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Dietary patterns of older adults and octogenarians in Chile: A secondary analysis of the 2016–2017 National Health Survey

Patrones alimentarios de la población adulta mayor y octogenaria en Chile: análisis secundario de la Encuesta Nacional de Salud 2016-2017

Padrões alimentares da população idosa e octogenária no Chile: análise secundária da Pesquisa Nacional de Saúde 2016-2017

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ABSTRACT

Introduction. There are few studies in Latin America describing the dietary patterns of older adults, especially the octogenarian population. Low consumption of fruits, vegetables, dairy products, legumes and meats has been reported in this group. The objective of this study was to analyze the dietary patterns of the older adult and octogenarian population with respect to the Dietary Guidelines for Chile. **Methodology.** An analytical study based on a secondary analysis of a cross-sectional study, with probabilistic sampling of national representativeness, using the database of the 2016-2017 National Health Survey of Chile. **Results.** A total of 1,802 individuals were analyzed, of whom 1,522 were between 60 and 79 years of age, and 280 were octogenarians. Of the octogenarians, 41.1% were overweight. Compared to the 60 to 79-year-old group, octogenarians showed lower alcohol consumption ($p < 0.001$), oatmeal and whole grains ($p < 0.05$), and fish ($p < 0.01$), but higher dairy consumption ($p < 0.01$). In addition, significant associations were observed between the conditions of octogenarians and water consumption (OR: 0.69; CI95%: 0.48-0.97), alcohol (OR: 1.64; CI95%: 1.24-2.17), fish (OR: 0.36; CI95%: 0.18-0.65), years of study (OR: 0.38; CI95%: 0.20-0.68) and tobacco consumption (OR: 4.25; CI95%: 2.47-7.96). **Discussion.** The study's results show that overweight octogenarians have a dietary pattern characterized by a lower consumption of oatmeal, whole grains and fish, and a higher consumption of dairy products compared to older adults aged 60 to 79 years. However, none of the analyzed groups followed the nutritional recommendations established for the different food groups. **Conclusions.** Overweight octogenarians have a dietary pattern characterized by lower consumption of whole grains and fish, and higher consumption of dairy products compared to older adults aged 60 to 79 years. However, neither group meets the recommendations established in Chile's Dietary Guidelines.

Keywords:
Aged; Aged, 80 and over; Feeding Behavior; Health Surveys; Nutritional Status; Nutritional Sciences; Nutrition Policy; Aging.

RESUMEN

Introducción. En Latinoamérica existen pocos estudios que describan los patrones alimentarios de personas mayores, especialmente de la población octogenaria. En este grupo se ha reportado un bajo consumo de frutas, verduras, lácteos, legumbres y carnes. El objetivo de este estudio fue analizar los patrones alimentarios de la población adulta mayor y octogenaria en relación con las Guías Alimentarias para Chile. **Metodología.** Estudio analítico basado en un análisis secundario de un estudio transversal, con muestra probabilística, de representatividad nacional, utilizando la base de datos de la Encuesta Nacional de Salud de Chile 2016-2017. **Resultados.** Se analizaron 1,802 individuos, de los cuales 1,522 tenían entre 60 y 79 años, y 280 eran octogenarios. El 41.1% de los octogenarios presentaba sobrepeso. En comparación con el grupo de 60 a 79 años, los octogenarios mostraron menor consumo de alcohol ($p<0.001$), avena y cereales integrales ($p<0.05$), y pescado ($p<0.01$), pero un mayor consumo de lácteos ($p<0.01$). Además, entre los octogenarios se observaron asociaciones significativas entre su condición y el consumo de agua (OR: 0.69; IC95%: 0.48-0.97), alcohol (OR: 1.64; IC95%: 1.24-2.17), pescados (OR: 0.36; IC95%: 0.18-0.65), años de estudio (OR: 0.38; IC95%: 0.20-0.68) y consumo de tabaco (OR: 4.25; IC95%: 2.47-7.96). **Discusión.** Los resultados del estudio evidencian que las personas octogenarias con sobrepeso presentan un patrón alimentario caracterizado por un menor consumo de avena, cereales integrales y pescado, y un mayor consumo de lácteos en comparación con los adultos mayores de 60 a 79 años. No obstante, en ninguno de los grupos analizados se observó cumplimiento de las recomendaciones nutricionales establecidas para los distintos grupos de alimentos. **Conclusiones.** Los octogenarios con sobrepeso presentan un patrón alimentario caracterizado por menor consumo de cereales integrales y pescado, y mayor consumo de lácteos en comparación con los adultos mayores de 60 a 79 años. Sin embargo, ningún grupo alcanza las recomendaciones establecidas en las Guías Alimentarias para Chile.

