

The Effectiveness of a Prefabricated Occlusal Appliance in Patients with Myofascial Pain



Nilner M¹, Doepel M², Ekberg EC¹, Andersson J¹, Selovuo K², Le Bell Y²

¹Faculty of Odontology, Malmö University; ²Institute of Dentistry, University of Turku



Introduction

Occlusal appliances are commonly used in the treatment of patients suffering from temporomandibular disorders, (TMD), Ekberg et al. found a better treatment outcome with stabilization appliance therapy compared to a control appliance in patients suffering from TMD of both myogenous and arthrogenous origin in a short-term as well as a long-term perspective (1998, 2002, 2003, 2004). The appliance mostly used in Scandinavian countries is the stabilization appliance.

General practitioners often claim that adjustment of a stabilization appliance is a difficult and time-consuming procedure. Due to the prevalence of TMD pain there is a need for the general dental practitioner to help patients with TMD in an easier way.

Hypothesis

The effectiveness of treatment with a prefabricated occlusal appliance has the same treatment outcome as the effectiveness of treatment with a stabilization appliance.

Aim

The aim of this RCT was to compare the short-term effectiveness of a new prefabricated appliance compared to a stabilization appliance in patients with myofascial pain.

Patients and Methods

The study was performed as a RCT **multi-centre** study in Turku, Finland and Malmö, Sweden.

According to a power analysis 64 patients referred for TMD (32 in Malmö and 32 in Turku) were included in the study.

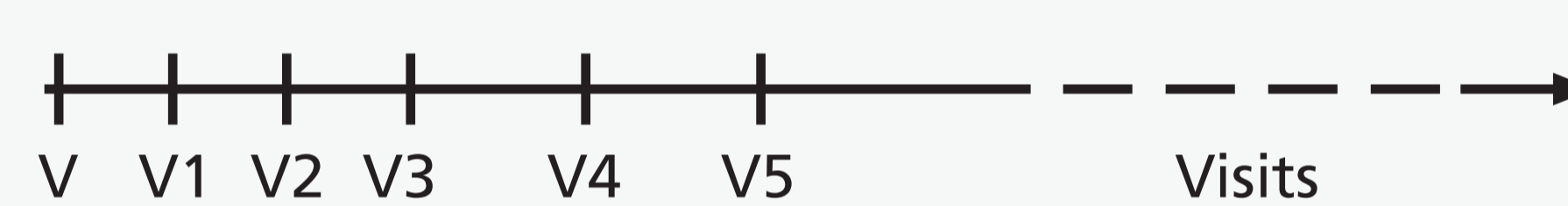
Inclusion criteria

- Age ≥ 18 years
- Pain of muscular origin with and without limited opening according to Dworkin & LeResche (1992).
- Self-assessed myofascial pain should be at least 40 on a numeric rating scale (NRS) from 0-10
- Pain for at least 3 months.

Exclusion criteria

- TMJ pain verified by interview and clinical examination
- Complete dentures
- Symptoms related to diseases in other components of the stomatognathic system (e.g. toothache, neuralgia)
- Whiplash
- Systemic muscular diseases
- Psychiatric disorders

