



Article

Mediterranean Diet Adherence in Adolescents of Different Cultures and Geographical Proveniences: A Pilot Study

Federica Intorre *, Maria Stella Foddai and Eugenia Venneria

Council for Agricultural Research and Economics—Research Centre for Food and Nutrition (CREA—Food and Nutrition), Via Ardeatina 546, 00178 Rome, Italy; mariastella.foddai@crea.gov.it (M.S.F.); eugenia.venneria@crea.gov.it (E.V.)

* Correspondence: federica.intorre@crea.gov.it

Abstract: The objective of the present research was to evaluate if and to what extent the encounter between different cultures in a context of globalization may have influenced the adherence to the Mediterranean diet (MD) in adolescents. The study comprised a structured questionnaire packet that inquired about anthropometric data, demographic information and both dietary and lifestyle habits. The KIDMED questionnaire was used to evaluate the adherence to the MD. A total of 103 respondents, aged 10–24 years (39.8% born in Italy or first-generation immigrants from Mediterranean countries) were included in the study. The results showed the highest percentage of adolescents having a medium adherence to the MD (44.7%), without differences according to geographical area of origin. Furthermore, the study proved that a higher adherence to the MD was significantly associated with daily breakfast ($p = 0.008$) and the consumption of fruit and vegetables ($p = 0.002$ and $p = 0.000$, respectively). Volunteers representing some of the different cultures and geographical proveniences currently present in Italy were perfectly integrated regarding diet and lifestyle, aspects considered in this study. Our investigation suggests the existence of incorrect dietary habits. It is certainly necessary to implement public health policies targeting adolescents to promote healthier lifestyle choices; the nutritional patterns of the MD should be among these choices.



Citation: Intorre, F.; Foddai, M.S.; Venneria, E. Mediterranean Diet Adherence in Adolescents of Different Cultures and Geographical Proveniences: A Pilot Study. *Adolescents* **2022**, *2*, 336–349. <https://doi.org/10.3390/adolescents2020026>

Received: 18 May 2022

Accepted: 15 June 2022

Published: 18 June 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: Mediterranean diet; adolescence; lifestyle; KIDMED questionnaire; multicultural societies

1. Introduction

The term “Mediterranean diet (MD)” has been widely used to describe the traditional dietary pattern prevailing among people living in the olive-tree-growing areas of the Mediterranean basin before the mid-1960s, that is, before globalization exerted its influence on lifestyle and diet [1]. There is no single MD. Each region personalizes the basic diet to take advantage of food availability and cultural preferences, but all of them have common characteristics. Despite differences across countries, the principal aspects of this dietary pattern include a high consumption of fruit and vegetables, olive oil as a source of fat, a low consumption of meat and dairy products and a moderate consumption of wine, combined with an active lifestyle [2]. The MD, acknowledged by UNESCO as an intangible cultural heritage of humanity, should not be considered just as a particular set of food to be consumed in specified quantities and proportions, but also as a cultural model involving not only consumption, but food production, processing, distribution and cooking, including rituals and traditions [3].

A substantial body of scientific evidence demonstrates the importance of the MD in preventing some chronic non-communicable diseases [4,5], reducing causes of mortality [6] and maintaining good health over the entire lifespan [7]. Hence, the MD has been promoted as a model for healthy eating. Despite these documented health benefits, during the past few decades, there has been a gradual erosion of this dietary pattern by the inhabitants of the Mediterranean basin, especially by the younger generations [8,9]. The withdrawal from the MD is due to numerous factors, including the importation of Western

habits, population growth, urbanization, lifestyle changes, together with economic and sociocultural factors, and the increasing availability and progressive globalization of food supply, which overcomes geographical barriers between food production and consumption worldwide [8,10].

Human migrations represent the greatest feature of the globalized world. Migration is a complex and dynamic process driven by the interplay of a set of social, economic, environmental and political factors in the sending and receiving countries. Political instability, insecurity, violence, poverty, unemployment and natural disasters serve as “push factors” in sending countries, whereas “pull factors”, acting from receiving countries, include better income and job prospects, higher standards of living, strong social and family ties and better educational systems [11]. Newly immigrated families live according to the traditions and cultures of their native countries—in most cases developing countries—which leads to difficulties concerning the integration with the host population. Migration often leads to lifestyle, psychological and social changes, which may contribute to changes in dietary habits, strictly connected with the cultures, traditions and religions of each ethnic group, and thus, strongly linked with their own origins. Indeed, the transition to a new culture and the adoption of the host culture have been associated with various effects on individuals’ behaviours, eating habits, food choices and health outcomes, especially during the first few months of the transition [12,13]. More sensitive elements of these processes are adolescents who, compared to their indigenous peers, follow a path of growth that is certainly more difficult, because they must simultaneously face transition both toward adulthood and towards the host society.

