

The outcome of nanoceramic resin-based material single partial crowns in patients with signs of bruxism. A 7-year retrospective study.



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INTRODUCTION

- A **recent literature review** pointed out that most of the randomized clinical trials (RCT) on different prosthodontic materials tend to **exclude patients with signs of bruxism**.
- The aim of this research paper is to retrospectively investigate the **success rate** of CeraSmart®, a nanoceramic resin-based material, **in patients with and without signs of bruxism**.

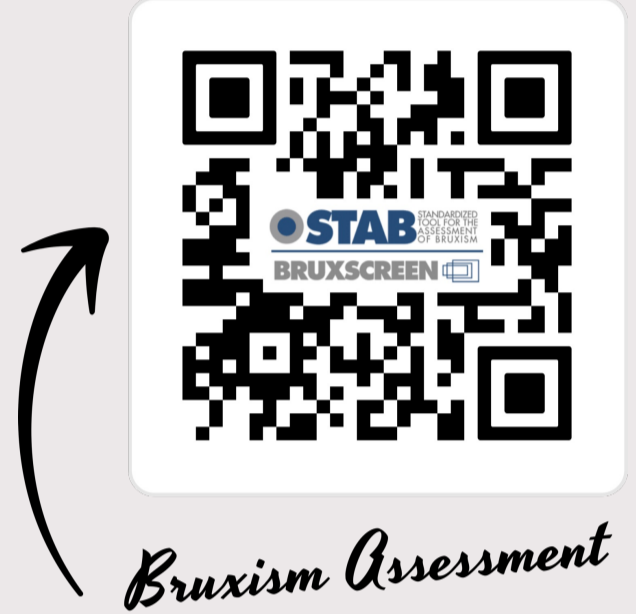


MATERIALS AND METHODS



A total of **98 patients** (53 women), with a mean age of 41 ± 8.9 years, were recalled at **7.7 ± 0.4 years** after placement of a nanoceramic resin-based material partial crown.

Patients were divided into **Bruxers (B) (55)** and **Non-bruxers (NB) (43)**, according to the clinical-based assessment of the **Standardized Tool for the Assessment of bruxism (STAB)**.

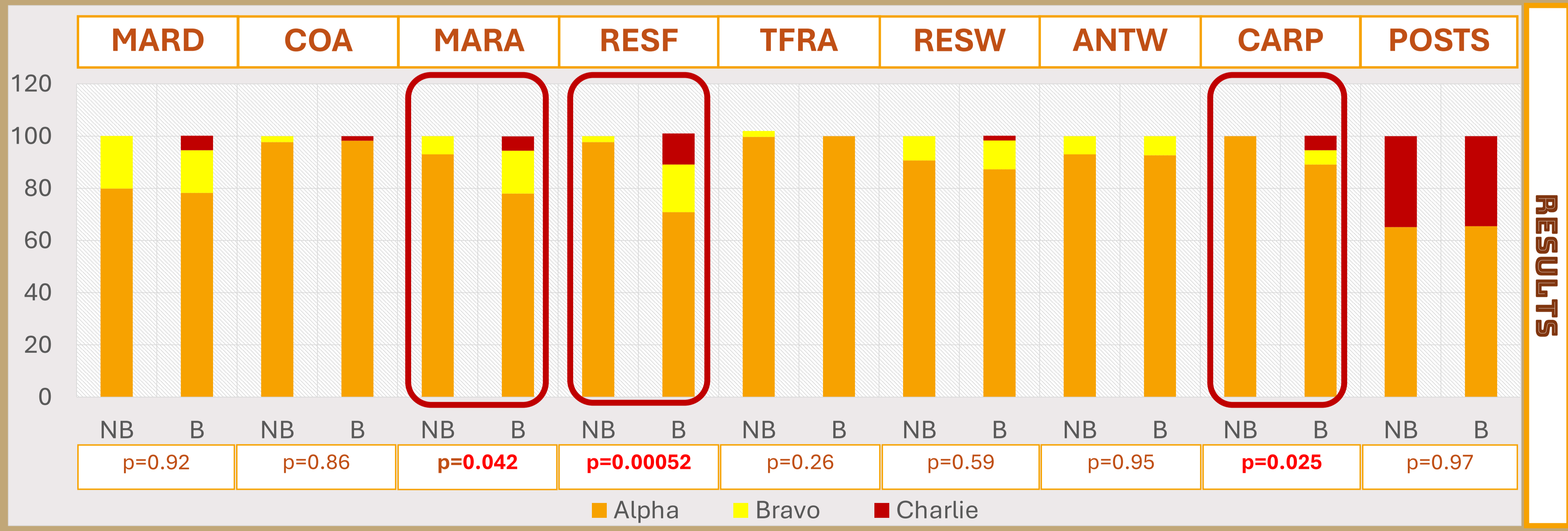


The outcome of the **98 crowns** was evaluated using the **US Public Health Service [USPHS] criteria**

Giving a score of **Alpha, Bravo, Charlie** for:

- Marginal Adaptation (MARD)
- Color Alteration (COA)
- Marginal Discoloration (MARA)
- Restoration Fracture (RESF)

- Tooth Fracture (TFRA)
- Restoration Wear (RESW)
- Antagonist Tooth Wear (ANTW)
- Presence of Caries (CARP)
- Postoperative Sensitivity (POSTS)



CONCLUSION

Variables	Maximum likelihood estimation	Modification of the log of the likelihood	p-value
Premolar/Molar Tooth	-22.52	.329	.566
Bruxism	-26.65	8.588	.003
Upper/Lower Arch	-22.63	.550	.458
Endodontic Treatment	-22.35	.000	.995
Premolar/Molar Tooth	-22.54	.372	.542
Bruxism	-26.67	8.625	.003
Upper/Lower Arch	-22.63	.550	.458
Bruxism	-27.07	9.064	.003
Upper/Lower Arch	-22.81	.541	.462
Bruxism	-27.71	9.795	.002

The study suggests that patients with signs of bruxism can report a **significantly higher failure rate** of nanoceramic resin-based partial crowns placed in posterior teeth in the long term.

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