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Research Article

**IN COMPLETE DENTURES TREATMENT ASSESSMENT OF  
ORAL HEALTH RELATED QUALITY OF LIFE**<sup>1</sup>Dr. Muhammad Usama Khalid Tareen, <sup>2</sup>Dr. Ameer Hamza, <sup>3</sup>Dr. Novaira Waseem,<sup>1</sup>Multan Medical and Dental College, Multan<sup>2</sup>Liaquat University of Medical and Health Sciences, Jamshoro<sup>3</sup>Rawal Institute of Health Sciences, Islamabad**Abstract:**

**Objective:** The aim of the study was to evaluate OHRQoL before and after the administration of a complete prosthesis.

**Study Design:** A case series study was conducted.

**Location and Duration:** In the Department of Prosthodontics Jinnah Hospital, Lahore for one year duration from March 2017 to March 2018.

**Methods:** One hundred and one toothless subjects were studied. All subjects completed the OHIP-14 questionnaire before and after the full dentures were given. The answers were compared in Likert scale.

**Results:** In most of the cases, pre-treatment responses were found at the upper end of the OHIP-14 questionnaire, which showed negative effects on OHRQoL. Subsequent responses to provisions showed a significant improvement.

**Conclusion:** This study suggested that the provision of complete dentures in people with a positive attitude towards removable prostheses had a positive effect on OHRQoL.

**Key words:** Oral health impact profile (OHIP), Oral health related quality of life (OHRQoL), Complete dentures, Prosthodontics.

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**INTRODUCTION:**

Quality of life is defined as a subjective, phenomenological and multidimensional structure based on an internal reference frame of the individual. OHRQoL is part of the quality of life affected by oral health and function. This quality of life is influenced by oral health and the number of teeth. There are two different groups to evaluate QOL (generic and disease-specific measures). The use of patient-based results helps to assess the psychosocial consequences of oral illness. The OHIP is one of the most advanced instruments used by WHO to assess the disability, disability classification and assessment of oral barriers. OHIP, a profile of forty-nine articles describing the effects of oral health conditions in seven areas, Functional Limitation, Physical Pain, Psychological Sad, Physical Disability, Psychological Disability, Social Inadequacy and Disability. In addition to the original English version of OHIP, it has been translated into Chinese, Sinhalese and German, representing intercultural equivalence. Then, a short OHIP form was developed in which the complete 49 questions was not suitable. Complete prosthesis is the most common form of prosthetic rehabilitation for edentulism. In Pakistan, complete immortality occupies about 4.1% of the population aged 65 and over, and an increase of 9.3% is expected in 2030. OHRQoL was accepted as a criterion for assessing the effect of edentulism and current treatments measured by OHIP.

**RESULTS:**

**TABLE 1: AGE DISTRIBUTION OF THE SUBJECTS (n = 100)**

Age Range	Frequency	Percentage
50-55	55	55.0
56-60	45	45
Total	100	100.0

Mean  $\pm$  S.D = 55.7  $\pm$  4.25

TABLE 3-4 (1) Represents the functional limitation area of the OHIP that people perceive in the problem. It shows a significant reduction in OHIP ( $p > 0.01$ ).

**MATERIALS AND METHODS:**

This case series study was conducted carried out in the Department of Prosthodontics Jinnah Hospital, Lahore for one year duration from March 2017 to March 2018 to evaluate OHRQoL before and after the administration of a complete prosthesis for the first time. It was done in the Prosthodontics section. It was a deliberate, probabilistic sampling technique. Men and women between 50 and 60 years old were totally toothless. In patients with acute / chronic symptoms, temporo-mandibular dysfunctions, oral manifestation systemic disease, diagnosed psychological cases were excluded. In this study, participants were 100 adult adults who preferred traditional full dentures. An oral confirmation was obtained from each participant. History and clinical examination were performed. A self-contained questionnaire called OHIP-14 was used to measure OHRQoL. The answers were recorded on the Likert scale. Categories for each question: Never, Almost never, Sometimes, Frequently, Very often, and Always. The codes for these categories vary from 1 to 6 for all times. Higher scores on the Likert scale showed a serious problem. The prosthetic procedure was performed by an experienced prosthesis specialist and 100 subjects of the study filled the OHIP-14 again two months after the introduction of a new complete denial. Data were analyzed by using SPSS version 18.0.

**TABLE 2: GENDER DISTRIBUTION. (n = 100)**

Gender	Frequency	Percentage
Male	46	46.0
Female	54	54.0
Total	100	100.0

**TABLE 3: DOMAIN OF FUNCTIONAL LIMITATION**

**Question 1: Did you have trouble pronouncing any word because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	42 (42.0)	42 (42.0)
Hardly ever	23 (23.0)	54 (54.0)
Occasionally	19 (19.0)	4 (4.0)
Fairly often	10 (10.0)	0 (0.0)
Very often	3 (3.0)	0 (0.0)
All the time	3 (3.0)	0 (0.0)
Total	100 (100.0)	100 (100.0)

Chi-square = 38.263, P = 0.001

Table 7-8 (3) represents the main psychological pain that the subjects perceive themselves.

