

Satisfaction and quality of life of patients rehabilitated by new complete prostheses: A cross sectional study

Satisfaction et qualité de vie des patients réhabilités par de nouvelles prothèses complètes : Une étude transversale

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ABSTRACT

Introduction : Edentulism impacts the quality of life and nutrition capacities especially of edentulous people. While conventional full dentures are commonly used as a treatment option, there is no consensus on the key factors that are essential in reducing the risk of patient dissatisfaction. The primary aim of this study is to assess the satisfaction and the short-term quality of life of Moroccan bimaxillary edentulous patients recently rehabilitated with bimaxillary removable complete denture and to identify factors associated.

Methods: This was a descriptive and analytical cross-sectional study targeting 40 bimaxillary total edentulous patients and was conducted at the odontology department of the Military Instruction Hospital Mohammed V in Rabat. All complete dentures were made by following the same protocol. A questionnaire was used to assess patients' overall satisfaction with dentures.

Quality of life related to oral health was evaluated using a valid questionnaire represented by the OHIP-20 (Oral Health Impact Profile).

Data were analyzed using ANOVA test and test post-hoc, an univariable and multivariable analysis using linear regression was conducted to examine the factors associated with the OHIP score.

Results: The satisfaction rate among edentulous patients was 80%, with 77.5% reporting satisfaction with aesthetic appearance, 67.5% with masticatory efficiency, and 70% with stability. The mean global OHIP-20 score was 40.58 ± 10.89 . Our findings indicated a statistically significant discrepancy in OHIP-20 scores related to age in the social incapacity domain ($p=0.014$). Gender also showed a significant difference in OHIP-20 scores in the physical incapacity domain ($p=0.006$). Furthermore, there was a notable difference in OHIP-20 scores based on the type of resorption, with Class IV Atwood resorption exhibiting the highest scores in both the mandible (45 ± 20.87) and maxilla (42.50 ± 12.33).

Conclusion: Patient satisfaction and quality of life with complete maxillary and mandibular dentures was found to be associated to age, gender, and degree of resorption.

Keywords: Satisfaction / Quality of life / Bone resorption / Complete dentures / OHIP-20.

RÉSUMÉ

Introduction : L'édentation impacte la qualité de vie et les capacités nutritionnelles, en particulier chez les personnes édentées. Bien que des prothèses complètes conventionnelles soient couramment utilisées comme option de traitement, il n'existe pas de consensus sur les facteurs clés essentiels à la réduction du risque d'insatisfaction des patients. L'objectif principal de cette étude est d'évaluer la satisfaction et la qualité de vie à court terme des patients marocains bimaxillaires édentés, récemment réhabilités avec des prothèses complètes amovibles bimaxillaires, et d'identifier les facteurs associés.

Méthodes : Il s'agit d'une étude descriptive et analytique transversale ciblant 40 patients édentés totaux bimaxillaires, menée au sein du département d'odontologie de l'Hôpital Militaire d'Instruction Mohammed V à Rabat. Toutes les prothèses complètes ont été réalisées en suivant le même protocole. Un questionnaire a été utilisé pour évaluer la satisfaction globale des patients vis-à-vis de leurs prothèses. La qualité de vie liée à la santé bucco-dentaire a été évaluée à l'aide d'un questionnaire valide représenté par l'OHIP-20 (Oral Health Impact Profile). Les données ont été analysées à l'aide du test ANOVA et du test post-hoc, une analyse univariable et multivariable par régression linéaire a été effectuée pour examiner les facteurs associés au score OHIP.

Résultats : Le taux de satisfaction parmi les patients édentés était de 80 %, avec 77,5 % exprimant leur satisfaction concernant l'apparence esthétique, 67,5 % concernant l'efficacité masticatoire et 70 % concernant la stabilité. Le score OHIP-20 global moyen était de $40,58 \pm 10,89$.

