

## Implant-prosthetic treatment in total edentulism

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### Keywords

Total edentation, implant, mastication, satisfaction

### Purpose

The aim of this work is to determine the effectiveness of different methods of treatment and final restoration using a general satisfaction and masticatory efficiency after collecting data from through questionnaires. Although the edentulism rate is decreasing every decade, the elderly population is rising so rapidly that the adult population in need of one or two complete dentures will actually increase.

### Introduction

Total edentation is the pathological absence of all teeth on the both of dental arches. Thus, it is considered a serious pathological condition of the dento-maxillary apparatus, affecting the basic functions performed by them (mastication, physiognomy, phonation) with consequences for the entire human body.

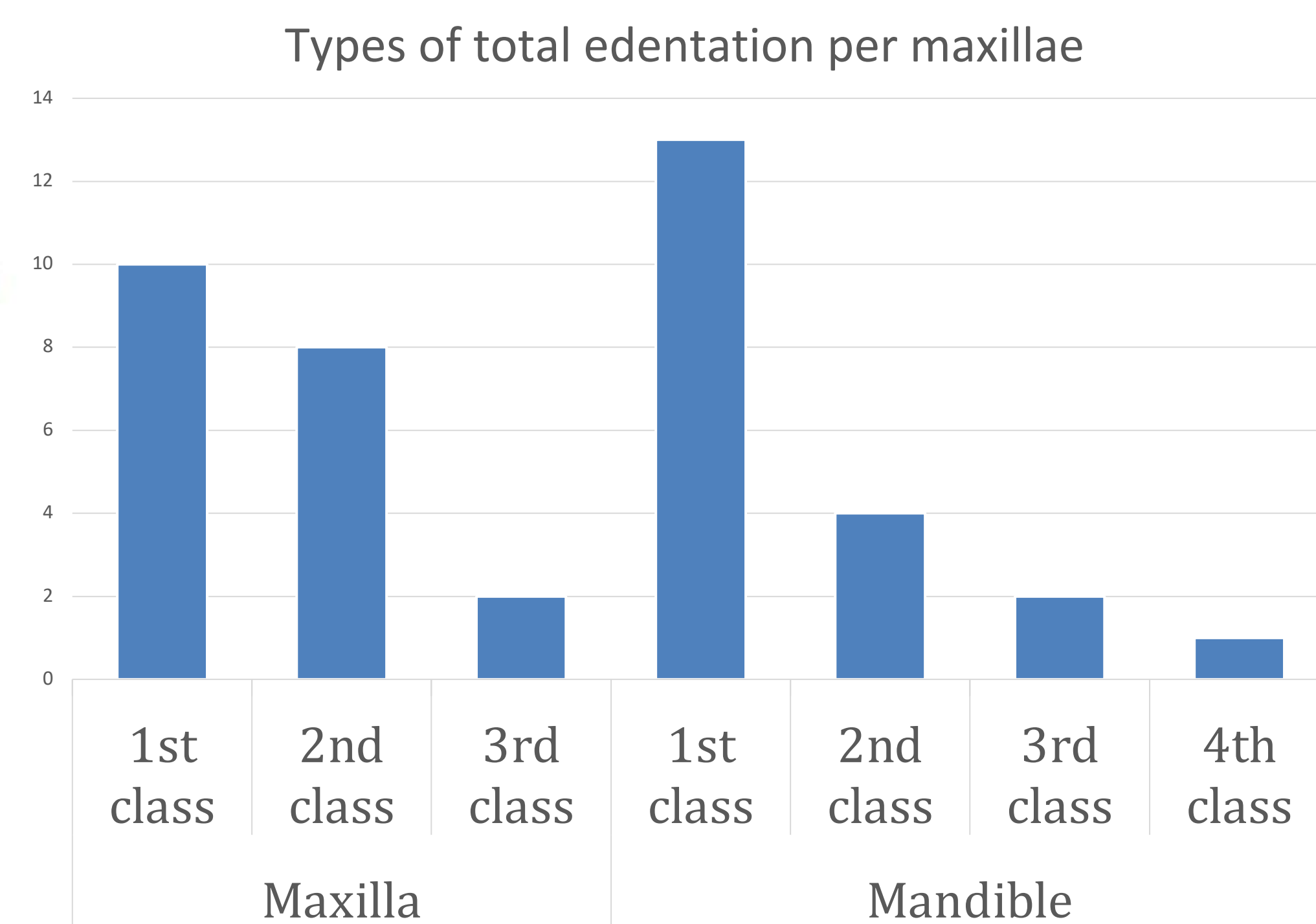


Fig.1 Types of total edentations

Region or country	Year of survey	Sample size	Age group (years)	Percentage edentulous
United States	2009-2010	about 5,000	65-74	15%
			≥75	22%
Canada	2007-2009	6,000	20-79	6%
			60-79	22%
Brazil	2002-2003	5,349	65 to 74	54.7%
Mexico	2002-2003	54,638,654	≥18	6.3%
			65-74	25.5%
Valencia, Spain	2006	1,264	65-74	20.7%
Montpellier, France	2004	321	65+	26.9%
Turkey	2004-2005	1545	65-74	48%
Sweden	2002	16,416	55-84	14%
Hungary	2004	4,606	65-74	19.8%
			≥75	38.7%

Fig 2. Prevalence of edentulism

	Complete Removable Dentures	Implant- supported Overdentures	Screw-retained Dentures
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Cheap</li> <li>• No need for surgery</li> <li>• Can be removed and kept clean, the gums have a chance to rest.</li> <li>• Shortest treatment time from start to finish.</li> <li>• Support facial muscles and structures.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved retention, stability and support during function.</li> <li>• Improved self-esteem.</li> <li>• Increased masticatory efficiency.</li> <li>• Free palate, improves taste sensation.</li> <li>• Reduces bone atrophy.