

Table I – Summary of articles selected in the research

Author	Objetives	Design	Sample	Main Results
Yamaga et al. [18]	To examine the relationship between physical fitness and the occlusal condition of natural teeth.	Cross-sectional study	749 functionally independent elderly people.	The strength of the extensor muscles of the legs, the rate of staggering, and the time spent on a leg with the eyes open showed significant correlations with the Eichner index (occlusal contacts). These findings suggest that the dental occlusal condition is associated with the dynamic strength of the lower limbs, agility, and balance function in elderly adults.
Tada et al. [20]	To assess the relationship between oral health and physical or cultural activities.	Cross-sectional study	101 functionally independent elderly people.	People with 20 or more teeth remaining were more active in sports than those with less than 20 teeth remaining. This data suggests that the number of remaining teeth is associated with physical activity in the elderly.
Takata et al. [25]	To assess the relationship between masticatory capacity or number of teeth with measures of physical fitness.	Cross-sectional study	697 functionally independent elderly people.	There is a relationship between the perceived masticatory capacity and physical fitness in this population. Masticatory capacity can be an independent predictor of physical fitness, therefore, preventive dental care designed to preserve masticatory capacity can improve activities of daily living and quality of life.
Hämäläinen et al. [26]	To study the state of oral health as a risk factor for loss of muscle strength.	Longitudinal study	193 functionally independent elderly people.	The grip strength correlated positively with the number of teeth present. In perspective analyzes the presence of periodontitis at the beginning of the study showed a clear association with a more pronounced decline in handgrip over the five years of follow-up.
Hashimoto et al. [27]	To investigate the differences in oral condition and health status of the elderly with 20 teeth or more.	Case-Control study	308 volunteers.	The condition of oral health and the number of teeth is associated with a better physical capacity in the elderly.
Moriya et al. [33]	To show relationships between oral conditions and physical performance.	Cross-sectional study	821 functionally independent elderly people.	Masticatory capacity may be related to muscle strength and the function of static balance. The pattern of occlusive pairs may be related to the static balance function.
Yoshida et al. [21]	Compare body balance control between toothless and toothed teeth.	Case-Control study	70 individuals.	Tooth loss can be a risk factor for postural instability. This further suggests that the proprioceptive sensation of the receptor of the periodontal ligament may play a role in controlling body balance.

Okuyama et al. [19]	To clarify the relationship between dental occlusion and physical fitness.	Longitudinal study	349 functionally independent elderly people..	The partial or total loss of occlusion (considering the number of teeth) was associated with a decline in the strength of the leg extensor muscle or a decrease in standing time on a leg with the eyes open.
Castrejón-Pérez et al. [42]	To test the hypothesis that poor oral health conditions are associated with a greater likelihood of physical frailty.	Cross-sectional study	699 functionally independent elderly people.	The greatest associations with the likelihood of frailty in the elderly were conditioned by females, myocardial infarction, urinary incontinence, worse oral health, less access to dental services, age, and use of medications.
Andrade et al. [28]	To test the hypothesis that clinical oral health conditions are associated with physical frailty.	Cohort Study	1,374 functionally independent elderly people.	Elderly individuals in need of dental prostheses were significantly more likely to be pre-frail and frail. Participants with 20 or more teeth were less likely to be fragile than toothless individuals.
Oliveira et al. [14]	To assess whether periodontal disease is a risk indicator of a lack of physical fitness.	Cross-sectional study	111 male volunteers.	Individuals with higher rates of loss of clinical insertion had progressively lower scores of physical fitness.
Tsakos et al. [29]	To analyze the effect of tooth loss on the decline in physical and cognitive functioning.	Cohort study	3,166 functionally independent elderly people.	Toothless participants showed a significant reduction in gait speed and memory. Total tooth loss was associated with physical and cognitive decline in the elderly.
Brand et al. [30]	To investigate the effects of tooth loss on gait stability.	Case-control study	49 volunteers.	Participants with natural teeth and rehabilitated with fixed prostheses had a significantly higher gait speed compared to users of dentures, in conditions of normal walking and dual-task performance. Tooth loss is associated with slower gait speed and therefore can have a negative impact on your stability.
Inui et al. [9]	To evaluate the relationship between muscle mass and its function and oral conditions.	Cross-sectional study	552 volunteers.	The number of teeth proved to be an independent risk factor for the 10 m walk test (in females) and for the skeletal muscle mass of the entire body (in males). The results also revealed that the improvement in the 10 m walk test was significantly correlated with a greater number of occlusal contacts.
Hoope et al. [13]	To evaluate the association between chronic oral inflammatory load and physical fitness.	Cross-sectional study	112 male police officers.	There was no significant association between endodontic parameters and physical fitness. However, periodontal parameters and chronic inflammatory burden were significantly associated with low physical fitness.

Eremenko et al. [12]	To evaluate the associations between handgrip strength, periodontitis, and the number of teeth.	Cross-sectional study	2,089 volunteers.	Body mass index, waist-to-hip ratio, and periodontal disease were associated with lower physical fitness, assessed by handgrip strength.
Kim et al. [31]	To examine the correlation between the number of natural teeth and the muscle mass index.	Cross-sectional study	2,378 functionally independent elderly people.	Male participants with more than 20 teeth showed a positive association with a higher percentage of muscle mass.
Ramsay et al. [32]	To investigate the associations between oral health measures and physical frailty.	Longitudinal study	1,284 functionally independent elderly people.	The risk of physical frailty was greater among edentulous participants and those who had 3 or more oral health problems.
Kotronia et al. [43]	To investigate the association between oral health and physical disability.	Cross-sectional study	2,147 functionally independent elderly people.	Markers of oral health problems, especially dry mouth, self-assessment of oral conditions, and the presence of more than one oral health problem, were associated with disability and poor physical function.
Morita et al. [34]	To evaluate the association between vertical jump height and oral function.	Cross-sectional study	231 functionally independent elderly people.	The height of the vertical jump was significantly associated with grip strength in men and women. In women, it was associated with masticatory performance, occlusal strength, and occlusal contact area.