Examinations and follow-ups

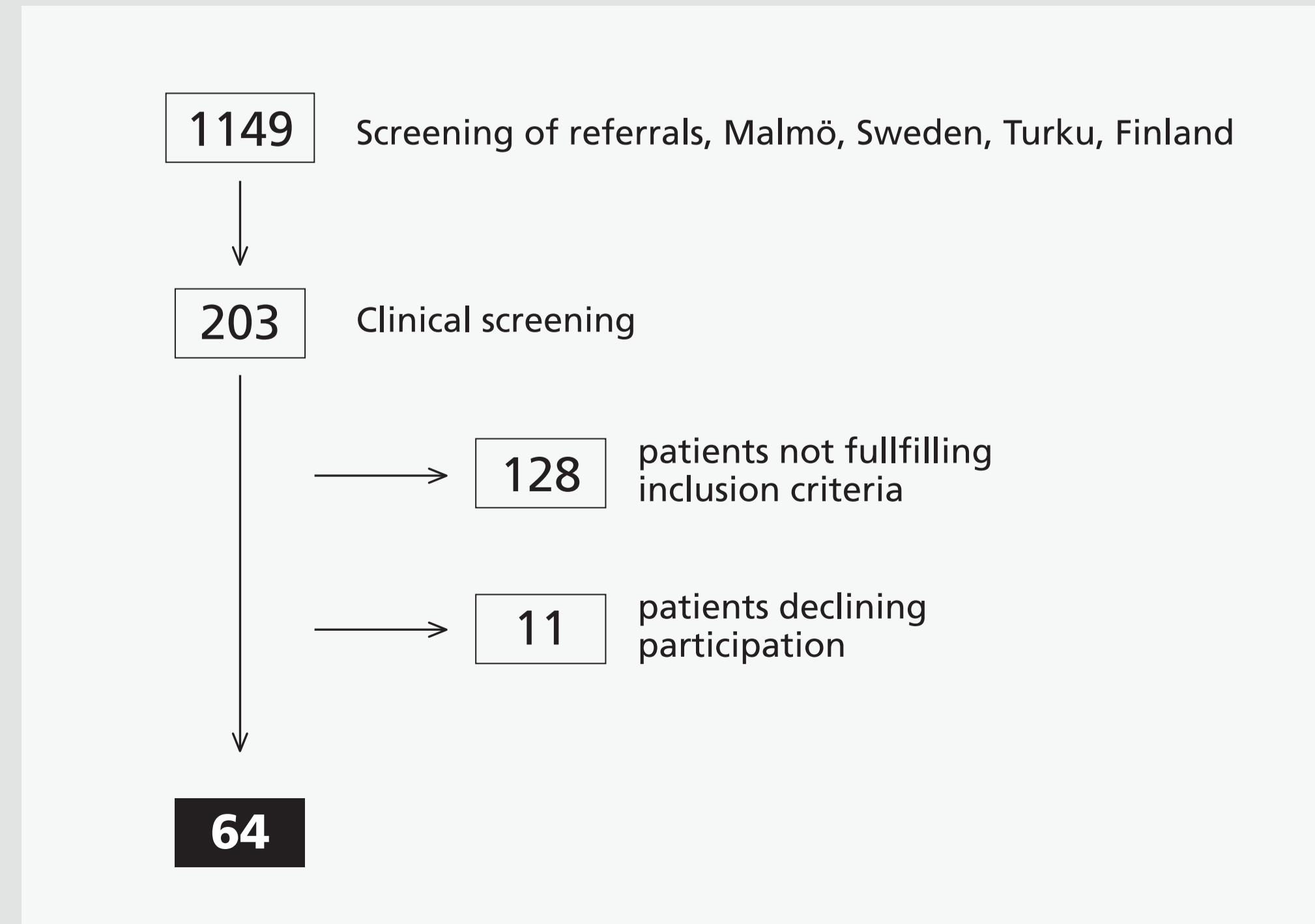
