



DENTAL VISIT PHOBIA AMONG ADULTS IN AL - NAJAF CITY/IRAQ: A CROSS-SECTION STUDY

Zainb H. Al-Hakeem*, Maher B. Mohammed, Mahdi Bassam Kahlil, Mohammed Hassan Ali, Zainab Salah Talib

^{1,2}University of Alkafeel, College of Dentistry.



*Corresponding Author: Zainb H. Al-Hakeem

University of Alkafeel, College of Dentistry.

Email id: abdulsahebs@gmail.com, zainab.hashim@alkafeel.edu.iq

DOI: <https://doi.org/10.5281/zenodo.18439942>



How to cite this Article: Zainb H. Al-Hakeem*, Maher B. Mohammed, Mahdi Bassam Kahlil, Mohammed Hassan Ali, Zainab Salah Talib. (2026). Dental Visit Phobia Among Adults In Al - Najaf City/Iraq: A Cross-Section Study. World Journal of Pharmaceutical and Life Sciences, 12(2), 91–96.

This work is licensed under Creative Commons Attribution 4.0 International license.

Article Received on 25/12/2025

Article Revised on 12/01/2026

Article Published on 01/02/2026

ABSTRACT

Despite the recent innovation and technological advances in modern dentistry, dental anxiety continues to be a widespread problem affecting child and adult populations to visit dental clinic. Patients with dental anxiety tend to delay or avoid dental care which will result in worsening their oral health. On the other hand, patients with dental anxiety are a considerable source of stress that can compromise the dentists' clinical performance. Thus, there is a need to identify patients with dental anxiety before treatment initiation. This can help dental care providers to provide effective treatment. This study involve questionnaire developed in the Najaf Governorate included 183 participants, comprising 62 males and 121 females. The results indicate that males are less likely to seek dental care regularly compared to females and severe fear was significantly more common among females (15%, 19 individuals) than males (8.1%, 5 individuals). The most common cause of fear was pain, affecting 38.4% of males (32 individuals) and 34.6% of females (53 individuals) and the most preferred solution was pain relief techniques chosen by 49.4% of males (41 individuals) and 46.9% of females (75 individuals). In conclusion, females tend to visit dentists more often than males, though the difference is not significant. Women experience higher dental anxiety and greater fear of medical tools, while men report slightly more fear of pain. Both genders value pain relief, but females emphasize the importance of psychological support from dentists.

KEYWORDS: Dental fear, dental care, dental anxiety.

INTRODUCTION

Dental phobia is recognized as extremely high anxiety for dental treatment. In such cases, it is difficult to perform dental treatments using routine methods.^[1] Despite technological advances in modern medical science and practice, many people still associate dental treatment with unpleasant emotional sensations and pain.^[2] Odontophobia has been officially recognized by the World Health Organization (WHO) as a legitimate psychological disorder. According to WHO estimates, approximately 15–20% of the global population is affected by this condition.^[3] Dental phobia represents one of the most prevalent causes of fear and anxiety among dental patients. Such fear may arise from previous negative dental experiences, observation of others' fearful reactions, or exposure to alarming information and rumors. Individuals may exhibit fear

toward specific stimuli, such as dental instruments, needles, or even the sight of their own blood. Moreover, contributing factors to dental anxiety include traumatic incidents, single distressing experiences, and information received from relatives, friends, or various media sources.^[4]

