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· 临床研究 ·

口腔种植手术患者术前牙科焦虑症影响因素分析

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【摘要】 目的 调查分析口腔种植手术患者术前发生牙科焦虑症的影响因素及干预策略偏好,为临床制定与实施针对性干预措施提供依据。**方法** 本研究经医院医学伦理委员会批准并获得所有研究参与者的书面知情同意。采用便利抽样法,选取2025年1月至10月在某三甲口腔医院种植科经医生诊断后于手术日拟行口腔种植手术的210例患者进行横断面调查。采用一般情况调查表、改良版牙科焦虑量表(MDAS)、焦虑原因调查表进行问卷调查。一般情况调查表收集患者性别、年龄、是否有系统性疾病、牙科治疗史、种植牙数量、是否需骨组织增量等信息。MDAS用于评估患者MDAS评分及牙科焦虑水平,MDAS评分 ≥ 12 分为牙科焦虑症。焦虑原因调查表涵盖:害怕疼痛、担心器械会对牙齿造成永久性的损伤;担心医生技术,不能达到理想效果;害怕打麻药;担心引起交叉感染;感到经济压力;因环境生疏和人面生而担心;既往有不愉快的就诊经历。对一般情况调查表和焦虑原因调查表中调查项目的MDAS评分采用Mann-Whitney U 检验或Kruskal-Wallis H 检验进行单因素分析,对单因素分析中有统计学意义的因素采用二元Logistic回归进行多因素分析。采用干预策略偏好调查表对患者进行问卷调查,了解患者对以下干预措施的偏好:了解手术操作的过程;医护人员的语言安慰;分散注意力如听音乐、减压球等;待在身心放松的环境里;其他。**结果** 口腔种植手术患者术前MDAS评分平均为 (10.91 ± 3.40) 分,牙科焦虑症(MDAS评分 ≥ 12 分)发生率为34.8%(73/210)。单因素分析显示,女性患者、年龄 < 45 岁患者的MDAS评分更高,差异有统计学意义($P < 0.05$);选择焦虑原因“害怕疼痛”(79.0%)、“害怕打麻药”(21.0%)及“因环境生疏和人面生而担心”(4.8%)患者的MDAS评分高于未选择患者($P < 0.05$)。多因素Logistic回归分析结果显示,患者年龄($OR = 0.420$)、患者害怕疼痛($OR = 4.234$)与环境生疏和人面生($OR = 8.220$)是口腔种植患者术前牙科焦虑症的独立影响因素($P < 0.05$)。干预策略偏好问卷调查显示:“医护人员人员的语言安慰”(45.2%)、“分散注意力”(43.3%)与“了解手术操作过程”(39.5%)为患者偏好性干预策略。**结论** 口腔种植手术前部分患者容易发生牙科焦虑,主要为中青年患者、害怕疼痛及因环境生疏和人面生而担心的患者。临床应重点关注此类患者人群,并据此开展系统性的术前教育与心理疏导。

【关键词】 牙科焦虑症; 口腔种植; 影响因素; 改良版牙科焦虑量表; 疼痛; 恐惧; 术前干预

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Analysis of influencing factors for preoperative dental anxiety in patients undergoing dental implant surgery

