

Color stability, psychosocial impact, and effect on self-perception of esthetics of tooth whitening using low-concentration (6%) hydrogen peroxide

Angel P.

Bersezio C.

Estay J.

Werner A.

Retamal H.

Araya C.

Martin J.

Fernández E.

Objective: The aim of this study was to assess the bleaching efficacy and impact on psychosocial and esthetics self-perception of a low-concentration (6%) hydrogen peroxide (H₂O₂) gel compared with a conventional (37.5%) H₂O₂ gel when used as an in-office treatment. **Method and Materials:** In total, 35 participants received two sessions of three 12-minute applications of treatment with 37.5% H₂O₂ on one side of the mouth and 6% H₂O₂ on the other. Color changes were measured objectively using total variation in color (ΔE) and subjectively using Vita Classical scale (Δ SGU). The Psychosocial Impact of Dental Aesthetic Questionnaire (PIDAQ) and Oral Health Impact Profile (OHIP-14) esthetic questionnaires were administered to measure self-perception and the psychosocial impact of the whitening procedure. **Results:** Both gels produced significant changes in tooth color at 1 and 3 months post-whitening. The objective efficacy (ΔE) of 37.5% H₂O₂ (9.06 ± 2.96) was significantly higher than that of 6% H₂O₂ (5.69 ± 3.06). The results of the subjective assessment were not statistically different. There was a positive impact on esthetic auto perception (OHIP-14, $P < .05$) and psychosocial impact (PIDAQ, $P < .05$) at the 3-month time point. **Conclusion:** Low concentration of H₂O₂ (6%) achieved effective bleaching ($\Delta E > 5$ units) with good stability at 3 months accompanied by a positive psychosocial impact and enhanced self-perception. However, the traditional 35% concentration was objectively more effective. ©

Quintessenz.

Low concentration

OHIP

PIDAQ

Quality of life

Tooth bleaching

hydrogen peroxide

tooth bleaching agent

adult

color

controlled study

dental procedure

double blind procedure

female

gel

human

male

middle aged

procedures

prospective study

quality of life

questionnaire

randomized controlled trial

self concept

treatment outcome

Adult

Color

Double-Blind Method

Esthetics, Dental

Female

Gels

Humans

Hydrogen Peroxide

Male

Middle Aged

Prospective Studies

Quality of Life

Self Concept

Surveys and Questionnaires

Tooth Bleaching

Tooth Bleaching Agents

Treatment Outcome