

INTRODUCTION

Rubber dam isolation is recommended by the AAE and AAPD as the standard of care for vital pulp therapy (VPT) due to its superior moisture and contamination control. However, alternative isolation systems (e.g., Isolite[®], DryShield[®]) are increasingly used in pediatric dentistry. Limited data exist evaluating how frequently providers adhere to guideline-recommended rubber dam use during VPT.

OBJECTIVES

Evaluate current isolation practices during VPT among pediatric dental providers and determine the factors influencing rubber dam utilization. Specifically, this study assessed whether residency training, program emphasis on alternative isolation systems, and provider demographics were associated with adherence to guideline-recommended use.

METHODS

Methods

- Nationwide cross-sectional survey (N=217)
- Pediatric dentists, general dentists, residents
- Assessed training, practice patterns, and attitudes toward isolation during VPT
- Analysis: descriptive stats, chi-square, Spearman correlations

SURVEY

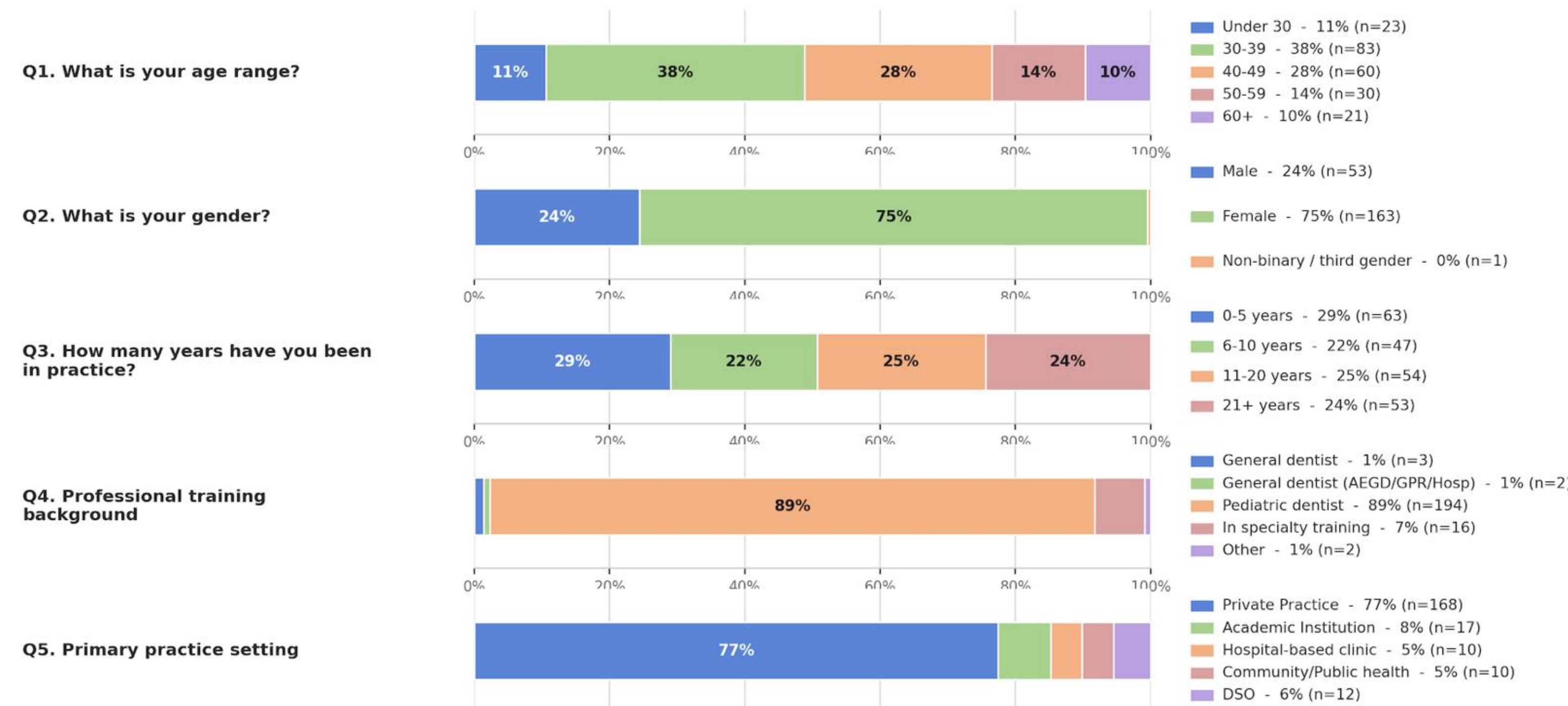


RESULTS

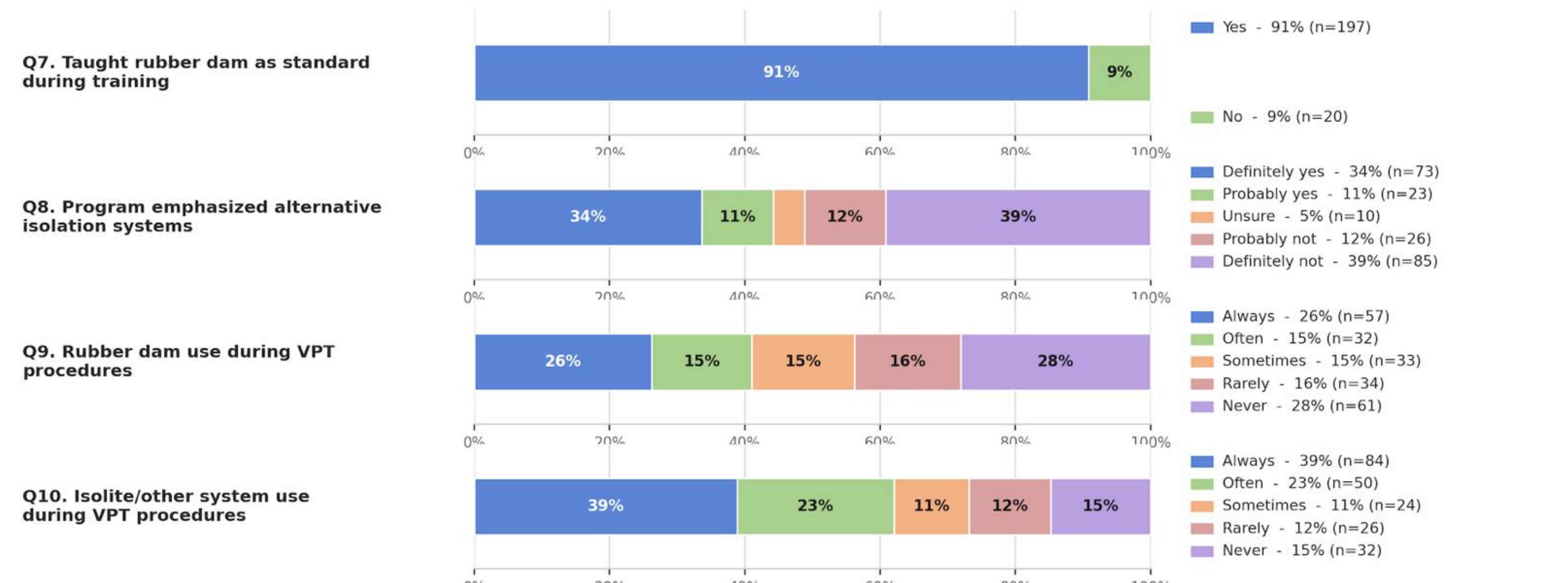
Vital Pulp Therapy Survey Results - 100% Stacked Bar Summary

Each bar shows the response distribution for a single-response survey item. Percentages use each question's valid N.

