**Research Goal**

In light of the universal trend and importance of preserving teeth, the research goal is to survey whether general Israeli dental practitioners tend to refer cases to specialists (endodontists), which cases they pass on, and what factors influence their decision to refer. In addition, the data will reflect comparisons of referral frequency between Jewish and Arab dentists and will examine whether a difference exists between the two study populations within the surveyed parameters.

**Materials and Methods**

Questionnaires were sent to 548 Israeli dentists. The list of dentists was obtained from the website of the Israel Dental Association. A list of the dentists’ active email addresses was prepared, and the questionnaires were disseminated via email.

The questionnaire comprised 19 questions, some of which included subsections.

Included in the questionnaire were questions regarding demographic data, the dentists’ professional background and year of graduation, the need for endodontic referrals and reasons behind them, and which factors influence their decision in referring patients.

Figures obtained from the survey were analyzed as general data for the study population. In addition, the population was divided into Arab and Jewish dentists, and a comparison was made between the two sectors.

**Results**

Out of the 548 disseminated questionnaires, 110 were filled by dentists. The response rate was ~20%.

110 questionnaires were included in the statistical analysis. The dentists participating in the survey graduated between 1978-2015, indicating that their professional experience ranges from 2-39 years.

54 participants were male (49.1%) and 56 were female (50.9%).

42 of the participants were Jewish (38.2%) and 68 were Arab (61.8%).

55.5% of the participants worked in the northern part of Israel, while 44.6% worked in the central and southern parts of the country.

Regarding employment type, 40% of the participating dentists owned private clinics, 33.6% were employed by private clinics, and 56.4% were employed by Health Maintenance Organizations (HMO) or Dental Support Organizations (DSO) (a corporate dental chain).

Regarding continuing education in endodontology:

37.3% of the dentists have not participated in continuing education courses, while 67.2% have completed such courses.

An analysis of the data from the following survey questions presents the following findings:

“Do you perform endodontic treatments?”: 23.6% replied that they do not perform endodontic treatments. When comparing Arab and Jewish dentists, 14.7% of the Arab dentists and 38.1% of the Jewish dentists do not perform endodontic treatments. The difference between the two groups was found to be statistically significant (P=0.01).

“Do you perform endodontic retreatments?”: 56.4% do not perform endodontic retreatments. When comparing Arab and Jewish dentists, 44.1% of the Arab dentists and 76.2% of the Jewish dentists do not perform retreatment procedures. The difference between the two groups was found to be statistically significant (P=0.01).

“Do you refer cases to endodontic specialists?”: 89.1% replied that they do refer cases to endodontic specialists. When comparing Arab and Jewish dentists, 82.4% of the Arab dentists and 100% of the Jewish dentists refer patients to endodontists. The difference between the two groups was found to be statistically significant (P=0.03).

“Is there a dentist in your clinic to whom you refer endodontic patients?”: 31.8% replied that they have an in-house endodontic specialist, 25.5% replied that they have an in-house dentist with endodontic knowledge to whom they refer patients. 42.7% replied that they do not have an in-house dentist for endodontic referrals. When comparing between Arab and Jewish dentists, 52.9% of the Arab dentists and 26.2% of the Jewish dentists do not have in-house dentists for endodontic referrals.. The difference between the two groups was found to be statistically significant (P=0.021).

For the question, “Which of the following cases would you refer to an endodontic specialist?,” a summary of the case scenarios and respective percentages of the necessity for referrals is presented below:

1. Cases of dental trauma – 43%
2. Patients with spontaneous pain and/or swelling – 12.4%
3. Teeth with large periapical lesions – 48.5%
4. Teeth with curved roots/canals – 69.1%
5. Teeth with calcifications – 72.2%
6. Endodontic retreatments – 50.5%
7. Teeth with restorations (crowns/bridges) – 23.7%
8. Any prosthetically-strategic tooth – 13.4%
9. Teeth requiring endodontic surgery – 67%
10. Teeth with irregular anatomy – 81.4%
11. Endodontic procedures in patients at high risk / with systemic diseases – 43.3%

“Rate the importance of the following factors regarding your decision to refer a patient to an endodontic specialist” (factors pertaining to both patient and caretaker):

1. Cost of the treatment by an endodontic specialist – 74.5% (important + very important)
2. The clinical status of the patient (curved root, retreatment) – 65.5% (important + very important)
3. Complications of pain and swelling – 25.5% (important + very important)
4. Patient’s desire to be treated in your clinic or to be referred to a specialist – 51.9% (important + very important)
5. Availability of modern medical equipment (endodontic microscope)– 65.5% (important + very important)

\* No significant differences were found between dentists from the Jewish and Arab sectors.

“Rate the importance of the following endodontist-related factors regarding your decision to refer a patient to an endodontic specialist (factors pertaining to endodontist)”:

1. Accessibility (convenient and close location) – 65.5% (important + very important). When comparing Arab and Jewish dentists, 74% of the Arab dentists and 54.8% of the Jewish dentists stressed the importance of this factor. This difference was found to be statistically significant (P=0.05).
2. Skill of the endodontist – 92.7% (important + very important)
3. Satisfaction of patients previously treated by the endodontist – 85.5% (important + very important)
4. The endodontist collaborates with me in the planning of the treatment – 86.4% (important + very important)
5. The endodontist cares and follows up on his patients – 85.5% (important + very important)
6. Availability of modern medical equipment (endodontic microscope)– 80.9% (important + very important)

The statement “There are enough endodontic specialists in the community” was agreed upon by 21.8% of the dentists. When comparing Arab and Jewish dentists, 14.7% of the Arab dentists and 33.3% of the Jewish dentists believe that there are a sufficient number of endodontists available in the community . The difference was found to be statistically significant (P=0.032).

The statement “An endodontic treatment to preserve a tooth is better than its extraction and replacement with an implant (if possible)” was agreed upon by 93.6% of the dentists. No significant difference was found between dentists from the Arab and Jewish sectors.