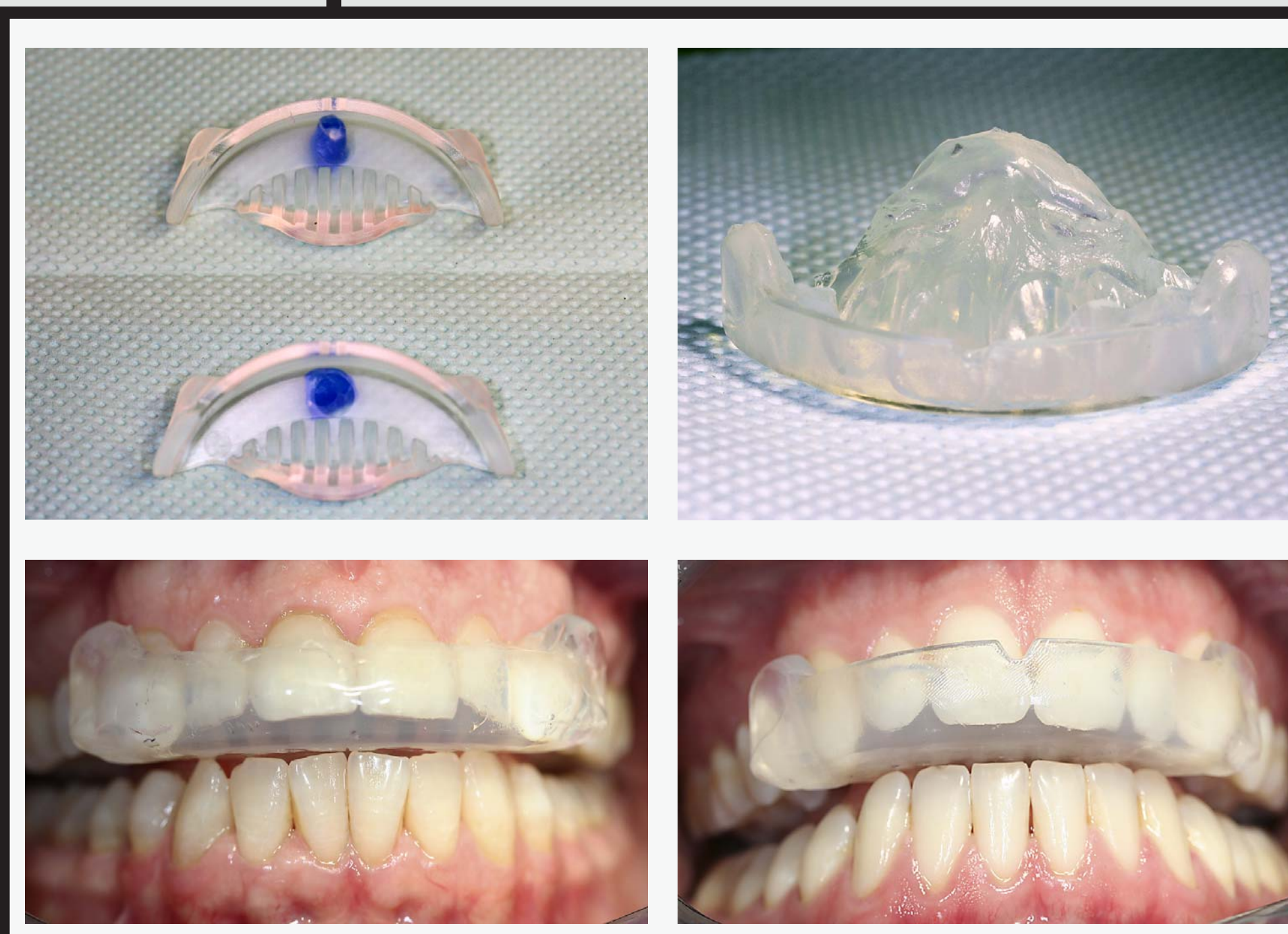


