

Nutritional habits comparison of the baby boomer, X, Y, and Z generations located at a private college in Muğla, Türkiye

HALİME ZÜLAL ZEREN¹, ELİF BURCU BALI^{2*}, HÜLYA DEMİR¹

¹Department of Nutrition and Dietetics, Institute of Health Sciences, Yeditepe University, Istanbul, Türkiye

²Gazi University, Department of Medical Services and Techniques, Vocational School of Health Services, Ankara, Türkiye

*Corresponding author: burcubali@gazi.edu.tr

Citation: Zeren H.Z., Bali E.B., Demir H. (2023): Nutritional habits comparison of the baby boomer, X, Y, and Z generations located at a private college in Muğla, Türkiye. Czech J. Food Sci., 41: 436–445.

Abstract: The present study aimed to reveal intergenerational differences in the nutritional habits of the baby boomer, X, Y, and Z generations at a private college in Muğla, Türkiye. The study population included the students of the TED Bodrum College in Muğla province in the 2021–2022 academic year, including 311 participants: baby boomers (74), X (66), Y (43), and Z (128) generations. An online questionnaire was used to compare the eating habits among the generations. The data were evaluated using SPSS software. Most of the generations believed in healthy eating. Physical image and social media mainly influence the healthy eating habits of the Z generation. The baby boomers and X generations mostly skipped lunch, while the Y and Z generations skipped breakfast. Baby boomers, X, and Y generations mostly prefer healthy foods; however, the Z generation attaches importance to tasty foods. Z generation's interest in nutrition mostly concerns their physical appearance, not their health. Nutritional knowledge must be strengthened, particularly among young generations, and nutrition education programs need to be better supported by the government and educational sectors.

Keywords: food choices; generational differences; healthy eating; nutrition knowledge; questionnaire

Nutrition is a major regulator of personal health during physical and mental development. As nutrition affects a person's life quality and can alter the general course of life, making careful food choices and applying healthy eating habits are crucial. Nutrition functions as 'the phrase of cultures, social relations, values and an individual's autonomy' (Lee et al. 2022). Since food consumption is one of the most significant daily events that influence the performance of the human body during the day (Alwafi et al. 2022), the importance of food

consumption in a sustainable way has gained academic interest globally (Kamenidou et al. 2020). What people eat, when, and how much they eat are significant in healthy eating (Durukan and Gül 2019).

Healthy eating habits have been evaluated through diverse measurement standards such as drinking water, the level of a balanced diet, portion control, having breakfast, the consumption of protein, self-prepared meals, and healthy snacks (Sogari et al. 2018). Changes in nutritional behaviour like eating out of home, skip-

<https://doi.org/10.17221/105/2023-CJFS>

ping breakfast, frequent fast food consumption, and sedentary snacking can affect individuals' healthy food choices. Moreover, knowledge of healthy nutrition can be a protective strategy against developing chronic disorders such as cardiovascular disease and obesity (Razaz et al. 2022). Nutrition knowledge may play a basic role in adopting healthier eating habits (Al-saffar 2012). Factors such as convenience, taste, food cost, and cultural or religious beliefs affect food intake (Spronk et al. 2014).

Eating patterns created for generations serve as a source to determine current and future food policies (Guyomard et al. 2012). Understanding the nutritional habits between generations could enable healthcare professionals to better design schedules concerted to generational differences (Xiong et al. 2019). Furthermore, it can allow us to analyse previously undefined aspects of the nutritional habits of other generations, as each generation tries to understand one other (Durukan and Gül 2019). So, it is crucial to obtain knowledge of nutrition, the food choices and eating habits of different generations, and to determine the factors influencing these choices. There have been limited studies on eating habits, nutrition knowledge, food choices and healthy eating perspectives among different generations in the Turkish population. Thus, the aim of this study is to evaluate intergenerational differences in the nutritional habits of the baby boomer, X, Y, and Z generations via an online questionnaire and to create a resource for determining current and future food policies.

MATERIAL AND METHODS

Research population. This research analyses a total of 311 people (202 females and 109 males) from four generations in Türkiye: the baby boomers ($n = 74$), consisting of people born between 1946–1964; the X generation ($n = 66$), people born between 1965–1979; the Y generation (or millennials; $n = 43$) people born between 1980–1999 and the Z generation ($n = 128$), people born after 2000 (Durukan and Gül 2019).

The research population included the ninth, tenth, eleventh, and twelfth-grade students of the TED Bodrum College 2021–2022 academic year, located in the Bodrum District boundaries of Muğla. Furthermore, college students' mothers, fathers, grandparents, teachers, and administrators were included in the study. The Bezmîâlem Vakıf University carried out this study with the approval of the Non-Interventional Ethics Committee (No. 50152) on February 8, 2022.

Data collection. For this study, an online questionnaire with 26 questions was used as a data collection tool from the literature to compare the socio-demographic characteristics and nutritional habits of different generations (Kılıç and Şanlıer 2007; Akşit Aşık 2019). The questionnaire was submitted online for ten days in January 2021. The questionnaire created contains simple, clear, short, and direct statements. All participants, consisting of college students and their parents, grandparents, teachers and administrators were volunteers and were given the informed consent form at the start of the questionnaire. The subscales of the questionnaire occurred in different parts as below. A statement describing how to use the survey answers and a confidentiality clause has been included in the questionnaire. The raw data relating to the paper for editorial review has been stored. The survey consists of the following parts: *i*) descriptive characteristics and workout frequency of participants, *ii*) distribution of nutrition knowledge levels and healthy eating perspectives, *iii*) distribution of eating habits, *iv*) distribution of factors affecting food choices, *v*) distribution of preferred culinary culture, *vi*) evaluation of home-cooked meals by generations in women and men, *vii*) evaluation of food types consumed outside by generations in women and men.

