Attitudes to Independent Dental Hygiene Practice: Dentists and Dental Hygienists in Ontario

• **Tracey L. Adams,** PhD •

Abstract

This study examined Ontario dentists' and dental hygienists' attitudes to independent dental hygiene practice and changing the scope of practice. Data were collected from a mail survey of a systematic, stratified sample of Ontario dentists (483 respondents) and dental hygienists (437 respondents) conducted in the winter and spring of 2002 to assess what practising dentists and dental hygienists think about independent practice and other professional issues. Contrary to previous research, this study found that male and female dentists did not differ in their attitudes to independent dental hygiene practice and university education for dental hygienists: both strongly opposed the former and tended to support the latter. Similarly, few differences in attitude amongst dentists by specialty were found. Dental hygienists were generally supportive of independent practice and of expanding their scope of practice. On some measures, however, sex and age differences in attitudes were evident: at times dental hygienists who were older or male seemed to be stronger advocates for professional change than others.

MeSH Key Words: *dentistry/manpower; dissent and disputes; interprofessional relations; professional autonomy*

© J Can Dent Assoc 2004; 70(8):535–8
This article has been peer reviewed.

In the past 2 decades, dental hygiene organizations have been striving for greater independence and autonomy for dental hygienists. In Ontario, this effort intensified under the provincial government's Health Professions Legislative Review in the 1980s. During the review, the Ontario Dental Hygienists Association (ODHA) lobbied for an independent regulatory college. With the passing of the Regulated Health Professions Act (RHPA) 1991, the College of Dental Hygienists of Ontario (CDHO) was established. Since the early 1990s, the CDHO and ODHA have lobbied for change to the RHPA to enable dental hygienists to practise more autonomously from dentists by eliminating the need for a dentist's "order" to provide treatment and to expand Ontario dental hygienists' scope of practice. At the same time on a national level, dental hygiene leaders have asserted that the assessment dental hygienists carry out in their practice should be labelled "diagnosis."[1,2] Diagnosis is currently not one of their licensed acts in Ontario under the RHPA. These leaders have also encouraged the expansion of dental hygiene education at the university bachelor's degree level.[3] Thus, dental hygiene organizations are very actively involved in what sociologists call a "professional project": a deliberate campaign aimed at expanding professional authority and social status.

In response to this project, dentists have argued that dental hygienists do not have the training or knowledge to practise independently (without an order) in every instance.[4,5] Their arguments have been effective enough to prevent change to the legislation so far. While the stances of dental and dental hygiene organizations (like the Ontario Dental Association [ODA] and ODHA) have been clearly articulated many times, there is some ambiguity in the attitudes of the majority of dental and dental hygiene practitioners. Notably, both dental hygienist leaders and dentists alike have questioned the extent to which rank and file dental hygienists support the professional and political activities of their organizational leadership.[2,4,6] For instance, in a study of dental hygiene's status and culture,[2] Brownstone's respondents believed that "a sense of professional identity was not … held by all dental hygienists" (p. 182), and that some were quite happy to work in a subordinate role.

Some question has also been raised about the attitudes of dentists to independent dental hygiene practice. A 1994 ODA study reported that although the vast majority of

dentists were opposed to independent practice for dental hygienists, non-ODA members were somewhat less opposed.[7,8] Moreover, Kaldenberg and Smith[9] surveyed a random sample of Oregon dentists in the late 1980s and found that female dentists were more supportive of independent practice for dental hygienists than were their male colleagues. However, it was unclear to the authors whether this finding reflected a true sex difference or differences in practice type; that is, solo practitioners, who were more likely to be male, were more likely than others to be opposed to independent practice. The low number of women in their study prevented their exploring this finding further. Perhaps female dentists, those in certain practice arrangements or those in specific specialties are more supportive of independent dental hygiene practice.

The current study explores whether variations in attitudes to independent dental hygiene practice and other aspects of dental hygiene's professional project exist among Ontario dentists and dental hygienists through an analysis of survey data.