Palabras clave:
Anciano; Anciano de 80 años o más; Conducta Alimentaria; Encuestas Epidemiológicas; Estado Nutricional; Ciencias de la Nutrición; Guías Alimentarias; Envejecimiento.

RESUMO

Introdução. Na América Latina, existem poucos estudos que descrevem os padrões alimentares de idosos, especialmente da população octogenária. Nesse grupo, tem sido relatado um baixo consumo de frutas, verduras, laticínios, leguminosas e carnes. O objetivo deste estudo foi analisar os padrões alimentares da população idosa e octogenária em relação às Guias Alimentares para o Chile. **Metodologia.** Estudo analítico baseado em uma análise secundária de um estudo transversal, com amostra probabilística e representatividade nacional, utilizando a base de dados da Pesquisa Nacional de Saúde do Chile de 2016-2017. **Resultados.** Foram analisados 1.802 indivíduos, dos quais 1.522 tinham entre 60 e 79 anos e 280 eram octogenários. Entre os octogenários, 41.1% apresentavam sobrepeso. Em comparação com a faixa etária de 60 a 79 anos, os octogenários apresentaram menor consumo de álcool ($p < 0.001$), aveia e grãos integrais ($p < 0.05$) e peixe ($p < 0.01$), mas maior consumo de laticínios ($p < 0.01$). Além disso, entre os octogenários, foram observadas associações

significativas entre sua condição e o consumo de água (OR: 0.69; IC 95%: 0.48-0.97), álcool (OR: 1.64; IC 95%: 1.24-2.17), peixe (OR: 0.36; IC 95%: 0.18-0.65), anos de estudo (OR: 0.38; IC 95%: 0.20-0.68) e consumo de tabaco (OR: 4.25; IC 95%: 2.47-7.96). **Discussão.** Os resultados do estudo mostram que octogenários com sobrepeso apresentam um padrão alimentar caracterizado por menor consumo de aveia, cereais integrais e peixe, e maior consumo de laticínios em comparação com idosos de 60 a 79 anos. No entanto, em nenhum dos grupos analisados foi observado o atendimento às recomendações nutricionais estabelecidas para os diferentes grupos alimentares. **Conclusões.** Os octogenários com sobrepeso apresentam um padrão alimentar caracterizado por menor consumo de cereais integrais e peixes, e maior consumo de laticínios, em comparação com idosos de 60 a 79 anos. No entanto, nenhum grupo atende às recomendações estabelecidas nas Guias Alimentares para o Chile.

Palavras-chave:
Idoso; Idoso de 80 Anos ou mais; Comportamento Alimentar; Inquéritos Epidemiológicos; Estado Nutricional; Ciências da Nutrição; Guias Alimentares; Envelhecimento.

Introduction

The Chilean population is undergoing a demographic aging process that is expected to intensify by 2031, when it is projected that there will be 102 older adults (OA) for ehighly 100 individuals under the age of 15. Within this group, octogenarians (people aged 80 years or older) represent an emerging segment that, according to the National Institute of Statistics (INE), will account for 6.87% of the national population by 2050 (1).

At the same time, it is estimated that 50% of older adults are overweight. According to the Department of Nutrition and Food of the Chilean Ministry of Health (MINSAL), 29.5% of older adults are overweight and 24.4% are obese (2)

The diet and nutritional status of older adults (OA) are gaining increasing attention due to the global population aging process. Eating habits have become an significant risk factor for morbidity and mortality, contributing to a greater predisposition to chronic diseases and loss of functional autonomy (3). Recent studies have shown that dietary diversity in this age group acts as a protective factor against cognitive decline (4,5) and is associated with lower mortality (6).

However, older adults may experience limitations in consuming a varied diet due to multiple factors, such as decreased appetite, physiological changes in the digestive system, and economic constraints that restrict access to diverse foods (7).

