

# Preliminary Clinical Report of Satisfaction with Prosthodontic Rehabilitation of Intellectually Disabled Young Adults Provided by Parents or Caregivers

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The aim of this research was to analyze satisfaction with prosthodontic rehabilitation of intellectually disabled (ID) patients provided by their parents/caregivers. A total of 12 ID patients received fixed dentures (FDs) and 10 patients received removable dentures (RDs). Parents/caregivers answered a questionnaire related to prosthodontic rehabilitation (1 = unsatisfactory, 5 = excellent). Parents/caregivers were mostly satisfied with their childrens' oral rehabilitation (results were skewed toward the highest scores). There was a significant improvement in masticatory function and a reduction of avoiding certain foods after both FD and RD therapy. RD therapy significantly improved ID patients' social lives. However, FD therapy increased problems with oral hygiene maintenance. Prosthodontic rehabilitation improves oral function of ID patients. *Int J Prosthodont* 2011;24:303–305.

**E**valuation of oral health of young adults with an intellectual disability (ID) has usually identified problems such as poor oral hygiene, untreated dental caries, gingival disease, and a large number of missing teeth.<sup>1</sup> Thus, oral health of ID patients depends largely on care provided from their parents or caregivers. Until recently, dental care of ID patients offered only emergency treatment, such as tooth extraction.

Although prosthodontic treatment cannot resolve their medical and physical handicap, improvement of oral health, oral function, and esthetics should have a physiologic and social impact on their lives. In this study, expectations and satisfaction of parents and caregivers with the prosthodontic rehabilitation of ID patients were analyzed.

## Materials and Methods

The study group consisted of 22 young ID patients from the Split-Dalmatian region, Croatia (age range: 18 to 31 years). Parents/caregivers of ID subjects gave their oral informed consent to participate in the study. All parents and caregivers were given a questionnaire to complete at home (Fig 1). A Likert 5-point scale (1 = unsatisfactory, 5 = excellent) was used for grading. Questionnaires were completed on two occasions: before and 1 month after completion of prosthodontic treatment of ID subjects.

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1. Have you noticed any difficulties of your child during mastication?
2. Did your child have to avoid certain kinds of food?
3. Had your child experienced any difficulties in speech and articulation of certain sounds?
4. Did you and your child have any problem in social functioning?
5. Did you or your child have any problem in maintaining oral hygiene?
6. Are you satisfied with the results of prosthodontic rehabilitation of your disabled child?
7. Are your friends, neighbors, and relatives satisfied with prosthodontic rehabilitation of your disabled child?
8. Do you think other parents would be satisfied with prosthodontic rehabilitation of their children and would you recommend similar therapy to other parents?
9. Do you think your child is satisfied with prosthodontic rehabilitation and would you repeat the same procedure if necessary?

**Fig 1** Questions related to the prosthodontic rehabilitation of ID patients. Answers were provided by their parents/caregivers. Questions 1 through 5 were answered only before treatment; all questions (1 through 9) were answered 1 month after prosthodontic treatment was completed.

**Table 1** Assessment of Satisfaction with Prosthodontic Rehabilitation of ID Patients

Question	Mean satisfaction (SD)	
	RDs (n = 10)	FDs (n = 12)
Are you satisfied with the results of prosthodontic rehabilitation provided to your disabled child?	4.92 ± 0.29	5.00 ± 0.00
Are your friends, neighbors, and relatives satisfied with the prosthodontic rehabilitation provided to your disabled child?	4.92 ± 0.29	5.00 ± 0.00
Do you think other parents would be satisfied with prosthodontic rehabilitation and would you recommend similar therapy to other parents?	4.75 ± 0.45	4.90 ± 0.31
Do you think your child is satisfied with provided prosthodontic rehabilitation and would you repeat the same procedure if it be necessary?	4.60 ± 0.49	4.80 ± 0.42

SD = standard deviation; RDs = removable dentures; FDs = fixed dentures.