Data analysis. Research data were evaluated using Statistical Package for the Social Sciences software (IBM SPSS Statistics, version 19.0). The data were shown in tables with numbers and percentage (%) values. As statistical analysis, the Pearson Chi-Square test was used to determine whether there was a correlation between two independent categorical variables. Fisher's Exact Chi-Square test was also used. The statistical significance level was expressed as $P < 0.05$ and $P < 0.01$.

Study limitations. A limitation of this study is that the sample participants were exclusively students in the academic year 2021–2022 from the TED Bodrum College located in Muğla, Türkiye, along with their mothers, fathers, grandparents, teachers, and administrators. Consequently, the inability to generalise the findings is a constraint of the present study.

RESULTS AND DISCUSSION

The demographic characteristics of the participants are shown in Table 1. The study included 311 participants, female (65%) and male (35%) of baby boomers (24%), X (21%), Y (14%), and Z (41%) generations. The participants' status of marriage, education, income,

Table 1. Descriptive characteristics and workout frequency of participants

	Baby boomer (<i>n</i> = 74)		Generation X (<i>n</i> = 66)		Generation Y (<i>n</i> = 43)		Generation Z (<i>n</i> = 128)	
Characteristics	women (<i>n</i> = 46)	men (<i>n</i> = 28)	women (<i>n</i> = 48)	men (<i>n</i> = 18)	women (<i>n</i> = 34)	men (<i>n</i> = 9)	women (<i>n</i> = 74)	men (<i>n</i> = 54)
	(n; %)							
Marital status								
Married	38 (82.6)	27 (96.4)	40 (83.3)	16 (89.9)	19 (55.9)	4 (44.4)	3 (4.1)	2 (3.7)
Single	8 (17.4)	1 (3.6)	8 (16.7)	2 (11.1)	15 (44.1)	5 (55.6)	71 (95.9)	52 (96.3)
Education								
≤ primary school	4 (8.7)	2 (7.1)	1 (2.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.4)	1 (1.9)
Secondary school	2 (4.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	13 (17.6)	13 (24.1)
High school	13 (28.3)	1 (3.6)	5 (10.4)	2 (11.1)	1 (2.9)	0 (0.0)	13 (17.6)	7 (13.0)
University	25 (54.3)	25 (89.3)	41 (85.4)	16 (88.9)	33 (97.1)	8 (88.9)	4 (5.4)	1 (1.9)
Continuing education	2 (4.3)	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)	1 (11.1)	43 (58.1)	32 (59.3)
Income status								
Income is less than the expense	4 (8.9)	4 (14.3)	10 (20.8)	0 (0.0)	7 (20.6)	0 (0.0)	17 (24.6)	13 (25.5)
Income equal to the expense	24 (53.3)	13 (46.4)	22 (45.8)	9 (50.0)	15 (44.1)	3 (33.3)	34 (49.3)	15 (29.4)
Income is greater than the expense	17 (37.8)	11 (39.3)	16 (33.3)	9 (50.0)	12 (35.3)	6 (66.7)	18 (26.1)	23 (45.1)
Employment status								
Working	7 (15.2)	7 (25.0)	29 (60.4)	16 (88.9)	33 (97.1)	9(100.0)	6 (8.1)	9 (16.7)
Not working	39 (84.8)	21 (75.0)	19 (39.6)	2 (11.1)	1 (2.9)	0 (0.0)	68 (91.9)	45 (83.3)
Workout frequency								
Never	13 (28.3)	7 (25.0)	18 (37.5)	2 (11.1)	8 (23.5)	1 (11.1)	14 (18.9)	7 (13.0)
1–2 hours per month	9 (19.6)	6 (21.4)	10 (20.8)	8 (44.4)	9 (26.5)	2 (22.2)	8 (10.8)	1 (1.9)
1–2 hours per week	11 (23.9)	7 (25.0)	12 (25.0)	4 (22.2)	10 (29.4)	5 (55.6)	31 (41.9)	14 (25.9)
At least 3 days a week	8 (17.4)	6 (21.4)	7 (14.6)	3 (16.7)	6 (17.6)	1 (11.1)	14 (18.9)	20 (37.0)
Every day	5 (10.9)	2 (7.1)	1 (2.1)	1 (5.6)	1 (2.9)	0 (0.0)	7 (9.5)	12 (22.2)

employment, and workout were evaluated according to the generations (Table 1). Most baby boomers and X generations were married, but the married status of four generations decreased from baby boomer to Z generations. Although the Z generations continued their educations, most of the baby boomer, X, and Y generations were university graduates. While most of the Z generation's income was less than their expenses, the Y generation's income was greater than their expenses. Moreover, most of the Z generation was not working; however, the Y generation had the most working individuals. In contrast to previous generations, men of generation Z tend to engage in more regular sports activities (Table 1).