As with all types of fear and phobias, dental fear can manifest as single or combination of emotional, physiological, cognitive and behavioral symptoms.^[5] Dental fear exists along a continuum ranging from very mild apprehension to severe phobia. Consequently, within a dental setting, the management strategies and behavioral techniques effective for one patient may not necessarily be suitable for another. Some individuals may require a personalized or tailored approach to management and treatment to address their specific

psychological and emotional needs.^[5] The issue of dental phobia (odontophobia) is closely associated with the role of the dentist. Therefore, it is essential that dental practitioners, in addition to their clinical competencies, possess the ability to recognize this condition and demonstrate an understanding of effective strategies for its appropriate management.^[6] In this context, identifying the specific causes and understanding the aforementioned components of dental phobia enable more effective planning and management of patients affected by this condition.^[7] Dental anxiety and dental phobia remain highly prevalent among adults and should be regarded as significant public health concerns in dentistry. Dental phobia is frequently described as a vicious cycle characterized by avoidance of dental care, deterioration of oral health, and psychosocial consequences that tend to intensify over time. Consequently, research on dental anxiety has placed considerable emphasis on longitudinal studies to better analyze the complexity of dental phobia. Furthermore, such studies may enhance the ability to identify factors contributing to its prevention and management.^[8]

MATERIALS AND METHOD

Study design and population

This was a cross-sectional study conducted from November until December 2024. A questionnaire was developed in the Najaf Governorate for a group of people who voluntarily agreed to participate. This study included 183 participants, comprising 62 males and 121 females, with an age range of 12 to 50 years. The questionnaire included a group of simple questions that were answered in the form of multiple choices designed to measure the level of dental fear among participants.

Data collection procedure

Data were collected through two methods:

1. Online distribution via social media platforms to maximize participant reach.
2. Paper-based surveys distributed directly to individuals, ensuring the inclusion of participants who may not have access to online surveys.

Responses were collected over a specific period, and incomplete questionnaires were excluded from the final analysis.

The survey included the following questions

In the beginning things included age, living and gender.

1. The first question was: How often do you visit the dentist annually? And the choices were: once or less, two to three times, four times or more.
2. The second question was: What is your level of fear of visiting the dentist? And the choices were: no fear, mild fear, moderate fear, severe fear.
3. The third question was: What are the reasons for your fear of visiting the dentist? And the choices were: fear of pain, treatment cost, fear of medical tools, negative past experiences, disliking the clinic environment.

4. The fourth question was: What could make your visit to the dentist more comfortable? And the choices were: better explanation of the treatment, pain relief techniques, improved clinic environment, psychological support from the dentist.

Statistical analysis

All the experiments were performed and reported triplicate. The t-test and Chi-square test was conducted after verifying the normality and homogeneity of the data to assess its significance and compare the means (Significant * <0.05; High significant ** <0.01; Very high significant *** <0.001). The software used for statistical analysis is (R Studio 4.5 was used for the correlations and the figures by Origin Lab 2021 Software).

RESULTS

Frequency of dental visits annually

The results indicate that males are less likely to seek dental care regularly compared to females. Specifically, 71% of males (44 individuals) visit the dentist once or less per year, whereas only 53% of females (53 individuals) fall into the same category. On the other hand, 25.8% of males (16 individuals) visit the dentist two to three times annually, while 35% of females (35 individuals) do so, suggesting that females tend to have more routine check-ups. Additionally, frequent dental visits (four or more times per year) were reported by only 3.2% of males (2 individuals), compared to 12% of females (12 individuals). Overall, although females visit the dentist more frequently than males, the difference is not statistically significant (P-Value = 0.23 for males, 0.12 for females).

Fear of visiting the dentist

When examining fear levels, the data shows that 25.8% of males (16 individuals) reported no fear, slightly higher than the 22% of females (26 individuals) who felt the same. Meanwhile, mild fear was experienced by 38.7% of males (24 individuals) and 42% of females (49 individuals), with females exhibiting slightly higher rates. Interestingly, moderate fear was reported more among males (27.4%, 17 individuals) compared to females (21%, 25 individuals), indicating that males may feel slightly more discomfort. However, severe fear was significantly more common among females (15%, 19 individuals) than males (8.1%, 5 individuals). This suggests that, while both genders experience dental anxiety, females tend to have higher levels of severe fear. The gender difference in fear levels was statistically significant (P-Value = 0.03 for males, 0.02 for females).