Nos résultats ont indiqué une différence statistiquement significative dans les scores OHIP-20 liée à l'âge dans le domaine de l'incapacité sociale ($p=0,014$). Le sexe a également montré une différence significative dans les scores OHIP-20 dans le domaine de l'incapacité physique ($p=0,006$). De plus, une différence notable dans les scores OHIP-20 en fonction du type de résorption a été observée, la résorption de classe IV d'Atwood présentant les scores les plus élevés à la fois pour la mandibule ($45 \pm 20,87$) et pour le maxillaire ($42,50 \pm 12,33$).

Conclusion : La satisfaction des patients et la qualité de vie avec des prothèses maxillaires et mandibulaires complètes étaient associées à l'âge, au sexe et au degré de résorption.

Mots clés : Satisfaction / Qualité de vie / Résorption osseuse / Prothèses complètes / OHIP-20.

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INTRODUCTION

Demographic data regarding the aging population indicate a persistent and growing need for the rehabilitation of edentulous individuals over the coming decades. As life expectancy increases and the proportion of elderly individuals rises, the prevalence of edentulism is expected to remain significant. Complete dentures continue to be a preferred treatment option for those who are fully edentulous, as they effectively enhance overall quality of life by restoring essential oral functions and improving self-esteem (1).

The prevalence of edentulism among elderly individuals is estimated to range from 25% to 30% in North America and from 15% to 72% in Europe (3). This wide variation underscores the importance of addressing the oral health needs of this demographic. The extent of tooth loss leads to physical changes that adversely affect an individual's ability to eat and communicate, resulting in challenges to self-esteem and increased social isolation. Furthermore, edentulism can contribute to a range of health issues, including inadequate nutrition, systemic health complications, and cognitive decline (4).

Teeth play a crucial role in maintaining facial aesthetics and a pleasant smile, both of which are significant determinants of quality of life (5). Complete dentures are widely acknowledged as the most common and cost-effective prosthetic solution for treating edentulous patients, focusing on the restoration of oral functions while enhancing functional, aesthetic, and psychological integration (6).

Inadequate prostheses can negatively impact both aesthetic appearance and masticatory function, leading to lesions that significantly affect patients' daily lives and result in functional, physical, and psychological discomfort (7). Evaluating patient satisfaction and quality of life following rehabilitation is a critical component of clinical research, as it provides insights into the effectiveness of treatment and areas for improvement (8). Numerous studies have investigated patient satisfaction after prosthetic treatment, identifying key factors that contribute to this satisfaction, such as the fit and comfort of the dentures, as well as the support provided by dental professionals (8,9).

Researchers have utilized the Oral Health Impact Profile (OHIP) index as a comprehensive tool for assessing and measuring various aspects of life, including physical, psychological, and social dimensions (11). Additionally, the quality of the patient-dentist relationship and the patient's overall attitude towards receiving new dentures are vital factors influencing their satisfaction with the denture fitting process (12). A positive relationship can enhance communication and trust, ultimately leading to better treatment outcomes.

The objective of this study was to evaluate short-term satisfaction, quality of life, and associated factors in Moroccan bimaxillary edentulous patients who have recently undergone rehabilitation with complete dentures. By focusing on this specific population, the study aims to contribute valuable data to the existing literature and inform future practices in dental rehabilitation.

METHODS

This was a cross-sectional analytical study targeting 40 bimaxillary total edentulous patients. The study was conducted in accordance with the Declaration of Helsinki, ensuring adherence to ethical principles in medical research, and it followed the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines (2).

Sample size calculation was performed based on previous studies, aiming for a power of 80% to detect significant differences in satisfaction and quality of life scores. The minimum sample size required was determined to be 40 participants, which was achieved in this study.

The questionnaire was administered anonymously to protect the confidentiality of the participants. The inclusion criteria comprised individuals of any age and gender who had bimaxillary edentulism and were able to comprehend and respond to the questionnaire utilized in the study. The exclusion criteria consisted of individuals with implants or immediate prostheses, those unable to provide fully informed consent, and those who were not included in treatment and follow-up appointments.