In Türkiye, income level and lack of knowledge are major factors impacting people's nutritional habits. Low-income individuals consume more bread, while high-income individuals consume more meat and meat products. This signifies that the problem is not the rareness of foods, but their mal-dispersion within gender, age, and socio-economic groups (Pekcan 2006; Ayranci et al. 2010). Casini et al. (2013) stated that low incomes and low education are usually associated with high energy intake, while high incomes and high education cause health-oriented behaviour, healthy foods, and the importance of natural and light nutrients. In our study, except for the Z generation, most of the other generations were university graduates with

<https://doi.org/10.17221/105/2023-CJFS>

high educational attainment and income levels equal to their expenses. This situation also affected the nutritional habits of our study generations.

The distribution of nutrition knowledge levels and healthy eating perspectives is presented in Table 2. Unlike the Z generation, most of the baby boomer, X, and Y generations stated that they did not have adequate nutrition knowledge. For the X and Z generations of women, social media was mainly important to obtain nutritional knowledge. In China, the Z generation of trampolines athletes mostly acquired nutritional

knowledge from relatives, coaches, and friends (Feng and Yuan 2022). In our study, however, social media, doctors/specialists/dietitians, family, and school were significant sources of nutritional knowledge for most of the Z generation. Choices to acquire nutrition knowledge can vary due to the study population and cultural differences.

In this study, although most of the baby boomer, X, and Y generations did not have adequate nutrition knowledge, they attached more importance to healthy eating than the Z generation. The nutrition knowl-

Table 2. Distribution of nutrition knowledge levels and healthy eating perspectives

Knowledge levels	Baby boomer (<i>n</i> = 74)		Generation X (<i>n</i> = 66)		Generation Y (<i>n</i> = 43)		Generation Z (<i>n</i> = 128)	
	women (<i>n</i> = 46)	men (<i>n</i> = 28)	women (<i>n</i> = 48)	men (<i>n</i> = 18)	women (<i>n</i> = 34)	men (<i>n</i> = 9)	women (<i>n</i> = 74)	men (<i>n</i> = 54)
(n; %)								
Adequate nutrition knowledge								
Yes	15 (32.6)	13 (46.4)	20 (41.7)	5 (27.8)	12 (35.3)	4 (44.4)	43 (58.1)	29 (53.7)
No	31 (67.4)	15 (53.6)	28 (58.3)	13 (72.2)	22 (64.7)	5 (55.6)	31 (41.9)	25 (46.3)
Nutrition knowledge was obtained from* (<i>n</i> = 141)								
School	4 (26.7)	4 (30.8)	2 (10.0)	3 (60.0)	4 (33.3)	3 (75.0)	26 (60.5)	20 (69.0)
Teacher	0 (0.0)	1 (7.7)	2 (10.0)	0 (0.0)	0 (0.0)	2 (50.0)	8 (18.6)	7 (24.1)
Doctor/specialist/ dietitian	11 (73.3)	11 (84.6)	3 (15.0)	3 (60.0)	9 (75.0)	2 (50.0)	24 (55.8)	14 (48.3)
Book/brochure	6 (40.0)	6 (46.2)	12 (60.0)	2 (40.0)	3 (25.0)	1 (25.0)	9 (20.9)	5 (17.2)
Family	4 (26.7)	4 (30.8)	7 (35.0)	3 (60.0)	2 (16.7)	0 (0.0)	19 (44.2)	15 (51.7)
Tv-radio programs	6 (40.0)	4 (30.8)	8 (40.0)	3 (60.0)	4 (33.3)	0 (0.0)	13 (30.2)	4 (13.8)
Social media	7 (46.7)	6 (46.2)	13 (65.0)	2 (40.0)	6 (50.0)	1 (25.0)	28 (65.1)	17 (58.6)
Do you believe in healthy eating?								
Yes	45 (97.8)	26 (92.9)	48 (100.0)	18 (100.0)	34 (100.0)	9 (100.0)	68 (91.9)	51 (94.4)
No	1 (2.2)	2 (7.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (8.1)	3 (5.6)
Do you think you're eating healthy?								
Yes	39 (86.7)	21 (75.0)	42 (87.5)	14 (77.8)	24 (69.7)	5 (55.5)	50 (67.6)	41 (75.9)
No	6 (13.3)	7 (25.0)	6 (12.5)	4 (22.2)	10 (30.3)	4 (44.4)	24 (32.4)	13 (24.1)
Does nutrition influence your mood?								
Yes	42 (91.3)	25 (89.3)	48 (100.0)	18 (100.0)	34 (100.0)	8 (88.9)	66 (89.2)	48 (88.7)
No	4 (8.7)	3 (10.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (11.1)	8 (10.8)	6 (11.3)
Why do you pay attention to nutrition?								
Because your appearance/look is important	4 (8.7)	4 (14.3)	4 (8.5)	3 (16.7)	8 (24.2)	2 (22.2)	41 (55.4)	18 (34.0)
Because your health is important	42 (91.3)	24 (85.7)	43 (91.5)	15 (83.3)	25 (75.8)	7 (77.8)	33 (44.6)	35 (66.0)

*More than one option is checked

edge levels of generation X men were the lowest; however, the nutrition knowledge of generation Z women was the highest among the generations. Spronk et al. (2014) mentioned that women tend to have higher levels of nutrition knowledge than men, and this variation is associated with women's more active role in food purchasing and cooking or a lower affinity for nutrition among men. Lee et al. (2022) also stated that women got higher scores with regard to their level of resilience in food literacy than men. Our findings are also in line with previous studies showing that women had higher levels of food and health literacy than men (Krause et al. 2018; Sponslee et al. 2021).