Reasons for fear of visiting the dentist

Regarding the causes of dental fear, both genders reported similar concerns, yet with some variations in prevalence. The most common cause of fear was pain, affecting 38.4% of males (32 individuals) and 34.6% of females (53 individuals). Fear of medical tools was another significant factor, with 16.9% of males (14 individuals) and 26.8% of females (41 individuals)

reporting this concern, showing a higher prevalence among females. Meanwhile, the discomfort with the clinic environment was expressed by 18.1% of males (15 individuals) and 15% of females (23 individuals). Treatment cost was cited by 13.3% of males (11 individuals) and 13.1% of females (20 individuals), with males displaying slightly higher concern in this area. Additionally, negative past experiences were reported by 13.3% of males (11 individuals) and 10.5% of females (16 individuals), indicating similar levels of concern across genders. Overall, the fear of medical tools was significantly higher among females, and the differences in fear reasons were statistically significant (P-Value = 0.013 for males, 0.012 for females).

Improving comfort during dental visits

When asked about potential ways to improve their comfort during dental visits, both genders prioritized pain relief techniques. This was the most preferred solution, chosen by 49.4% of males (41 individuals) and 46.9% of females (75 individuals). Additionally, psychological support was more emphasized by females (27.4%, 44 individuals) than males (20.4%, 17 individuals), suggesting a greater need for emotional reassurance. Improvements in the clinic environment were preferred by 16.9% of males (14 individuals) and 13.8% of females (22 individuals), while better explanation of treatments was highlighted by 13.3% of males (11 individuals) and 11.9% of females (19 individuals). Although both genders agreed on the importance of pain relief, females showed a stronger preference for psychological support. However, no statistically significant differences were found in these preferences (P-Value = 0.06 for males, 0.05 for females).

Table 1: The significance of patients answers to the questions.

		Male N (%)	Female N (%)	P-Value
How often do you visit the dentist annually?	1. Once or less	44(71)	53(53)	0.3NS
	2. Two to three times	16(25.8)	35(35)	
	3. Four times or more	2(3.2)	12(12)	
Total= n (%)	-	N= 62(100%)	N= 100 (100%)	-
P-Value	-	0.23NS	0.12NS	-
What is your level of fear of visiting the dentist?	1. No fear	16(25.80)	26(22)	0.3NS
	2. Mild fear	24(38.70)	49(42)	
	3. Moderate fear	17(27.40)	25(21)	
	4. Severe fear	5(8.1)	19(15)	
Total= n(%)	-	N= 62(100%)	N= 119 (100%)	-
P-Value	-	0.03**	0.02**	-
What are the reasons for your fear of visiting the dentist?	1. Fear of pain	32(38.4)	53(34.6)	0.2NS
	2. Treatment cost	11(13.3)	20(13.1)	
	3. Fear of medical tools	14(16.9)	41(26.8)	
	4. Negative past experiences	11(13.3)	16(10.5)	
	5. Disliking the clinic environment	15(18.1)	23(15)	
Total= n(%)	-	N= 83(100%)	N= 153 (100%)	-
P-Value	-	0.013**	0.012**	-
What could make your visit to the dentist more comfortable?	1. Better explanation of the treatment	11(13.3)	19(11.9)	0.3NS
	2. Pain relief techniques	41(49.4)	75(46.9)	
	3. Improved clinic environment	14(16.9)	22(13.8)	
	4. Psychological support from the dentist	17(20.4)	44(27.4)	
Total= n(%)	-	N= 83 (100%)	N= 160 (100%)	-
P-Value	-	0.06NS	0.05NS	-
NS: No Significant Value (* <0.05; ** <0.01; *** <0.001)				