After explaining the purpose of the research to each patient and obtaining their agreement to participate, a medical and dental history was taken, and a clinical examination and complete prosthesis examination were performed.

All complete prostheses were fabricated in the same dental laboratory. A standard study protocol was followed, which involved taking primary and secondary impressions, registration of jaw relationships, using occlusal waxes, and placement of artificial teeth in a mutually balanced occlusal scheme, with one or two trials for insertion and seating of the dentures. Denture adjustments were made at the follow-up appointment. The satisfaction questionnaire was developed and completed through targeted inquiries, focusing on the following parameters: duration of prosthesis wear, retention, stability, occlusion, pain, chewing ability, aesthetics, and oral hygiene related to the prosthesis.

Quality of life related to oral health was evaluated using a valid questionnaire represented by the OHIP-20 (Oral Health Impact Profile-20) (global score and sub-scores). This questionnaire is a short version of OHIP-49 and is suitable for totally edentulous individuals. It comprises 20 questions, to be answered using a Likert-type scale (never = 1, rarely = 2, occasionally = 3, often = 4, very often = 5, and always = 6). The total OHIP-20 score thus ranges from 20 to 120 (11). A lower score is associated with better oral health-related quality of life. The questionnaire, completed by the same operator, is grouped into 7 domains: functional limitations, physical pain, psychological discomfort, physical incapacities, psychological incapacities, social incapacities, and handicap. The global score of the OHIP-20 questionnaire was calculated by summing the scores from all dimensions. A completed form documenting socio-demographic and clinical information, including both intraoral and extraoral examinations, was also collected. Characteristics such as gender, age group, education level, and profession

served as key indicators of qualitative variables. The resorption classes based on Atwood's classification were evaluated in terms of head counts and percentages: Class I: Ridge with poor resorption, considered favorable; Class II: Moderately resorbed ridge; Class III: Ridge showing high levels of vertical and horizontal resorption, with vestibulo-lingual bone table hypoplasia and a knife-edge ridge; and Class IV: Concave ridge with significant vertical collapse of both alveolar and basal bone structures (13).

Ethical Considerations

Ethical approval for this study was obtained from the Ethics Committee of Faculty of Dental Medicine Rabat. Informed consent was obtained from all participants prior to their inclusion in the study, ensuring that they were fully aware of the study's purpose and procedures. Participants' confidentiality was maintained throughout the research process.

Statistical Analysis

Mean values and standard deviations were calculated for all aspects of patient satisfaction. Quantitative variables were expressed as mean $\pm$ standard deviation and included total scores and dimension scores (functional limitation, physical pain, psychological discomfort, physical handicap, psychological disability, social disability, handicap). Differences between groups of patient satisfaction were tested using the T-test. The comparison of these scores between different age groups and between different maxillary and mandibular resorption classes was carried out using the ANOVA test followed by Tukey's Post-Hoc test. An univariable and multivariable analysis using linear regression was conducted to examine the factors associated with the OHIP score. Analysis was performed using Jamovi. Statistical significance was set at $p < 0.05$. The variables that exhibited a statistically significant threshold in the univariable model were incorporated into the multivariable model, ensuring that collinear variables were not included.

RESULTS

Study population characteristics

Among the 40 patients in the study, 52.5% were male and 47.5% were female. The patients were categorized into three age groups: 60% were aged 55-65 years, 27.5% were aged 66-75 years, and 12.5% were over 75 years. A majority (72.5%) received a complete removable prosthesis for the first time, while 27.5% had prior experience with prostheses.

In terms of general health, 57.5% of the patients reported good health. The primary causes of edentulism included dental caries (47.5%), trauma (27.5%), and periodontal issues (22.5%).