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【Abstract】 Objective To investigate and analyze the influencing factors and intervention strategy preferences of preoperative dental anxiety in patients undergoing oral implant surgery, and to provide a basis for the clinical formulation and implementation of targeted interventions. **Methods** This study was approved by the Hospital Medical Ethics Committee, and written informed consent was obtained from all participants. Using convenience sampling, a cross-sectional survey was conducted from January to October 2025 among 210 patients in the Department of Implantology of a tertiary dental hospital. All participants had been clinically diagnosed and were scheduled to undergo oral implant surgery on the day of the survey. The survey was conducted using a General Information Questionnaire, the Modified Dental Anxiety Scale (MDAS), and an Anxiety Cause Questionnaire. The General Information Questionnaire collected data on patients' gender, age, presence of systemic diseases, dental treatment history, number of implants, whether bone augmentation was required. The MDAS was used to assess patients' dental anxiety levels via MDAS scores, with a score ≥ 12 defined as dental anxiety. The Anxiety Cause Questionnaire covered the following items: fear of pain, concern that the instruments might cause permanent damage to their teeth, concern about the dentist's technique and inability to achieve ideal results, fear of local anesthesia, concern about cross-infection, financial pressure, exposure to an unfamiliar environment and strangers, and previous unpleasant dental experiences. The MDAS scores of the items in the Anxiety Cause Questionnaire and General Information Questionnaire were analyzed using the Mann - Whitney U test or Kruskal - Wallis H test for univariate analysis, and factors with statistical significance in the univariate analysis were further analyzed using binary logistic regression for multivariate analysis. An Intervention Strategy Preference Questionnaire was used to survey patients' preferences for the following interventions: understanding the surgical procedure, verbal reassurance from medical staff, distraction methods such as listening to music or using stress balls, staying in a physically and mentally relaxing environment, and others. **Results** The average preoperative MDAS score of patients undergoing oral implant surgery was 10.91 ± 3.40 , and the incidence of dental anxiety (MDAS ≥ 12) was 34.8% (73/210). Univariate analysis showed that female patients, patients aged < 45 years, had significantly higher MDAS scores ($P < 0.05$). Patients who selected "fear of pain" (79.0%), "fear of local anesthesia" (21.0%), and "exposure to an unfamiliar environment and strangers" (4.8%) as causes of their anxiety had higher MDAS scores than those who did not select these items ($P < 0.05$). Multivariate logistic regression analysis showed that patient's age ($OR = 0.420$), fear of pain ($OR = 4.234$), and exposure to an unfamiliar environment and strangers ($OR = 8.220$) were independent influencing factors of preoperative dental anxiety in patients undergoing oral implant surgery ($P < 0.05$). The Intervention Strategy Preference Questionnaire showed that "verbal reassurance from medical staff" (45.2%), "distraction" (43.3%), and "understanding the surgical procedure" (39.5%) were the most preferred intervention strategies among patients. **Conclusions** Preoperative dental anxiety is common among some patients undergoing oral implant surgery, particularly young and middle-aged patients, those treated by less experienced physicians, and those experiencing anxiety due to a fear of pain or exposure to an unfamiliar environment and strangers. Clinical attention should focus on these patient populations, and systematic preoperative education and psychological counseling should be provided accordingly.

【Key words】 dental anxiety; dental implantation; influencing factors; modified dental anxiety scale; pain; fear; preoperative intervention

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牙列缺损和缺失会降低患者的咀嚼功能,导致营养不良^[1]、衰老^[2]等风险增加,从而影响其生活质量和全身健康。种植义齿因舒适、美观、咀嚼效率高且稳定功能较好等优势,已成为牙列缺损/缺失患者首选的治疗方案之一^[3-4]。牙科焦虑症(dental anxiety, DA)是指对牙科治疗产生特有的紧张、忧虑甚至恐惧心理,可能导致患者拒绝接受治疗而错过最佳治疗时机^[5]。牙科焦虑症普遍存在于牙科诊疗过程中,常导致患者逃避治疗,影响患

者生活质量^[6-7]。这种焦虑不仅与个体心理特质有关,也受到对手术过程陌生、害怕疼痛、费用担忧等多重因素的综合影响^[8]。临床研究(ClinicalTrials.gov, NCT05424458)显示口腔种植患者牙科焦虑症的发生率较高,不利于口腔种植的整体治疗^[9]。影响口腔种植患者牙科焦虑症的危险因素较多^[10],对其多维影响因素及深层原因的剖析仍有待深入。目前,国内关于口腔种植患者牙科焦虑症的发生率报道不一,尚缺乏基于标准量表的、