Healthy nutrition is defined as a diet, rich in olive oil, vegetables, fruits, herbs, spices, legumes, nuts, and high fibre intake with a decrease in processed red meat intake (Gantenbein and Kanaka-Gantenbein 2021). In this study, all generations believed in healthy nutrition, and healthy eating influenced their moods. Compared to the four generations, the baby boomer and X generations thought that they were more health-conscious and more health-aware than the Y and Z generations, which is in line with the findings of Sogari et al. (2018). The impact of physical appearance and social media on healthy eating was found to be highest in generation Z. The studies of Alwafi et al. (2022) and Kaylor et al. (2022) confirmed these findings that social media is the main factor influencing eating habits. Additionally, Lee et al. (2022) stated that young adults, including the Z generation, usually attach importance to their appearance.

Table 3 presents the distribution of eating habits according to generations for men and women. Most of the generations also preferred to consume three meals per day. Those who consumed two meals were found to be the highest in the baby boomer generation. More than half of generation Z stated that dinner was their regular meal. Eating three meals per day is believed to be a healthy option, which originated from a mix of cultural heritage (Paoli et al. 2019). A three-meals per-day eating pattern has been adopted for the daily business and school schedules to provide both practical and social advantages. Although a widespread belief is that skipping meals is harmful and that eating three meals daily is substantial, the evidence supporting these beliefs is unsatisfactory (Mattson et al. 2014; Paoli et al. 2019; Potter et al. 2019). Moreover, in our study, most of the generations also consumed snacks in high ratios. Family structure, changing lifestyles, and limited time to prepare food significantly affect the eating habits of generations (Yarimoglu et al. 2019).

Table 4 displays the distribution of the factors affecting the food choices of the generations. For the baby boomers and generation X, the main factors influencing food choices are being healthy, tasty, safe, and additive-free. Unlike these generations, the Y and Z generations of women pay more attention to easily prepared (70.6% and 56.8%, respectively) and satisfying (50% and 73%) factors when choosing their foods. While the criterion of being healthy in food choices is the most important in the baby boomer and X generations of women, taste has gained much more importance in the Y and Z generations of women. Health and flavour were found to be the most important factors for all generations (Table 4).

Food choice affects individuals' overall quality of life, playing a major role in people's everyday lives (Lee et al. 2022). In this study, health and taste were the dominant factors affecting food choices for all generations, which agrees with the results of Ali et al. (2022). In our study, baby boomer women preferred most of their food to be healthy, but the Z generation of women preferred most of their food to be delicious. Our food choice findings also align with previous studies' results that attach importance to the taste factor (Sogari et al. 2018; Ozturk and Akoglu 2020; Rajini et al. 2021). Wongprawmas et al. (2022) mentioned that being economical is important when choosing food for freshmen students. Garai-Fodor (2021) also stated that freshness, money, good taste, and smell were the most important factors in food choice for the Z generation, respectively. Unlike the findings of these studies, our results reveal that money was a less important factor in food choices for all generations, which may indicate that the participants have no financial problems.

According to Table 5, the baby boomer generation of women mostly prefers vegetable-based traditional cuisine (73.9%); however, men of this generation mostly prefer meat-based traditional cuisine (57.1%). Furthermore, the meat-based traditional cuisine was the most preferred culinary culture for X (77.8%), Y (100%), and Z (98.1%) generations of men. The second most preferred culinary culture for the Z generation of women (68.9%) and men (50%) was fast food. Most generations are university graduates, economically self-sufficient, and mostly prefer a healthy diet.

Families play an essential role in improving children's self-efficacy concerning healthy eating. Educational level, income, and economic status might influence their children's healthy food choices (Casini et al. 2013; Güven and Öncü 2022). Therefore, generation Z, the child of generation Y, might mainly prefer a meat-