In this context, Food-Based Dietary Guidelines (FBDG) constitute a key tool for promoting healthy dietary choices and improving diet diversity (8). The most recent versions of the Chilean dietary guidelines included recommendations for the general population regarding the consumption of fish, dairy products, fruits and vegetables, water intake, among others (9).

Dietary patterns have a direct influence on macro- and micronutrient intake and, consequently, on nutritional status. An adequate diet can contribute to the prevention of chronic diseases and the maintenance of health, whereas an unbalanced diet may lead to both undernutrition and overweight or obesity (10).

Although studies have described food consumption among older adults in Latin America and Chile (11–14), significant gaps remain regarding dietary differences across age subgroups within the older population. In particular, the dietary patterns of octogenarians have been scarcely addressed, despite representing a particularly vulnerable and growing group.

Promoting healthy eating among older adults, especially octogenarians, is essential for preserving physical and cognitive function and preventing age-related diseases (15).

In this context, the following question arises: What are the dietary patterns of older adults and octogenarians in Chile, and how do they relate to the recommendations of the Food-Based Dietary Guidelines?

The aim of this study is to analyze the dietary patterns of the older and octogenarian population in Chile in relation to the Food-Based Dietary Guidelines?

Methodology

Based on secondary analysis of a cross-sectional study with a nationally representative probabilistic sample, geographically stratified and multistage, conducted using data from the 2016–2017 Chilean National Health Survey (CNHS-2016-2017) (available at http://epi.minsal.cl/bases-de-datos/). The design assumes simple random sampling, with a 95% confidence level and a prevalence of 50% (maximum variance). Expansion factors were calculated from the 2017 INE Census (see Censal Cartographic Base, June 2018, INE), relative to individuals aged 18 years and older residing in urban areas, for a total of 13,439,667. The survey included

Chilean and foreign individuals aged ≥18 years who had been living in private dwellings (occupied for at least the last 6 months) located in urban areas across the 16 regions of Chile (12). The inclusion criterion was older adults (≥60 years) who participated in the CNHS-2016-2017 and responded to dietary items; participants with incomplete data were excluded.

Food frequency questionnaire (FFQ): Valid responses to the FFQ items, which included specific foods such as fish, frequency of dairy consumption, vegetables, water, sugar-sweetened beverages, fruit juices, and type of oil consumed.

Dietary pattern assessment: To evaluate adherence to healthy dietary patterns, considering each food group and its frequency of consumption, the following documents were used as reference: (1) Food-Based Dietary Guidelines developed by the Chilean Ministry of Health in 2013 (16). Although an earlier version than the current guidelines, it recommended similar food portions. Compliance with the guidelines was defined as: ≥3 fruits/day; ≥2 servings of vegetables/day; ≥2 servings of fish/week; ≥3 servings of dairy/day; ≥2 servings of legumes/week; ≥6 glasses of water/day.

Anthropometric data: Trained nurses assessed waist circumference, weight, and height. Waist circumference was measured at the midpoint between the last rib and the iliac crest with the participant's abdomen exposed; weight and height were measured with participants barefoot using a DRY scale for weight and a measuring tape fixed to the wall for height. Parameters included waist circumference, weight, height, and BMI, classified according to World Health Organization (WHO) criteria (<18.5: underweight, 18.5–24.9: normal weight, 25–29.9: overweight, >30–34.9: obesity class I, >35–39.9: obesity class II, >40: obesity class III).

Demographic data: Region, area, age, sex, and educational level of participants were included.

Ethical considerations: The study protocol was approved by the Research Ethics Committee of the Faculty of Medicine, Pontificia Universidad Católica de Chile (study protocol number: 16-019).

Data collection was carried out through in-home interviews conducted by trained health professionals, who administered questionnaires covering dietary patterns, sociodemographic data, anthropometric measurements, blood pressure, and blood and urine analyses.

Statistical analysis: Qualitative variables were expressed as absolute values (frequencies) and relative values (percentages); quantitative variables were expressed as means with standard deviations. To assess the association between adults aged 60–79 years and those aged ≥80 years with consumption of healthy and unhealthy foods, the chi-square test (χ^2) was applied.

