



INTISARI

Lansia mengalami perubahan fisiologis berupa penurunan fungsi kelenjar saliva, penurunan sekresi saliva berdampak pada penurunan pH saliva sehingga meningkatkan risiko karies dan *stomatitis denture*. Terapi non-farmakologis seperti senam wajah dan *cryotherapy* atau terapi dingin dikembangkan untuk meningkatkan sekresi saliva. Penelitian ini bertujuan untuk melihat pengaruh sekaligus membandingkan pengaruh senam wajah dan *cryotherapy* dalam meningkatkan pH saliva Lansia Panti Tresna Wreda Pakem

Penelitian ini menggunakan desain *cross over* pada 24 subjek lansia yang dibagi menjadi dua kelompok perlakuan secara bergantian. Subjek dipilih menggunakan *purposive sampling* sesuai kriteria inklusi dan eksklusi dan diacak dengan menggunakan *envelope concealment*. Setiap subjek mendapatkan perlakuan senam wajah dan *cryotherapy* masing-masing selama 1 minggu dengan periode *washout* di antara kedua perlakuan. Pengukuran pH saliva menggunakan pH meter dilakukan sebelum dan sesudah perlakuan dengan pengulangan sebanyak 3 kali. Analisis pengaruh sebelum dan sesudah menggunakan *Paired t-test*, serta perbandingan kedua perlakuan dilakukan dengan uji *Independent t-test*.

Hasil penelitian menunjukkan bahwa senam wajah dan *cryotherapy* sama-sama meningkatkan pH saliva secara signifikan dibandingkan sebelum perlakuan ($p < 0,05$). Rerata peningkatan pH saliva pada kelompok *cryotherapy* lebih tinggi dibandingkan senam wajah, namun perbedaan peningkatan pH antara kedua perlakuan menunjukkan perbedaan yang tidak bermakna secara statistik ($p > 0,05$). Maka kedua metode tersebut menunjukkan pengaruh yang relatif sebanding secara statistik sehingga keduanya dapat digunakan sebagai alternatif terapi non-farmakologis dalam meningkatkan pH saliva pada lansia.

Kata Kunci : *Cryotherapy*, Lansia, pH saliva, Senam wajah.



ABSTRACT

The elderly experience physiological changes like decreased salivary gland function and decreased saliva secretion, which affects saliva pH, increasing the risk of caries and denture stomatitis. Non-pharmacological therapies such as facial exercises and cryotherapy or cold therapy have been developed to increase saliva secretion. This study aims to examine and compare the effects of facial exercises and cryotherapy in increasing the pH of saliva in Panti Tresna Wreda Pakem.

This study used a crossover design on 24 elderly subjects who were divided into two treatment groups alternately. Subjects were selected using purposive sampling according to inclusion and exclusion criteria and randomized using envelope concealment. Each subject received facial exercises and cryotherapy for one week with a washout period between the two treatments. Salivary pH measurements were taken before and after each treatment using a pen pH meter, with three repetitions. The effects before and after were analyzed using a Paired t-test, and the two treatments were compared using an Independent t-test.

The results showed that facial exercises and cryotherapy both significantly increased salivary pH compared to before treatment ($p < 0.05$). The mean increase in salivary pH in the cryotherapy group was slightly higher than that in the facial exercise group, but the difference in pH increase between the two treatments was not statistically significant ($p > 0.05$). Therefore, both methods show relatively comparable statistical effects, making them suitable alternatives for non-pharmacological therapy in improving saliva pH in elderly.

Keywords: Cryotherapy, Elderly, Facial exercises, Salivary pH.