<https://doi.org/10.17221/105/2023-CJFS>

Table 3. Distribution of eating habits

Eating habits	Baby boomer (<i>n</i> = 74)		Generation X (<i>n</i> = 66)		Generation Y (<i>n</i> = 43)		Generation Z (<i>n</i> = 128)	
	women (<i>n</i> = 46)	men (<i>n</i> = 28)	women (<i>n</i> = 48)	men (<i>n</i> = 18)	women (<i>n</i> = 34)	men (<i>n</i> = 9)	women (<i>n</i> = 74)	men (<i>n</i> = 54)
(n; %)								
Number of meals consumed per day								
1 meal	0 (0.0)	1 (3.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (4.1)	1 (1.9)
2 meals	20 (43.5)	14 (50.0)	20 (41.7)	7 (38.9)	12 (35.3)	3 (33.3)	17 (23.0)	9 (16.7)
3 meals	22 (47.8)	12 (42.9)	22 (41.7)	10 (55.6)	20 (58.8)	5 (55.6)	44 (59.5)	34 (63.0)
≥ 4 meals	4 (8.7)	1 (3.6)	6 (12.5)	1 (5.6)	2 (5.9)	1 (11.1)	10 (13.5)	10 (18.5)
The most regularly consumed meal								
Breakfast	28 (60.9)	17 (60.7)	27 (56.3)	9 (50.0)	14 (41.2)	2 (22.2)	10 (13.5)	11 (20.4)
Lunch	4 (8.7)	1 (3.6)	9 (18.8)	3 (16.7)	9 (26.5)	3 (33.3)	22 (29.7)	8 (14.8)
Dinner	14 (30.4)	10 (35.7)	12 (25.0)	6 (33.3)	11 (32.4)	4 (44.4)	42 (56.8)	35 (64.8)
The most regularly skipped meal								
I don't skip meals	13 (28.3)	1 (3.6)	9 (18.8)	1 (5.6)	9 (26.5)	1 (11.1)	13 (17.6)	15 (27.8)
Breakfast	2 (4.3)	4 (14.3)	9 (18.8)	7 (38.9)	14 (41.2)	6 (66.7)	43 (58.1)	19 (35.2)
Lunch	28 (60.9)	20 (71.4)	26 (54.2)	7 (38.9)	8 (23.5)	0 (0.0)	14 (18.9)	18 (33.3)
Dinner	3 (6.5)	3 (10.7)	4 (8.3)	3 (16.7)	3 (8.8)	2 (22.2)	4 (5.4)	2 (3.7)
Reasons to skip meals*								
Can't wake up in the morning	7 (24.1)	1 (4.0)	6 (24.0)	1 (12.5)	6 (24.0)	1 (12.5)	29 (48.3)	15 (39.5)
Lack of time	6 (20.7)	6 (24.0)	14 (40.0)	10 (66.7)	15 (60.0)	2 (25.0)	26 (43.3)	15 (39.5)
Being late to school/work	1 (3.4)	1 (4.0)	3 (8.6)	4 (26.7)	3 (12.0)	3 (37.5)	23 (38.3)	13 (34.2)
No preparer	2 (6.9)	7 (28.0)	7 (20.0)	2 (13.3)	4 (16.0)	2 (25.0)	11 (18.3)	6 (15.8)
Lack of appetite	7 (24.1)	7 (28.0)	8 (22.9)	2 (13.3)	5 (20.0)	2 (25.0)	32 (53.3)	21 (55.3)
Lack of economic opportunities	2 (6.9)	1 (4.0)	1 (2.9)	1 (6.7)	1 (4.0)	0 (0.0)	0 (0.0)	1 (2.6)
To lose weight	10 (34.5)	9 (36.0)	15 (42.9)	2 (13.3)	6 (24.0)	1 (12.5)	14 (23.3)	4 (10.5)
Consuming snacks								
Yes	39 (84.8)	20 (71.4)	40 (83.3)	15 (83.3)	29 (85.3)	5 (55.6)	67 (90.5)	47 (87.0)
No	7 (15.2)	8 (28.6)	8 (16.7)	3 (16.7)	5 (14.7)	4 (44.4)	7 (9.5)	7 (13.0)

*More than one option is checked

based diet. Generation Z's preference for healthy eating may be associated with their families' educational and economic status. Goyal and Singh (2007) stated that homemade food was the first choice for young Indian consumers compared to fast food. The results of this study agree with ours. In our study, we think that generation Z's preference for healthy eating may be associated with their families' educational and economic status.

Turkish cuisine is among the richest and most popular cuisines in the world. Butter, butter fat, or olive

oil is used in vegetable dishes, pastries, meat dishes, and meatless or meaty vegetable dishes (Batu and Heysem 2018). In our study, vegetable dishes with olive oil, meat dishes, cake, bulghur, rice, etc. were mostly cooked at home by all generations (Table 6). Especially fast foods, street foods, and snacks were consumed outside by the Z generation (Table 7). Yari-moglu et al. (2019) noted that consuming snacks and junk food outside the home has significantly increased over the years due to limited time for food prepara-

Table 4. Distribution of factors affecting food choices

Factors affecting food choices*	Baby boomer (<i>n</i> = 74)		Generation X (<i>n</i> = 66)		Generation Y (<i>n</i> = 43)		Generation Z (<i>n</i> = 128)	
	women (<i>n</i> = 46)	men (<i>n</i> = 28)	women (<i>n</i> = 48)	men (<i>n</i> = 18)	women (<i>n</i> = 34)	men (<i>n</i> = 9)	women (<i>n</i> = 74)	men (<i>n</i> = 54)
	(n; %)							
No additives	31 (67.4)	16 (57.1)	28 (58.3)	10 (55.6)	18 (52.9)	4 (44.4)	11 (14.9)	13 (24.1)
Being healthy	34 (73.9)	18 (64.3)	39 (81.3)	14 (77.8)	24 (70.6)	3 (33.3)	29 (39.2)	28 (51.9)
Low calorie, high nutritional value	20 (43.5)	5 (17.9)	19 (39.6)	2 (11.1)	14 (41.2)	1 (11.1)	26 (35.1)	16 (29.6)
Low-fat content	22 (47.8)	5 (17.9)	15 (31.3)	4 (22.2)	5 (14.7)	1 (11.1)	17 (23.0)	16 (29.6)
Nutrient diversity	15 (32.6)	3 (10.7)	14 (29.2)	2 (11.1)	7 (20.6)	0 (0.0)	11 (14.9)	8 (14.8)
Cooking method (frying, grilling, etc.)	20 (43.5)	12 (42.9)	21 (43.8)	8 (44.4)	10 (29.4)	2 (22.2)	29 (39.2)	23 (42.6)
Being economic	10 (21.7)	3 (10.7)	13 (27.1)	5 (27.8)	11 (32.4)	3 (33.3)	19 (25.7)	14 (25.9)
Satisfying	10 (21.7)	6 (21.4)	19 (39.6)	7 (38.9)	17 (50.0)	5 (55.6)	54 (73.0)	43 (79.6)
Tasty	31 (67.4)	21 (75.0)	37 (77.1)	15 (83.3)	28 (82.4)	6 (66.7)	68 (91.9)	44 (81.5)
Easy to prepare	12 (26.1)	4 (14.3)	14 (29.2)	5 (27.8)	24 (70.6)	4 (44.4)	42 (56.8)	25 (46.3)
Different from the tastes you are used to	1 (2.2)	0 (0.0)	3 (6.3)	2 (11.1)	5 (14.7)	0 (0.0)	10 (13.5)	11 (20.4)
Safety	32 (69.6)	18 (64.3)	36 (75.0)	11 (61.1)	20 (58.8)	5 (55.6)	30 (40.5)	26 (48.1)