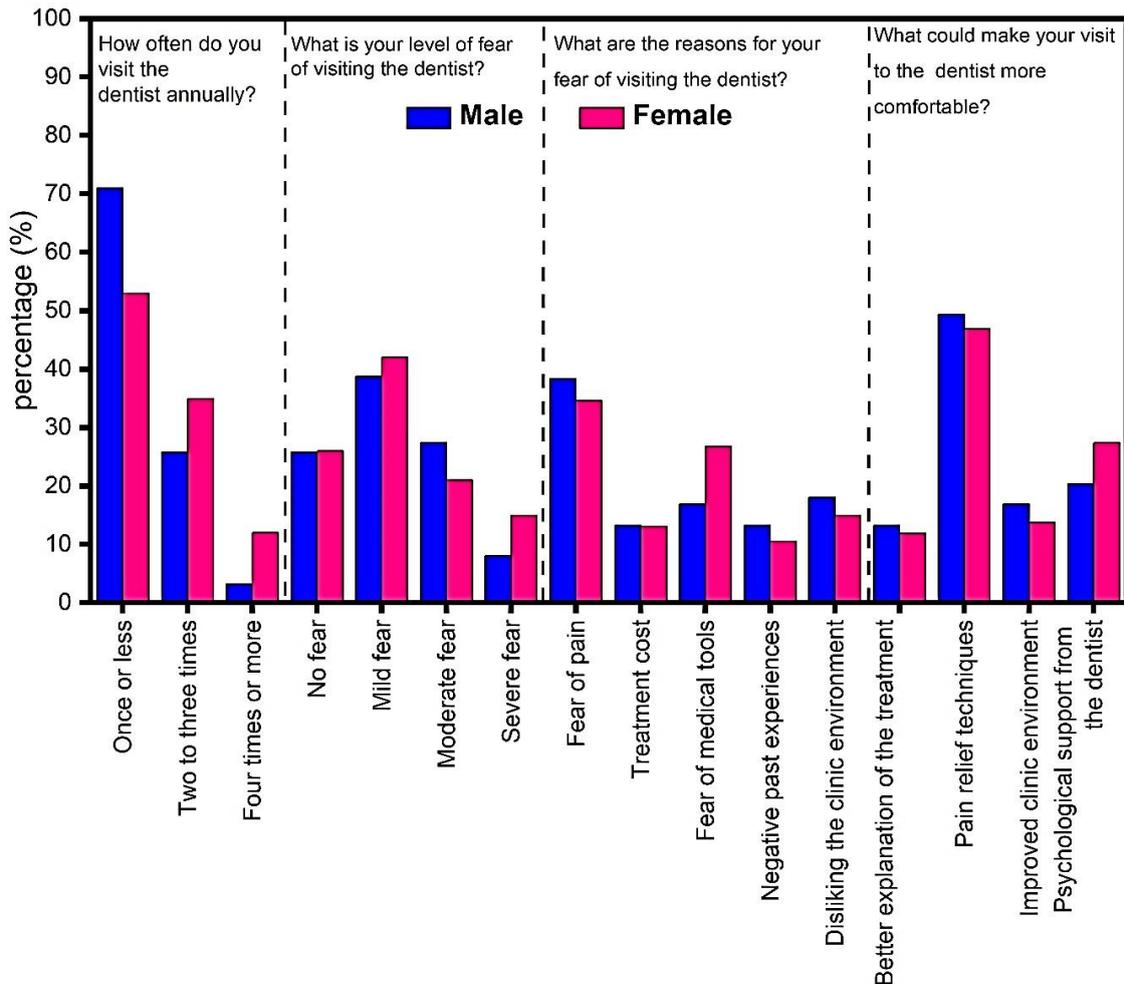


Figure 1: The percentage of number of the answer patient's male and female.