Visit	Examiners
V = Screening, history questionnaire	A
V1 = Clinical examination, Impressions, Randomization	A
V2 = Appliance therapy	B
V3 = Control Adjustment appliance	B
V4 = Follow-up: 6 weeks	A
V5 = Follow-up: 10 weeks	A

Method Randomized controlled study

Prefabricated occlusal appliance (P)
n= 32 (27 women, 5 men)

Stabilization appliance (S)
n= 32 (30 women, 2 men)



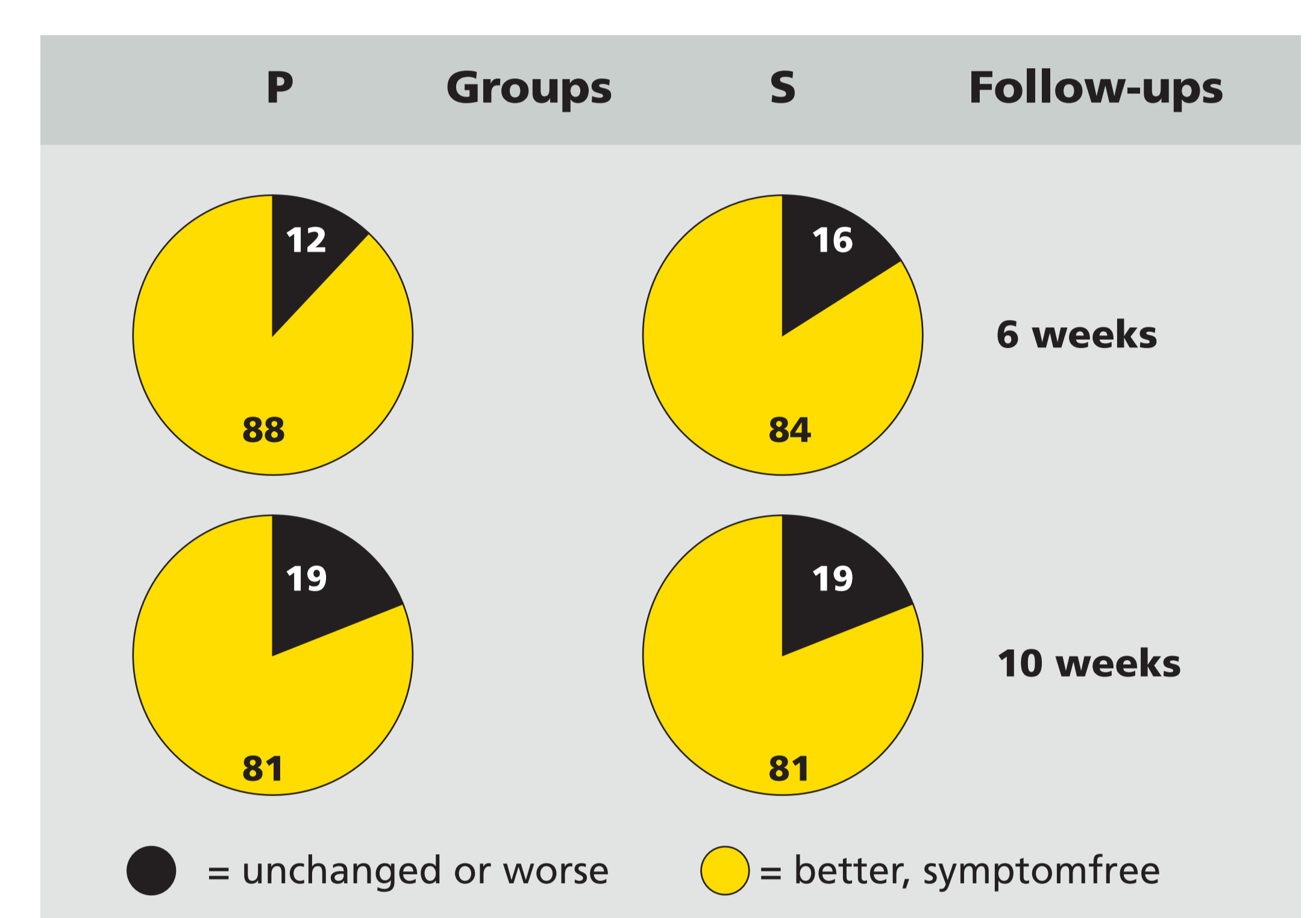
Selection among patients referred for treatment of TMD.