* Multiple options are selected

Table 5. Distribution of preferred culinary culture

Preferred culinary cultures*	Baby boomer (<i>n</i> = 74)		Generation X (<i>n</i> = 66)		Generation Y (<i>n</i> = 43)		Generation Z (<i>n</i> = 128)	
	women (<i>n</i> = 46)	men (<i>n</i> = 28)	women (<i>n</i> = 48)	men (<i>n</i> = 18)	women (<i>n</i> = 34)	men (<i>n</i> = 9)	women (<i>n</i> = 74)	men (<i>n</i> = 54)
	(n; %)							
Meat-base traditional cuisine	21 (45.7)	16 (57.1)	27 (56.3)	14 (77.8)	26 (76.5)	9 (100.0)	52 (70.3)	53 (98.1)
Vegetable-base traditional cuisine	34 (73.9)	16 (57.1)	35 (72.9)	9 (50.0)	22 (64.7)	4 (44.4)	32 (43.2)	19 (35.2)
Fast-food	3 (6.5)	3 (10.7)	9 (18.8)	4 (22.2)	10 (29.4)	4 (44.4)	51 (68.9)	27 (50.0)
Grain-based traditional cuisine	9 (19.6)	7 (25.0)	13 (27.1)	1 (5.6)	6 (17.6)	1 (11.1)	27 (36.5)	13 (24.1)
Mediterranean cuisine	26 (56.5)	11 (39.3)	29 (60.4)	9 (50.0)	18 (52.9)	2 (22.2)	32 (43.2)	25 (46.3)
Vegetarian/ vegan	1 (2.2)	0 (0.0)	3 (6.3)	1 (5.6)	4 (11.8)	0 (0.0)	13 (17.6)	3 (5.6)

* More than one option is checked

<https://doi.org/10.17221/105/2023-CJFS>

Table 6. Evaluation of home-cooked meals by generations in women and men

Types of meals cooked at home	Women (n = 202)				Men (n = 109)					
	baby boomer (n = 46)	generation X (n = 48)	generation Y (n = 34)	generation Z (n = 74)	P	baby boomer (n = 28)	generation X (n = 18)	generation Y (n = 9)	generation Z (n = 54)	P
(n; %)										
Meat dishes	41 (89.1)	44 (91.7)	29 (85.3)	72 (97.3)	0.102 ^a	23 (82.1)	18 (100.0)	8 (88.9)	51 (94.4)	0.116 ^a
Vegetable dishes with meat	35 (76.1)	35 (72.9)	22 (64.7)	64 (86.5)	0.066 ^b	22 (78.6)	18 (100.0)	6 (66.7)	50 (92.6)	0.016 ^{a*}
Legume dishes with meat	28 (60.9)	29 (60.4)	19 (55.9)	60 (81.1)	0.016 ^{b*}	15 (53.6)	16 (88.9)	4 (44.4)	45 (83.3)	0.003 ^{a**}
Vegetable dishes with olive oil	43 (93.5)	46 (95.8)	30 (88.2)	65 (87.8)	0.382 ^a	27 (96.4)	15 (83.3)	7 (77.8)	42 (77.8)	0.116 ^a
Legume dishes with olive oil	34 (73.9)	34 (70.8)	20 (58.8)	58 (78.4)	0.207 ^b	23 (82.1)	14 (77.8)	4 (44.4)	43 (79.6)	0.139 ^a
Cake, bulghur, rice, etc.	34 (73.9)	43 (89.6)	31 (91.2)	63 (85.1)	0.106 ^b	22 (78.6)	15 (83.3)	8 (88.9)	51 (94.4)	0.115 ^a
Pastry	22 (47.8)	27 (56.3)	13 (38.2)	48 (64.9)	0.052 ^b	16 (57.1)	8 (44.4)	4 (44.4)	35 (64.8)	0.381 ^b
Desserts	19 (41.3)	19 (39.6)	14 (41.2)	52 (70.3)	0.001 ^{b**}	13 (46.4)	9 (50.0)	5 (55.6)	37 (68.5)	0.214 ^b
All	15 (32.6)	15 (31.3)	10 (29.4)	42 (56.8)	0.005 ^{b**}	11 (39.3)	7 (38.7)	3 (33.3)	28 (51.9)	0.566 ^a

^a Fisher's Exact test; ^b Pearson Chi-Square test; * $P < 0.05$; ** $P < 0.01$

Table 7. Evaluation of food types consumed outside by generations in women and men

