

Preferences and Perceptions of Public Water Fluoridation: A Cross-Sectional Study

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LEARNING OBJECTIVES

Upon review of this material, the observer will be able to...

1. Describe current attitudes of pediatric dental professional toward public water fluoridation (PWF).
2. Evaluate factors associated with perceptions of fluoride safety.
3. Assess the influence of professional experience of fluoridation attitudes.
4. Identify the impact of misinformation on clinical practice.

INTRODUCTION

In recent years, public water fluoridation (PWF) has become a topic of national debate regarding its safety and efficacy in caries prevention. PWF has been recognized for decades as one of the most effective public health interventions for preventing dental caries¹. Supported by extensive scientific evidence, PWF has played a key role in reducing oral health disparities, especially among children. Pediatric dental professionals have historically supported PWF and often served as advocates for its implementation and maintenance. However, in recent years, PWF has faced increasing public scrutiny, influencing both legislation and national public health policies. These developments may be influencing how pediatric dental professionals perceive PWF as a safe and effective way to prevent caries in the pediatric population. Understanding whether and how these attitudes may have shifted in response to recent public discourse can help inform public health messaging, professional education and caries prevention strategies². This study aims to capture a timely snapshot of pediatric dental professionals' perspectives in 2025, contributing to a broader understanding of the profession's alignment with community-based oral health initiatives in a changing public health climate.

METHODS

A cross-sectional survey was conducted in 2025 to assess pediatric dental professional's attitudes and perceptions of public water fluoridation (PWF). The anonymous, voluntary survey was distributed electronically to members of the American Academy of Pediatric Dentistry (AAPD). Eligible participants were dental professionals aged 18 years or older who consented to participate. The survey included items assessing demographics (age, gender, professional status, years in practice, practice location and setting), clinical practices related to fluoride use, and attitudes towards PWF. Descriptive statistics were calculated for all variables and used to summarize response patterns. Attitudinal items were measured using five-point Likert scales. An ordinal logistic regression model was conducted to identify predictors of agreement with the statement that water fluoridation is safe. Key outcomes included perceived safety and effectiveness of PWF, perceived influence of media and misinformation and support for PWF. Survey responses were exported to Excel for analysis.

CONCLUSION/DISCUSSION

Based on limitations imposed by the methods of this study, the following conclusions may be made:

1. Strong professional consensus exists in support of community water fluoridation.
2. Perceived risk-benefit balance is the primary driver of fluoride attitudes.
3. Clinical experience does not significantly influence attitudes.
4. Dental professionals recognize the influence of misinformation on public attitudes.

