

摘要

背景和目的:

妊娠期是女性一生中的特殊时期,妊娠期龈炎在内的多种口腔疾病的发病率会增加。孕期口腔疾病不仅会影响孕妇健康,也对孩子的口腔健康有着重要影响。妊娠期牙周炎与不良妊娠结局如低体重儿和早产儿相关。养成良好的孕期口腔卫生习惯,保持孕期口腔健康不仅可以减少口腔疾病对孕妇自身的危害,也有利于未来儿童的口腔健康。之前的调查显示,我国孕妇的牙龈炎和龋病患病率较高,孕前及孕期口腔检查比率较低,且对孕期口腔健康知识认知不足。其中,孕妇对孕期口腔诊疗安全性的疑虑可能是阻碍孕妇孕期进行口腔诊疗的重要原因。

本研究采用自制调查问卷对郑州和开封两市的孕妇进行调查,旨在探究孕妇对孕期口腔诊疗安全性的担忧是否是孕妇口腔健康自我评价的影响因素,并了解孕妇口腔健康状况、知识、态度及行为现状。从而为制定有针对性的口腔健康教育政策提供依据,以改善孕妇口腔保健行为。

方法:

本次调查为横断面研究,调查对象为2020年12月至2021年7月郑州大学第一附属医院、河南大学附属淮河医院、河南大学第一附属医院所有符合纳入排除标准并自愿接受调查的孕妇。调查问卷包括6部分共50道问题,囊括人口统计学特征,孕期相关特征,口腔健康状况,口腔健康知识来源与认知程度,口腔保健态度和口腔健康行为。在正式调查前,通过预调查修改完善问卷。使用SPSS 26.0分析数据。设定自变量为对“孕期口腔疾病诊疗是安全的”这一问题回答的正误,设定因变量为孕期口腔健康状况自我评价。使用 χ^2 检验和二分类Logistic回归进行统计检验,显著性水平设定为0.05。

结果:

1. 研究对象的人口统计学特征:本研究共纳入311名孕妇。26~40岁的孕妇占82.7%;城市户口占80.7%;家庭年收入9万~15万占32.5%;本科学历及以上占68.5%;自有住房占82%。

2. 研究对象的孕期相关特征:平均孕周为 26 ± 11 周;晚期妊娠占53.7%;第一次怀孕占51.4%;使用医疗保险(包括新农合,商业保险等)的孕妇占60.8%;患有孕期并

发症占 27.3%，患病率最高的两个并发症分别为贫血（17.4%）和孕期糖尿病（9.3%）。

3. 研究对象的口腔健康状况：认为自己口腔健康状况一般占 54.3%，然后依次为好（28.0%），很好（8.7%），差（7.4%）和很差（1.6%）。有牙龈出血占 49.8%，有龋齿占 12.9%，而自述无口腔问题的孕妇占 33.4%。

4. 研究对象的口腔健康知识来源与掌握情况：认为自身口腔健康知识来源于网络（手机或电脑）占 63.0%；期望通过网络（手机或电脑）获得口腔健康知识占 57.9%，期望通过妇产科和口腔科医务人员处获得口腔知识的占 40%以上。

口腔健康知识正确率仅为 36.0%。超过 50%孕妇不知道“孕期口腔疾病诊疗是安全的”；超过 80%的孕妇不知道“孕期可以用抗生素”，“孕期看牙可以打麻药”，“孕期可以吃止疼药”，“孕期口腔科 X 线检查是安全的”；超过 70%的孕妇认为“女性可能因为怀孕而掉牙”。

5. 研究对象的口腔保健态度：绝大部分接受调查的孕妇对提升口腔健康持积极态度。对“对于成年人来说，即使牙齿没有问题也要定期进行口腔检查”持有积极态度的孕妇数占总体的 93.6%；但对于“当孩子第一颗乳牙萌出时，就需要去看牙医”这一问题，仅有 22.9%的孕妇持积极态度。

6. 研究对象的口腔保健行为及就诊障碍：使用含氟牙膏的孕妇占 49.2%；刷牙频率每天两次或更多次占 76.2%；使用过牙线的孕妇占 42.8%；每一年或更短时间就会进行一次口腔检查的孕妇占 39.9%；每一年或更短时间就会进行一次牙周龈上洁治占 37.6%。