Type of food consumed outside	Women (n = 202)				P	Men (n = 109)				
	baby boomer (n = 46)	generation X (n = 48)	generation Y (n = 34)	generation Z (n = 74)		baby boomer (n = 28)	generation X (n = 18)	generation Y (n = 9)	generation Z (n = 54)	
										(n; %)
Pot dishes	9 (19.6)	9 (18.8)	6 (17.6)	21 (28.4)	0.466 ^a	7 (25.0)	4 (22.2)	3 (33.3)	16 (29.6)	0.882 ^b
Fast-food	8 (17.4)	16 (33.3)	21 (61.8)	65 (87.8)	0.001 ^{***}	7 (25.0)	6 (33.3)	7 (77.8)	45 (83.3)	0.001 ^{***}
Meatballs, kebabs, doners, etc.	35 (76.1)	36 (75.0)	30 (88.2)	53 (71.6)	0.306 ^a	20 (71.4)	16 (88.9)	8 (88.9)	50 (92.6)	0.070 ^b
Street foods	7 (15.2)	14 (29.2)	11 (32.4)	48 (64.9)	0.001 ^{***}	7 (25.0)	8 (44.4)	4 (44.4)	40 (74.1)	0.001 ^{b**}
Fish and seafood	28 (60.9)	31 (64.6)	17 (50.0)	43 (58.1)	0.605 ^a	22 (78.6)	11 (61.1)	4 (44.4)	23 (42.6)	0.014 ^{b*}
Bakery/ pastry products	13 (28.3)	12 (25.0)	14 (41.2)	40 (54.1)	0.004 ^{***}	7 (25.0)	6 (33.3)	1 (11.1)	28 (51.9)	0.026 ^{a*}
Snacks (wafers, crackers, chocolate, candy, etc.)	4 (8.7)	7 (14.6)	5 (14.7)	56 (75.7)	0.001 ^{***}	1 (3.6)	4 (22.2)	2 (22.2)	33 (61.1)	0.001 ^{***}
World cuisine (Mexican, Asian, Italian, etc.)	13 (28.3)	17 (35.4)	11 (32.4)	45 (60.8)	0.001 ^{***}	6 (21.4)	6 (33.3)	4 (44.4)	29 (53.7)	0.037 ^{***}

^a Pearson Chi-Square test; ^b Fisher Freeman Halton test; * $P < 0.05$; ** $P < 0.01$

tion, a higher number of women engaged in business careers, changing lifestyles, and evolving family structures. The study results confirm this situation. Furthermore, our findings showed that fast food is the second most preferred culinary culture and the most consumed food outside the home by generation Z. The study results align with the previous studies, which signifies the increased fast food consumption of Z generations (Ares et al. 2021; Rajini et al. 2021; Tahir et al. 2022).

CONCLUSION

Healthy eating habits among generations are a critical point in maintaining a healthy life and are important for all segments of society. This study will first reveal generational differences in nutrition knowledge levels, healthy eating habits, food choices, preferred culinary culture, home-cooked meals, and food types consumed outside among the baby boomer, X, Y, and Z generations in Muğla, Türkiye. As a result of this study, it was observed that the baby boomer, X and Y generations mostly prefer healthy eating perspectives; however, the Z generation has a hedonistic approach to eating habits. Although the Z generation's nutritional knowledge was higher than that of the other generations, their interest in nutrition was mostly related to their physical appearance, not their health. Different perceptions about nutrition have created food consumption patterns for generations. Thus, it is necessary to strengthen the knowledge of proper nutrition, particularly among young generations, and to support more nutrition education programs by the government and education sectors.

Acknowledgement. The research was performed as the master's thesis of Halime Zülal Zeren under the supervision of Assoc. Prof. Dr. Hülya Demir and Assist. Prof. Dr. Elif Burcu Bali.

REFERENCES

- Akşit Aşık N. (2019): Factors affecting food preferences of X and Z generation consumers. *Journal of Tourism and Gastronomy Studies*, 7: 2599–2611.
- Ali S.H., Gupta S., Tariq M., Penikalapati R., Vasquez-Lopez X., Auer S., Hanif C., Parekh N., Merdjanoff A.A., DiClemente R.J. (2022): Mapping drivers of second-generation South Asian American eating behaviors using a novel integration of qualitative and social network analysis methods. *Ecology of food and nutrition*, 61: 503–521.
- Alsaffar A.A. (2012): Validation of a general nutrition knowledge questionnaire in a Turkish student sample. *Public Health Nutrition*, 15: 2074–2085.
- Alwafi H., Alwafi R., Naser A.Y., Samannodi M., Aboraya D., Salawati E., Alqurashi A., Ekram R., Alzahrani A.R., Aldhahir A.M., Assaggaf H., Almatrafi M. (2022): The impact of social media influencers on food consumption in Saudi Arabia, a cross-sectional web-based survey. *Journal of Multidisciplinary Healthcare*, 15: 2129–2139.
- Ares G., Antúnez L., Alcaire F., Vidal L., Bove I. (2021): Listening to the voices of adolescents for the design of strategies to promote healthy eating: An exploratory study in a Latin American country. *Public Health Nutrition*, 24: 5953–5962.
- Ayranci U., Erenoglu N., Son O. (2010): Eating habits, lifestyle factors, and body weight status among Turkish private educational institution students. *Nutrition*, 26: 772–778.
- Batu A., Heysem S.B. (2018): Historical background of Turkish gastronomy from ancient times until today. *Journal of Ethnic Food*, 5: 76–82.
- Casini L., Contini C., Marone E., Romano C. (2013): Food habits. Changes among young Italians in the last 10 years. *Appetite*, 68: 21–29.
- Durukan A., Gül A. (2019): Mindful eating: Differences of generations and relationship of mindful eating with BMI. *International Journal of Gastronomy and Food Science*, 18: 100172.
- Feng B., Yuan Y. (2022): Investigation and strategy research on dietary nutrition knowledge, attitude, and behavior of athletes. *Journal of Food Quality*, 2022: 7323680.
- Gantenbein K.V., Kanaka-Gantenbein C. (2021): Mediterranean diet as an antioxidant: The impact on metabolic health and overall wellbeing. *Nutrients*, 13: 1951.
- Garai-Fodor M. (2021): Food consumption patterns, in a values-based approach, for generation Z. *Acta Polytechnica Hungarica*, 18: 117–134.
- Goyal A., Singh N.P. (2007): Consumer perception about fast food in India: An exploratory study. *British Food Journal*, 109: 182–195.
- Güven Y., Öncü E. (2022): The relationship between junk food consumption, healthy nutrition, and obesity among children aged 7 to 8 years in Mersin, Turkey. *Nutrition Research*, 103: 1–10.
- Guyomard H., Darcy-Vrillon B., Esnouf C., Marin M., Russel M., Guillou M. (2012): Eating patterns and food systems: Critical knowledge requirements for policy design and implementation. *Agriculture and Food Security*, 1: 13.
- Kamenidou I., Stavrianea A., Bara E.-Z. (2020): Generational differences toward organic food behavior: Insights from five generational cohorts. *Sustainability*, 12: 2299.
- Kaylor S.K., Allen I., Crim A.D., Callihan M.L. (2022): Calories and control: Eating habits, behaviors, and motivations