To analyze the effect of variables on older adults, logistic regression models were used. For logistic regression, the variable "adults aged ≥80 years" was dichotomized as follows: those aged ≥80 years were assigned the category "yes = 0," and those aged 60–79 years the category "no = 1." Logistic regression models included the following adjustments: Model 1: Healthy foods (fruits, vegetables, oats/whole grains, fish, dairy, legumes) and unhealthy foods (sugar-sweetened beverages) - Model 2: Adjusted for healthy and unhealthy foods, age, sex, and years of education - Model 3: Additionally adjusted for physical activity, nutritional status, sleep, and tobacco use.

A p-value <0.05 was considered statistically significant. Associations are presented as odds ratios (OR) with 95% confidence intervals (95% CI). Analyses were performed using R Commander, package *library(Rcmdr)*.

Result

Table 1 presents the characterization of the participants, which includes 1,802 individuals, of whom 1,522 are aged between 60 and 79 years, and 280 are over 80 years old. When differentiated by sex, it is observed that in the group aged over 80 years, there is a higher proportion of women compared to men, accounting for 73.9% and 36.1%, respectively.

Regarding geographical location, 79.3% of participants live in urban areas, while 20.7% reside in rural areas. When evaluating the educational level of individuals over 80 years old, most have less than 8 years of schooling (69.3%). However, 26.4% have between 8 and 12 years of education, and 4.3% have more than 12 years of education.

When classifying the nutritional status of individuals aged 80 years and older, overweight is the most prevalent condition, affecting 41.1% of the sample, followed by those with a normal nutritional status. In addition, a significant proportion of individuals over 80 years present with obesity (26.8%).

When analyzing factors such as physical activity and tobacco use, it is evident that the majority of participants aged 80 years and older neither engage in physical activity nor consume tobacco.

Table 1. General characteristics of the sample

Variables N(%)	Total (n=1802)	60–79 years (n=1522, 84.5%)	≥80 years (n=280, 15.5%)
Age, mean (SD)	70.8 (7.87)	68.3 (5.56)	84.3 (3.92)
Sex			
Female	1147 (63.7)	968 (63.6)	179 (63.9)
Male	655 (36.3)	554 (36.4)	101 (36.1)
Area of residence			
Rural	358 (19.9)	300 (19.7)	58 (20.7)
Urban	1444 (80.1)	1222 (80.3)	222 (79.3)
Years of education			
< 8 years	918 (50.9)	724 (47.6)	194 (69.3)
8–12 years	700 (38.8)	626 (41.1)	74 (26.4)
> 12 years	184 (10.2)	172 (11.3)	12 (4.3)
Nutritional status (BMI)			
Underweight	14 (0.8)	6 (0.4)	8 (2.9)
Normal weight	362 (20.1)	280 (18.4)	82 (29.3)
Overweight	707 (39.2)	592 (38.9)	115 (41.1)
Obese	719 (39.9)	644 (42.3)	75 (26.8)
Physical activity			
Yes	86 (4.8)	79 (5.2)	7 (2.5)
No	1716 (95.2)	1443 (94.8)	273 (97.5)
Tobacco use			
Yes	272 (15.1)	259 (17.0)	13 (4.6)
No	1530 (84.9)	1263 (83.0)	267 (95.4)
Sleep, mean (SD)	7.25 (1.67)	7.21 (1.63)	7.51 (1.84)

Source: prepared by the authors.

Table 2 shows the association between older adults, classified into the 60–79-year age group and those aged 80 years and older, with healthy and unhealthy food consumption. Significant differences are observed between these groups in terms of alcohol consumption, with a decrease in the proportion of consumers as age increases.

Significant differences are also observed in the consumption of oats and whole grains, indicating that individuals over 80 years old have lower consumption of these foods compared to those aged 60–79 years.

Regarding dairy consumption, participants aged 80 years and older show greater adherence to recommendations, with a higher percentage consuming three or more servings of dairy per day compared to the 60–79-year group (7.9% vs. 5.3%, respectively).

Analysis of weekly fish consumption shows that the 60–79-year group consumes fish more than once per week, whereas the 80+ group typically consumes fish less than once per week and exhibits a higher percentage of individuals classified as having no fish intake.