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides very good retention, stability and support during mastication and speaking.</li> <li>• Retained denture, increases self-esteem and confidence.</li> <li>• No need for adjustment period.</li> <li>• Prevents sores of soft tissues.</li> <li>• No need for relining or rebasing.</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>• Retention, stability and support during function are not quite satisfying.</li> <li>• Increases the bone atrophy and gingival recession.</li> <li>• Need for relining and rebasing in the future.</li> <li>• Can affect speech pronounce.</li> </ul>	<ul style="list-style-type: none"> <li>• Quite expensive.</li> <li>• Requires proper plaque control and denture hygiene.</li> <li>• Necessity of many visits to complete the rehabilitation.</li> <li>• Surgical complications.</li> <li>• Peri-implant soft-tissue complications</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive.</li> <li>• Need for regular check-ups at the clinic for plaque control and prosthesis maintenance.</li> <li>• Surgical complications.</li> <li>• Peri-implant soft-tissue complications.</li> </ul>

Fig 7. Advantages and disadvantages of different type of treatments

### Material and methods

For this study were examined specialized manuals, articles from national and international medical sources, were selected 20 patients aged between 52 and 74 years completely edentulous who were rehabilitated with various prosthetic remedies. Of all these patients, 10 of them were non-smokers, 7 patients smokes <10 cigarettes per day and 3 patients smokes >10 cigarettes per day. All of the patients has none of chronic pathology. Exclusion criteria: persons with partial or extended partial edentulism, a history of systemic diseases, alcohol or drug abuse, immune compromised status, psychiatric disorders, pregnancy or lactation, uncontrolled periodontal disease. The study was performed for a period of 18 months and included questionnaires of satisfaction and masticatory efficiency. Different questionnaires of mastication and general satisfaction were made after treatment.