Twelve patients received fixed dentures (FDs). Seven ID patients who could understand what was going on were treated in a dental office; 5 patients were treated under general inhalation anesthesia using sevoflurane (Sevorane, Abbott Laboratories). Because of a greater loss of teeth, 10 patients received removable dentures (RDs; 8 patients received removable partial dentures and 2 received complete maxillary dentures and mandibular overdentures).

The Wilcoxon signed rank test was used to test the significance of differences in information received from the parents/caregivers prior to and after prosthodontic therapy. A *P* value of < .05 was considered statistically significant.

## Results

All parents/caregivers, as well as neighbors and relatives, reported that they were satisfied with the prosthodontic treatment of the ID patients (Table 1). The results were skewed toward the highest scores.

Significant improvement in masticatory function of ID patients, as well as a reduction in avoiding certain foods and improvement in social life after RD

therapy, was observed (Table 2, *P* < .05). This study also revealed a statistically significant improvement in masticatory function and the ability to consume certain types of foods after FD therapy. However, oral hygiene was more difficult to maintain after FD therapy (Table 2).

## Discussion

Parents and caregivers were quite satisfied with the prosthodontic treatment of ID patients. RD therapy had a positive effect on social life, while FD therapy had borderline significance (*P* = .058).

It has been suggested that RDs might not be the treatment of choice for ID individuals, so FDs might be a better option if enough teeth remain to support a partial denture.<sup>2</sup> The results of the present study revealed that parents/caregivers of ID patients were satisfied with both fixed and removable prosthodontic therapy.

Patients with Down syndrome wearing an occlusal appliance show decreased chewing frequency and increased masticatory duration.<sup>3</sup> This study showed that both FD and RD therapy helped to increase the

**Table 2** Assessment of Oral Health and Social Effects of Prosthodontic Therapy in ID Patients

Assessment	Before therapy	After therapy	<i>P</i> <sup>†</sup>
<b>RD therapy</b>			
Chewing ability	3.67 ± 1.33	4.40 ± 0.51	.046**
Avoiding certain foods	1.20 ± 0.42	4.00 ± 0.67	.004*
Difficulties in speech	3.00 ± 1.25	2.50 ± 1.27	.322, NS
Social life	2.30 ± 0.67	2.70 ± 0.48	.046**
Oral hygiene difficulties	1.70 ± 0.48	1.70 ± 0.48	> .999, NS
<b>FD therapy</b>			
Chewing ability	3.17 ± 0.58	3.67 ± 1.15	.165, NS
Avoiding certain foods	2.67 ± 0.78	1.33 ± 0.49	.007*
Difficulties in speech	2.75 ± 1.42	2.67 ± 1.43	.914, NS
Social life	2.08 ± 0.67	2.50 ± 0.52	.058, NS
Oral hygiene difficulties	2.17 ± 0.57	3.42 ± 0.97	.002*

NS = not significant.

\**P* < .01; \*\**P* < .05; <sup>†</sup>Wilcoxon signed rank test.

ability of mastication and of consuming certain types of food. The results, however, showed increased difficulty in oral hygiene maintenance after FD therapy. ID patients with RD therapy had no problems in maintaining oral hygiene because the prosthesis could be readily removed. Studies exploring satisfaction with prosthodontic treatment<sup>4,5</sup> are mostly limited to adults without ID, and satisfaction with prosthodontic therapy in ID patients has not been well documented. The disabilities of the study patients precluded their answering the questions; parents or caregivers answered the questions instead. Moreover, a matched control group of nonpatients was not employed.

### Conclusion

A small convenience sample of available and accessible ID patients permitted this preliminary clinical investigation. Recorded observations suggest that both patients with ID and their parents/caregivers are usually satisfied with small changes in their reported quality of life perceptions. It appears that prosthodontic interventions for such a special group of individuals led to small, yet discernible, improvements in patients' oral function and esthetics. This was also appreciated by the patients' parents and caregivers.

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