Table 2. Association of age groups among older adults with healthy and unhealthy foods

Foods Water	60–79 years	≥80 years	p-value
Water			
> 6 glasses/day	328 (21.6)	44 (15.7)	
1–5 glasses/day	1085 (71.3)	216 (77.1)	
No consumption	109 (7.2)	20 (7.1)	0.081
Alcohol			
Consumption	816 (53.6)	112 (40.0)	
No consumption	706 (46.4)	168 (60.0)	0.00002
Oats/Whole grains			
≥2/day	34 (2.2)	4 (1.4)	
<2/day	564 (37.1)	83 (29.6)	
No consumption	924 (60.7)	193 (68.9)	0.031
Sugar-sweetened beverages			
Consumption	705 (46.3)	118 (42.1)	
No consumption	817 (53.7)	162 (57.9)	0.197
Fruit			
≥2/day	442 (29.0)	82 (29.3)	
<2/day	1017 (66.8)	180 (64.3)	
No consumption	63 (4.1)	18 (6.4)	0.224
Dairy products			
≥3/day	81 (5.3)	22 (7.9)	
2–1/day	706 (46.4)	152 (54.3)	
<1/day	608 (39.9)	85 (30.4)	
No consumption	127 (8.3)	21 (7.5)	0.008
Fish			
>1 time/week	147 (9.7)	11 (3.9)	
<1 time/week	844 (55.5)	169 (60.4)	
No consumption	531 (34.9)	100 (35.7)	0.007
Legumes			
≥2/week	438 (28.8)	89 (31.8)	
<1 time/week	940 (61.8)	154 (55.0)	
<1/month or none	144 (9.5)	37 (13.2)	0.054
Vegetables			
≥3/day	152 (10.0)	24 (8.6)	
<3/day	1340 (88.0)	244 (87.1)	
No consumption	30 (2.0)	12 (4.3)	0.051

Source: prepared by the authors.

Figure 1 illustrates the degree of compliance with the Chilean Dietary Guidelines among octogenarians by food type. Overall compliance is low, with particularly low percentages for dairy (5.7%), fish (8.8%), and vegetables (9.8%). Only fruit (29.1%) and legumes (29.2%) show relatively higher compliance, although still insufficient.

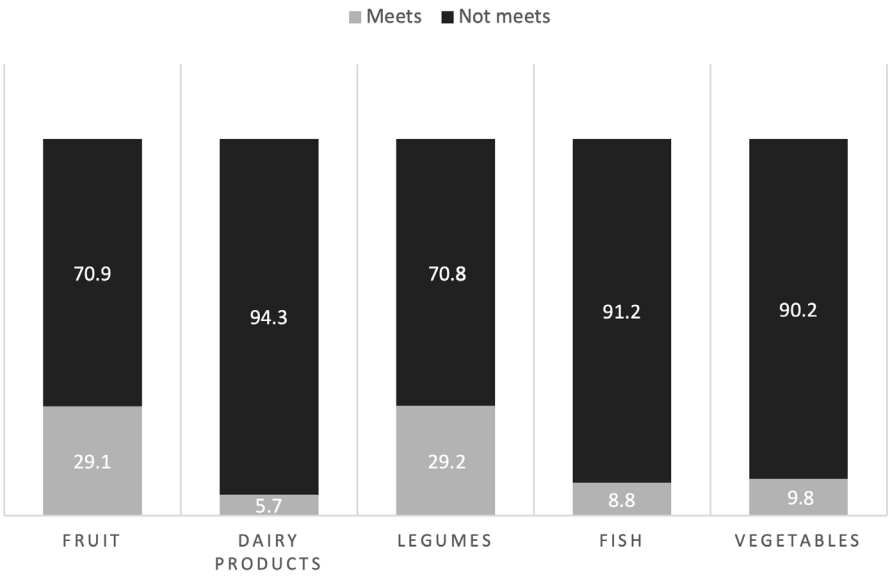

Figure 1: Compliance (%) with Chilean dietary guidelines among octogenarians
Source: prepared by the authors.

Regarding the association between individuals aged 80 years and older and food consumption (healthy and unhealthy), sociodemographic factors, and habits (Table 3), a significant association is observed in Model 4 (fully adjusted) between being aged 80 years and older and water consumption (OR: 0.69; 95% CI: 0.48–0.97), alcohol consumption (OR: 1.64; 95% CI: 1.24–2.17), fish consumption (OR: 0.36; 95% CI: 0.18–0.65), years of schooling (OR: 0.38; 95% CI: 0.20–0.68), and tobacco use (OR: 4.25; 95% CI: 2.47–7.96).