各项口腔科就诊障碍因素中，孕妇认同比率最高的三个因素依次为：“不知道怀孕期间可以做什么口腔治疗”（55.9%），“害怕口腔治疗对孩子有危害”（44.4%），“认为自己牙齿没问题”（27.0%）。

7. 研究对象孕期口腔诊疗安全性认知对口腔健康状况自评的影响：“孕期口腔疾病诊疗是安全的”回答正确与否对孕期口腔健康自我评价的影响具有统计学意义（OR=1.70，95%CI 1.05-2.74，P=0.029<0.05），回答正确的孕妇口腔健康自我评价较高

8. 探究研究对象孕期口腔诊疗安全性认知与孕妇口腔健康状况自评之间联系：孕期口腔健康状况自评与龈上洁治频率存在相关性；龈上洁治频率与“害怕口腔治疗对孩子有危害”这一障碍因素的选择相关；“害怕口腔治疗对孩子有危害”这一障碍因素的选择与“孕期口腔诊疗是安全的”这一问题的正确与否具有相关性。

结论：

所调查孕妇的口腔健康状况不佳，口腔健康自我评价较低。口腔健康知识，态度，行为亟待提升。对于孕期口腔疾病诊疗安全性的担忧与孕期口腔健康自我评价相关，对于孕期口腔疾病诊疗安全性有疑虑的孕妇的口腔健康自我评价较低。对孕期口腔诊疗安全性的宣传教育有潜力成为孕期口腔健康教育的突破口。

关键词：孕妇；孕期口腔健康；口腔健康自我评价；口腔健康知识；口腔保健态度；口腔保健行为；口腔科就诊障碍

ABSTRACT

Background and purpose:

Pregnancy is a special period in a woman's life, and the incidence of various dental diseases, including pregnancy gingivitis, will increase. Dental diseases during pregnancy not only affect the health of pregnant women but also have an important impact on the oral health of children. For example, periodontitis during pregnancy is associated with adverse pregnancy outcomes, such as low birth weight and premature births. Developing good oral health habits and maintaining oral health during pregnancy can not only reduce the harm of dental diseases to pregnant women but also benefit the oral health of children. Previous surveys showed that the incidence of gingivitis and caries in pregnant women in China is high, the oral examinations rate pre-pregnancy and during pregnancy in China is low, and their knowledge of oral health during pregnancy is low, too. That dental diagnosis and treatment were not performed for pregnant women during pregnancy were possibly attributed to the doubts about the safety of dental diagnosis and treatment during pregnancy.

This study investigated pregnant women in Zhengzhou and Kaifeng with self-administered questionnaires to explore whether concerns about the safety of dental diagnosis and treatment during pregnancy influence self-rated oral health of pregnant women, and to understand the oral health status, knowledge, attitude and behavior of pregnant women. Finally, it provides the basis for formulating targeted oral health education policy, and promotes oral health behavior of pregnant women.

Method:

This is a cross-sectional study. The research subjects are pregnant women who meet the inclusion criteria and signed the Informed consent from the First Affiliated Hospital of Zhengzhou University, Huaihe Hospital of Henan University and the First Affiliated Hospital of Henan University from December 2020 to July 2021. The questionnaire consists of 6 parts with 50 questions, including demographic characteristics, pregnancy-related characteristics, oral health status, the source and cognition of oral health knowledge, oral health attitudes and oral health behaviors. Before the formal survey, the questionnaire is modified and improved through a pre-survey. SPSS 26.0 was used for statistical analysis. The independent variable was the answer to the question "Diagnosis and treatment of dental diseases during pregnancy is

safe", and the dependent variable was the self-rated oral health during pregnancy. Chi-square and binary logistic regression were used, and the level of significance was $P < 0.05$.

Result:

1. Demographic characteristics: A total of 311 pregnant women were included in the study. 82.7% of pregnant women aged 26 to 40 years; 80.7% have urban hukou; 32.5% of the pregnant women's annual family income were between 90000 to 150000 yuan; 68.5% of them reported bachelor's degree or higher; 82% have owned housing.

2. Pregnancy-related characteristics: the average gestational week was 26 ± 11 weeks; 53.7% of pregnant women were the third trimester; The current pregnancy was the first for 51.4% of participants; 60.8% had medical insurance (including Xinnonghe, commercial insurance, etc.); 27.3% had pregnancy complications, with the two most common complications being anemia (17.4%) and gestational diabetes (9.3%).