Methods

In the winter of 2002, 2 parallel surveys were conducted. The first was a survey of 800 dentists registered to practise in Ontario. The second was a survey of 650 practising dental hygienists in Ontario. Both of the surveys used stratified systematic samples. The survey of dentists was stratified by sex and practice area (general practitioner versus specialist) to ensure an adequate sample of women and specialists. In effect, 4 samples of dentists were drawn from the 2001 directory of the Royal College of Dental Surgeons of Ontario. Surveys were sent to 350 male general practitioner dentists, 300 female general practitioner dentists, 100 male dental specialists, and 50 female dental specialists. Following the Dillman method, a follow-up reminder postcard and 2 additional copies of the survey were sent, at intervals, to nonrespondents.[10]

The dental hygiene sample was also stratified by sex. Because only 3% of dental hygienists in the province were men, it was deemed necessary to oversample them to explore the possibility of gender differences in attitudes. Using the 2001 directory of the College of Dental Hygienists of Ontario, a total of 85 male hygienists were identified and each of them was sent a survey. The remaining 565 surveys were sent to a systematic sample of female dental hygienists, including specialists.

The 2 surveys were similar in focus and in structure. The surveys themselves represented the third phase of a broader research project exploring relations between dentistry and dental hygiene over time. The first phase involved an analysis of documents, including articles published in professional journals over the past 50 years. The second phase involved interviews with 24 professional leaders in both dentistry and dental hygiene. These 2 research phases illuminated several key professional issues, and the surveys were designed to explore the attitudes of rank-and-file dentists and dental hygienists on these issues.[4,11] Attitudinal questions in both surveys used a Likert scale and required respondents to indicate the extent to which they agreed or disagreed with a given statement, or to assess its importance on a 4-point scale (i.e., very important, important, somewhat important, not important). Surveys also asked questions about practice characteristics and job satisfaction. Dental hygienists were asked a series of questions about their scope of practice that were not asked in the dentists' survey. Both dentists and dental hygienists were asked whether they agreed that dental hygienists should be able to practise independently of dentists and about the value of university education for dental hygienists. Dentists alone were asked how important it was that their professional organizations actively fight independent dental hygiene practice. Before their distribution, surveys were sent out for comment to professional leaders active in each profession and were approved by a university ethics review board.

To assess dentists' and dental hygienists' attitudes about these issues, cross-tabular analyses were conducted with SPSS (SPSS Inc., Chicago, Ill.). Analyses explored attitudinal differences between and amongst dentists and dental hygienists in Ontario, and focused, in particular, on the presence of differences within groups by sex and age, and, in dentistry, by practice type and specialty. Analyses of sex differences within the 2 professions were conducted with unweighted data. Analyses of attitudes across the professions in general, and by age and practice type were conducted with data that were weighted to reflect the distribution of men and women in dentistry (23% women) and dental hygiene (97% women). Weighting produced sample sizes of 392 dentists and 383 dental hygienists. Chi-square tests were done to determine statistical significance. A p value of ≤ 0.05 was considered significant.

Results

A total of 483 dentists responded to the survey, a response rate of 60%. The adjusted response rate (eliminating those who could not be reached through the mail), was 62%. The response rate did vary somewhat among strata: male general practitioner dentists were more likely to respond than other groups (65% responding), and male dental specialists were least likely to respond (54% responding). A few dental specialists formally declined to answer the survey because they did not regularly work with dental hygienists.

The dental hygienist response rate for this survey was 72%. Adjusted for those who could not be reached, the response rate was 78%. Here too, the response rate varied by sex, with women being more likely to respond than men. Total sample size was 440, including 53 male respondents.