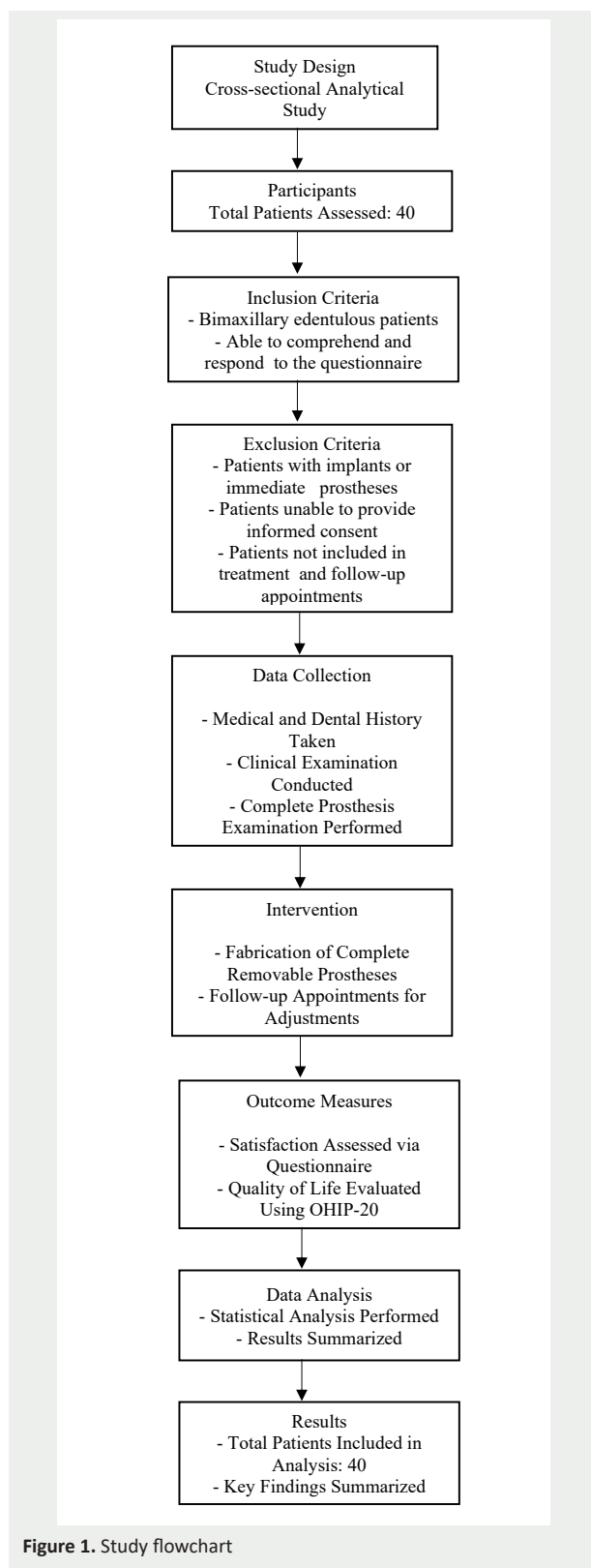


Figure 1. Study flowchart

According to Atwood classification, 50% of patients exhibited maxillary resorption class II, while 25% had class I, 20% had class III, and 5% had class IV. For mandibular resorption, 42.5% had class II, 22% had class III, 20% had class IV, and 15% had class I.

Positive stability features were noted, with 82.5% of patients having a favorable palate, 65% exhibiting prominent tuberosities, and 72.5% having a firm trigon. (Table 1).

Table 1. Assessment of satisfaction with the new prostheses

Satisfaction parameters	N(%)=40
Maxillary stability	
Stable	28(70.0)
Unstable	11(27.5)
Mandibular stability	
Stable	29(72.5)
Unstable	10(25.0)
Chewing efficiency	
Very satisfactory	27(67.5)
Unsatisfactory	12(30.0)
Aesthetics	
Good	31(77.5)
Poor	8(20.0)
Overall satisfaction	
Yes	32(80.0)
No	7(17.5)

expressed as headcounts and percentages

The average total score was 40.58 ± 10.89 on a scale of 20-120.

