

Table A1. Mean, standard deviation and frequency distribution for each questionnaire item used to measure attitudes toward RCT isolation methods

		% (n) responses					
Question number	Question wording	Item mean (S.D.) ^a score	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
	Agreement items ^b		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
23	I received sufficient knowledge and training in dental school on how to effectively place a rubber dam prior to performing a root canal.	4.28 (0.96)	3 (47)	4 (60)	4 (66)	38 (568)	50 (746)
24	Cotton rolls or gauze are just as effective as the rubber dam when root canals are done on <i>anterior</i> teeth.	3.68 ^d (1.30)	36 (540)	26 (383)	14 (206)	18 (265)	6 (94)
25	Cotton rolls or gauze are just as effective as the rubber dam when root canals are done on <i>premolar</i> teeth.	4.04 ^d (1.14)	47 (692)	28 (418)	12 (172)	11 (157)	3 (48)
26	Cotton rolls or gauze are just as effective as the rubber dam when root canals are done on <i>molar</i> teeth.	4.42 ^d (0.93)	64 (954)	22 (321)	8 (124)	4 (60)	2 (27)
27	Isolite™ is just as effective as the rubber dam when root canals are done on <i>anterior</i> teeth.	3.31 ^d (1.04)	18 (269)	15 (218)	51 (753)	11 (167)	5 (67)
28	Isolite™ is just as effective as the rubber dam when root canals are done on <i>premolar</i> teeth.	3.40 ^d (1.03)	20 (301)	17 (247)	49 (728)	10 (143)	4 (56)
29	Isolite™ is just as effective as the rubber dam when root canals are done on <i>molar</i> teeth.	3.56 ^d (1.03)	26 (377)	17 (255)	48 (703)	6 (95)	3 (44)
30	Using a rubber dam during root canals reduces the likelihood of infection for patients.	3.85 (1.04)	2 (31)	10 (146)	20 (301)	37 (546)	31 (463)
31	Using a rubber dam during root canals decreases the likelihood of infection for practitioners and office staff.	3.12 (1.09)	7 (101)	22 (333)	35 (522)	24 (355)	12 (176)
32	Using a rubber dam when performing root canals reduces the potential for swallowed or aspirated dental items.	4.70 (0.63)	1 (14)	1 (6)	2 (31)	21 (317)	75 (1,119)
33	Using rubber dams when performing root canals improves treatment effectiveness.	4.15 (1.01)	2 (30)	7 (97)	13 (198)	31 (456)	47 (706)
34	Rubber dams control moisture very well during root canals.	4.24 (0.83)	1 (14)	4 (55)	8 (125)	44 (654)	43 (638)
35	It's very important to use a rubber dam every time a root canal is performed.	3.89 (1.25)	5 (78)	14 (203)	12 (184)	24 (363)	44 (657)
36	Rubber dams tear frequently.	3.09 ^d (1.01)	4 (61)	30 (440)	24 (363)	37 (549)	5 (73)