针对术前特定阶段的大样本数据。现有研究多集中于一般牙科患者的焦虑现状,而对口腔种植这一特定情境下焦虑的多维影响因素(如医生工作经验、环境陌生感等)的剖析仍不充分。此外,既往研究较少同时关注患者对具体干预策略的偏好,导致临床干预措施的制定缺乏针对性。因此,本研究旨在明确口腔种植手术患者术前牙科焦虑症的发生率及水平;系统分析其人口学、医疗情境及心理认知层面的独立影响因素;同时探讨患者对具体干预策略的偏好,为构建临床干预策略、改善患者诊疗体验提供实证依据。

1 资料和方法

1.1 研究对象

本研究为一项单中心、横断面调查研究,报告遵循《加强流行病学中观察性研究报告质量(STROBE)声明:观察性研究报告规范》中横断面研究指南进行撰写。采用便利抽样法选取2025年1月至2025年10月于四川大学华西口腔医院口腔种植科拟行口腔种植手术的患者作为研究对象,包括初诊和复诊患者。本研究经医院医学伦理委员会批准(批准号:WCHSIRB-D-2024-451),全部研究对象均知情同意并签署了书面知情同意书。

便利抽样法在本研究中是基于临床实际工作流程和患者可及性考虑,旨在有限资源下初步探索该人群的焦虑状况及其影响因素。为尽可能减少便利抽样带来的选择偏倚,本研究设定了明确的纳入与排除标准,并在结果部分详细报告了样本的人口学特征,以供读者判断样本的代表性。

纳入标准:①18岁≤年龄≤80岁;②经种植科主治及以上医师评估,符合口腔种植手术适应证,且无手术禁忌证;③意识清楚,沟通理解能力正常,能独立完成问卷者;④知情同意并自愿参与本研究。

排除标准:①患有严重系统性疾病、精神疾患或认知障碍者;②无法配合调查者。

1.2 调查内容

调查内容包括:一般资料、牙科焦虑症、焦虑原因及干预措施偏好。

1.2.1 一般资料 一般资料问卷为自行设计,包含患者性别、年龄、是否有系统性疾病、牙科治疗史、种植牙数量、是否需骨组织增量等信息。调查问卷中“牙科治疗史”条目已涵盖既往牙科就诊经历(含种植手术史)。

1.2.2 牙科焦虑症 采用中文版改良版牙科焦虑量表(modified dental anxiety scale, MDAS)^[11]评估患者术前MDAS评分及牙科焦虑症情况。MDAS包括5个问题,每个问题有5个备选回答:不焦虑(1分)、轻微焦虑(2分)、焦虑(3分)、非常焦虑(4分)、高度焦虑(5分),MDAS总分为5个问题的分值总和,合计5~25分,MDAS评分≥12分诊断为牙科焦虑症^[12]。MDAS信效度良好,本研究中该量表的Cronbach's α 为0.831。

1.2.3 焦虑原因及干预措施偏好 本研究根据相关文献^[13]结合临床实际自行设计调查表,分析患者术前导致焦虑原因及干预策略偏好。

导致患者牙科焦虑症可能的原因包括:①害怕疼痛;②担心器械会对牙齿造成永久性的损伤;③担心医生技术,不能达到理想效果;④害怕打麻药;⑤担心引起交叉感染;⑥感到经济压力;⑦因环境生疏和人面生而担心;⑧既往有不愉快的就诊经历。

术前焦虑干预策略偏好包括:①了解手术操作的过程;②医护人员的语言安慰;③分散注意力(听音乐、减压球等);④待在身心放松的环境里;⑤其他。患者根据自己主观感受认真选择填写,可根据实际情况选择多项导致焦虑的原因及干预策略偏好。

1.3 调查方法

在患者签署书面知情同意书后在口腔种植手术当日手术前,由经过统一培训的调查员向患者发放问卷。采用匿名方式,由患者自行填写,所发问卷当场收回,出现缺项、漏项视为无效问卷。问卷包括一般资料问卷、MDAS、焦虑原因及干预措施偏好调查表。

