Predicting successful outcomes of complete denture therapy

Address for correspondence: Janice S Ellis, Department of Restorative Dentistry,
School of Dental Sciences, Framlington Place, Newcastle University,
Newcastle upon Tyne, UK. E-mail: j.s.ellis@ncl.ac.uk

Question: What are the indicators for success in prosthodontic treatment?

Data sources   Ovid databases searched for relevant material for
the review.

Study selection   Studies were limited to the English language and all
identified articles were included.

Data extraction and synthesis   A narrative review was conducted.

Results   Three RCT were identified that related directly to conventional
dentures. Nineteen clinical experimental studies and seven
nonexperimental clinical studies were therefore also included because
of the lack of higher ranking studies in this area. All studies that were
identified have been included within this review.

Conclusions   There remains a paucity of research in this area. From
the best available data, construction of technically correct dentures,
a well-formed mandibular ridge and accuracy of jaw relations are
positive indicators for success. Patient neuroticism and a poorly formed
mandibular ridge are negative indicators for success. Other prognostic
indicators have not been shown to be of significant value. There exists a
minority of patients who will never adapt to any conventional complete
denture. This problem is more acute in the mandible than the maxilla.
There is need for further research in this area.

Commentary

Despite its inherent limitations, this literature review was good
enough to show that the scientific basis that dentists use to judge
the success or failure of conventional complete denture therapy is
weak. The review suggested a number of indicators to predict the
success or failure of conventional complete denture therapy, name-
ly: patient age and demographics, psychological factors and per-
sonality traits, expectations and attitudes, residual ridge form and
anatomy, method of construction, quality of denture and changes
over time, and aesthetics. Only a few indicators showed some kind
of an association. A positive association would lead to a more suc-
cessful treatment whereas a negative association would lead to a less
successful treatment.

Stating some of what is known anecdotally or through prac-
tice, the review concluded that patients with neuroticism would
be most likely to be be dissatisfied with their complete dentures.
The lower ridge form and quality was found to be more indica-
tive of failure than the maxillary ridge. Past experience, and
expectations and attitudes of the patient were not indicative of
failure or success. The review also concluded that the literature
was equivocal about the methods of construction, duration of
use, and aesthetics. Interestingly, however, the review concluded
that the age of the patient cannot be considered an indicator for a
successful therapy.

It is apparent that this narrative review was done with the basic
tenets of evidence-based dentistry in mind. Nonetheless, because of
the intrinsic shortcomings of narrative reviews, that is, the absence
of a specific research question, lack of predetermined selection cri-
teria and, above all, lack of rigorous assessment of the methodol-
ogy of the selected studies, the conclusions of the review cannot be
considered evidence-based.

Thus arises the legitimate question: how do we benefit from
reading this literature review? The answer would be, in a nutshell,
that this review showed that after decades of providing patients
with conventional complete dentures, the dental profession still
lacks good quality studies to show what factors can really lead to a
satisfied conventional complete denture patient.

Asim Al-Ansari
Dental Department, Armed Forces Hospital, Dhahran,
Saudi Arabia