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Research Article

PATIENTS' ACCEPTATION OR REFUSING OF RECOMMENDED PROSTHETIC TREATMENT

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ABSTRACT

Aim

Our aim in this study is:

1. To analyze the frequency of accepted prosthetic treatments;
2. To show the frequency of refused prosthetic treatments;
3. To determine the correlation between them.

Material and methods

During 2013 and 2017 year, were examinated 1785 patients which in clinic for prosthetic dentistry "Protetika Ag" in Tetova have asked for prosthetic treatment. From this total, 52.83% were males and 47.17% females.

Their age was from 13 to 82 years, with average age 48.2 years.

The getting data were evidenced in the work sheet for each patients separately according **WHO,** adapted and modifide by the nature of our study**.**

The getting data of our study in this paper are showed with graphics and tebles, meanhwile dhe most importan of them are showed with Student fisher T-test, Coeficient of probability (p) ahnd Coeficient of corelation(Rxy).

Results

The getting results showed that:

- Treated patients in high per cent 32.78% belong to the age-group 50-59 years old, meanhwile the low per cent 7.57% of patients belong to the age-group ap to 19 years old.
- In 46.19% of cases, coste was the crucial reason for acceptance of recomaned treatment.
- In 43.47% of cases coste was also the crucial reason for refusing of recomanded treatment.

Conclusion

1. By our treated patients the stomatognatic sistem is disordet with wide toothless areas and disfavourable distribution of remained teeth.
2. Covering of cost for prosthetic treatment with removable dentures from the side of Health Insurance Fund has influence on the chose of patients for this kind of prosthetic appliances.
3. Non covering of cost for prosthetic treatment with fixed dentures from the side of Health Insurance Fund, and high expenditure is the most common reason for rejection of this kind of prosthetic appliances.
4. The lack of awareness among patients about the importance of oral halth in one side, and negligence for need of preventive measures on the other side, influence on refuzing of recomandet treatment.

INTRODUCTION

Teeth as par of stomatognatic system play an important role in the positive safeguarding of each individual's self-image, while their loss result in significant disabilities which may hinder and have a profound negative impact on social activities (Roessle0, 2003; Omar *et al* 2003; Fiske *et al* 1998; Al Quran *et al* 2001). Tooth loss in general, or loss of all teeth known as total toothless, weakens the quality of life and affects the behavior of patients in society, the mood and understanding of caring (Shillinburg *et al* 2011; Koçi 1999; Shaqiri *et al* 2001, Rekha *et al* 1997). It has been suggested that adverse reactions toward

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edentulousness as well as the individuals' feelings about dentures are important for the acceptance of the new dentures (Al Quran *et al* 2001).

For one particular clinical situation, many prosthetic treatment options may be available, namely removable, fixed, or implant-supported prosthesis. Traditionally, determination of prosthodontic treatment options and selection of treatment have been considered a part of the practitioner's professional responsibility. In contemporary clinical practice, patients are increasingly assuming an active role in determining their actual treatment needs by stating their expectations and constraints (Leles *et al* 2004).

In general, the three major areas that determine the acceptability of treatment are comfort, function, and esthetics. Mechanical and biological factors determine comfort and function. However, a variety of social and cultural influences, attitudes, and beliefs may determine patients' acceptance of the esthetic aspects of prosthodontic treatment (Conny *et al* 1985). More emphasis is being placed on patient-mediated concerns in prosthetic treatment planning. Consequently, more information has been published on realistic treatment needs and socio-dental treatment needs of different populations (Akeel 2003).

An another important determinant of treatment decisions is the patient's individual preferences, which is regulated by subjective factors such as personal views, previous experiences, attitudes and beliefs about prosthodontics (Leles *et al* 2004). The reasons for opting for types of prosthodontics are as diverse as the treatment options themselves. For some patients, it is purely a personal decision while for others cultural and social considerations may play a part.

Active participation of the patient in shared clinical decisions has been considered to have a strong influence on treatment outcomes, patient satisfaction and cost-effectiveness of the intervention (Feine *et al* 2007; Rich *et al* 2002; Narby *et al* 1998).