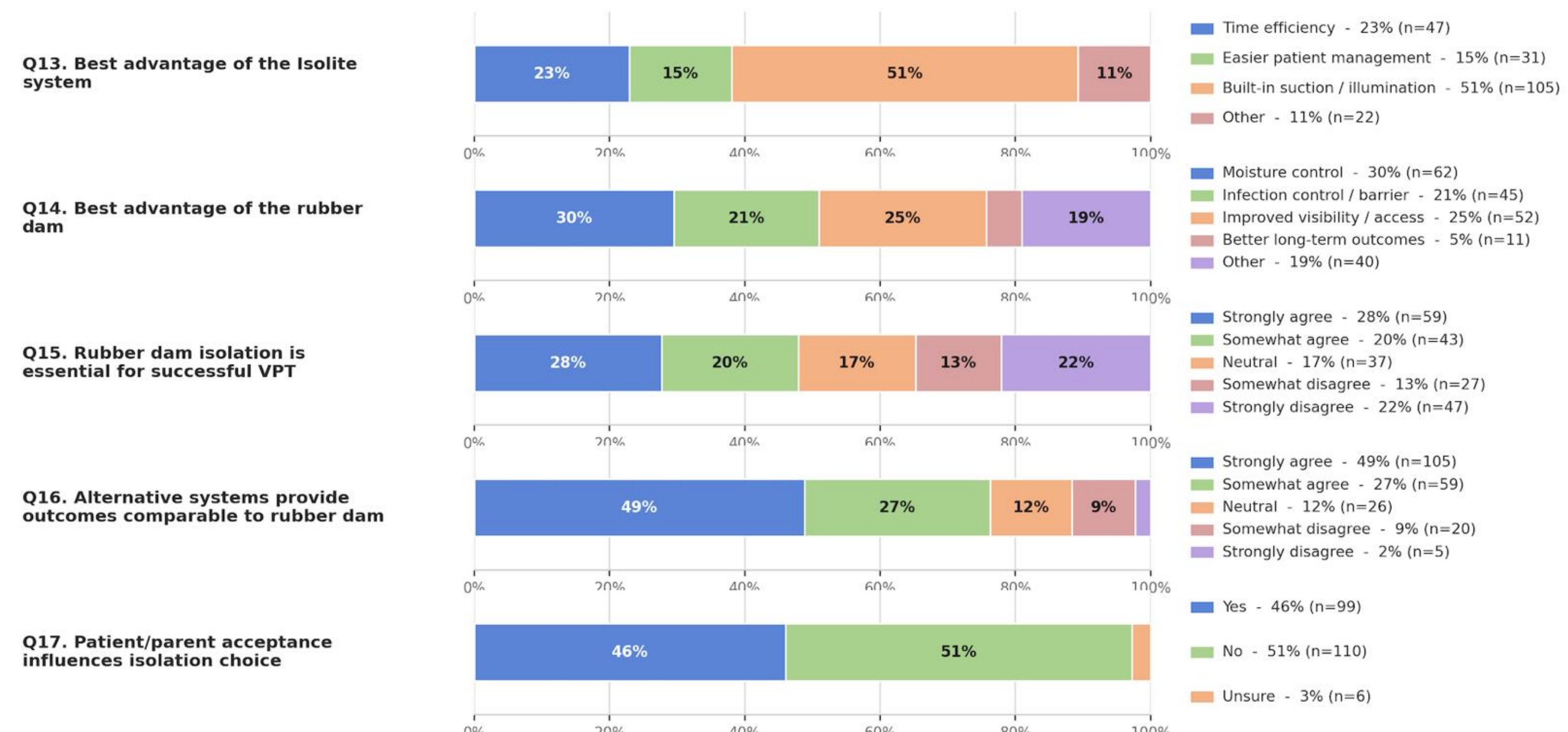
Respondent profile



Training and current practice



Perceptions and beliefs



DISCUSSION

Rubber dam use during VPT remained inconsistent, while alternative systems were widely utilized. Training exposure ($p = .042$) and age group ($p = .006$) were significantly associated with rubber dam use. Frequent rubber dam use was inversely associated with alternative-system use ($p = -0.732, p < .001$) and positively associated with belief that rubber dam is essential ($p = 0.634, p < .001$). Frequent alternative-system use was positively associated with belief in comparable outcomes ($p = 0.589, p < .001$). Child cooperation and time efficiency were the most common barriers.

CONCLUSION

A significant *Practice Guideline* gap exists in pediatric dentistry regarding isolation during vital pulp therapy. Despite guideline support for rubber dam use, many providers reported selective use or favored alternative systems due to efficiency and behavioral considerations. Training exposure, provider beliefs, and age-related differences were significantly associated with isolation preferences. These findings support the need for outcome-based research and improved alignment between education and contemporary clinical practice.

ACKNOWLEDGEMENTS

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REFERENCES