Among the sub-scores obtained for specific areas, the most significant negative impact was observed in physical incapacity (9.85 ± 4.03) closely followed by physical pain (9.30 ± 4.94), functional limitation (8.10 ± 3.98) and psychological incapacity (5.32 ± 3.08).

Conversely, which signify a better quality of life, were observed in psychological discomfort (4 ± 2.33), handicap (2.45 ± 1.19), and social incapacity (2.25 ± 0.70).

Statistical analysis revealed that higher total OHIP-20 scores and sub-dimension scores were associated with factors such as age, gender, and resorption classification. Notably, significant differences were found in the social incapacity dimension across age groups, with the oldest group exhibiting the highest scores. Additionally, a significant difference in the physical incapacity dimension was observed between men and women, with men reporting higher scores.

No statistically significant differences in satisfaction parameters were found when comparing age groups, gender, educational levels, various diseases, and patients with or without prior prosthetic treatment (Table 2).

The comparison of OHIP-20 scores based on maxillary resorption stages revealed significant differences across the Atwood resorption classification. A notable difference was observed in the total OHIP-20 score, with higher scores associated with more advanced resorption stages. Specifically, significant disparities were found in the dimensions of functional limitation, physical pain, and psychological discomfort.

Patients classified with maxillary resorption IV exhibited the highest total OHIP-20 score (52.50 ± 7.07) compared to those in class I (34.00 ± 11.45). In the functional limitation dimension, significant differences were noted between classes III (11.00 ± 3.96) and I (4.80 ± 2.44), with class IV also showing elevated scores (11.00 ± 7.07). Similarly, the physical pain dimension indicated that patients in the maxillary resorption IV group reported the highest levels of pain (15.00 ± 1.41).

Table 2. OHIP 20 score values

Items	Values (N=40)
1 Functional limitation	8.10 ± 3.98
Q1 : Difficulty chewing food	2.83 ± 1.58
Q2 : Food stuck	2.93 ± 1.74
Q3: Dentures unsuitable	2.35 ± 1.49
2 Physical pain	9.30 ± 4.94
Q4: Pain in the mouth	2.28 ± 1.19
Q5: Discomfort when eating	2.00 ± 1.24
Q6: Presence of painful points	2.38 ± 1.27
Q7: Uncomfortable prostheses	2.45 ± 1.61
3 Psychological discomfort	4.00 ± 2.33
Q8: Anxiety about dental problems	2.18 ± 1.25
Q9: Self-awareness due to dental problems	1.83 ± 1.25
4 Physical incapacity	9.85 ± 4.03
Q10: Foods avoided due to dental problems	2.00 ± 1.28
Q11: Unsatisfactory diet due to dental problems	1.75 ± 1.23
Q12: Unable to eat with dentures	2.90 ± 2.01
Q13: interruption of eating due to dental problems	3.25 ± 1.90
5 Psychological incapacity	5.32 ± 3.08
Q14: Pain caused by dental problems	2.03 ± 1.57
Q15: Embarrassed because of dental problems	3.30 ± 2.25
6 Social incapacity	2.25 ± 0.70
Q16: Avoiding activities due to dental problems	1.12 ± 0.33
Q17: Tolerant to partners or family	1.10 ± 0.34
Q18: Irritating to others because of dental problems	1.15 ± 0.53
7 Handicap	2.45 ± 1.19
Q19 Unable to enjoy the company of others	1.18 ± 0.54
Q20: Less satisfaction due to dental problems	1.28 ± 0.71
Total score	40.58 ± 10.89

expressed as mean $\pm$ standard deviation

In the psychological discomfort dimension, significant differences were observed between maxillary resorption IV (7.50 ± 4.95) and I (2.60 ± 0.96), with class IV patients experiencing greater discomfort (Table 3).

The analysis of OHIP-20 scores based on mandibular resorption stages revealed a statistically significant difference in the total OHIP-20 score ($p=0.022$). Patients classified with mandibular resorption IV exhibited the highest total score (50.40 ± 6.63) compared to those in class II (36.50 ± 11.10).