The reasons for the lack of permanent natural teeth are different: congenitally that account for about 2% and conditioned that are present with about 90% of them, without mentioning the percentage of dental absent due to various actions(Shillinburg *et al* 1997; Toti 2003; Kërçiku 1981; Shaqiri *et al* 2003). Direct causes are oral diseases, in the first place caries and paradontopathies, which are present and escort mankind today (Shaqiri *et al* 2003; Shaqiri 2005; Shaqiri *et al* 2016).

Lack of certain teeth, a tooth group or a complete teeth system in one or both jaws, causes complex disorders such as aesthetic, phonetic, functional and topographical, which are jointly reflected in the digestive system and the psyche of people, as well as compel the patient to ask dentist for help for their sanitation (Shaqiri 2013). In this case, the prosthetist is that one who, through oral rehabilitation, should treat the disorderly stomatognatic system in these patients (Shaqiri *et al* 2003; Shaqiri 2005; Shaqiri *et al* 2016).

Oral rehabilitation means any kind of dental intervention undertaken and aimed at restoring the normal functioning of stomatognatic system. In the strictest prosthetic aspect, oral rehabilitation represent correction of simple or complicated abnormalities of the stomatognatic system as a need for prosthetic restorations of damaged or lost masticatory units in patients with permanent dentition (Shaqiri *et al* 2016; Suvin *et al* 1987).

Prosthetic disciplines with their constructive and reconstructive abilities not infrequently fulfill entirety the oral rehabilitation, or in the process of therapy operate independently themselves. While the field of prosthetic treatment is performed through partial prostheses fixed to the natural teeth and implants, through partial and complete mobile prostheses, as well as from the restoration of a tooth cavity, the rehabilitation of the occlusion to the compensation of tooth system in one or both toothless jaws(Shaqiri 2006; Suvin 2005; Koçi 1982).

Having into consideration all avovementioned facts we aimed in this study:

1. To analyze the frequency of accepted prosthetic treatments;
2. To show the frequency of refused prosthetic treatments;
3. To determine the correlation between them.

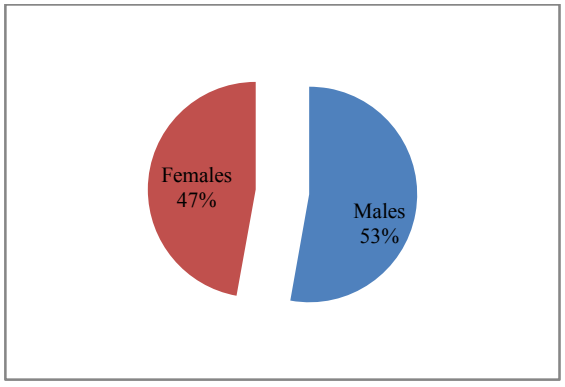
MATERIAL AND METHODS

For this goal in a period from 2013-2017 there were examinated 1785 patients which in clinic for prosthetic dentistry "Protetika Ag" in Tetova have asked for prosthetic treatment. From this grouping 943 (52.83%) of them were males, while 842(47.17%) were females. The age of the examinees was 13 to 82, with an average age of 48.2 years.
The getting data were evidenced in the work sheet for each patients separately according WHO (*World Health Organization*), adapted and modifide by the nature of our study (Oral Health Assessment Form 1997).

The getting data of our study in this paper are showed with graphics and tebles, meanhwile dhe most importan of them are showed with Student fisher T-test, Coeficient of probability(p) and Coeficient of corelation(Rxy).

RESULTS

In the graphicon 1 is showed the number of treated patinets accordin sex.



Graphic 1 The per cent of treated patients according sex

There we can see that, number of males is 943(52.83%) opposite females with 842 (47.17%).

Table 1 shows the distribution of examined patients according different age-groups and sex.