Table 3 . Association of octogenarian status with healthy/unhealthy foods and sociodemographic variables

Variables	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Water (Yes)	0.67 (0.47–0.95)*	0.67 (0.47–0.94)*	0.69 (0.48–0.97)*
Oats/Whole-grain bread (Yes)	0.59 (0.17–1.53)	0.62 (0.18–1.61)	0.65 (0.19–1.73)
Sugar-sweetened drinks/juices (No)	1.15 (0.88–1.50)	1.21 (0.93–1.58)	1.20 (0.91–1.57)
Fruits (Yes)	1.04 (0.77–1.38)	1.11 (0.82–1.48)	1.09 (0.81–1.47)
Dairy products (Yes)	1.68 (1.00–2.74)*	1.77 (1.04–2.89)*	1.66 (0.97–2.74)
Legumes (Yes)	1.24 (0.93–1.64)	1.22 (0.92–1.62)	1.21 (0.91–1.61)
Alcohol (No)	1.74 (1.34–2.26)***	1.77 (1.34–2.33)***	1.64 (1.24–2.17)***
Fish (Yes)	0.37 (0.19–0.68)**	0.38 (0.19–0.68)**	0.36 (0.18–0.65)**
Vegetables (Yes)	0.88 (0.54–1.38)	0.92 (0.56–1.44)	0.95 (0.58–1.50)
Sex (Female)	—	0.80 (0.60–1.06)	0.81 (0.60–1.08)
Years of education (>12 years)	—	0.37 (0.19–0.65)**	0.38 (0.20–0.68)**
Physical activity (150 min/week)	—	—	0.47 (0.19–0.98).
Nutritional status (Normal)	—	—	1.94 (1.43–2.61)***
Sleep (7–9 h)	—	—	0.84 (0.64–1.09)
Tobacco (No)	—	—	4.25 (2.47–7.96)***

Model 1: Healthy foods; Model 2: Healthy foods plus sociodemographic data; Model 3: Healthy foods, sociodemographic data, nutritional status, and personal habits.
Source: prepared by the authors.

Discussion

The results of this study indicate that octogenarian older adults are primarily classified as overweight. Regarding dietary habits, they consume lower amounts of oats/whole grains and fish but higher amounts of dairy compared to individuals aged 60–79 years, although adherence to dietary recommendations was not observed in either group.

This finding is consistent with international studies that describe a progressive decline in diet diversity with advancing age. For example, Nguyen et al. (17), in a study conducted with older adults in the United Kingdom, observed reduced consumption of fruits, whole grains, and fish among the oldest age groups, similar to the pattern observed in our octogenarian population (17). In Japan, Zhao et al. (18) reported that varied diets with high intake of fish and vegetables are associated with a lower risk of mortality, reinforcing the importance of promoting these foods among older adults (18).

Regarding dairy consumption, the higher adherence observed in the octogenarian group may reflect both greater economic accessibility and the substitution of more expensive protein sources, such as fish. This is consistent with another study in which dairy consumption was associated with a lower risk of frailty in older adults (19).

Concerning low fish intake, only 3.9% of octogenarians reported consuming fish more than once per week. This is concerning given the cognitive and cardiovascular benefits associated with regular consumption of omega-3-rich fish, as reported by Pei H et al. (20) and Nishihira et al. (21). Promoting fish consumption is particularly significant in a population vulnerable to functional and cognitive decline.

From a public health perspective, our findings are in line with those of Sotos-Prieto et al. (22) in the United States, where low adherence to dietary guidelines among older adults was identified despite ongoing promotion campaigns. This suggests that challenges in achieving adherence to dietary recommendations among older adults are widespread and require more specific strategies, segmented by age and functional status.

In Chile, Durán et al. (23) evaluated the nutritional status of this population and found a similar scenario, where octogenarians are characterized by some degree of overnutrition.

Regarding tobacco use among older adults, 12.8% of individuals aged 65 and older smoke, according to the 2016–2017 National Health Survey (24). In the present study, 17% of participants aged 60–79 years reported tobacco use, whereas this proportion decreased to 4.6% in the 80+ age group.

With respect to dairy consumption, results indicate differences depending on the age group, with octogenarians consuming more dairy. This is consistent with Hernández et al. (25), who reported better dairy intake among the studied octogenarian population. Dairy consumption (three servings per day) contributes substantially to nutrient requirements, including calcium, vitamin D, and phosphorus (26), and, being less costly than meat, also provides significant amounts of vitamin B12 (27).

