

# Pseudoscientific and Invalid Beliefs about Fluoride Use: A Qualitative Study

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## ABSTRACT

**Introduction:** Tooth decay is one of the most common diseases people suffer from. On the other hand, the use of prevention methods such as fluoride therapy has always been associated with challenges. The purpose of this study is to compile a list of pseudo-scientific and invalid beliefs about the use of Fluoride.

**Methods and Materials:** The current qualitative study uses a conventional content analysis method. In this approach, the classes were directly extracted using existing textual data to achieve a deeper understanding of the desired phenomenon. Then, a systematic classification process identified evident and hidden themes or patterns. The statistical population of the research included all students participating in the Young Innovative Leaders Program. By using the purposeful sampling method, the data of this study was saturated with the number of 12 people. The data was collected using a semi-structured interview by a female interviewer. The analysis was done simultaneously and continuously, using data collection based on the proposed algorithm in qualitative content analysis. In this way, the words, sentences, or paragraphs of the participants' conversations containing important points related to the research topic were considered semantic units (meaning units were placed together as words or sentences with a single meaning). In the next step, meaning units were named according to their obvious or hidden meaning, and a code was assigned to each. The codes' differences and similarities were evaluated; based on this, they were placed in subclasses and classes, and more abstract labels were assigned. Finally, the review of classes, codes, and data led to the extraction of the central theme of the study.

**Results:** In this study, after removing the repetitive and ambiguous themes, various propositions were obtained, which were classified according to the direction of common themes. The benefits and importance of Fluoride, its harms and complications, when to use it, different groups of users, age, sensitive dental conditions, prevention of caries, the best behaviors recommended for oral health, oral and dental self-care, awareness of preventive dentistry and attitude towards it, ethical issues of adding Fluoride to water, mothers' concern about their children's use of Fluoride and other cases were among the subgroups of qualitative findings of this study.

**Conclusion and Discussion:** In the popular culture of Iranians, there are various beliefs about oral health and serious doubts about their scientific validity. Some people believe that Fluoride increases the tooth's resistance to decay. Even though most people were interested and active in using Fluoride, some believed in the unproven side.

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