Table 1 Examinated patients according age-groups and sex

Age-group	Number	Per cent	Males		Females	
			Number	Per cent	Number	Per cent
Up to19 years	135	7.57%	46	34.07%	89	65.93%
20-29 years	180	10.08%	103	57.22%	77	42.78%
30-39 years	210	11.76%	121	57.62%	89	42.38%
40-49 years	195	10.92%	90	46.15%	105	53.85%
50-59 years	585	32.78%	271	46.32%	314	53.68%
60-69 years	300	16.81%	208	69.33%	92	30.67%
70 years et up	180	10.08%	104	57.78%	76	42.22%
Total	1785	100%	943	52.83%	842	47.17%
				X^2= 62.41	p<0.001	

From the table results we can see that higher per cent of treated patients belong to age-group 50-59 years 585 (32.78%), followed by agegroups 60-69 years 300(16.81%), 30-39 years 210(11.76%), 40-49 years 195(10.92%), 70 years et up 180(10.08%), and 20-29 years 180(10.08%), meanhwile the low per cent of treated patients belong to age-group up to 19 years 135(7.57%).

The results for acceptance by patients of the recommended prosthetic treatment are presented in table 2.

Table 2 Prosthetic treatment accepted by patients

The reasont for acceptation	Number	Per cent
Quality	130	12.38%
Esthetic	152	14.48%
Stability	44	4.19%
Retention	36	3.43%
The cost	485	46.19%
Existing conditions in the jaw	51	4.86%
Efficiency	18	1.71%
Trust in the therapist	19	1.72%
Functionality	88	8.38%
Maintain gourmet perception	17	1.62%
Prophylactic and preventative effect	10	0.95%
Total	1050	100%
	T= 2.28	p<0.1

According results of table 2, there is clearly seen that the cost leads convincingly with 46.19%(485), followed by esthetic with 14.48%(152), quality with12.38%(130), functionality with 8.38%(88), existing conditions in the jaw with 4.86%(51), stability with 4.19%(44), retention with 3.43%(36), trust in the therapist with 1.72%(19), efficiency with 1.71%(18), and maintain gourmet perception with 1.62%(17),while the lower per cent have the prophylactic and preventive effects with only 10 0.95%(10) of cases.

Results for the reasons for refusing the prosthetic treatment are shown in table 3

Table 3 Prosthetic treatment refused by patients

The reasons for refusing	Number	Per cent
No subjective need	104	27.73%
Reaction to anesthetics	14	3.73%%
Lack of time for treatment	62	16.53%
The cost	163	43.47%
Difficulties in adaptation	32	8.53%
Total	375	100%
	T= 4.69	p<0.01

There we can see that out of the total number of 375 refusals, the strongest reason to reject the prosthetic treatment was the cost with 43.47%(163), followed by no subjective need with 27.73%(104), lack of time for treatment with 16.53%(62), difficulties in adaptation with 8.53(32), while the reason with lower per cent was reaction to anesthetics with 3,73%(14).

DISCUSSION

Human ability to adapt to physically and psychologically changes in oral conditions, and cope with its impacts is affected by external factors such as environment and social context (Teófilo *et al* 2007). Tooth loss is associated with esthetic, functional, phonetic, psychological, and social impacts for individuals, and hence patients express a desire to replace their missing teeth. Various treatment options are available for prosthetic reconstruction of teeth, which may be removable or fixed prosthesis. Removable prosthesis includes complete dentures, interim and cast partial dentures, whereas fixed prosthesis includes crowns, bridges, and implants(Carr *et al* 2011). The choice of prosthesis is a shared decision-making process between the dentist and the patient.

Treatment options should be proposed on an individual basis, with shared decision-making between patients and clinicians. Patients' active role in prosthodontics treatment decision-making is important to achieve successful outcomes(Rich *et al* 2002; Carr *et al* 2011) by making their expectations more realistic and reducing the anxiety and disappointment associated with treatment(Rich *et al* 2002; Carr *et al* 2011; Narby *et al* 2005).

Fromentim *et al* (2001) showed that the level of patient satisfaction after completion of prosthetic treatment is high, but tends to decrease when compared with expectations and attitudes before treatment.