3. Oral health status: 54.3% of pregnant women believe their oral health is average, followed by good (28.0%), excellent (8.7%), fair (7.4%), and poor (1.6%); 49.8% had gingival bleeding, 12.9% had dental caries, and 33.4% reported no dental problems.

4. The average accuracy rate of oral health knowledge was only 36.0%. More than 50% of pregnant women did not know that "Diagnosis and treatment of dental diseases during pregnancy is safe"; More than 80% of pregnant women did not know that "Antibiotics can be used during pregnancy"; 16.7% did not know "Anesthesia can be used during pregnancy"; 16.4% did not know "Pain medication can be taken during pregnancy"; 16.1% did not know "Dental X-ray examination during pregnancy is safe"; More than 70% of pregnant women believe that "A woman can lose a tooth just because she is pregnant".

5. Oral health attitude: Most of pregnant women have a positive attitude towards improving oral health. 93.6% of pregnant women had a positive attitude towards "It is important for adults to go to the dentist, even when they do not have problems with their teeth"; However, only 22.9% of pregnant women had a positive attitude towards "It is important to take a child to the dentist when the first tooth comes in".

6. Oral health behaviors and barriers: 49.2% of them use fluoride toothpaste; 76.2% brush teeth twice or more times a day; 42.8% used dental floss; 39.9% have an oral examination every year or less; 37.6% have supragingival scaling once a year or less.

Among the various barriers factors to dental care during pregnancy, the three factors that had the highest level of recognition were: "Do not know what kind of dental treatment are safe during pregnancy" (55.9%), "Be afraid that dental treatment is harmful to children" (44.4%) , "Feeling my teeth are good" (27.0%).

7. The influence of the cognition of the safety of dental diagnosis and treatment during pregnancy on the self-rated oral health of pregnant women: The difference between answering correctly or incorrectly to " Diagnosis and treatment of dental diseases during pregnancy is safe" has a statistically significant impact on the self-rated oral health during pregnancy (OR=1.70, 95% CI 1.05-2.74, P = 0.029<0.05). The self-rated oral health of pregnant women with correct answers is higher.

8. To explore the relationship between the cognition of the safety of dental diagnosis and treatment during pregnancy and self-rated oral health of pregnant women: There is a correlation between the pregnant women's self-rated oral health and the frequency of supragingival scaling; The frequency of supragingival scaling is related to an agreement to barrier factor of "Be afraid that dental treatment is harmful to children"; The agreement of the barrier factor of " Be afraid that dental treatment is harmful to children" is associated with the correctness of answering the question of " Diagnosis and treatment of dental diseases during pregnancy is safe".

Conclusion:

The oral health status of pregnant women is poor, and their self-rated oral health is poor, too. and their oral health knowledge, attitude and behavior need to be improved. Concerns about the safety of dental diagnosis and treatment during pregnancy are related to self-rated oral health of pregnant women. The self-rated oral health of pregnant women who have doubts about the safety of dental diagnosis and treatment during pregnancy is low. Publicity and education on the safety of dental diagnosis and treatment during pregnancy have the potential to become a breakthrough in oral health education during pregnancy.

Key words: Pregnant women; Oral health during pregnancy; Self-rated oral health; Oral health knowledge; Oral health attitude; Oral health behavior; Barriers to dental care

目 录

摘 要.....	I
ABSTRACT	IV
目 录.....	VII
前 言.....	1
资料与方法.....	5
1.1 研究框架.....	5
1.2 研究对象.....	6
1.3 纳入与排除标准.....	6
1.3.1 纳入标准.....	6
1.3.2 排除标准.....	6
1.4 计算样本量.....	6
1.5 实际调查样本量.....	6
1.6 数据采集.....	6
1.7 研究内容.....	7
1.7.1 人口统计学特征.....	7
1.7.2 孕期相关特征.....	7
1.7.3 口腔健康状况.....	7
1.7.4 口腔健康知识来源与认知程度.....	7
1.7.5 口腔保健态度.....	8
1.7.6 口腔保健行为.....	8
1.8 问卷质量控制.....	8
1.8.1 前期准备阶段.....	8
1.8.2 现场调查阶段.....	8
1.9 数据录入、整理.....	9
1.10 统计分析.....	9
1.11 伦理审查.....	9
研究结果.....	10
2.1 研究对象的人口统计学特征.....	10
2.2 研究对象的孕期相关特征.....	11
2.3 研究对象的口腔健康状况.....	13

