

ABSTRACT

Purpose of study: To understand patient satisfaction and needs within a non-profit dental organization in Minnesota that had longstanding integration of dental therapists.

Methods: Researchers conducted a cross-sectional survey focusing on patients' satisfaction with their clinical provider, with particular emphasis on dental therapists. Surveyed patients included any who received dental services between February and August 2021 at 1 of 7 dental centers operated by Apple Tree Dental, a non-profit dental organization serving low-income and Medicaid eligible patients in Minnesota.

Results: Patients (adult: n=567; child: n=331) ranked information and communication from dental hygienists (*mean*=4.47) higher compared to dentists (*mean*=4.30; *P*=.047) and dental therapists (*mean*=4.24; *P*=.005). Dentists (*mean*=4.32) were rated higher than dental hygienists (*mean*=4.24; *P*=.010) and dental therapists (*mean*=4.09; *P*=.004) on understanding and acceptance. Technical competence and satisfaction with treatment did not differ across provider or patient types. Neither procedure type nor patient characteristics affected scores of overall satisfaction.

Implications: Instituting a new workforce model is a complex undertaking, requiring successive levels of legislative, regulatory, and clinical action. Minnesota has been a champion of dental therapy, incorporating the model since 2012. This study's findings show that patients' satisfaction with dental therapists was high and largely equal to other providers, suggesting a high quality of care overall.

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INTRODUCTION

- Dental therapy is a new workforce model that introduces mid-level practitioners (dental therapists) with both preventive and restorative skills
- Dental therapy has been authorized in 13 states; Minnesota (MN) was the first to establish licensing of dental therapists in 2009
- Dental therapy has been successfully integrated into a variety of practice settings in MN, with improvements in cost of care per unit, production, and collections
- Apple Tree Dental is a large, non-profit dental organization in MN that has employed dental therapists since their earliest availability in 2012

METHODS

Cross-sectional survey

- Anonymous, voluntary feedback to assess patient satisfaction with providers at Apple Tree Dental, with emphasis on dental therapists
- Developed using several standardized instruments
- 13-item final survey with satisfaction rating domains including (1) information and communication, (2) understanding and acceptance, and (3) technical competence and satisfaction with treatment items
 - Likert-scale ratings from 1 (strongly disagree) to 5 (strongly agree)

Data analysis

- Analysis of variance (ANOVA) models of patient satisfaction using provider, patient type, and patient characteristics including sex, race/ethnicity, residence, procedure type

RESULTS

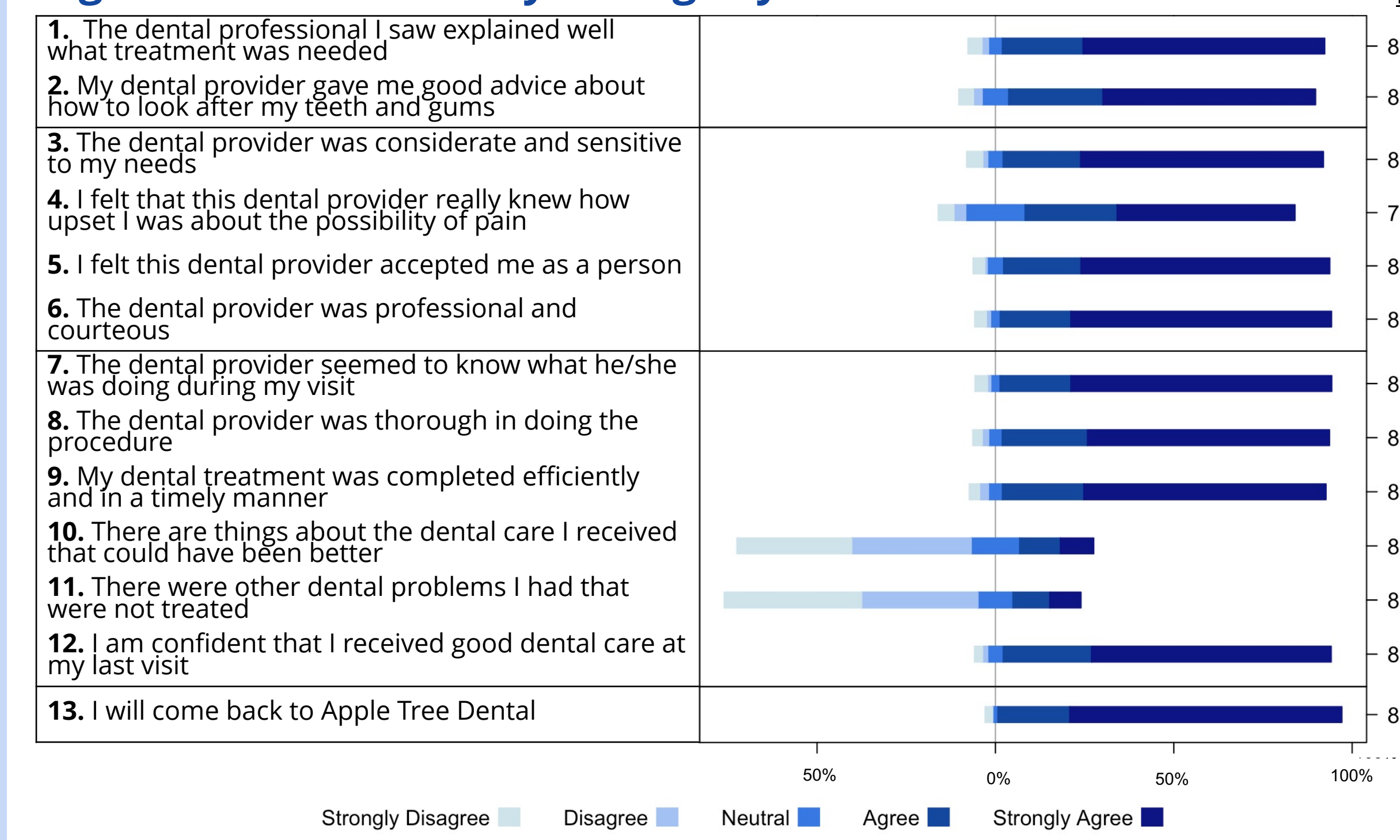
Table 1. Patient Demographic and Clinical Characteristics