In the functional limitation dimension, significant differences were noted between mandibular resorption IV and both classes I and II, with the highest score recorded in class IV (12.13 ± 3.48). Similarly, in the physical pain dimension, significant differences were observed between mandibular resorption IV and class I, with class IV patients reporting the highest levels of pain (13.75 ± 5.26) (Table 4).

Table 3. Difference of OHIP20 score according to maxillary resorption

Score OHIP	R max I n=10	R max II n=20	R max III n=8	R max IV n=2	p-values
Total OHIP20 score	34.00±11.45	40.01±10.64	47.00±5.61	52.50±7.07*	0.027
Functional limitation dimension	4.80±2.44	8.30±3.34	11.00±3.96**	11.00±7.07	0.003
Physical pain dimension	6.90±2.92	8.50±4.88	12.88±5.11	15.00±1.41	0.015
Psychological discomfort dimension	2.60±0.96	4.05±2.03	4.75±2.71	7.50±4.95***	0.023
Physical incapacity dimension	8.80±4.61	10.20±4.33	10.63±3.02	8.50±0.70	0.733
Psychological incapacity dimension	5.30±3.40	5.40±3.10	4.50±2.83	8.00±2.83	0.570
Social incapacity dimension	2.30±0.94	2.10±0.44	2.50±0.92	2.50±0.70	0.548
Handicap dimension	2.60±1.89	2.30±0.97	2.63±0.74	2.50±0.70	0.894

expressed as mean ± standard deviation

R max means maxillary resorption

I, II, III, IV means Atwood resorption classification

*R max IV vs I (p=0.045) after post-hoc test.

*** R max IV vs I (p=0.026) after post-hoc test.

Table 4. Difference of OHIP20 score according to mandibular resorption

Score OHIP	R mand I n=6	R mand II n=17	R mand III n=9	R mand IV n=8	p-values
Total OHIP20 score	38.30±13.60	36.50±11.10	41.00±6.60	50.40±6.63*	0.022
Functional limitation dimension	6.67±4.72	6.53±3.24	8.44±2.96	12.13±3.48**	0.005
Physical pain dimension	8.00±4.43	7.88±4.27	8.89±4.54	13.75±5.26***	0.032
Psychological discomfort dimension	4.00±3.46	3.35±1.58	4.22±1.56	5.13±3.27	0.455
Physical incapacity dimension	8.67±4.27	9.06±4.29	11.11±4.11	11.00±3.16	0.455
Psychological incapacity dimension	6.83±3.87	4.94±2.66	3.56±2.07	7.00±3.42	0.064
Social incapacity dimension	2.00±0.00	2.18±0.72	2.44±0.88	2.38±0.74	0.618
Handicap dimension	2.00±0.00	2.59±1.69	2.56±0.88	2.38±0.51	0.773

expressed as mean ± standard deviation

R mand means mandibular resorption

*R mand IV vs II (p=0.013) after Post-Hoc test.

** R mand IV vs I (p=0.030) and R mand IV vs II (p=0.003) after Post-Hoc test.

*** R mand IV vs II (p=0.024) after Post-Hoc test.

The analysis revealed several statistically significant relationships between various factors and the total OHIP-20 score. Notably, class III maxillary resorption was associated with an increase of 13 points in the OHIP-20 score (95% CI [3.38; 22.60], $p = 0.01$), while class IV maxillary resorption was linked to an increase of 18 points (95% CI [2.28; 33.70], $p = 0.02$). Additionally, class IV mandibular resorption was associated with a 12-point increase in the total OHIP-20 score.

For each unit increase in the history of prosthetic treatment, the total OHIP-20 score increased by 5.73 points. A significant relationship was also found between maxillary stability/retention and the total OHIP score; when maxillary stability/retention was moderate, the score increased by 8 points (95% CI [1.31; 14.80], $p = 0.02$), and when considered unsatisfactory, the score increased by 19 points (95% CI [10.43; 20.00], $p < 0.001$). Furthermore, unsatisfactory mandibular stability/retention was associated with a 22-point increase in the total OHIP score (95% CI [9.57; 34.80], $p = 0.001$).