TABLE 7: DOMAIN OF PSYCHOLOGICAL DISCOMFORT

**Question 5: Have you felt self conscious because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	16 (16.0)	46 (46.0)
Hardly ever	30 (30.0)	44 (44.0)
Occasionally	14 (14.0)	6 (6.0)
Fairly often	12 (12.0)	4 (4.0)
Very often	12 (12.0)	0 (0.0)
All the time	16 (16.0)	0 (0.0)
Total	100	100

Chi-square = 52.365, P = 0.001

A significant improvement in quality of life ( $p > 0.01$ ) was shown.

TABLE 5: DOMAIN OF PAIN

**Question 3: Have you had pain or ache in your mouth? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	1 (1.0)	39 (39.0)
Hardly ever	48 (48.0)	55 (55.0)
Occasionally	19 (19.0)	6 (6.0)
Fairly often	20 (20.0)	0 (0.0)
Very often	8 (8.0)	0 (0.0)
All the time	5 (5.0)	0 (0.0)
Total	100	100

Chi-square = 76.333, P = 0.001

Tables 11-12 (5). After leaving the rest of the relaxation and embarrassment related responses in a significant development of psychological disability effect.

TABLE 4: DOMAIN OF FUNCTIONAL LIMITATION

**Question 2: Have you felt that your sense of taste has worsened because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	47 (47.0)	41 (41.0)
Hardly ever	20 (20.0)	55 (55.0)
Occasionally	21 (21.0)	2 (2.0)
Fairly often	3 (3.0)	2 (2.0)
Very often	5 (5.0)	0 (0.0)
All the time	4 (4.0)	0 (0.0)
Total	100	100

Chi-square = 41.638, P = 0.001

TABLE 8: DOMAIN OF PSYCHOLOGICAL DISCOMFORT

**Question 6: Have you felt tense because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	21 (21.0)	59 (59.0)
Hardly ever	28 (28.0)	32 (32.0)
Occasionally	15 (15.0)	7 (7.0)
Fairly often	12 (12.0)	2 (2.0)
Very often	12 (12.0)	0 (0.0)
All the time	12 (12.0)	0 (0.0)
Total	100	100

Chi-square = 52.369, P = 0.001

TABLE 6: DOMAIN OF PAIN

**Question 4: Did you find it uncomfortable to eat any food because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	12 (12.0)	28 (28.0)
Hardly ever	27 (27.0)	60 (60.0)
Occasionally	26 (26.0)	10 (10.0)
Fairly often	8 (8.0)	1 (1.0)
Very often	12 (12.0)	1 (1.0)
All the time	15 (15.0)	0 (0.0)
Total	100	100

Chi-square = 55.780, P = 0.001

TABLE 11: DOMAIN OF PSYCHOLOGICAL DISABILITY

**Question 9: Have you found it difficult to relax because of problems with your teeth, mouth or dentures? n = 100**

Responses	Before Frequency (%)	After Frequency (%)
Never	29 (29.0)	58 (58.0)
Hardly ever	30 (30.0)	33 (33.0)
Occasionally	16 (16.0)	8 (8.0)
Fairly often	8 (8.0)	1 (1.0)
Very often	14 (14.0)	0 (0.0)
All the time	3 (3.0)	0 (0.0)
<b>Total</b>	<b>100</b>	<b>100</b>

Chi-square = 34.921, P = 0.001

Similar studies have been reported in other studies.

TABLE 9: DOMAIN OF PHYSICAL DISABILITY

**Question 7: Has your diet been unsatisfactory because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	20 (20.0)	38 (38.0)
Hardly ever	21 (21.0)	51 (51.0)
Occasionally	21 (21.0)	8 (8.0)
Fairly often	10 (10.0)	2 (2.0)
Very often	18 (18.0)	1 (1.0)
All the time	10 (10.0)	0 (0.0)
<b>Total</b>	<b>100</b>	<b>100</b>

Chi-square = 54.458, P = 0.001

TABLE 12: DOMAIN OF PSYCHOLOGICAL DISABILITY

**Question 10: Have you been a bit embarrassed because of the problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	36 (36.0)	65 (65.0)
Hardly ever	18 (18.0)	30 (30.0)
Occasionally	17 (17.0)	5 (5.0)
Fairly often	8 (8.0)	0 (0.0)
Very often	9 (9.0)	0 (0.0)
All the time	12 (12.0)	0 (0.0)
<b>Total</b>	<b>100</b>	<b>100</b>

Chi-square = 46.872, P = 0.001

TABLE 10: DOMAIN OF PHYSICAL DISABILITY

**Question 8: Have you had to interrupt meals because of problems with your teeth, mouth or dentures? n = 100**

Responses	Before Frequency (%)	After Frequency (%)
Never	42 (42.0)	70 (70.0)
Hardly ever	29 (29.0)	27 (27.0)
Occasionally	13 (13.0)	2 (2.0)
Fairly often	6 (6.0)	1 (1.0)
Very often	8 (8.0)	0 (0.0)
All the time	2 (2.0)	0 (0.0)
<b>Total</b>	<b>100</b>	<b>100</b>

Chi-square = 28.710, P = 0.001

Tables 13-16 (5): There were lower rates of social disability and disability related to treatment. Loss of maxillary teeth leads to phonetic problems. The loss in the jaw teeth does not cause disability.