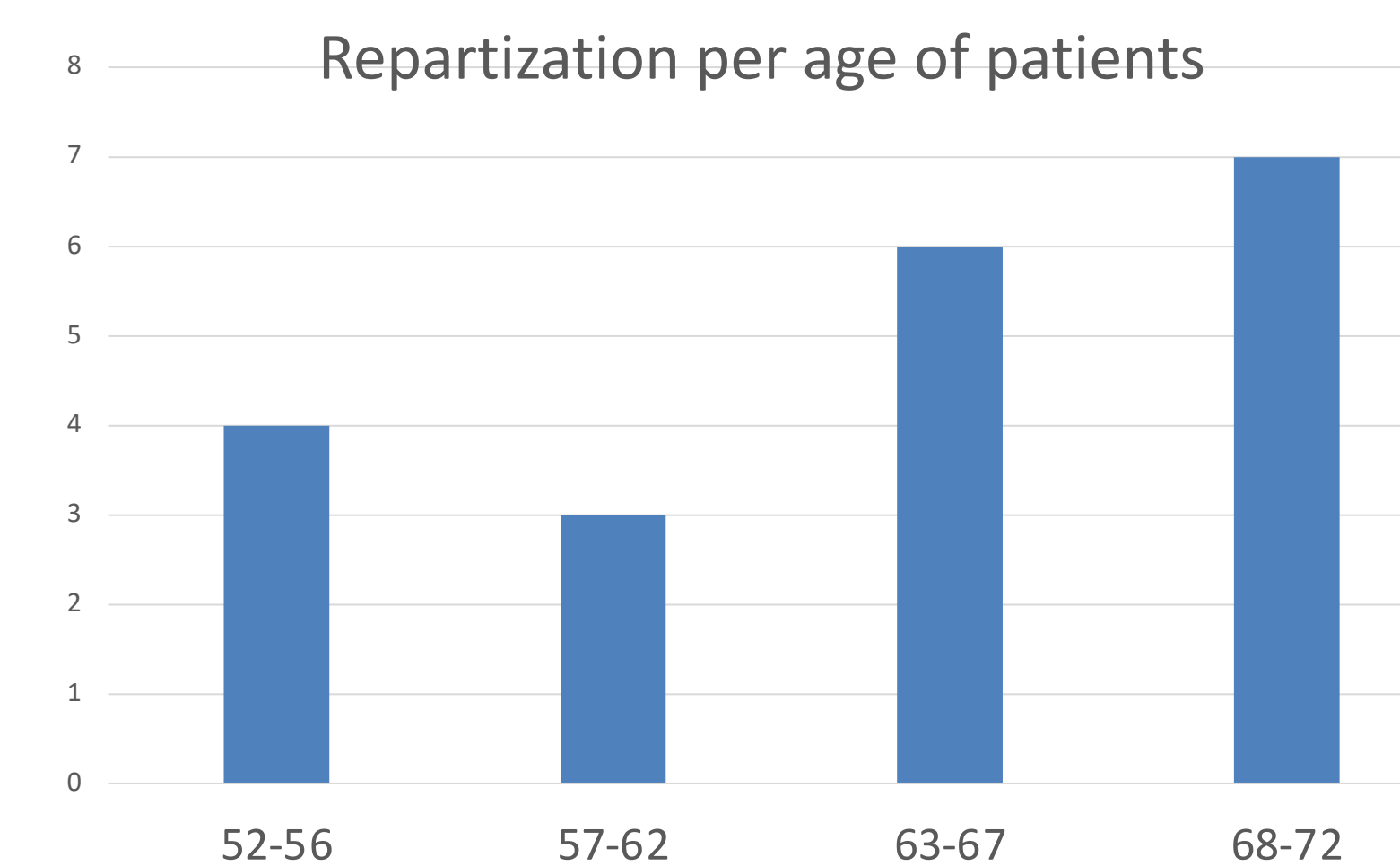
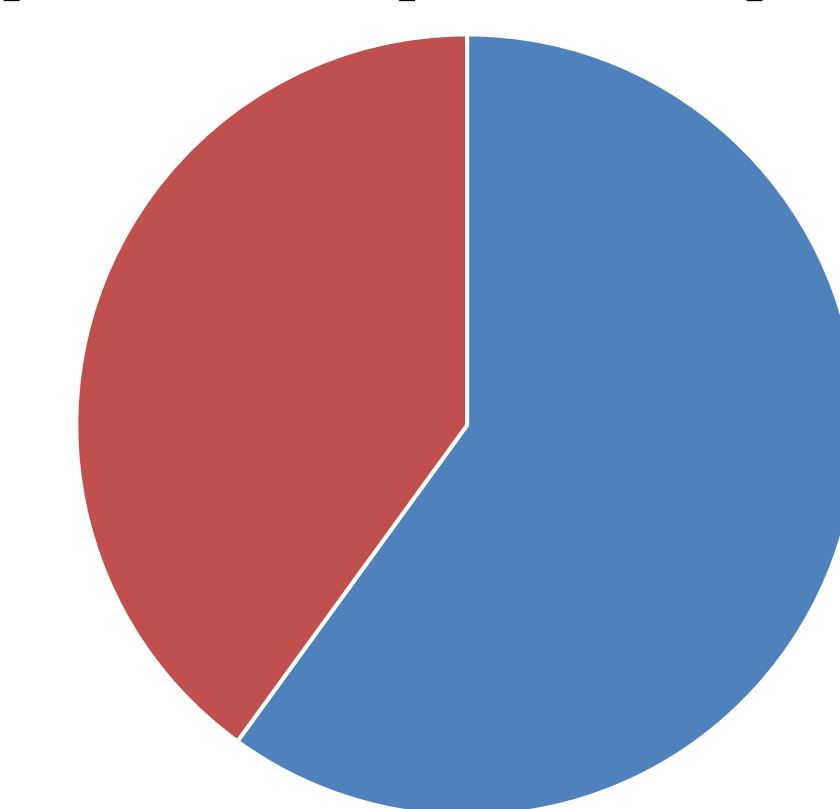