Dentist and dental hygienist respondents differed in their attitudes towards independent practice for dental hygienists (see **Table 1** at http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html). Fully 71% (271/383) of all dental hygienists agreed or strongly agreed that dental hygienists should be allowed to practise independently of dentists,

compared with only 4% (15/392) of dentists. In contrast, respondents in each occupation did not differ greatly on issues relating to university training for dental hygienists. Nevertheless, dentists were more likely to agree or strongly agree that a baccalaureate degree would have direct employment value than dental hygienists. Conversely, dental hygienists were slightly more in favour of university training for dental hygienists than dentists, although most did not support the need for a baccalaureate degree for entry to practice (see **Table 2** at http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html).

The more central question, however, was not whether dentists and dental hygienists had similar attitudes, but whether a great deal of internal variation existed amongst dental hygienists and dentists. **Table 1** demonstrates little internal variation. The dentist survey revealed that dentists were overwhelmingly opposed to independent dental hygiene practice, regardless of sex or practice focus. Moreover, roughly half of the dentist respondents agreed that dental hygiene training should be offered in universities and less than one third believed baccalaureate education would make hygienists better workers. Although minor differences between men and women, and general practitioners and specialists were evident (**Table 1**), they were small and not statistically significant. The only question about attitudes for which differences approached statistical significance ($p = 0.79$), was about whether dental organizations should spend their resources fighting independent practice for dental hygienists (see **Table 3** at http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html). Here, male specialist respondents were slightly less likely than the rest of their colleagues to see this as important, and women specialists were less likely to see it as very important than important. Nonetheless, the differences were small, and overall 66% (260/391) of dentists believed it important or very important that dental organizations fight independent dental hygiene practice.

Although our results show some internal variation amongst dental specialists about their attitudes toward independent dental hygiene practice, the number of specialist respondents was too low to identify statistically significant differences. Analyses (data not shown) were also done to determine whether differences existed amongst dentists by practice type and sex. While there were no attitude differences amongst women in solo, partner, and associate practice, males outside of solo and partner practice were slightly more likely to be neutral in their attitudes than their male colleagues ($\chi^2 = 68.2$, $p \leq 0.01$).

Age cohort differences were also rare amongst dentists. The only statistically significant difference by age cohort was found in response to a question about whether dental hygiene training should be offered in universities (see **Table 4** at http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html). Here, older dentists were more likely to agree and strongly disagree that dental hygiene training should be offered in universities ($\chi^2 = 53.5$, $p \leq 0.001$).

Data from the survey of dental hygienists indicated a great deal of support for many professional changes. For instance, a total of 83% (317/382) of respondents deemed it important or very important that dental hygienists no longer require an order to do their work (**Table 2**). Moreover, 79% (301/381) believed it important or very important that dental hygienists be able to prescribe radiographs, and 76% (289/381) believed it important or very important that more alternative practice opportunities arise. Fewer respondents (64%, or 244/382) believed it important or very important that more opportunities for independent practice arise. There was much less support for baccalaureate education for dental hygienists; only 34% (129/380) believed it important or very important that a bachelor's degree be required for entry to practice. Further, 52% (198/382) of hygienists believed it important or very important that they be allowed to administer anesthesia.

Analyses were also run contrasting dental hygienists across sex and age categories, and education cohorts. The latter analyses aimed to determine whether there were differences between dental hygienists who obtained a diploma from the University of Toronto before the program's closure in the mid-1970s, those who obtained their diploma from community colleges in the late 1970s and 1980s, and those who entered dental hygiene in the 1990s when dental hygiene became a self-regulating profession. Cohort differences (data not shown) were evident in a number of areas, notably, in attitudes to university education and administering anesthesia. Specifically, 80% (30/38) of the cohort of university-educated dental hygienists either agreed or strongly agreed that dental hygiene training should be offered in universities, compared with 45% (72/161) of those trained between 1977 and 1990, and 44% (80/183) of those trained after 1990. Further, 60% (110/183) of hygienists trained after 1990 believed it important or very important that dental hygienists be able to administer anesthesia, compared with 44% (71/161) of the earlier college cohort, and 45% (17/38) of those in the earliest (university) cohort.