TABLE 13: DOMAIN OF SOCIAL DISABILITY

**Question 11: Have you been a bit irritable with other people because of the problems with your teeth, mouth or dentures? n = 100**

	Before Frequency (%)	After Frequency (%)
Never	52 (52.0)	66 (66.0)
Hardly ever	21 (21.0)	32 (32.0)
Occasionally	18 (18.0)	2 (2.0)
Fairly often	3 (3.0)	0 (0.0)
Very often	1 (1.0)	0 (0.0)
All the time	5 (5.0)	0 (0.0)
Total	100	100

Chi-square = 25.744, P = 0.001

TABLE 15: DOMAIN OF HANDICAP

**Question 13: Have you felt that life in general is more or less satisfying in spite of the problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	26 (26.0)	70 (70.0)
Hardly ever	34 (34.0)	29 (29.0)
Occasionally	20 (20.0)	1 (1.0)
Fairly often	10 (10.0)	0 (0.0)
Very often	6 (6.0)	0 (0.0)
All the time	4 (4.0)	0 (0.0)
Total	100	100

Chi-square = 57.754, P = 0.001

## DISCUSSION:

The study demonstrates the OHRQoL of a group of hundreds of groups before and after the presentation of full dentures. The study population was homogeneous according to age and sex in harmony with Forgie and Scott. Speech is a complex skill that requires prolonged adaptation, so a significant improvement may be due to a shorter review period.

Subjects also perceived taste problems. It shows a significant reduction in OHIP ( $p > 0.01$ ). According to Allen and McMillan's report reduced taste perception is caused by factors such as taste buds, tooth and systemic deterioration and atrophy of drugs. The provision of new prostheses increases chewing efficiency, resulting in a better perception of taste. TABLE 5-6 (2) represents the area of physical pain in which painful pain is experienced. OHIP showed a significant decrease ( $p > 0.01$ ). Likewise, subjects perceived eating difficulties. The OHIP subscale

TABLE 14: DOMAIN OF SOCIAL DISABILITY

**Question 12: Have you had difficulty doing your usual job because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	38 (38.0)	57 (57.0)
Hardly ever	28 (28.0)	38 (38.0)
Occasionally	15 (15.0)	4 (4.0)
Fairly often	6 (6.0)	1 (1.0)
Very often	10 (10.0)	0 (0.0)
All the time	3 (3.0)	0 (0.0)
Total	100	100

Chi-square = 28.255, P = 0.001

TABLE 16: DOMAIN OF HANDICAP

**Question 14: Have you been totally unable to function because of problems with your teeth, mouth or dentures? (n = 100)**

Responses	Before Frequency (%)	After Frequency (%)
Never	57 (57.0)	93 (93.0)
Hardly ever	23 (23.0)	7 (7.0)
Occasionally	6 (6.0)	0 (0.0)
Fairly often	7 (7.0)	0 (0.0)
Very often	5 (5.0)	0 (0.0)
All the time	2 (2.0)	0 (0.0)
Total	100	100

Chi-square = 37.173, P = 0.001

scores showed a significant decrease ( $p > 0.01$ ). The OHRQoL of the participants suggested that physical pain was the most common symptom.<sup>23</sup> Participants used prostheses in a short period of 2 months and it is possible to report acute effects. This contradicts the particular patient group who has great difficulty in using prostheses. Likewise, the subject felt nervous. OHIP showed a significant decrease ( $p > 0.01$ ). Other studies showed a significant improvement in psychological distress.

The major advances in TABLES were reported in responses to diet and discontinued meals in which the physical disability 9-10 (4) area. The improvement in physical disability was also reported by Awad et al.<sup>20</sup> OHIP is based on Locker's conceptual frameworks to measure oral health outcomes. The results show the potential benefit of using OHIP-14. The size of the sample is relatively small and therefore the data is carefully interpreted. No attempt

has been made to relate the clinical quality of complete dentures to the satisfaction of the subjects. Associations were found between the quality and satisfaction of the new prostheses. It has been suggested that the habit of the prosthesis may arise to overcome the gradual deterioration of the prosthesis.

There does not seem to be a significant difference in OHRQoL between respondents and non-responders. Another limitation is that the effects of removable prostheses in OHRQoL may be significantly different between the upper and lower dentures.

### CONCLUSION:

The study findings provided clues about the OHRQoL of the toothless participants before and two months after the provision of full dental prostheses. The study suggested that there was an OHRQoL in toothless reactions before the delivery of prostheses, and that tooth loss with increasing age was associated with more negative effects, which improved significantly in seven areas of Oral Health.

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