Analysis of fish consumption among octogenarians shows a low intake, with only 3.9% consuming fish more than once per week. Sun (28) reported that average fish consumption among older adults was 1.2 servings per week, similar to national data. In this study, consuming one serving per week or less was more frequent among octogenarians (60.4%) than those under 80 years (55.5%). In contrast, Nishihira et al. (21), who assessed EPA and DHA intake using a dietary questionnaire, found stable fish consumption regardless of age in 185 dementia-free adults over 80 years.

These results are relevant, as fish is a rich source of protein and long-chain omega-3 polyunsaturated fatty acids, eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA), and regular consumption is associated with a lower risk of sarcopenic obesity (29) and reduced mortality from cardiovascular diseases (30). Fish consumption among octogenarians is also linked to cognitive benefits, with higher serum levels of EPA and DHA + EPA associated with better global cognitive function in dementia-free older adults (28).

Regarding dairy intake, few studies focus exclusively on individuals aged 80 years or older. However, Lana et al. (31) included participants aged 60 and older and found that higher consumption of skim milk and yogurt was associated with lower risk of frailty.

Concerning water intake, our study observed low consumption, with only 14% drinking more than six glasses per day. In this age group, dehydration ranges from 12–50% (32). Water is a major component of cells and bodily fluids, where biochemical reactions occur; it also plays a key role in thermoregulation, elimination of toxic substances via urine, and preservation of cognitive performance (33). Inadequate water intake may lead to chronic dehydration, particularly affecting older adults, hospitalized individuals, and children (34).

Identifying dietary patterns that fail to meet general recommendations in octogenarians provides relevant

evidence for developing targeted nutritional interventions at multiple levels. Promoting fish and water intake among older adults could improve nutritional status and prevent degenerative diseases. Early detection of nutritional problems through monitoring, along with interventions to correct dietary deficiencies, including supplementation, may help prolong healthy life years in this population segment.

By 2050, the population aged 80 years and older is projected to represent 28% of all older adults. As age increases, so do severe disability and functional decline (35), suggesting a higher burden on the healthcare system, as this population is the most frequent user for disease management (35). Therefore, it is imperative to adapt public health policies, programs, and strategies that provide age-specific recommendations for individuals over 80 years.

It is worth noting that in recent decades, Chile has promoted public policies targeting octogenarians, emphasizing healthy lifestyle pillars but lacking specific dietary strategies to provide nutritional support for this age group.

Strengths of this study include its national representativeness, allowing broader extrapolation. Limitations include the restricted list of foods assessed in the National Health Survey (ENS), limiting in-depth dietary analysis, which is expected to improve in future surveys. Additionally, no weights adjusted for complex survey design were applied. Although the ENS 2016–2017 uses stratified, multistage sampling with national representativeness, this analysis assumed a simple random sampling approach to facilitate secondary analysis with available statistical tools. This may limit generalizability, particularly for estimates of proportions and measures of association, as expansion factors, stratification, and intracluster variability were not fully accounted for. Nevertheless, the study maintains exploratory and descriptive value, providing relevant insights into the dietary behavior of older adults, especially octogenarians. Another limitation is that, as a cross-sectional study, only associations, not causal relationships, can be inferred.

It is essential to continue researching octogenarians, particularly regarding behaviors and lifestyle, to support health promotion and nutritional interventions aimed at improving quality of life and well-being in old age.

Conclusions

The nutritional status of octogenarian older adults is primarily characterized by overweight and obesity. Furthermore, the majority do not engage in physical activity, and most do not consume tobacco. Regarding dietary habits, significant differences are observed in the consumption of healthy and unhealthy foods between the 60–79-year group and octogenarians. As age increases, the proportion of individuals consuming alcohol, whole grains and oats, and fish decreases. Conversely, in the 80+ age group, adherence to dairy consumption recommendations is higher.

This study highlights the importance of analyzing dietary characteristics in older adults, particularly octogenarians, to develop targeted strategies that address specific nutritional challenges in this age group. Efforts should focus on promoting increased fish and water consumption among octogenarians due to their associated health benefits.

Conflicts of interest

The authors declare no conflicts of interest.

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