Additional analyses revealed some differences by age. As **Table 5** illustrates (see http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html), dental hygienists from earlier age cohorts were more likely than others to deem it very important that hygienists be allowed to prescribe radiographs and that they no longer require an order to do their work. These same hygienists were also more supportive of university education for dental hygienists.

When attitudes were compared across sex, differences became evident on some issues (see **Table 6** at http://www.cda-adc.ca/jcda/vol-70/issue-8/535.html). Male dental hygienist respondents were more likely than their female counterparts to see it as very important that a university degree be required for entry to practice (25%, or 13/53 males, versus 11%, or 44/390 females), and that dental hygienists be legally able to administer anesthesia (51%, or 27/53 males, versus 25%, or 98/392 females).

Moreover, male dental hygienist respondents were more likely to strongly agree that dental hygiene's scope of practice should be expanded (45%, or 24/53 males, versus 29%, or 114/391 females). On some issues, then, men seemed to be stronger supporters of dental hygiene's professional project, than were the majority of female hygienists.

Discussion

Overall, the findings of this survey suggest a great deal of unity in attitudes about independent dental hygiene practice amongst dentists and a fair amount within the dental hygiene profession. The latter finding contrasts with the findings of previous publications[2,6] that suggested that rank and file hygienists may be somewhat ambivalent about professional issues. Nonetheless, on many variables, a great deal of internal variation was evident. While most dental hygienists supported the removal of dental orders from the RHPA — an issue that dental hygiene organizations have been lobbying about for some time — there was more division over newer concerns such as baccalaureate education, administration of anesthesia and independent practice. In some areas it was the oldest group of dental hygienists and men (who actually tended to be in younger age groups) who most strongly supported the occupation's professional project. There were fewer major differences of opinion across age group, sex or practice area amongst dentists.

In their written comments on the survey, dentists from all backgrounds and practice areas tended to say that they had the utmost respect for their dental hygiene colleagues, but that they did not approve of the lobbying activity pursued by dental hygiene organizations. The fact that many dental hygienists clearly do approve of their organizations' efforts, whereas dentists are unified in their opposition, portends ongoing tension on a professional level for years to come. ◆

Acknowledgement: *I would like to thank Terri Tomchick, Tamara Gillespie and Sharon Sabourin for their research assistance, and the many dentists and dental hygienists who took the time to fill out the surveys. This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.*

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The views expressed are those of the author and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.

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Table 1 Percentage of dentists and dental hygienists who agreed with selected attitude statements[a]

Selected statements	All dentists[b,c] (*n* = 392)	Dental general practitioners		Dental specialists		χ^2 (*p* value)	Hygienists[c,d]			χ^2 (*p* value)
		Male (*n* = 213)	Female (*n* = 178)	Male (*n* = 54)	Female (*n* = 29)		All (*n* = 383)	Female (*n* = 393)	Male (*n* = 53)	
Dental hygienists should be allowed to practise independently of dentists	3.8	3.2	4.5	11.8	6.9	24.4 (0.11)	70.7	70.7	67.9	1.3 (0.97)
Dental hygiene training should be offered in universities	48.9	47.4	51.7	38.9	65.5	17.8 (0.47)	53.1	53.1	60.3	3.1 (0.79)
Baccalaureate education for dental hygienists will make them better workers	30.2	28.4	35.1	16.7	34.5	19.3 (0.37)	12.5	12.5	15.0	3.3 (0.77)

[a]*Values expressed as percentage of respondents in each category who either agreed or strongly agreed with the given statements. Percentages were based on unweighted data, except for those reflecting the attitudes of all dentist and all dental hygienist respondents.*
[b]*Differences amongst dentists were not statistically significant.*
[c]*Differences in attitudes to independent practice and baccalaureate education between dentists and dental hygienists were statistically significant* ($p \leq 0.01$).
[d]*Differences amongst dental hygienists were not statistically significant.*

Table 2 Attitudes of dental hygienists on selected variables[a]