Fig.3 Repartition by age of the patients

### Repartition per sex of patients



■ Men ■ Women

Fig.4 Repartition per sex of the patients

### Results

Mobile prostheses, fixed screwed prostheses on implants and fixed cemented prostheses on implants were chosen as treatment methods. Thus, following the study, the lowest degree of satisfaction and chewing was received by mobile prostheses, with a percentage of 50% general satisfaction and 40% of masticatory. An equal degree was present in fixed prostheses on implants by screwing and cementing, with differences of less than 10%. The percentage of satisfaction and mastication was 90%, while for implant supported overdenture was 70% of masticatory efficiency.

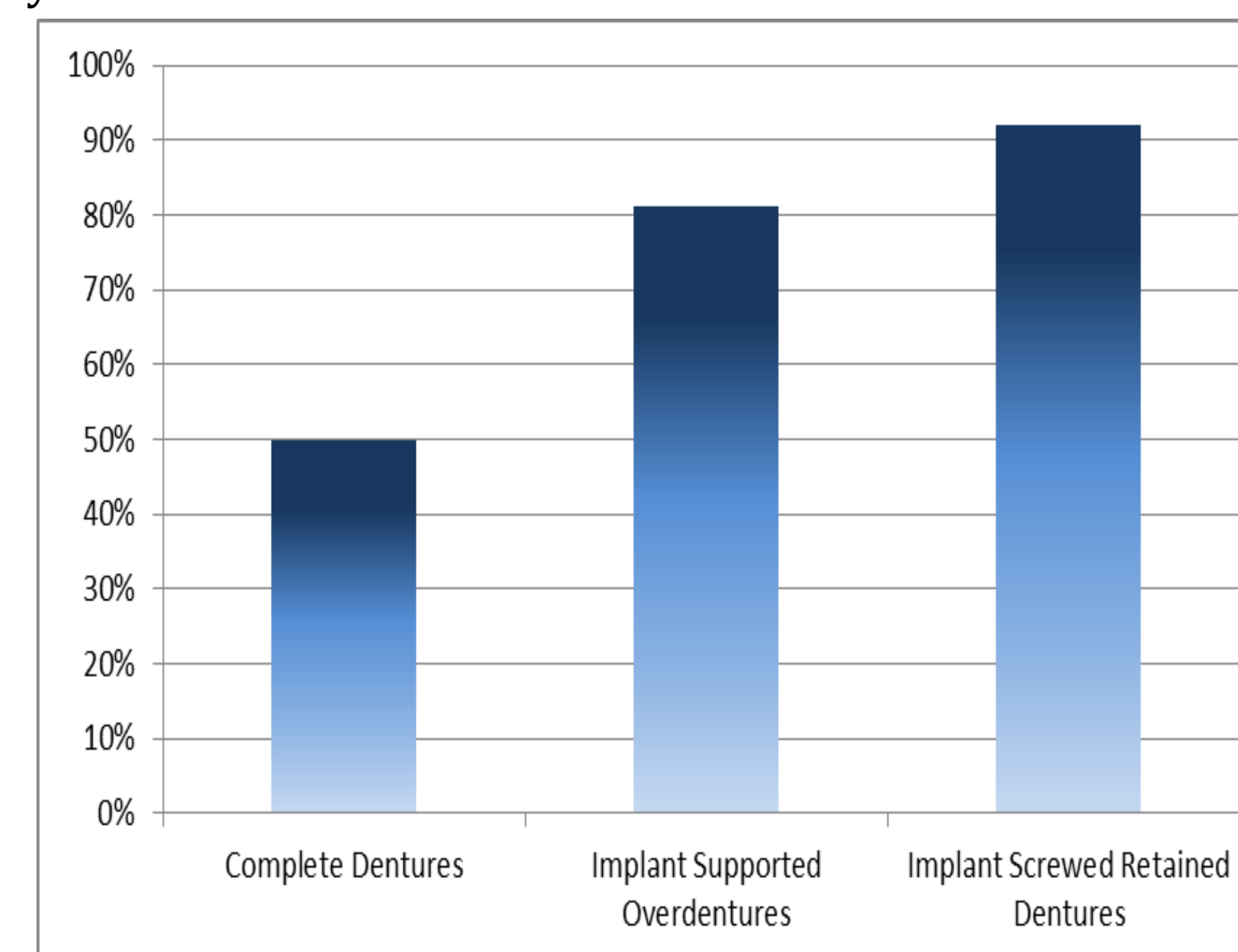


Fig 5. General satisfaction after collecting data from questionnaires

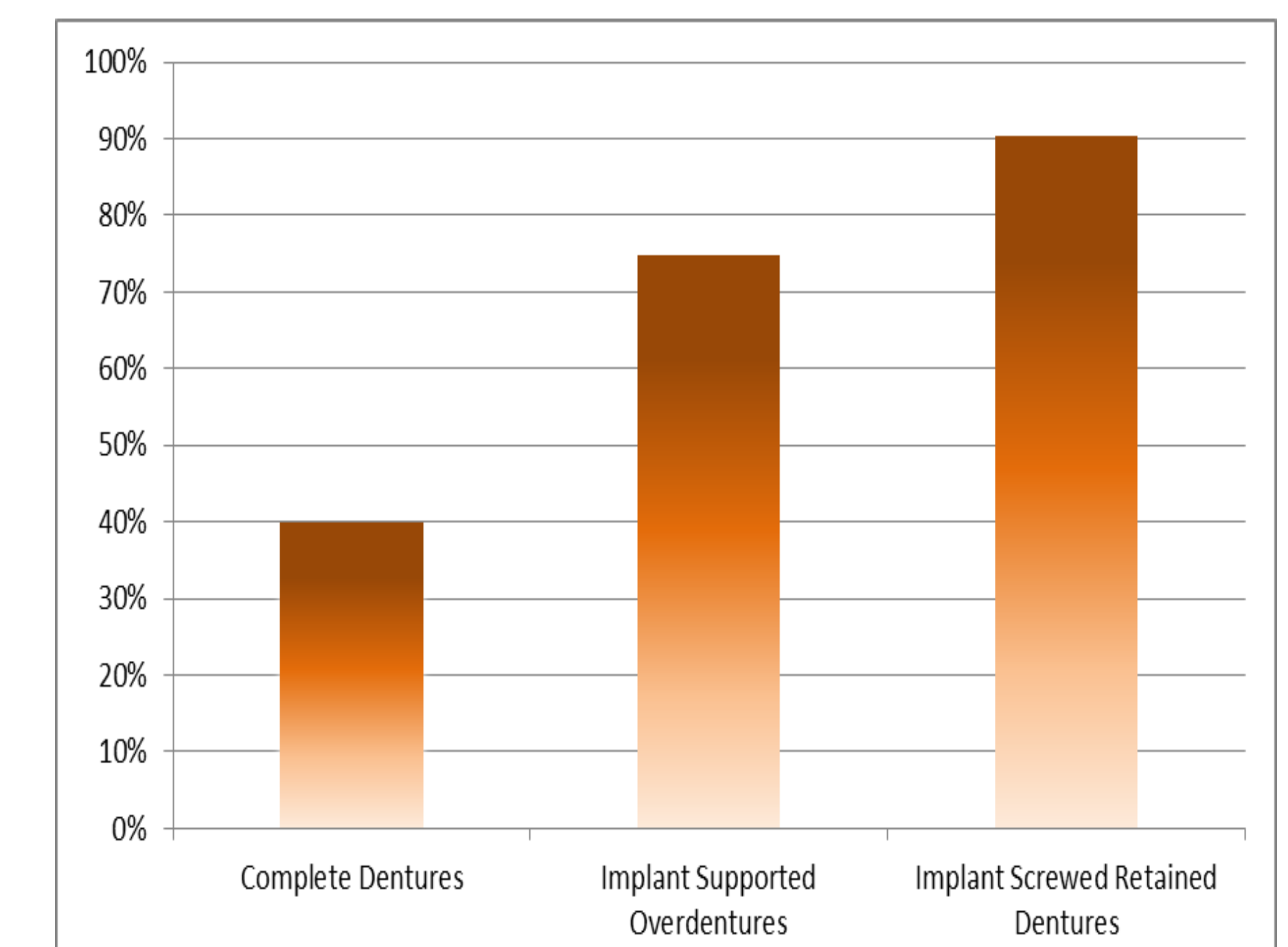


Fig 6. Masticatory efficiency after collecting data from questionnaires



### Conclusions

Implant-prosthetic restoration is the rehabilitation of election in the treatment of total edentulousness, with impressive results, fully restoring the stomatognathic system and its functions.