According to Schouten *et al* (2002), patients believe it is important to decide whether or not to undergo treatment. Although it is an important facet of the decision-making process, few studies have investigated patients' reasons for choosing or refusing a particular prosthodontics treatment modality (Celebic´ *et al* 2003).

By result from graphic 1clearly states that in the Prosthetic Clinic "Protetika AG" during 2013- 2017 were treated more male patients than females. Such a situation shows that men suffer more from tooth loss than females. On the other hand, we judge that women pay more attention to oral health.

Many investigators have studied the factors affecting clinical decision-making regarding choice of prosthesis by the dentists (Awad *et al* 2000; Gorman 2000; Shigli *et al* 2007). Patients' satisfaction with prosthetic treatment once the treatment has been completed has also been studied (Sangapa 2012). The literature also has research on how to effectively train dental graduates regarding clinical decision-making in prosthodontics (Deshpande *et al* 2015). However, evaluation of the patients' decisions regarding the choice of treatment before beginning of treatment is less reported in the literature (Jung 2008). Patient compliance with the acceptance of prostheses can also be enhanced (Awad *et al* 2000).

Different authors in their studies on the same or similar problem present diverse results. Thus, Shigli *et al* (2009), from

the examination of 365 patients in their study, find that the highest percentage of patients spreading in the examined age-group 46-55 in 25.2% of cases, while the lowest percentage of patients in age group 76-85 years old only 4.66%.

Likewise, the author Kochi (1999), out of the 244 examined patients aged 20 years and older spreading in the age-groups, finds that the highest percentage of patients examined is 20-30 years old in 35.2% of cases, while the smallest percentage found the age group 50 years or more in 12.3% of the cases
Even Mirchev (1977), in his study found a higher percentage of patients in the age-group of 20-29 years, 29.78%, while the lowest percentage of patients examined in the age-group 60 and older was 7.68%.

The results for acceptance of the recommended prosthetic treatment by patients, shown in table 2, clearly showed that the cost leads convincingly to 485 (46.19%) cases. Having into consideration the readiness of the Health Insurance Fund in the Republic of Macedonia to pay 90% of the cost of partial and full mobile dentures to patients, no doubt and with full fairness we can say that this has directly influenced that the higher per cent of the reason for acceptance the recommended prosthetic appliance has the cost (*financial costs*)

Shigli *et al* (2009), written that the readiness for free prosthetic treatment at the Institute of Dental Sciences in Belgaum, where he has conducted his study, may have influenced the outcome of his study.

The results for the reasons for refusing the prosthetic treatment presented in table 3, showed that from total number of refusals, the strongest reason to reject prosthetic treatment was the cost.
The cost as the reason for rejecting the highest percentage of prosthetic treatment in the results of the abovementioned table has to do with fixed prosthetic appliances which are financially unsupported by the Health Insurance Fund.

Osterberg *et al* (1984), reported that esthetic rather than functional factors determine an individual's subjective need for the replacement of missing teeth, which was confirmed in the present study. This means that the demand for replacement of missing teeth and acceptance of the proposed treatment plan are strongly related to the position of the missing teeth.

Leles *et al* (2009), notice that hygiene difficulties were one reason for refusing an FPD. According the same authors, the main reason for refusing an FPD was biological cost associated with removal of teeth structure. Other relevant reasons included low cost, less complexity and time of treatment.

CONCLUSION

Based on the obtained pre-clinical and clinical data from our study on prosthetic problems in patients with permanent dentition in the Tetova population and its surroundings, as well as on the basis of their analysis, processing and presentation we have reached these conclusions:

1. By our treated patients the stomatognatic sistem is disordet with wide toothless areas and disfavourable distribution of remained teeth.
2. Covering of cost for prosthetic treatment with removable dentures from the side of Health Insurance Fund has influence on the chose of patients for this kind of prosthetic appliances.
3. Non covering of cost for prosthetic treatment with fixed dentures from the side of Health Insurance Fund, and high expenditure is the most common reason for rejection of this kind of prosthetic appliances.
4. The lack of awareness among patients about the importance of oral halth in one side, and negligence for need of preventive measures on the other side, influence on refuzing of recomandet treatment.

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