DISCUSSION

Dental fear is a widespread phenomenon that affects individuals across all age groups. Many patients experience anxiety during dental visits, often resulting from previous negative experiences, anticipation of pain, or aversion to the sound of dental instruments. A deeper understanding of the underlying causes of dental anxiety can contribute to enhancing patient comfort and promoting more consistent attendance at dental appointments, thereby supporting better oral health outcomes.^[5]

Our finding revealed low frequency of annual dental visits (71% of males and 53% of females reported one visit or less). This highlights that dental fear may contribute to avoidance behavior — consistent with a vicious cycle model: fear → avoidance → poorer oral health → more invasive treatment → increased fear. Helkimo *et al.* reported a higher mean number of filled tooth surfaces among those with dental fear versus those without in a 40-year time-trend study.^[9]

The present study revealed gender differences in levels of dental fear: 25.8% of males reported no fear compared to 22% of females, while severe fear affected 15% of females versus only 8.1% of males. These findings

support earlier work showing that females are more likely than males to report global dental fear and specific fear of dental pain. For example, Heft and Milgrom observed higher reporting of dental and pain-related fear by women than men in a large adult sample.^[10]

In addition, these findings align with research conducted in Denmark, which reported that women tend to experience higher levels of dental fear.^[11] Similarly, a study carried out among adults in Lebanon demonstrated comparable results.^[12] However, these outcomes contrast with other studies indicating that both genders exhibit similar levels of dental fear.^[13]

This gender disparity may stem not just from differential fear intensity but also from differential expression of anxiety, social-cultural norms around admitting fear, or neurobiological differences in stress and pain responses. For instance, Oktay *et al.* found that women demonstrated higher dental anxiety scores, likely associated with higher baseline rates of generalized anxiety, depression, and expressiveness of emotions.^[14]

Moreover, in another question included in our study, pain was identified as the most common cause of dental fear among both male and female participants.

Interestingly, previous studies have reported that the sound and use of dental drilling instruments were the primary sources of fear, while pain ranked as the second most frequently cited cause^[13].

Furthermore, previous studies have reported that negative past experiences and dental trauma were the most common causes of severe dental fear.^[15]

Our findings regarding preferred ameliorative strategies are also noteworthy: pain-relief techniques were highly prioritized (49.4% males, 46.9% females), and psychological support was more frequently selected by females (27.4%) compared to males (20.4%). The differences did not reach statistical significance ($P > 0.05$).

In contrast, another study identified a high level of education as the most significant factor contributing to a more comfortable dental experience, considering it a protective factor against dental fear.^[12] These variations suggest possible differences in behavioral or cultural patterns that may influence the manifestation and management of dental phobia across different populations.

Finally, the results of present study suggest that management of dental fear should adopt a multifaceted approach

- Effective analgesia/anaesthesia and minimally uncomfortable procedures to tackle the pain dimension (as supported in the literature)
- Patient-centred communication and psychological reassurance, particularly for female patients who seem to place greater value on emotional support
- Environmental and procedural adaptations (clinic ambience, explanation of treatment, instrument noise reduction).

Such holistic strategies are supported by recent reviews indicating that dental fear reduction requires combining behavioural, cognitive, and sensory control interventions.^[16]

An additional implication is the need to tailor interventions based on gender and identified fear triggers. For instance, given the elevated fear among females of dental instruments, clinics may consider pre-treatment audiovisual orientation, “tell-show-do” approaches, and exposure to instrument noises in advance. For males who report moderate fear but less often severe, emphasis might instead be on reassurance of control and procedural transparency.^[5]

CONCLUSION

Females visit the dentist more frequently than males, but the difference is not statistically significant. Males report lower levels of fear compared to females, who experience more severe dental anxiety. Fear of medical tools is significantly higher in females, while fear of pain

is slightly more common in males. Both genders prioritize pain relief techniques, but females place greater importance on psychological support from dentists.

These findings suggest that dental professionals should consider gender specific strategies to improve patient experiences, particularly by addressing dental fear in females and ensuring effective pain management for all patients. A clinical diagnostic interview is also required to establish a definite diagnosis of dental anxiety. Furthermore, having a valid and reliable instrument is of great importance in clinical settings. In response to this need, researchers have developed various specific instruments to evaluate dental anxiety.