Results

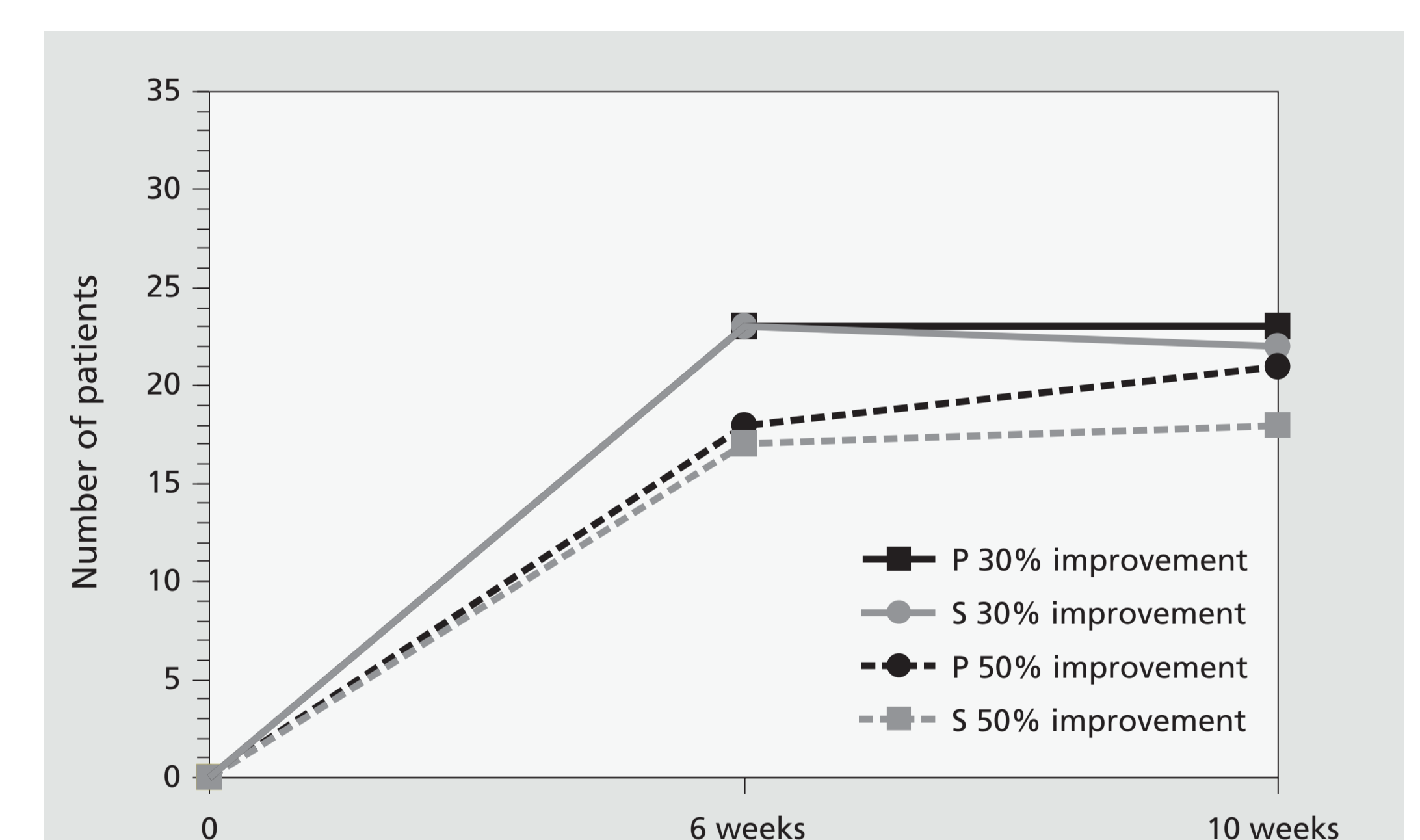
Baseline data

Patients had been suffering from myofascial pain for 3 months – 40 years with a mean of 5 and 7 years respectively in the S and P group.

