



## Sources of patients' knowledge on the treatment of missing teeth with implants

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### ABSTRACT

The number of patients who take the decision to have implantoprosthodontic treatment keeps increasing. The aim of this study was to determine the sources of knowledge about possibilities of treating missing teeth with implants. The survey was conducted among 464 patients of both sexes aged from 20 to 74 years, treated with dental implants at the Non-Public Healthcare Centre "Dental" in Tomaszów Mazowiecki. The patients answered questions in an anonymous questionnaire. The questions included age, place of residence and source of knowledge about implants. Persons aged up to 40 years frequently obtained knowledge about the possibility of using implants from the media; patients aged 40-60 years – from their dentist, and people over 60 years of age – from family or friends. Persons living in rural areas or small town frequently acquired knowledge of the possibility of dental implants from the dentist, the city residents – from family or friends. The results of the survey indicate that the dentist is most commonly the main source of information about the possibility of replacing the missing teeth with implants, less family and friends and the media. The source of acquiring knowledge in this field varies depending on the age and place of residence of the persons concerned.

### INTRODUCTION

The socio-economic transformation in the nineties of the twentieth century and the progressive change of lifestyle in Poland has contributed to the increased interest in treatments that allow for improving one's appearance. Treatments are also seen as an investment in one's own health. There is an increasing number of patients who opt for dental aesthetic treatment [7]. With the growing interest in replacing of missing teeth with implants, it is interesting to learn about the sources of knowledge on the subject.

### AIM

The aim of this study was to determine the sources of knowledge of the opportunities of replacing missing teeth with implants in implantoprosthodontic-treated patients.

### MATERIAL AND METHODS

The survey was conducted among 464 patients of both sexes aged 20-74 years, treated with dental implants at the Non-Public Healthcare Centre "Dental" in Tomaszów Mazowiecki. The patients answered questions included in an anonymous questionnaire. Questions included age, place of residence and source of knowledge on implantation. The patients were divided into three age groups: below 40 years ( $n = 157$ ), between 40 and 60 ( $n = 241$ ), and over 60 ( $n = 66$ ), and the place of residence (village, small town – population 20,000-50,000, city – population of 100,000-500,000). Using the  $\chi^2$  test of independence, the impact of the variables was analyzed. Statistical analysis was performed by using the Statistica 6.0 software (StatSoft, Inc., Tulsa, Oklahoma, USA).

### RESULTS

Analysis shows that the source of knowledge about the possibility of implant surgery as a treatment for missing teeth depends highly statistically significantly on the age of the respondents ( $p < 0.001$ ). Persons aged up to 40 years

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frequently obtained knowledge of the possibility of implant surgery from the media, patients aged 40–60 years – from the dentist during visits to the dental office, and the elderly over 60 years old – from family or friends (Table 1).

**Table 1.** Source of knowledge on treatment of missing teeth using implants

Age (years)	Source of knowledge about implants			Total
	Media	Family/friends	Dentist	
< 40	65	39	53	157
	41.40%	24.84%	33.76%	100%
40-60	58	76	107	241
	24.07%	31.54%	44.40%	100%
>60	13	35	18	66
	19.70%	53.03%	27.27%	100%
Total	136	150	178	464

The value of the test function  $\chi^2=26.145$ ,  $p<0.001$

It has also been shown that the source of acquired knowledge about the opportunities of implant surgery as a treatment for missing teeth largely depends on the place of residence ( $p<0.001$ ). Persons living in rural areas or small towns obtained their knowledge frequently from the dentist, and the residents of the city – from family or friends (Table 2).

**Table 2.** Source of knowledge about the treatment of missing teeth with implants, depending on the place of residence

Place of residence	Source of knowledge about implants			Total
	Media	Family/friends	Dentist	
Village	26	29	55	110
	23.64%	26.36%	50.00%	100%
Small town	73	71	87	231
	31.60%	30.74%	37.66%	100%
City	37	50	36	123
	30.08%	40.65%	29.27%	100%
Total	136	150	178	464

The value of the test function  $\chi^2=12.238$ ,  $p=0.016$

## DISCUSSION

Prosthetic treatment using implants is a method that allows for a fully functional and aesthetic replacement of missing teeth and meets the expectations of patients to a large extent [5].

In our study, irrespective of age and place of residence, the dentist was the source of information for the largest group of the surveyed patients. This is a positive phenomenon – obtaining information from the most qualified source of knowledge on the subject. Polish research shows that even among the junior doctors and dental students, knowledge of implantology is satisfactory and it progresses with subsequent years of study [9].

The media are today a popular source of information, and the Internet is mentioned first in the order of the source of acquiring knowledge about health, illness or health problems [3]. The frequency of obtaining health information through the media correlates with age and education, but does not depend on the place of residence [10]. In our study the dependence of frequency of acquiring knowledge about dental implants was dependent upon age of respondents: people from the youngest age group more often than older ones learnt from the media about the possibility of implant

surgery. In addition, our studies show that the sources of information about treatment using dental implants for people over 60 years were frequently family members and friends. According to Suchodolski et al., the most common and most accessible sources of information on the implantoprosthesis treatment are the opinions of people who experienced the implantoprosthesis treatment or the Internet [9].

Our findings point to an interesting regularity: the important role of the media as an information source for the younger generation, the dentist – for middle-aged people, the experiences of family and friends – for the oldest ones. It seems that this is a result of both the progress of civilization, as the impact of sociological and social factors.

The previous studies by foreign authors suggest that the level of knowledge about the implants did not differ statistically significantly irrespective of the country: the United States (1992) – 77%, Norway (2000) – 70.1%, Austria (2003) – 72% and Saudi Arabia (2010) – 66.4% [1,2,11,12]. In the case of our research, all respondents were aware of the possibility of replacing the missing teeth with implants as these people had undergone implantoprosthesis treatment. It was preceded by clinical radiological examination and detailed interview with the patient.

It is emphasized that the restoration of the masticatory system by replacing missing teeth and restoring the chewing function with implantoprosthesis modern methods should be aimed at patients with essential knowledge and the material status to accept the course and results of treatment [13]. In addition, our research on quality of life related to health in terms of restoration of the masticatory organ shows that proposing more expensive treatment based on dental implants to patients having little knowledge about this method does not produce significant psychosocial improvement compared with restoration based on traditional prosthetic dentures [4].

It has been found that the lack of interest in dental implants in patients treated prosthetically is partly due to high prices of these solutions, but it is also due to a lack of adequate information provided by the physician [6].

Doctors with expert knowledge about the possibilities and limitations of implant prosthetic treatment should share it with the patients, while allowing the patient to make an informed decision about possible treatment. Skillful awareness-raising of patients whilst maintaining ethical principles by the physician, constitutes, besides medical treatment, fundamental duties of the doctor. It seems to be the most beneficial for both the patient who obtains information from the most qualified sources, as well as for the dentist, favorably affecting his credibility in the eyes of the patient and the development of dental practice [8].

## CONCLUSIONS

1. The main source of information about the possibility of supplementing the missing teeth with implants is most commonly the dentist, less family and friends and the media.
2. The source of acquiring knowledge in this subject area varies depending on the age and place of residence of the persons concerned.

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