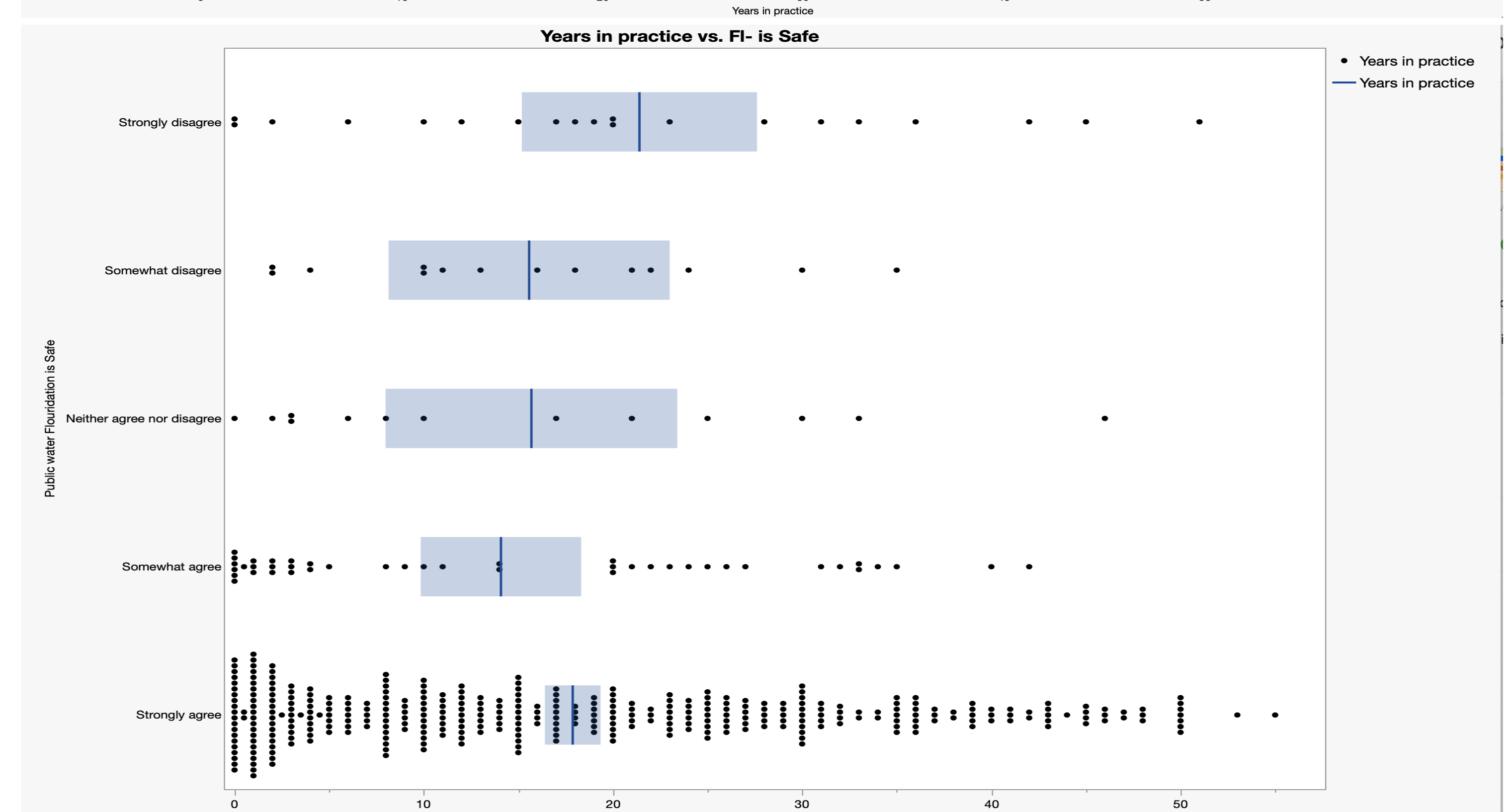
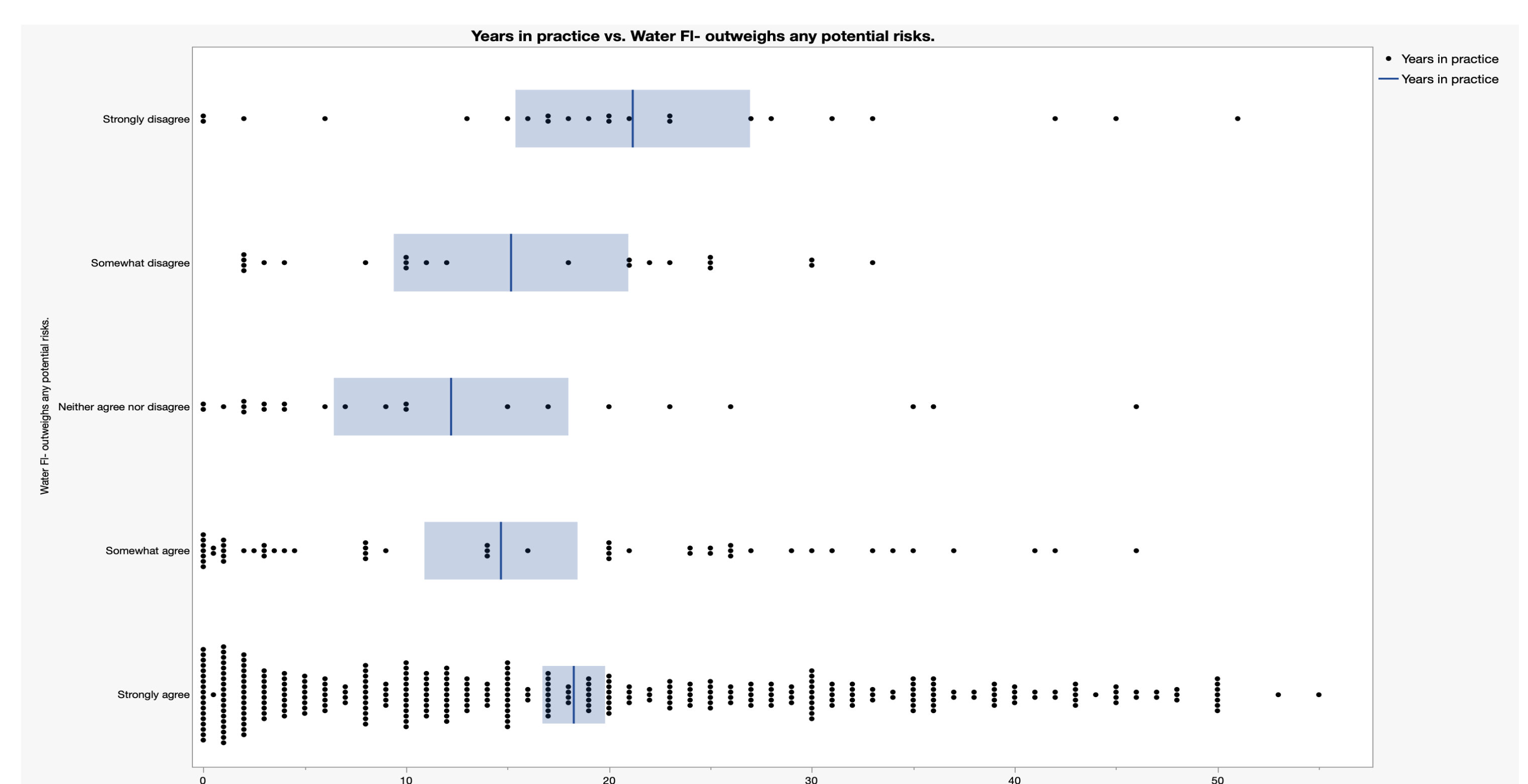
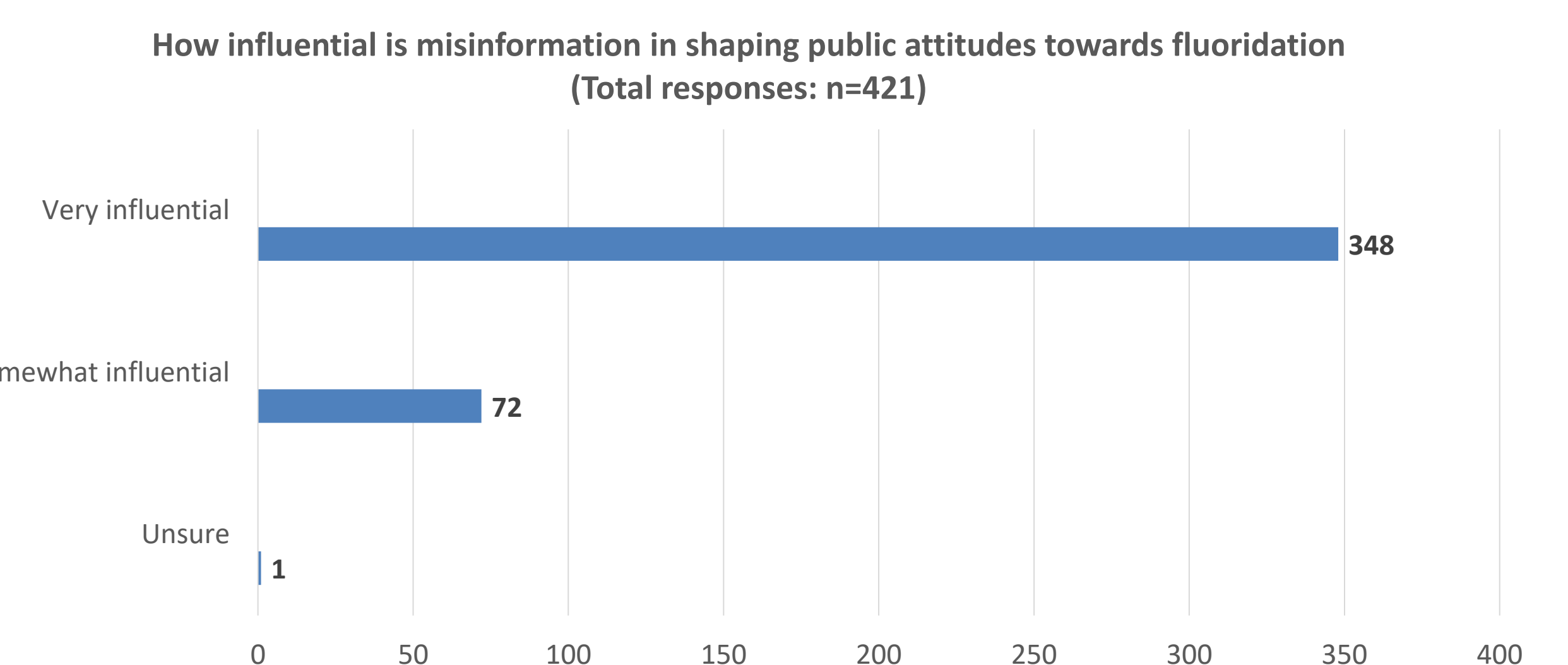
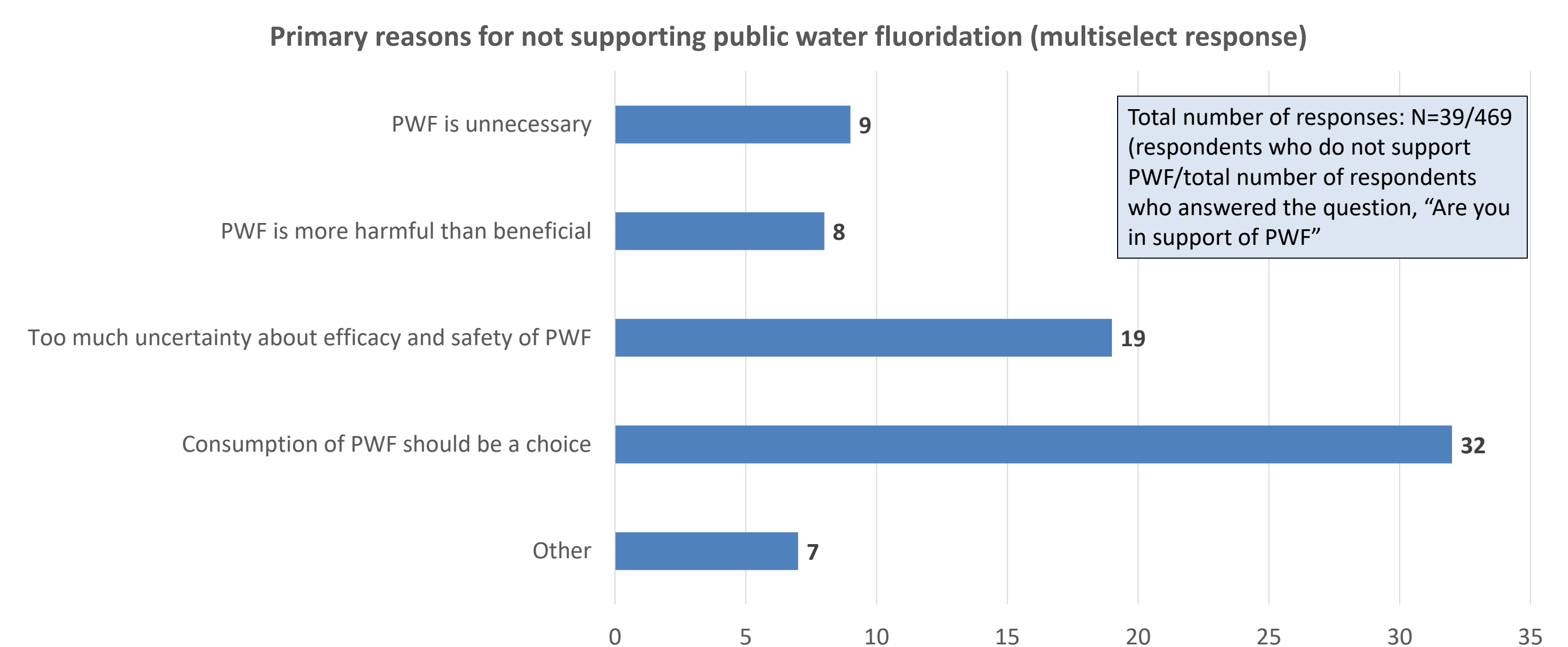
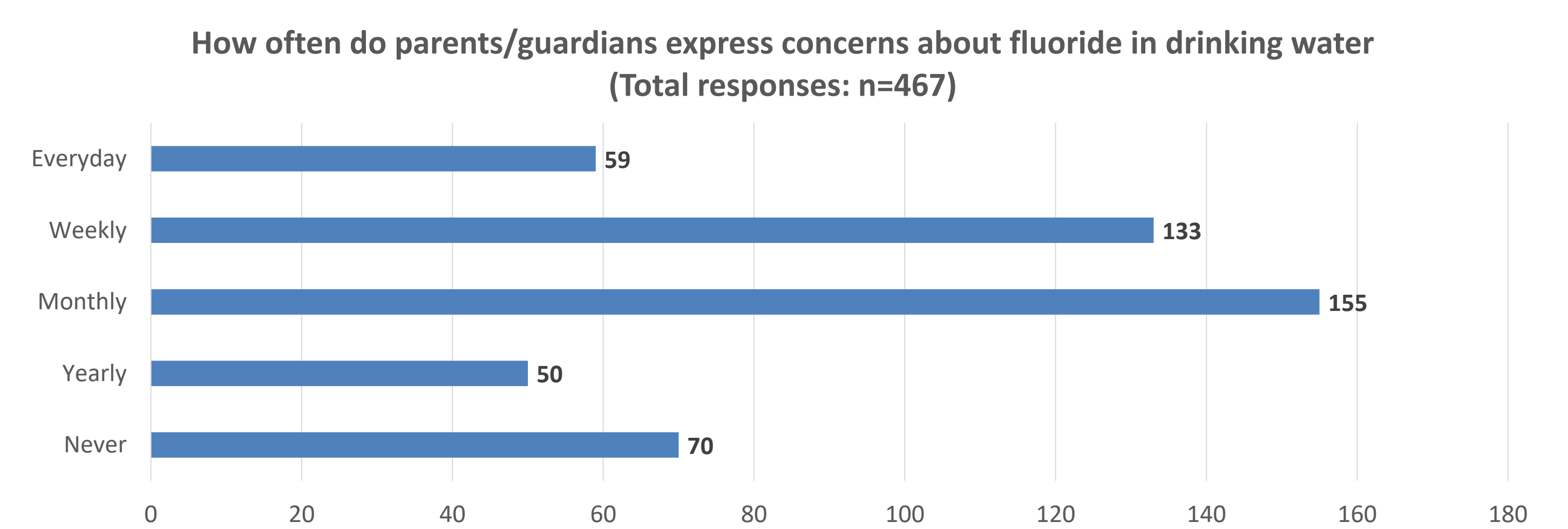
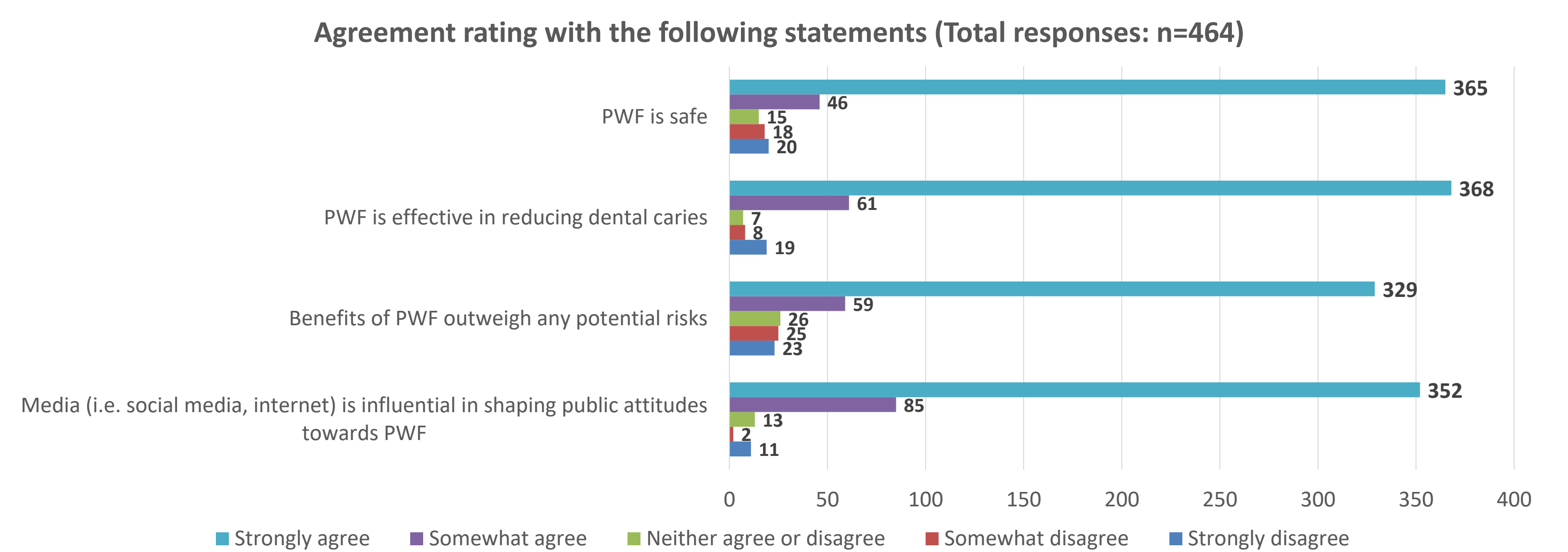
Overall, the findings of this survey demonstrate strong professional consensus supporting public water fluoridation as a safe and effective public health intervention. Most respondents agreed that fluoridation is safe and that its benefits outweigh potential risks, with risk-benefit perception emerging as the strongest predictor of safety beliefs. Years in practice was not associated with attitudes towards PWF, indicating consistent support across experience levels. Although respondents reported frequent parental concerns and influence of misinformation, these factors did not significantly affect clinicians' beliefs. Together, these results highlighted alignment within the AAPD community alongside ongoing public skepticism, emphasizing the need for targeted communication and educational efforts.

Improving the reproducibility of future research on this topic will require methodological refinements in study design, data collection and analysis to strengthen the reliability, validity and reproducibility of this research.

ACKNOWLEDGMENTS

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RESULTS



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