1.4 质量控制

为控制信息偏倚和选择偏倚,本研究采取了以下措施。

①调查员培训与标准化:研究开始前,对所有调查员进行统一培训,规范指导语,要求使用中性、无暗示性语言解释问卷条目,避免诱导回答。

②数据收集时点标准化:所有问卷均在手术当日术前等待期间发放,避免因手术进程或术后体验影响患者的焦虑回忆和报告。

③调查环境控制:问卷填写在安静、私密的独立诊室或候诊区进行,以尽量控制环境因素对患者心理状态的干扰,并强调匿名性,鼓励患者如实作答。

④混杂因素控制:在研究设计阶段,通过设定统一的纳入/排除标准(如排除严重系统性疾病及精神疾患)来控制混杂;在统计分析阶段,采用二元 Logistic 回归对单因素分析中有统计学意义的变量进行多因素调整,以控制潜在混杂因素的影响。

⑤数据管理:问卷当场回收并检查完整性,双人独立录入数据,并进行逻辑纠错和异常值溯源核对。

1.5 样本量估算

根据回归分析要求,样本量应为纳入变量的10倍^[14]。本研究中纳入的变量有:一般资料问卷7项,牙科焦虑症1项,导致患者牙科焦虑可能的原因8项,合计16项。考虑20%的无效问卷,计算所需样本量为200例,本研究实际样本量为210例。

1.6 统计学分析

采用SPSS 24.0软件进行统计学分析。计数资料用频数(n)及构成比(%)进行统计描述;计量资料若符合正态分布采用 $\bar{x} \pm s$ 描述,若不符合正态分布采用 $M(P_{25}, P_{75})$ 描述。采用Mann-Whitney U 检验或Kruskal-Wallis H 检验比较按不同因素分组时各组患者MDAS评分差异。对单因素分析中有统计学意义的因素进行二元 logistic 回归分析。 $P < 0.05$ 判定为差异有统计学意义。

2 结果

2.1 口腔种植手术患者术前牙科焦虑症单因素分析

本次问卷共发放214份,其中4份因有缺项或拒绝参与视为无效问卷,有效问卷210份(有效率98.1%),缺失4份(缺失率1.9%)。

患者年龄18~76岁,其中男75例(35.7%),女135例(64.3%);平均(40.42 ± 12.82)岁,其中<45岁者127例(60.5%),≥45岁者83例(39.5%);有系统性疾病者22例(10.5%);有牙科治疗史者172例(81.9%);单颗种植147例(70.0%),多颗种植63例(30.0%);需行骨增量手术者98例(46.7%);由工作年限<5年医生接诊21例(10.0%),5~10年36例(17.1%),>10年153例(72.9%)。

调查结果显示口腔种植手术患者术前的MDAS评分平均为(10.91 ± 3.40)分,其中有牙科焦虑症(MDAS评分≥12分)的患者为73例(34.8%)。单因素分析结果显示:女性、年龄<45岁、害怕疼痛、害怕打麻药及因环境生疏和人面生而担心的患者MDAS评分更高,差异有统计学意义($P <$

0.05)(表1)。

2.2 口腔种植手术患者术前牙科焦虑症多因素分析

对单因素分析中有统计学意义的变量进行如下赋值:性别(0=男,1=女)、年龄(0=<45岁,1=≥45岁)、害怕疼痛(0=否,1=是)、害怕打麻药(0=否,1=是)、因环境生疏和人面生而担心(0=否,1=是),每项变量均以0为参照,进行比较。二元 logistic 回归分析结果显示患者年龄、“害怕疼痛”、“因环境生疏和人面生而担心”为口腔种植术前患者产生牙科焦虑症的独立因素。中老年患者(≥45岁)相较于中青年患者(<45岁)术前牙科焦虑的发生率更低。患者害怕疼痛及因环境生疏和人面生而担心为患者术前牙科焦虑症的独立危险因素,二者均可明显升高患者术前牙科焦虑症的发生率(表2)。

2.3 口腔种植手术患者术前牙科焦虑症干预策略偏好分析

本研究分析了患者对具体干预策略的偏好,结果显示:其缓解焦虑的方式选择呈现多元化趋势。其中“医护工作人员的语言安慰”(45.2%)、“分散注意力(听音乐、减压球)”(43.3%)与“了解手术操作过程”(39.5%)三种为患者偏好性干预策略(表3)。