REFERENCES

1. Ogawa, M., Ayuse, T., Fujisawa, T., Sato, S., & Ayuse, T. The methods and use of questionnaires for the diagnosis of dental phobia by Japanese dental practitioners specializing in special needs dentistry and dental anesthesiology: a cross-sectional study. *BMC Oral Health*, 2022; 22(1): 38.
2. Avramova, N. Dental fear, anxiety, and phobia; causes, diagnostic criteria and the medical and social impact. *Journal of Mind and Medical Sciences*, 2022; 9(2): 202-208.
3. Seligman, L.D.; Hovey, J.D.; Chacon, K.; Ollendick, T.H. Dental anxiety: An understudied problem in youth. *Clin. Psychol. Rev.*, 2017; 55: 25–40.
4. Avramova, N. Dental fear, anxiety, and phobia; causes, diagnostic criteria and the medical and social impact. *Journal of Mind and Medical Sciences*, 2022; 9(2): 202-208.
5. Appukuttan DP. "Strategies to manage patients with dental anxiety and dental phobia:literaturereview". *Clinical,Cosmetic and Investigational Dentistry*, March 2016; 8: 3550. doi:10.2147/CCIDE.S63626. PMC 4790493. PMID 27022303
6. Seligman, L.D.; Hovey, J.D.; Chacon, K.; Ollendick, T.H. Dental anxiety: An understudied problem in youth. *Clin. Psychol. Rev.*, 2017; 55: 25–40
7. Avramova, N. Dental fear, anxiety, and phobia; causes, diagnostic criteria and the medical and social impact. *Journal of Mind and Medical Sciences*, 2022; 9(2): 202-208.
8. Carlsson, S. G., Wide Boman, U., Lundgren, J., & Hakeberg, M. Dental anxiety—a joint interest for dentists and psychologists. *European Journal of Oral Sciences*, 2013; 121(3pt2): 221-224.
9. Nydell Helkimo, A., Rolander, B., & Koch, G. Dental fear in school children and young adults attending public dental health care: prevalence and relationship to gender, oral disease and dental treatment; trends over 40 years. *BMC Oral Health*, 2022; 22(1): 146.
10. Heft, M. W., Meng, X., Bradley, M. M., & Lang, P. J. Gender differences in reported dental fear and fear of dental pain. *Community dentistry and oral epidemiology*, 2007; 35(6): 421–428.

- <https://doi.org/10.1111/j.1600-0528.2006.00344.x> .
11. Moore, R., Birn, H., Kirkegaard, E., Brødsgaard, I., & Scheutz, F. Prevalence and characteristics of dental anxiety in Danish adults. *Community dentistry and oral epidemiology*, 1993; 21(5): 292-296).
 12. Kassem El Hajj, H., Fares, Y., & Abou-Abbas, L. Assessment of dental anxiety and dental phobia among adults in Lebanon. *BMC Oral Health*, 2021; 21: 1-10.
 13. Alenezi, A. A., & Aldokhayel, H. S. The impact of dental fear on the dental attendance behaviors: A retrospective study. *Journal of Family Medicine and Primary Care*, 2022; 11(10): 6444-6450
 14. Oktay, E. A., Koçak, M. M., Şahinkesen, G., & Topçu, F. T. The role of age, gender, education and experiences on dental anxiety. *Age (years)*, 2009; 20: 29).
 15. Heaton, L. J., Carlson, C. R., Smith, T. A., Baer, R. A., & de Leeuw, R. Predicting anxiety during dental treatment using patients' self-reports: less is more. *The Journal of the American Dental Association*, 2007; 138(2): 188-195.
 16. Kumari, M., Sharma, S., & Raj, A. Factors contributing to dental anxiety and fear in dental procedures—an exploratory study. *Journal of Advanced Sciences*, 2023; 2(1).