In the multivariable linear regression analysis, after adjusting for age, sex, history of prosthetic treatment, and classes IV maxillary and mandibular resorption, a

significant relationship was found between the total OHIP-20 score and sex. Men had a total OHIP score elevated by 6.71 points compared to women (95% CI [0.24; 13.18], $p = 0.04$). Additionally, a significant relationship was observed between the total OHIP score and maxillary resorption, with class IV maxillary resorption leading to a 25-point increase in the total OHIP score (95% CI [8.15; 43.26], $p = 0.006$) (Table 5).

DISCUSSION

Summary of Key Findings

This study aimed to evaluate the short-term satisfaction, quality of life, and associated factors in Moroccan bimaxillary edentulous patients who have recently undergone rehabilitation with complete dentures. The findings indicate that a significant proportion of patients reported high levels of satisfaction with their new prostheses, with 80% expressing overall satisfaction.

Table 5. Simple and multiple linear regression of factors associated with the OHIP score

Variables	categories	Univariate analysis			Multivariate analysis		
		B	95% CI	P	B	95% CI	P
Age		0.07	-0.33;0.35	0.95	-0.30	-0.62; 0.02	0.06
Sexe		3.60	-3.37;10.60	0.30	6.71	0.24;13.18	0.04
Maxillary Resorption	2 – 1	6.15	-1.71;14.00	0.12	6.38	-1.70;14.48	0.11
	3 – 1	13.00	3.38;22.60	0.01	12.11	1.19; 23.03	0.03
	4 – 1	18.00	2.28;33.70	0.02	25.71	8.15; 43.26	0.006
Mandibular resorption	2 – 1	-1.80	-2.88; 1.59	0.70	-3.08	-13.17; 7.00	0.53
	3 – 1	2.67	-2.26; 2.71	0.61	-0.95	-12.51;10.61	0.86
	4 – 1	12.04	-1.42; 3.67	0.03	4.14	-7.63; 15.92	0.47
History of prosthetic treatment		5.73	-1.96; 13.40	0.14	5.49	-1.13; 12.20	0.07
Maxillary stability/retention	Moderate – Highly Satisfactory	8.04	1.31; 14.80	0.02	---	---	---
	Unsatisfactory – Highly Satisfactory	19.24	10.43;20.00	<0.001	---	---	---
Mandibular stability/retention	Moderate – Highly Satisfactory	5.99	-0.85;12.80	0.08	---	---	---
	Unsatisfactory – Highly Satisfactory	22.17	9.57; 34.80	0.001	---	---	---

The average total OHIP-20 score was 40.58 ± 10.89 , reflecting a moderate impact of oral health on quality of life. Notably, the dimensions of physical incapacity and physical pain exhibited the most significant negative impacts, while psychological discomfort and social incapacity showed relatively better scores. The analysis revealed that factors such as age, gender, and resorption classification significantly influenced the OHIP-20 scores. Specifically, patients with class IV maxillary and mandibular resorption reported the highest total OHIP-20 scores, indicating a greater negative impact on their quality of life. Additionally, the study found that men reported higher scores in the physical incapacity dimension compared to women, highlighting potential gender differences in the perception of oral health-related quality of life. The results also indicated that a history of prosthetic treatment and the stability of the dentures significantly affected patient satisfaction, with those experiencing unsatisfactory maxillary and mandibular stability reporting markedly higher OHIP-20 scores.

It is crucial to systematically collect data on patient satisfaction to better understand their expectations and adapt services accordingly, ensuring that the care provided aligns with patient needs and enhances overall quality of life(14).