3 讨论

3.1 口腔种植手术患者术前牙科焦虑症影响因素

牙科焦虑症是全球范围内牙科患者普遍存在的心理问题之一,影响因素复杂多样,过度的焦虑还可能引发生理应激反应,从而影响治疗效果^[15]。本研究以患者是否存在牙科焦虑症(MDAS评分≥12分)为因变量进行 Logistic 回归分析,旨在分析口腔种植手术患者术前发生牙科焦虑症的影响因素,以便及时识别该类人群,进而进行针对性干预。研究发现在控制混杂因素后,“年龄”、“害怕疼痛”与“因环境生疏和人面生而担心”成为口腔种植手术患者术前牙科焦虑症的独立预测变量。对于年龄而言,<45岁的患者牙科焦虑症发生率更高,推测这一年龄段患者的疼痛阈值低于高年龄患者,因随着年龄增长衰老会降低患者的疼痛敏感性^[16]。

本研究聚焦于口腔种植这一特定情境,揭示了患者术前牙科焦虑症的多种因素,牙科焦虑症的发生由人口学特征、医疗情境与特定恐惧认知

表1 口腔种植手术术前不同分组患者的MDAS评分比较

Table 1 Comparison of MDAS scores among patients in different groups before dental implant surgery

n (%)

Variables	Total cases (n=210)	MDAS≥12 (n=73)	MDASM(P_{25}, P_{75})	Z/χ^2	P
Gender [†]					
Male	75(35.7)	20(27.4)	10.00(8.00, 12.00)	-3.122	0.002*
Female	135(64.3)	53(72.6)	11.00(10.00, 14.00)		
Age [†]				4.470	< 0.001*
< 45 years old	127(60.5)	55(75.3)	11.00(10.00, 14.00)		
≥ 45 years old	83(39.5)	18(24.7)	10.00(7.00, 11.00)		
Systemic diseases [‡]				-0.927	0.354
Yes	22(10.5)	7(9.6)	10.00(8.00, 12.00)		
No	188(89.5)	66(90.4)	10.00(9.00, 13.00)		
Previous dental treatment history [†]				-0.075	0.941
Yes	172(81.9)	59(80.8)	10.00(9.00, 13.00)		
No	38(18.1)	14(19.2)	11.00(8.75, 14.00)		
Number of implanted teeth [‡]				-1.107	0.268
Single tooth	147(70.0)	52(71.2)	10.00(9.00, 13.00)		
Multiple teeth	63(30.0)	21(28.8)	10.00(8.00, 13.00)		
Bone augmentation surgery [†]				-1.687	0.092
Yes	98(46.7)	38(52.1)	11.00(10.00, 14.00)		
No	112(53.3)	35(47.9)	10.00(8.25, 13.00)		
Fear of pain [†]				-4.490	< 0.001*
Yes	166(79.0)	68(93.2)	11.00(10.00, 14.00)		
No	44(21.0)	5(6.8)	9.50(6.00, 10.00)		
Concern about permanent dental damage caused by instruments [‡]				-1.556	0.120
Yes	53(25.2)	21(28.8)	10.00(10.00, 13.00)		
No	157(74.8)	52(71.2)	10.00(9.00, 13.00)		
Worry about dentists' skills and unsatisfactory treatment outcomes [†]				-0.467	0.641
Yes	55(26.2)	17(23.3)	11.00(10.00, 13.00)		
No	155(73.8)	56(76.7)	10.00(9.00, 13.00)		
Fear of anesthesia injection [†]				-2.572	0.010*
Yes	44(21.0)	23(31.5)	12.00(10.00, 15.00)		
No	166(79.0)	50(68.5)	10.00(9.00, 12.00)		
Worry about cross-infection [†]				-0.110	0.912
Yes	33(15.7)	9(12.3)	10.00(10.00, 12.00)		
No	177(84.3)	64(87.7)	10.00(9.00, 13.50)		
Economic burden				-1.724	0.085
Yes	25(11.9)	11(15.1)	11.00(10.00, 13.50)		
No	185(88.1)	62(84.9)	10.00(9.00, 13.00)		
Fear of unfamiliar environment and strangers [†]				-2.994	0.003*
Yes	10(4.8)	8(11.0)	14.00(12.25, 16.00)		
No	200(95.2)	65(89.0)	10.00(9.00, 13.00)		
Previous unpleasant dental visits [†]				-1.027	0.305
Yes	9(4.3)	3(4.1)	11.00(10.00, 14.00)		
No	201(95.7)	70(95.9)	10.00(9.00, 13.00)		