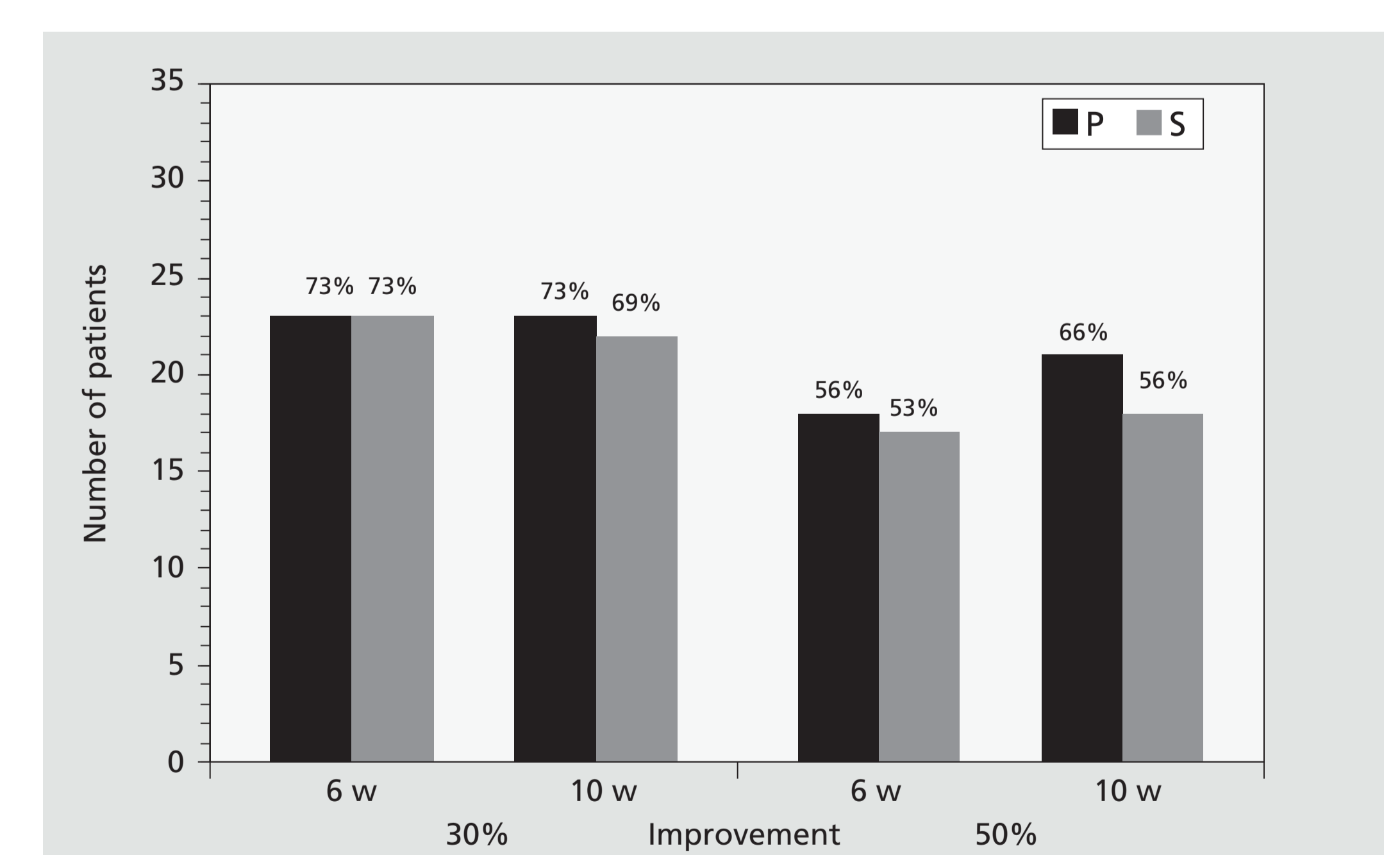
There were no differences between the groups regarding age, gender, frequency of pain, number of years suffering from pain, worst or mean pain during the last six months, number of tender sites in the masticatory muscles.



Reported improvement in percent to a verbal scale at the 6 and 10 weeks follow-up.



Reported 30% and 50% improvement according to NRS in the P and S group at 6 and 10 weeks follow-up.



Percentage and numerically reported 30% and 50% improvement according to NRS in the P and S group at 6 and 10 weeks follow-up.

Conclusion

The prefabricated occlusal appliance can be recommended as a treatment modality for adult patients with myofascial pain in a short term perspective.