Demographic and Clinical Characteristics	Adult patients (n=567) n (%)	Parents/caretakers of patients (n=331) n (%)	Children/other accompanied patients (n=331) n (%)	Difference between groups (χ²) P
Age (years)				<.001
17 or younger	3 (0.6)	2 (0.6)	262 (81.1)	
18-34	101 (45.5)	94 (13.2)	43 (13.3)	
35-54	222 (41.0)	184 (55.3)	13 (4.0)	
55 and older	216 (39.9)	53 (15.9)	5 (1.5)	
Sex				<.001
Female	411 (73.3)	303 (92.7)	164 (50.3)	
Male	149 (26.6)	24 (7.3)	162 (49.7)	
Race/ethnicity				<.001
White, non-Hispanic	476 (85.0)	266 (81.3)	239 (73.3)	
Other	84 (15.0)	61 (18.7)	60 (26.7)	
Self-reported area of residence				.06
Urban	351 (62.8)		180 (55.2)	
Rural	208 (37.2)		146 (44.8)	
Procedure type				<.001
Preventive	251 (32.5)		184 (38.1)	
Restorative	521 (67.5)		299 (61.8)	
Provider type seen				<.001
Dentist	247 (43.6)		109 (32.8)	
Dental hygienist	229 (40.4)		116 (35.2)	
Dental therapist	91 (16.0)		106 (31.9)	

RESULTS (cont.)