MDAS: modified dental anxiety scale. [†] Mann-Whitney U test; [‡] Kruskal-Wallis H test; P < 0.05

表2 口腔种植手术患者术前牙科焦虑症影响因素的多因素 Logistic 回归分析

Table 2 Multivariate logistic regression analysis on influencing factors of preoperative dental anxiety among patients undergoing dental implant surgery

Item	B	OR	95% CI	P
Gender	0.275	1.317	0.665 - 2.607	0.430
Age	-0.867	0.420	0.208 - 0.850	0.016
Fear of pain	1.443	4.234	1.420 - 12.620	0.010
Fear of anesthesia injection	0.596	1.814	0.836 - 3.937	0.132
Anxiety caused by unfamiliar environment and strangers	2.107	8.220	1.382 - 48.879	0.021
Constant	-1.223	0.294		0.091

n=210. Statistical analysis used logistic regression analysis

等因素相互影响。其中恐惧疼痛是普遍且核心的驱动因素(79.0%)与国外研究一致^[17]。现有研究已经显示^[18]:当口腔疾病患者接受口腔侵入性治疗时,口腔局部麻醉、患者意识清醒、麻醉时间有限、焦虑水平高的患者往往会感受到更高的疼痛

程度和更长的疼痛时间,而较高的疼痛也会影响患者的治疗依从性及治疗效果。因此在牙列缺损治疗中,焦虑和疼痛是需要重点关注的两方面因素^[19]。本研究明确将“害怕疼痛”锁定为最关键干预靶点(79.0%的患者报告,OR = 4.234)。这一结

表3 口腔种植手术患者术前焦虑时希望采取的干预措施
Table 3 Measures expected by patients undergoing dental implant surgery for preoperative anxiety relief

Expected intervention measures	n(%)
Verbal consolation by medical staff	95(45.2)
Distraction therapy (music listening, stress relief balls)	91(43.3)
Knowledge of surgical procedures	83(39.5)
Comfortable and relaxing treatment environment	37(17.6)
Others	15(7.1)

n=210. Patients could select more than one option, so column percentages may exceed 100%

果提示在种植手术前可重点为患者讲解种植手术疼痛相关知识及疼痛管理措施,因在术前对患者进行疼痛管理宣教,能有效减轻其对医疗疼痛的恐惧^[20](ClinicalTrials.gov: NCT05887596)。研究表明,明确的疼痛管理预案能显著降低预期性焦虑^[21-22]。同时,尽管“因环境生疏和人面生而担心”牙科焦虑症发生率较低(4.8%),但风险比($OR = 8.220$)高,提示在临床工作中应重点关注陌生环境和人对患者焦虑的影响,也挖掘出口腔种植治疗中人文环境层面的关键作用。Sankhe等^[23]研究报告也证实了在新环境中小鼠会产生焦虑行为。陌生的诊室、不认识的医生、不了解的仪器声音和流程,会让大脑处于高度警惕状态,不知道接下来会发生什么,这种不确定性会直接触发焦虑^[24]。患者在陌生人面前张着嘴,可能会担心被评判(如牙齿不够干净、有异味、或者因害怕而出丑),这种羞耻感会加重紧张和焦虑^[25-26]。患者在面对陌生环境和陌生人时保持警惕,产生恐惧,激发自我防御机制是一种生存本能^[27]。而在牙科椅上,患者处于一个被动、仰卧、无法随时离开的位置,这会本能地加剧患者的不安全感^[28]。因此,实施低成本的“环境与人情化”措施,如优化诊疗环境布局、微笑接诊及沟通、主动介绍环境及医护人员等来消除患者陌生感,缓解患者术前牙科焦虑,对这部分患者可能产生事半功倍的效果。