2.4 研究对象的口腔健康知识来源与掌握情况.....	13
2.4.1 研究对象的口腔健康知识来源	13
2.4.2 研究对象的口腔健康知识掌握情况.....	14
2.5 研究对象的口腔保健态度	17
2.6 研究对象的口腔保健行为及就诊障碍.....	19
2.6.1 研究对象的口腔保健行为	19
2.6.2 研究对象的口腔科就诊障碍	21
2.7 研究对象孕期口腔诊疗安全性认知对孕妇口腔健康状况自评的影响.....	22
2.8 探究研究对象孕期口腔诊疗安全性认知与孕妇口腔健康状况自评之间联系.....	23
讨 论.....	25
3.1 研究对象的人口统计学特征	25
3.2 研究对象的孕期相关特征	25
3.3 研究对象的口腔健康状况	26
3.4 研究对象的口腔健康知识来源与掌握情况.....	26
3.5 研究对象的口腔保健态度	27
3.6 研究对象的口腔保健行为	28
3.7 研究对象的口腔科就诊障碍	29
3.8 研究对象孕期口腔诊疗安全性认知对孕妇口腔健康状况自评的影响.....	29
3.9 探究研究对象孕期口腔诊疗安全性认知与孕妇口腔健康状况自评之间联系.....	29
3.10 局限性.....	30
3.11 创新性.....	30
3.12 未来与展望.....	30
结 论.....	32
参考文献.....	33
综 述.....	35
1 孕妇口腔健康状况.....	35
2 孕妇口腔保健行为及相关因素	36
3 孕妇口腔健康知识掌握程度及口腔保健态度.....	39
4 局限性.....	40
5 未来与展望.....	41
参考文献.....	42
致 谢.....	44
攻读学位期间发表的学术论文目录	45

前 言

妊娠期是女性一生中的特殊时期，孕期激素水平与心理状态会发生很大变化^[1]。在性激素和免疫因子等因素的共同作用下，包括妊娠期龈炎在内的多种口腔疾病的发病率会增加^[2]。多国调查表明，孕妇孕期口腔健康状况不佳，且不同国家报告结果差异较大。首先是孕期最普遍的牙龈炎（牙龈出血）。发达国家中，牙龈炎的患病率在 18.3%至 60.0%之间^[3, 4]。发展中国家中，牙龈炎患病率在 23.2%至 84.4%之间^[5-8]。而我国孕妇的牙龈炎患病率同样较高，从 17.3%到 78.6%不等^[9-18]。其中，大多数研究的牙龈炎患病率集中在 60%到 70%左右。结合我国 35 到 44 岁女性牙龈出血患病率 86.8%^[19]。我国孕妇牙龈炎患病率，与发达国家相比较，与其他发展中国家患病率相当。另外一种常见的口腔疾病是龋病，在发达国家，孕期龋病的患病率在 2.4%到 41.5%之间^[3, 4, 20]。值得关注的是，新加坡的患病率仅为 2.4%^[3]。作为发展中国家的尼日利亚的患病率为 12.4%^[5]。而中国孕妇的患病率从 49.8%到 70.1%不等^[10, 12, 13, 17]。结合我国 35 到 44 岁女性患龋率 91.8%^[19]。这一指标远高于发达国家，而与其他发展中国家相比，患龋率也较高。

孕妇对口腔健康状况的自我评估与孕期口腔疾病患病率相关，不同国家的孕妇的自我评估存在差异。一项针对美国 599 位孕妇进行的调查表明，352（59.8%）名孕妇评价自身口腔健康状况好或非常好，246（41.1%）名孕妇认为自身口腔健康状况为一般或差^[21]。澳大利亚 241 名孕妇中，认为自身口腔健康状况为很好，好，一般，差，很差的孕妇分别为 26 人（10.8%），71 人（29.5%），111 人（46.0%），21 人（8.7%）和 12 人（5.0%）^[4]。在科威特的 603 名孕妇中，分别有 38 人（19.1%），110 人（55.3%），38 人（19.1%）和 13 人（6.5%）认为自身口腔健康状况完美，很好，好和差^[22]。综上所述，科威特孕妇自我口腔健康状况评价较高，而美国和澳大利亚的孕妇自我评价较低。但我国暂无相关报道。