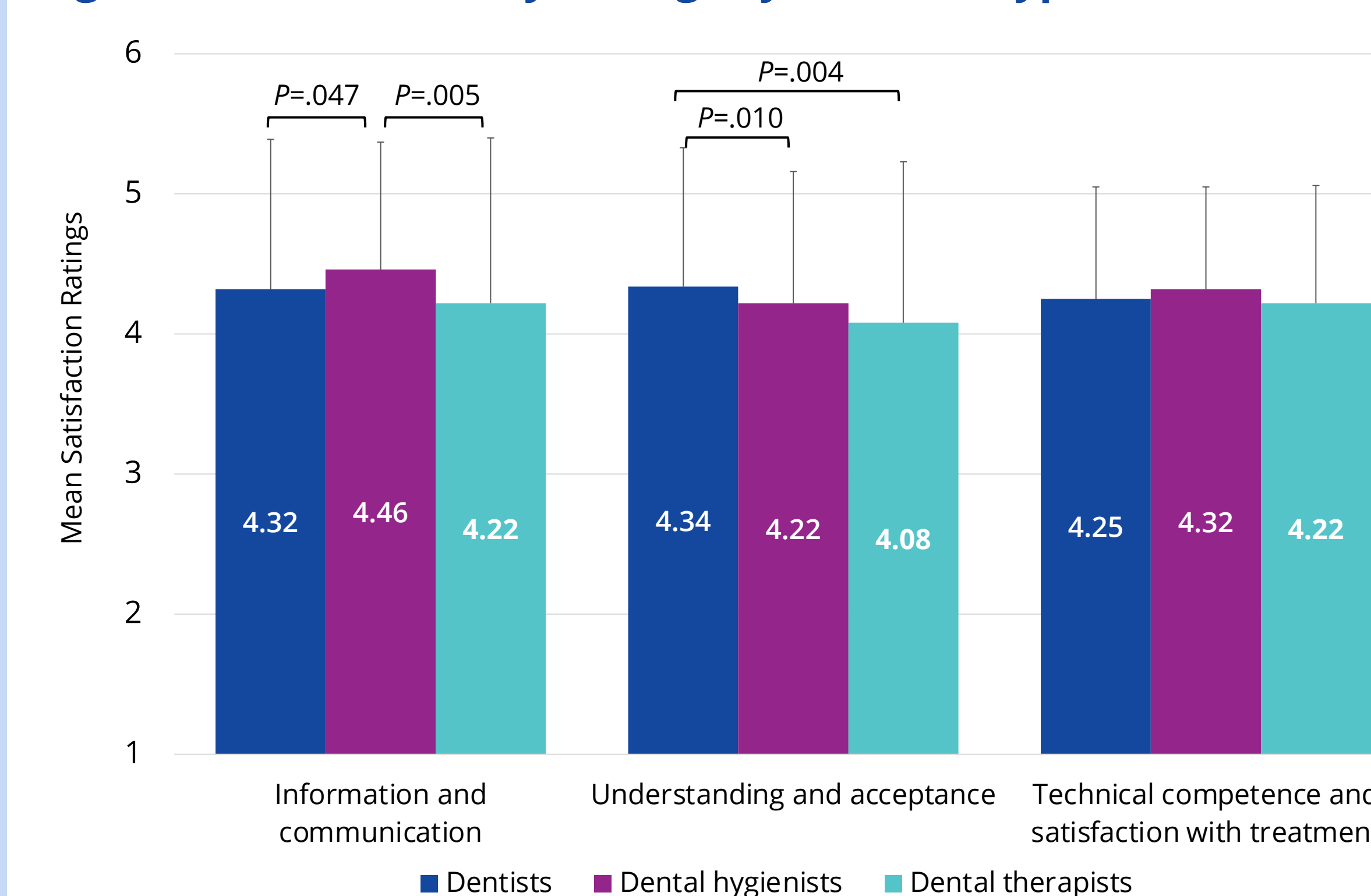
- Patient satisfaction was high across items and within domains (shown in order below)
 - Information and communication, understanding and acceptance, technical competence and satisfaction with treatment, and general satisfaction

Figure 1. Patient Survey Ratings by Item



- Significant differences in satisfaction domains based on provider type
 - Information-communication (*P*=.011) (Figure 2)
 - Understanding-acceptance (*P*=.017) (Figure 2)

Figure 2. Patient Survey Ratings by Provider Type



RESULTS (cont.)

- Composite scores of overall satisfaction were high across all groups
- No effects of patient type or provider type, and no interactions

Table 2. Patients' Overall Satisfaction Ratings

Demographic Characteristics	Overall Satisfaction With Care		
	Dentists	Dental Hygienists	Dental Therapists
	<i>Mean (SD)</i>		
Sex			
Male	4.46	4.29	4.47
Female	4.27	4.25	4.56
Race/ethnicity			
White, non-Hispanic	4.47	4.41	4.43
Other	4.26	4.60	4.16
Self-reported area of residence			
Urban	4.34	4.25	4.55
Rural	4.40	4.29	4.49
Procedure type			
Preventive	4.29	4.31	4.54
Restorative	4.55		4.50

CONCLUSIONS AND IMPLICATIONS

- Patient satisfaction with the services of dental therapists was generally high and did not differ in consistent ways from other clinicians
 - Patient satisfaction was high across domains and was not dependent on patient type
 - Overall scores, when not segregated by domain, showed no effects based on provider or patient characteristics and no interactions
- Early adoption of dental therapists in MN and at Apple Tree Dental illustrates that a workforce with hybrid skills (preventive and restorative) can be successfully integrated into established oral health teams
- Integration of dental therapists permits organizations to be flexible in accommodating patient need
 - Increase in organizational capacity corresponds with an increase in access to care in numerous locations throughout MN
- Patient satisfaction, as a component of quality measurement, indicates the dental therapy workforce has not diminished quality of patient care

REFERENCES/ACKNOWLEDGMENTS

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