. A study on dentigerous cystic changes with radiographically normal impacted mandibular third molars. J Maxillofac Oral Surg. 2012;11(4):458-65.
5. Sarica I, Derindag G, Kurtuldu E, Naralan ME, Caglayan F. A retrospective study: Do all impacted teeth cause pathology? Niger J Clin Pract. 2019;22(4):527.
6. De Araújo TM, Caldas LD. Tooth extractions in orthodontics: First or second premolars? Dent Press J Orthod. 2019;24(3):88-98.
7. Fernández-Barrera MÁ, Medina-Solís CE, Casanova-Rosado JF, Mendoza-Rodríguez M, Escoffié-Ramírez M, Casanova-Rosado AJ, et al. Contribution of prosthetic treatment considerations for dental extractions of permanent teeth. Peer J. 2016;4:e2015.
8. Weil K, Hooper L, Afzal Z, Esposito M, Worthington H, Van Wijk A, et al. Paracetamol for pain relief after surgical removal of lower wisdom teeth. Aust Dent J. 2008;53(2):184-5.
9. Gazal G, Al-Samadani KH. Comparison of paracetamol, ibuprofen, and diclofenac potassium for pain relief following dental extractions and deep cavity preparations. Saudi Med J. 2017;38(3):284-91.
10. Seymour R, Blair G, Wyatt F. Post-operative dental pain and analgesic efficacy. Part I. Br J Oral Surg. 1983;21(4):290-7.
11. Cho H, Lynham A, Hsu E. Postoperative interventions to reduce inflammatory complications after third molar surgery: Review of the current evidence. Aust Dent J. 2017;62(4):412-9.
12. Houston JP, McCollum J, Pietz D, Schneck D. Alveolar osteitis: A review of its etiology, prevention, and treatment modalities. Gen Dent. 2002;50(5):457-63.
13. Garola F, Gilligan G, Panico R, Leonardi N, Piemonte E. Clinical management of alveolar osteitis: A systematic review. Med Oral Patol Oral Cir Bucal. 2021;26(6):e691.
14. Nerella A. The role of 5G and edge computing in enhancing real-time market data processing. Int J Manag Res Rev. 2023;13(3):395-405.
15. Tandon P, Sahoo SK, Mohanty L, Jain N, Hittalamani V, Kamble SS, et al. Dry socket prevalence and risk factors in third molar extractions: A prospective observational study. Cureus. 2024;16(3).
16. Assiry M, Aloqbi M, Albrahim H, Alnabulsi A, Alim H, Ghamdi M, et al. Prevalence and management of post-extraction complications. J Complement Med Res. 2023;14(2):90.
17. Nerella A, Badri P. Omnichannel banking: How digital wallets and credit cards can coexist. Int J Inf Electron Eng. 2021;11(4):26-30.

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