<https://doi.org/10.17221/105/2023-CJFS>

- of generation Z females. *Journal of American College Health*, 71: 2578–2586.
- Kılıç E., Şanlıer N. (2007): The comparison of three women's nutrition habits, *Kastamonu Education Journal*, 15: 31–44.
- Krause C., Sommerhalder K., Beer-Borst S., Abel T. (2018): Just a subtle difference? Findings from a systematic review on definitions of nutrition literacy and food literacy. *Health Promotion International*, 33: 378–389.
- Lee Y., Kim T., Jung H. (2022): The relationships between food literacy, health promotion literacy and healthy eating habits among young adults in South Korea. *Foods*, 11: 2467.
- Mattson M.P., Allison D.B., Fontana L., Harvie M., Longo V.D., Malaisse W.J., Mosley M., Notterpek L., Ravussin E., Scheer F.A., Seyfried T.N., Varady K.A., Panda S. (2014): Meal frequency and timing in health and disease. *Proceedings of the National Academy of Sciences of the United States of America*, 111: 16647–16653.
- Ozturk S.B., Akoglu A. (2020): Assessment of local food use in the context of sustainable food: A research in food and beverage enterprises in Izmir, Turkey. *International Journal of Gastronomy and Food Science*, 20: 100194.
- Paoli A., Tinsley G., Bianco A., Moro T. (2019): The influence of meal frequency and timing on health in humans: The role of fasting. *Nutrients*, 11: 719.
- Pekcan G. (2006): Food and nutrition policies: What's being done in Turkey. *Public Health Nutrition*, 9: 158–162.
- Potter C., Griggs R.L., Brunstrom J.M., Rogers P.J. (2019): Breaking the fast: Meal patterns and beliefs about healthy eating style are associated with adherence to intermittent fasting diets. *Appetite*, 133: 32–39.
- Rajini S., Kannan K., Selvi T. (2021): Factors influencing the consumption of fast food among young adults. *Journal of Pharmaceutical Research International*, 33: 430–440.
- Razaz J.M., Balam F. H., Karimi T., Rahmani J., Kalantari N., Shariatpanahi S.P., Bawadi H., Bhagavathula A.S., Roudsari A.H. (2022): Sex differences in healthy eating: Investigating the moderating effect of self-efficacy. *Journal of Nutrition Education and Behavior*, 54: 151–158.
- Sogari G., Velez-Argumedo C., Gómez M.I., Mora C. (2018): College students and eating habits: A study using an ecological model for healthy behavior. *Nutrients*, 10: 1823.
- Sponslee H.C.S., Kroeze W., Poelman M.P., Renders C.M., Ball K., Steenhuis I.H.M. (2021): Food and health promotion literacy among employees with a low and medium level of education in the Netherlands. *BMC Public Health*, 21: 1273.
- Spronk I., Kullen C., Burdon C., O'Connor H. (2014): Relationship between nutrition knowledge and dietary intake. *The British Journal of Nutrition*, 111: 1713–1726.
- Tahir N.S., Ahmad Y., Bustami M.R., Abd Hamid S.N.F., Muhammad Zamri N.E.M., Mulyany R. (2022): Generation Z's perception of fast food's product safety, nutrition, and health. *Environment-Behaviour Proceedings Journal*, 7: 3–10.
- Wongprawmas R., Sogari G., Menozzi D., Mora C. (2022): Strategies to promote healthy eating among university students: A qualitative study using the nominal group technique. *Frontiers in Nutrition*, 9: 821016.
- Xiong R., Spaccarotella K., Quick V., Byrd-Bredbenner C. (2019): Generational differences: A comparison of weight-related cognitions and behaviors of generation X and millennial mothers of preschool children. *International Journal of Environmental Research and Public Health*, 16: 2431.
- Yarimoglu E., Kazançoğlu İ., Bulut Z. (2019): Factors influencing Turkish parents' intentions towards anti-consumption of junk food. *British Food Journal*, 121: 35–53.

Received: July 8, 2023

Accepted: December 6, 2023

Published online: December 21, 2023