3.2 口腔种植手术患者术前牙科焦虑症干预策略

基于本研究对焦虑成因的调查,本研究进一步探索了患者对于干预措施的需求偏好。不仅为临床实践提供了直接依据,更深层地揭示了在医疗压力情境下,患者对于情感支持、控制感和认知确定性的普遍心理诉求。首先,“医护人员的语言安慰”成为最受青睐的干预方式,这印证了医患关系中的情感联结是缓解焦虑的第一道防线^[29-30]。

这与邹丽莉等^[31]的研究结果一致:语言沟通能显著降低焦虑症患者的焦虑评分,并改善其情感状态。共情、肯定的语言不仅能够提供直接的情感安抚,更传递了“被关注”和“被理解”的信号,有效改善患者的焦虑情绪,从而提高患者就医依从性^[32]。因此临床工作中,医护人员可主动运用共情宽慰、积极肯定的话术,及时回应患者内心疑虑,诊疗过程中适时给予鼓励安抚,让患者真切感受到被重视、被理解,从而改善患者的焦虑情绪。这类语言干预方式操作简便、成本低廉,便于临床日常常态化落地开展。其次,当患者无法改变外界环境(如医疗操作)时,可以将患者注意力转向可自我调节的中性或积极刺激(如音乐)^[33]。这是一种恢复内在自主性的适应性策略。音乐疗法作为一种安全、低成本、非药物的干预措施对患者也起积极作用能有效降低患者的焦虑水平^[34]。在临床上可为患者提供可选择的个性化音乐既能分散注意力降低焦虑。再者,“了解手术操作过程”的需求反映了患者提前获得清晰、可预期的信息,能帮助他们构建心理准备,减少对“接下来会发生什么”的灾难化想象,从而恢复认知层面的掌控感^[35-36]。说明无论具体操作为何,加强医患沟通,提供“可预测性”本身就是一种强有力的干预^[37]。上述三种偏好并非孤立存在,临床上可开展积极性和系统性的术前健康教育,设计整合性、阶梯式的干预方案,从多维度协同缓解患者术前焦虑情绪,进而进一步提高患者就医依从性^[38]。

3.3 研究局限性

本研究采用便利抽样法,样本来源于单中心三甲口腔医院,代表性有限,可能影响结论的外部效度;横断面设计无法推断因果关系;焦虑原因及干预策略偏好调查表为自行设计,未经正式的跨文化调适与信效度检验,虽然条目基于文献和临床实际,但可能存在测量偏倚;本研究未评估患者的特质焦虑与状态焦虑,未能区分短暂情境性焦虑与个体稳定的焦虑倾向。未来研究可采用多中心、随机抽样设计,结合纵向随访,进一步验证本研究发现。

综上所述,口腔种植手术前部分患者容易发生牙科焦虑,是患者个体特征、医生工作经验、特定恐惧认知及医疗情境的多因素共同作用结果,临床应重点关注对疼痛和陌生环境恐惧的核心焦虑源。临床干预可采取“医护人员的语言安慰”、“分散注意力”及“手术操作流程讲解”等措施改善

患者的焦虑情绪,但临床干预不是单一措施的简单应用,应以患者为中心,开展系统性的术前教育与心理疏导,从多维度协同缓解患者术前焦虑情绪。

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【Ethics statement】 The study adhered to the tenets of the Declaration of Helsinki and was approved by the Ethics Committee of West China Hospital of Stomatology, Sichuan University (No. WCHSIRB-D-2024-451) and written informed consent was obtained from all participants.

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【Data availability statement】 The original contributions presented in this study are included in the article. Further inquiries can be directed to the corresponding author upon reasonable request.

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