Selected questions	Very important	Important	Somewhat important	Not important	N (weighted)
How important is it that dental hygienists be legally entitled to prescribe radiographs?	37.4	41.6	15.4	5.6	381
How important is it that dental hygienists be legally able to administer anesthesia?	25.1	27.3	28.3	18.8	382
How important is it that hygienists no longer require an 'order' to do their work?	57.9	25.2	10.2	6.4	382
How important is it that more opportunities for practising independently of dentists arise?	34.2	29.6	23.7	12.5	382
How important is it that more alternative practice opportunities arise?	35.8	39.7	18.7	5.9	381
How important is it that a university degree be required for entry into dental hygiene practice?	11.3	22.3	25.4	41.0	380

[a]*Values expressed as percentage of respondents in each category. Analyses based on weighted data.*

Table 3 Dentists' attitudes to the importance of fighting against independent practice for dental hygienists

Attitude	All dentists[a] (*n* = 391)	Male GPs (*n* = 216)	Female GPs (*n* = 174)	Male specialists (*n* = 49)	Female specialists (*n* = 29)
Very important	34.2	36.1	33.9	30.6	27.6
Important	31.8	33.3	29.9	28.6	37.9
Somewhat important	20.2	18.5	21.8	24.5	24.1
Not important	12.5	12.0	14.4	16.3	10.3

GPs = general practitioners.
[a]Values expressed as percentage of respondents in each category ($\chi 2 = 19.43$, $p \leq 0.08$). Percentages for all dentists reflect weighted data. Percentages in the other cells are unweighted.

Table 4 Dentists' attitudes to dental hygiene training by year of birth[a]

Dental hygiene training should be offered in universities	Born 1949 or earlier (*n* = 94)	1950–1959 (*n* = 117)	1960–1969 (*n* = 119)	1970–1979 (*n* = 44)
Strongly agree	18.1	19.6	13.4	4.5
Agree	33.0	31.6	37.0	27.3
Neutral	19.1	21.4	24.4	34.1
Disagree	14.9	20.5	13.4	18.2
Strongly disagree	13.8	3.4	7.6	9.1
Don't know	1.0	3.4	4.2	6.8

[a]Values expressed as percentage of respondents in each category. Percentages are based on weighted data. All differences were significant ($\chi 2 = 53.6$, $p \leq 0.001$).

Table 5 Percentage of dental hygienists, by age, answering very important to selected questions about their attitudes[a]

Selected questions	Born 1949 or earlier (*n* = 31)	1950–1959 (*n* = 119)	1960–1969 (*n* = 177)	1970–1979 (*n* = 113)	Total (*n* = 450)
How important is it that dental hygienists be allowed to prescribe radiographs?	50.1	34.7	39.9	33.0	37.4
How important is it that dental hygienists are legally able to administer anesthesia?	26.7	19.6	27.9	27.6	25.4
How important is it that dental hygienists have a university degree for entry to practice?	16.6	10.3	12.7	9.0	11.3
How important is it that hygienists no longer require an order to do their work?	79.9	52.8	63.3	49.5	57.9
Dental hygiene training should be offered in universities (% strongly agreeing)	53.3	12.1	14.6	17.6	17.6

[a]Values expressed as percentage of respondents in each category. Differences among age groups are statistically significant ($p \leq 0.05$) for all variables, except for the variable measuring attitudes to administering anesthesia ($p = 0.1$). Analyses based on weighted data.

Table 6 Percentage of dental hygienists, by sex, answering very important to selected questions about their attitudes[a]

Selected questions	Males (*n* = 53)	Females (*n* = 392)	Total (*n* = 445)	χ^2 (*p* value)
How important is it that a university degree be required for entry to practice?	25.5	11.3	11.3	8.5 (0.05)
How important is it that dental hygienists be legally able to administer anesthesia?	50.9	25.0	25.1	16.3 (0.01)
Dental hygiene's scope of practice should be expanded (% strongly agreeing)	45.3	29.2	29.2	10.5 (0.1)

[a]*Values expressed as percentage of respondents in each category.*