37	Rubber dams make it easier to perform root canals.	3.93 (1.10)	3 (45)	10 (150)	15 (227)	34 (503)	38 (561)
38	Most dentists I know use rubber dams when performing root canals.	3.69 (1.06)	3 (41)	13 (189)	22 (321)	39 (577)	24 (358)
39	Placing a rubber dam before performing a root canal is time-consuming.	3.27 ^d (1.11)	12 (174)	40 (588)	16 (244)	28 (421)	4 (58)
40	Clamp placement requires the use of additional anesthesia around the gum line when rubber dams are used to perform root canals.	2.83 ^d (1.07)	5 (68)	30 (440)	17 (257)	42 (618)	7 (103)
41	Using rubber dams to perform root canals is inconvenient.	3.44 ^d (1.19)	20 (293)	37 (551)	17 (248)	21 (307)	6 (87)
42	Patients are uncomfortable wearing a rubber dam during root canals.	2.95 ^d (1.10)	6 (91)	30 (452)	25 (366)	30 (439)	9 (138)
43	Maintaining an adequate supply of rubber dams in one's practice is difficult.	4.35 ^d (0.75)	49 (726)	40 (592)	10 (143)	1 (14)	1 (11)
	Difficulty items ^c		Very Hard	Hard	Neither Hard nor Easy	Easy	Very Easy
	How hard or easy it for you to ...						
44	place a rubber dam to perform a root canal?	3.72 (0.86)	1 (9)	7 (109)	30 (441)	45 (663)	18 (264)
45	place a rubber dam on an <i>anterior</i> tooth to perform a root canal?	4.01 (0.86)	1 (8)	5 (72)	18 (273)	45 (675)	31 (458)
46	place a rubber dam on a <i>premolar</i> tooth to perform a root canal?	4.02 (0.81)	1 (4)	4 (66)	17 (251)	50 (740)	29 (424)
47	place a rubber dam on a <i>molar</i> tooth to perform a root canal?	3.51 (0.99)	3 (41)	14 (207)	27 (398)	42 (620)	15 (215)
48	fit a clamp that is too big, too small, or of awkward size for the tooth?	2.52 (0.87)	8 (116)	48 (706)	32 (476)	10 (149)	3 (39)
49	place a rubber dam when you have limited access and visibility of the isolated operating area?	2.16 (0.86)	20 (291)	54 (802)	19 (278)	6 (96)	1 (19)
50	place a rubber dam when the patient doesn't have the ability to open his/her mouth very wide?	1.92 (0.72)	27 (399)	57 (853)	13 (194)	2 (36)	0 (3)
51	explain to a patient the importance of using a rubber dam to perform a root canal?	3.91 (0.85)	1 (12)	4 (62)	23 (345)	47 (693)	25 (374)
52	communicate with the patient (as needed) during a root canal when a rubber dam is being used?	3.45 (0.98)	2 (36)	15 (227)	30 (443)	40 (589)	13 (191)

53	use a rubber dam to perform a root canal with a patient who is claustrophobic, talkative, a gagger, and/or has a breathing problem (e.g., COPD)?	2.13 (0.91)	26 (380)	46 (687)	19 (281)	8 (126)	1 (11)
54	get assistance from auxiliary staff to place a rubber dam when needed?	3.49 (0.97)	3 (44)	12 (181)	31 (467)	40 (590)	14 (204)
55	use a rubber dam to perform a root canal when you have competing demands in your clinic (e.g., other patients are waiting for you to check them after a cleaning)?	3.33 (1.01)	3 (50)	16 (243)	38 (570)	28 (417)	14 (206)

^a S.D.: standard deviation of the mean

^b The 21 "agreement" attitude questions asked how strongly respondents agree with the statement, using these response categories: 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree.

^c The 12 "difficulty" attitude questions asked about how difficult certain RCT practices are, using these response categories: 1=very hard; 2=hard; 3=neither hard nor easy; 4=easy; 5=very easy.

^d Before calculating the mean scores for these questions, the 1-5 scales were inverted so that a higher score would have a positive correlation with using a rubber dam.

Table A2. Multivariable logistic regression quantifying the relationship between dentists' attitudes about rubber dam use and whether or not they use a rubber dam during root canal treatment 90% of the time or more

	B (SE)	P	Odds Ratio (95% CI)
Rubber dam effectiveness	1.97 (.12)	< .001	7.12 (5.57 – 9.13)
Inconvenient/time consuming	-1.23 (.10)	< .001	0.28 (0.23 – 0.35)
Ease of placement	.81 (.09)	< .001	2.17 (1.92 – 2.74)
Compared to Isolite®	-1.49 (.12)	< .001	0.22 (0.17 - 0.28)
Patient factors	.55 (.10)	< .001	1.74 (1.45 - 2.10)

The regression is adjusted for differences in dentist gender (female=0, male=1); decades since dental school graduation truncated at 30+ coded (0-9=1, 10-19=2, 20-29=3, 30+=4); additional training since dental school (no training=0, additional=1); practice type (large group practice=0, private practice=1, public health/government/other=1); whether the practice is located in a rural setting (urban/suburban=0, rural=1); whether an endodontist is located in the same building as the practice (no=0, yes=1); and whether the dentist does fewer than 10 RCT each month (10 or more=0, less than 10=1).

The model fit was statistically significant (n= 1445, chi-square = 1065.6, p < .001 with df=13). Nagelkerke's R² of .71. The prediction success overall was 88% (80% for not using the rubber dam \geq 90% of the time and 92% for using the rubber dam \geq 90% of the time).