孕期口腔疾病不仅会影响孕妇健康，也对孩子的口腔健康有着重要影响。如妊娠期牙周炎与不良妊娠结局如低体重儿和早产儿等相关^[23]。低龄儿童龋是最常见的儿童慢性口腔疾病，而大多数婴幼儿是通过致龋菌的垂直传播获得引起龋齿的细菌。针对孕妇的产前口腔保健可使孩子口腔变形链球菌数量减少，从而降低低龄儿童龋的发病率^[24]。定期进行口腔保健的母亲也更有可能带孩子去看牙医，并促使孩子形成良好的口腔保健态

度和行为^[25]。养成良好的孕期口腔卫生习惯,保持孕期口腔健康不仅可以减少口腔疾病对孕妇自身的危害,也有利于儿童的口腔健康^[24]。

孕妇的口腔保健行为直接影响到孕妇的口腔健康状况^[4]。口腔保健行为包括口腔卫生行为和口腔专业服务设施的利用行为。口腔卫生行为主要包括刷牙和使用牙线、漱口水等辅助牙齿清洁工具。在发达国家中,澳大利亚和美国的孕妇每天刷牙两次及以上的比率分别为 67.2%^[4]和 96.0%^[26],而发展中国家的沙特阿拉伯,有 51.5%的孕妇每天刷牙两次及以上^[27]。在我国,这一比率在 54.8%至 91.5%之间^[9, 11, 15, 17, 18, 28-34],这一比率与国外大致相同。沙特阿拉伯孕妇之前使用过牙线的比率为 50.5%^[27],而我国孕妇这一比率在 6.6%到 56.8%之间^[9, 17, 29, 31-35]。

而口腔服务设施利用是在口腔科或口腔诊所针对口腔疾病的预防和治疗就诊行为, Singhal A 等对美国马里兰州 4537 孕妇的研究发现,怀孕期间完成口腔检查的孕妇比率为 48.2%^[36]。澳大利亚 George, A 等发现,在过去 6 个月内进行口腔检查的孕妇比率为 30.5%^[4]。在沙特阿拉伯,孕妇孕前及孕期口腔检查比率分别为 49.1%和 31.9%^[27]。相比之下,我国孕妇孕前口腔检查比率较低。除刘芸的一项调查显示孕前检查比率为 46.1%^[29],其余比率均低于 30.0%,从 6.3%到 29.9%不等^[18, 30, 31, 35]。与此同时,孕期口腔检查比率从 35.2%至 38.0%不等,此比率与国外相近^[9, 31],但此项结果不同地区之间差异很大,如 2018 年于冬梅等在长春地区对 989 名妊娠期妇女进行的一项横断面调查显示,仅 6.27%的孕妇在孕前做过口腔检查^[35];杭州 Sun, W.等研究发现,仅 16.70%的孕妇报告在妊娠期会定期进行口腔保健^[34]。

孕妇的口腔保健行为受孕妇口腔健康知识、态度的影响^[4, 34, 37]。有效的口腔健康教育可以提升口腔健康知识并促进孕妇的口腔保健态度和行为^[38]。对于口腔健康知识,知识的输入是起点。有学者对口腔健康知识的来源进行了调查,调查发现,我国孕妇口腔健康知识主要来源于大众传媒(如网络、手机 APP、电视、报刊等),其次来源于医务人员指导^[16, 18, 28, 30]。

口腔健康知识认知方面,对于“牙周炎与妊娠结局有关”这一问题,新加坡,沙特和约旦的孕妇回答正确率分别为 37.8%, 22.6%和 42.9%^[3, 27, 39]。相比之下,对这一问题,我国孕妇的回答正确率较低,在 8.7%至 23.1%之间^[15, 30, 32, 40]。对于“怀孕期间可以进行口腔治疗”这一问题,沙特阿拉伯的孕妇回答正确的比率为 53.6%^[27]。而我国孕妇回答正确率在 12.7%至 31.2%之间,相比之下比率较低^[10, 15, 29, 30, 32, 40]。

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