# Survey Based Research on Awareness and Knowledge of Patients Who Visit Marmara University Hospital

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## Article Info

**Article history:**
- Received 29 August 2019
- Received in revised form 29 October 2019
- Accepted 10 November 2019
- Available online 23 December 2019

**Keywords:**
- Awareness about dentistry
- Dental fear
- Endodontic knowledge

## Abstract

**Background and aim:** This survey presents an analysis of patients’ expectations, concerns and perceptions about endodontic treatment.

**Material and Methods:** The questionnaire, containing 15 questions were prepared based on similar survey based researches. Patients who participated in this survey were older than 18 years old. The questionnaires were given from and retrieved by the same operator. Overall attendance on study was 100 patients. Patients’ identities remained anonymous.

**Results:** Participants were 61% women and 39% men. The patients who were over the age of 40 were 47%, from 25 to 40 were 28% and from 18 to 25 were 25%. Patients who had root canal treatment before was 69%. Of these, 65% said they had a good experience. Forty four percent of patients who previously had an endodontic treatment had a painful experience. Patients who thinks root canal treatment is necessary on spontaneous pain is 42%. Patients who has pain prefer to see the dentist at the first place are 78% and 72% patients prefer endodontic treatment to extraction of the tooth. Patients who prefer an Endodontist to get their treatment are 48%. Overall 71% of patients choose university dental hospitals for endodontic treatments.

**Conclusion:** Endodontists should inform patients to understand the importance of endodontics. Patients’ awareness should be increased.

## 1. Introduction

The overall aim of endodontic treatment is to preserve functional teeth without prejudice to the health of the patient. According to the position statement of European Society of Endodontology[12] Endodontic treatments include, but are not limited to the diagnosis and treatment of pulpal and periradicular diseases, post endodontic disease, root canal treatment, traumatic injuries, vital pulp treatment, surgical endodontic treatment, bleaching and restorations involving the root canal space. Current endodontics are constantly evolving. This development offers not only new instruments but also new treatment modalities. The most basic rule of modern endodontics is a painless and effective treatment.[2] Fear against to dental treatment is relatively common in population. The study of Oosterink et al.[11] revealed an exploratory factor analysis (EFA) on a set of 67 stimuli present in the dental setting using a sample of almost 1,000 individuals. As a result, they divided dental fear in two factors; the first one was an invasive treatment-related stimuli factor; and the second factor was a non-invasive treatment-related factor. However, a close inspection of findings revealed that this explanation was unsatisfactory because the two factors were very general in nature. Wong et al.[1] built a research based on the study of Oosterink et al., their EFA showed seven factor solution (i.e. dental check-up, injection, scale and drill, surgery, empathy, perceived lack of control, and clinical environment). Their classifications may help us understand the structure of dental fear of patients. Further studies show that the relationship between the dentist and the patient is important to avoid the fear of treatment.[13]

The theory of fear of pain seems to be related not only to dental anxiety, but also to pain expectations prior to dental procedures.[14] Different factors affect the treatment decisions of patients. Patients should also participate in the decision-making of the treatment plan.[15] The consequences of decision should be explained in the simplest possible language by the physician. Excess use of medical terms or communicating in a language in which the patient is not proficient may mislead the patient.[16] It is important to know how well the patients understand physicians and how much physicians can tell their patients about the treatment process.[11, 12] Other studies revealed that the patient–dentist relationship strongly affects the patient’s feelings of control and safety.[13, 14] There is little data about the knowledge of endodontic treatment amongst patients in Turkey. The aim of this study was to evaluate the knowledge and awareness of patients about endodontic treatment to understand the expectations and concerns of the patients and to obtain a baseline data for the dental practitioners.

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http://doi.org/10.30485/IJSRDMS.2019.199715.1016
2. Material and methods
This questionnaire was prepared based on standardized questionnaires[2, 6, 8]. Ethics approval was given by the Marmara University Clinical Research Ethics Committee (27.12.2018, 2018/254). The questionnaires were distributed in the Endodontology Clinics of Marmara University. The participants of the survey were over 18 years of age and agreed to join the study. After explaining the purpose of the study, its method and its contribution to science, a hundred questionnaire forms were distributed. The questionnaires were collected by the same operator. No names, identification or marks on forms were asked from the respondents in order to guarantee anonymity. The questions were asked with multiple choices. Open-ended questions were used as little as possible. This survey dealt with questions that were subdivided into two main topics; the first part of the questionnaire contained basic questions to obtain demographic data. In the next section, questions were asked to measure the patients’ knowledge, concerns and experiences about canal treatment. The first seven questions were for patients who previously had root canal treatments. Those questions were intended to understand the patients’ experience with root canal treatment. The following eight questions were asked to evaluate the knowledge and awareness of patients about root canal treatment. These included the patients’ perception on the necessity and the reason for the root canal treatment. The ideal price for the root canal treatment was also asked.

3. Results
Participation to the study was 100%. Overall, 61% of the participants were female and 39% were male. The patients were grouped as 18-25, 25-40 and 40 years and over. Of the participants, 47% were over 40 years of age. The first part of the questionnaire was developed for the patients who previously had a canal treatment (n: 69). When these patients were asked about their previous endodontic experience was good. But almost half of them said that endodontic treatment was painful. The most common complaint related to endodontic treatment was the fear of pain. Therefore, we believe that, it is a good representative of the whole population.