Methodological Considerations

The use of the Oral Health Impact Profile (OHIP-20) in this study is noteworthy. This validated tool assesses the impact of oral health on quality of life through 20 items covering various dimensions, including functional limitations, physical pain, psychological discomfort, and social incapacity. Our administration of the OHIP-20 followed standardized protocols, ensuring reliability and validity in measuring the subjective impact of oral health

conditions. The average OHIP-20 score of 40.58 indicates a moderate impact on quality of life, which is consistent with findings from other studies, such as those by Laetitia Rio et al. and Sara A. Alfadda et al (15). However, it contrasts with Bouhy et al.(16), who reported a much lower OHIP-20 score of 10.76, suggesting that cultural factors may influence perceptions of quality of life.

Clinical and Demographic Correlates

The predominant age group of 56-65 years, constituting 60% of participants, aligns with Bashyer and Ssaddaladin's (17) findings but contrasts with Bouhy and Lamy's younger cohort (16). This discrepancy may reflect regional differences in edentulism onset patterns or access to dental care. The male predominance (52.5%) observed in our study is consistent with findings from Mogtar Gueye et al. (18) and Takashi et al.(19), while several studies have documented a female predominance, such as those by Yun Zou and Zhan (20) and Fenlon and Sherriff (21). Soboleva and al. found that women were slightly less satisfied with the appearance of their dentures, as well as with the chewing ability and comfort of both upper and lower dentures (1). Previous studies have shown that men tend to adjust faster to new dentures than women(22).

The gender differences in physical incapacity scores suggest that biological factors may interact with cultural expectations regarding dental function. Furthermore, the strong association between advanced resorption (Atwood class IV) and poorer outcomes reinforces the importance of ridge morphology in determining patient satisfaction and quality of life.

Prosthetic Factors Influencing Outcomes

Several key treatment factors emerged as significant

predictors of patient satisfaction. Unsatisfactory denture stability was associated with increased OHIP-20 scores, underscoring the clinical imperative for proper border molding and post-insertion adjustments. The correlation between chewing difficulties and physical incapacity scores aligns with previous research indicating that conventional dentures may be insufficient for patients with marked resorption. Interestingly, our study found no statistically significant difference in aesthetic satisfaction, which may be attributed to adherence to the standards set by the French Society of Aesthetic Dentistry(23). Additionally, the low levels of pain reported by participants can be linked to our rigorous adherence to clinical protocols, including precise impressions and systematic follow-up procedures.

Theoretical and Practical Implications

These findings advance prosthodontic theory by validating the OHIP-20's applicability in North African populations, demonstrating the compounding effects of resorption severity on quality of life, and revealing nuanced gender differences in adaptation to conventional prostheses. Clinically, our results suggest that patients with Atwood class III-IV resorption may benefit from considering implant-supported options(24), while meticulous attention to denture stability remains paramount. Furthermore, the findings indicate that men may require additional rehabilitation support to enhance their satisfaction with prosthetic treatment(25).

Limitations and Future Directions

While informative, this study has limitations, including a short follow-up period of six months and a single-center design, which may limit the generalizability of the findings. Future research should focus on comparing conventional versus implant-supported prostheses in similar cohorts, conducting longitudinal studies to track OHIP-20 score trajectories, and investigating cultural influences on denture satisfaction.

CONCLUSION

In conclusion, this study underscores the significant impact of bimaxillary complete dentures on the quality of life of Moroccan edentulous patients. With a satisfaction rate of 80%, most patients expressed positive feelings regarding aesthetic appearance, masticatory efficiency, and stability of their dentures. However, our analysis revealed that satisfaction levels are closely associated with demographic factors such as age and gender, as well as the classification of mandibular resorption.

The statistically significant variations in OHIP-20 scores based on these factors highlight the need for personalized approaches when rehabilitating edentulous patients. Specifically, patients with Class IV Atwood resorption reported the highest levels of OHIP-20, indicating that the type of resorption may play a critical role in prosthesis acceptance and overall satisfaction.

Our findings suggest that addressing these determinants during the prosthetic fitting process could enhance patient outcomes, and future research should focus on developing strategies to better manage the unique challenges faced by individuals with significant resorption. This study provides valuable insights for clinicians to improve treatment protocols and ultimately enhance the quality of life for edentulous patients.

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