Table 1. The patients' own experience regarding root canal treatment.

<table>
<thead>
<tr>
<th>Have you been treated endodontically?</th>
<th>Yes</th>
<th>69%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>31%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do you recall it?</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Well</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Badly</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Not important</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Was it a painful treatment?</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>I don’t remember</td>
<td>21%</td>
</tr>
</tbody>
</table>

Seventy-eight of the participants said that if they had a toothache, the first thing they would do was to go to a dental practitioner. However, 22% stated that they would try to find a remedy at home first to relieve the pain. Patients were asked if they knew what a root canal treatment was and 53% said that they had an average knowledge and would like to receive information before treatment (table 3).

Table 3. Self-evaluation of patients’ knowledge on the endodontic treatment.

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<table>
<thead>
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<tbody>
<tr>
<td>I know a lot</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Average knowledge, I ask for details</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Average knowledge, I am not interested in the course</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>I don’t know anything</td>
<td>1%</td>
<td></td>
</tr>
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</table>

In case of a toothache, 28% stated that they would want the tooth to be extracted (table 4).

Table 4. Assessment of patients’ behavior in case of toothache.

<table>
<thead>
<tr>
<th>Patients’ behavior in case of toothache</th>
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<tbody>
<tr>
<td>I refer to the dentist</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>I use home remedies to relieve toothache</td>
<td>22%</td>
<td></td>
</tr>
</tbody>
</table>

Regarding the pricing of the endodontic treatment, 61% of the participants said they did not know how much a patient should pay. Overall, 45% stated they would choose the treatment facility because of the free service. Seventy-one percent of patients stated that they chose university hospitals for their treatment, as well as 48% who would prefer an Endodontist for their treatment.

4. Discussion
This study investigated the knowledge and awareness of patients about endodontic treatment. In many studies, patients with average knowledge about the root canal therapy preferred to keep their natural teeth[2, 6, 8]. This survey was conducted in one of the largest dental university hospitals in Marmara University in Istanbul, which is the mostly inhabitant city of Turkey. Therefore, we believe that, it is a good representative of the whole population in Turkey. Participation rate to the survey was 100%. The reason for this was that the same operator distributed and collected the survey right after the patients responded. The study was performed with patients who came to the endodontics clinic. Patients who either had a root canal treatment or not expressed their thoughts in the parts of the study. The overall rating of the patients for their previous endodontic experience was good. But almost half of them said that endodontic treatment was painful. The most common complaint related to endodontic treatment was reported as “pain”[2, 6, 8, 10, 19]. Pain experience causes patients to hesitate treatment and become more frightened of it. Therefore, a painful treatment causes a bad ground for future treatments of the patient[19]. The main reason for patients to avoid going to the dentists was the fear of pain[19]. This may be the reason why patients delay
treatments until they experience spontaneous toothache. Nevertheless, further studies revealed that dental fear may create oral health problems as well as psychosocial problems for the individual. [15, 16, 17] Participants stated that painless treatment is much more important than expense of the treatment. Physician should always try to reduce stress level of the patient. The biggest part of the patients tension is a painful experience. Therefore, the dentist should always make decisions in favor of the patients. Nevertheless, almost half of the patients did not know how much is root canal treatment price. Spontaneous toothache of the patients was determined as the chief reason for the patients to apply to the dental clinics as an emergency. [18] In our study, 42% of the patients reported that they would go to the dentist in case of spontaneous pain. Spontaneous pain was also the main reason that the participants thought a root canal treatment should be performed. However, 22% of patients would try to find a remedy for themselves at home and 78% said they would immediately consult to the dental practitioner. This result is similar in other studies. [12, 6, 8] Nearly half of the patients said they would prefer an endodontist to perform the treatment. This rate was much higher in other studies (68%). [2] The proportion of patients who had not yet acquainted with the concept of endodontist was much more than we expected. We believe that this was due to patients being unaware about endodontics. [2] In previous studies, the most important criterion for patients in dental clinics was the skill and the experience of the staff [6, 8] which was in accordance with our findings. Participants self-reported that their knowledge about endodontics was average, yet 31% said they would not be interested in knowing what it is about. In contrast, more than half of the participants reported that they would ask for details. Previous studies revealed that the patient–dentist relationship strongly affects whether a patient would feel safe and secure. [19, 20] It is the practitioners’ duty to explain the course of the treatment with alternative treatment plans to patients. Participants stated that almost half of them would prefer university dental hospitals for their treatments (48%). Nevertheless, only 5% of the patients prefer an Endodontist for their root canal treatments. However, 22% stated that root canal treatment should be performed by an experienced general practitioner. That reveals patients’ lack of knowledge about Endodontist concept. Physicians should clarify the purpose of the treatment and value of keeping inborn teeth on the mouth cavity as well as Endodontist job description.

5. Conclusion
The awareness of endodontic treatment changes from society to society. [6] Our survey concluded that patients’ greatest motivation to visit dental clinic was toothache. All in all the main reason for patients to avoid dental treatment was either pain or fear from a painful treatment. Other studies revealed that cost of endodontic treatment is/was not a barrier. [6] This study revealed that patients choose university hospitals considering treatment fee. Overall patients are sensitive to physicians to be professional in their work. To sum up Endodontists should inform patients to understand the importance of endodontics.

Conflict of Interest
The authors declared that there is no conflict of interest.

References