Adolescence is a transitional period from childhood to adulthood. The World Health Organization (WHO) defines adolescence as the broad age range from 10–24 years [14]. This is further broken down into early adolescence (10–15 years), late adolescence (15–18 years) and early adulthood or emerging adulthood (18–24 years) [15]. Adolescence is a critical, complex phase in an individual’s physical and emotional development. In this phase, diet and nutrition are important aspects of one’s life course. Adolescents’ increasing independence around food choice is often portrayed negatively: they are increasingly adopting unhealthy eating behaviours such as the consumption of food away from home and the frequent intake of energy-dense, processed “fashionable” foods [8], with an important abandonment of the MD. As eating habits formed during childhood and adolescence can potentially increase the risk of some typical adult diseases [16], it is important to establish healthy habits early in life [7].

Despite the high presence of adolescents from different cultures and geographical proveniences in Italy, specific studies on lifestyle, eating habits and nutritional status are lacking. The objective of the present research was therefore to evaluate, through an observational study, if and to what extent the encounter between different cultures due to a migration process, in the context of globalization present in modern society, may have influenced these aspects, defining as study sample the adolescents (10–24 years) attending youth aggregation centres of the First District of Rome.

2. Materials and Methods

Through the administration of questionnaires in a “face to face” assisted modality, information about lifestyle, eating habits, food consumption and adherence to the MD were anonymously collected to maintain and protect confidentiality. Linguistic barriers were compensated for by translating questionnaires into other languages and/or using visual and/or technological supports.

Before starting data collection, participants were informed about the objective of the research and signed informed consent was obtained. Participation in the study was fully voluntary and subjects could withdraw from the study at any time, for any reason. Moreover, in accordance with the European Commission General Data Protection Regulation (679/2016), those willing to participate signed, in advance, a privacy policy and consent form for collecting and processing personal data. In the case of minors, both releases were

signed by parents or by whoever had parental responsibility. The assessment did not involve invasive procedures or induce changes in dietary patterns. Therefore, the study did not require approval by the Ethics Committee.

Data collection was performed between October 2020 and September 2021. All the information came from subjective statements of the participants and referred to a habitual condition which did not consider the concomitant pandemic situation that partly changed the lifestyles of adolescents, as demonstrated by recent studies conducted on this age group [17].

2.1. Study Sample

Adolescents born abroad and whose parents were not both born in Italy were considered “first-generation immigrants”. Adolescents born in Italy and who had at least one parent born abroad were considered “second-generation immigrants”. Adolescents whose parents were born in Italy were considered “natives”.

Based on the country of origin of adolescents for first-generation immigrants and of parents for second-generation immigrants, two categories were defined. Mediterranean volunteers hailed from Italy, Egypt, Libya, Morocco and Syria; non-Mediterranean volunteers hailed from Asia (Bangladesh, China, India, Iraq, Pakistan, Philippines and Sri Lanka), South America (Argentina, Bolivia, Brazil, Colombia, Peru, Uruguay and Venezuela), non-Mediterranean European regions (Poland) and non-Mediterranean Africa (Côte d’Ivoire, Ghana, Guinea, Mali, Nigeria, Senegal, Somalia and Togo). For second-generation immigrants, in the case where the parents were from two different geographical areas, the category was randomly chosen between the mother’s and the father’s area of origin.

2.2. Anthropometric Data

Self-reported weight and height were used for determining body mass index (BMI), calculated as weight in kilograms divided by the square of the height in meters (kg/m^2), and consequently for classifying volunteers into underweight ($<18.5 \text{ kg}/\text{m}^2$), normal weight ($18.5\text{--}24.9 \text{ kg}/\text{m}^2$), overweight ($25.0\text{--}29.9 \text{ kg}/\text{m}^2$) and obese ($\geq 30.0 \text{ kg}/\text{m}^2$) [18].

2.3. Lifestyle Questionnaire

The lifestyle questionnaire consisted of a package of questions specifically designed to obtain different information about geographical provenience, social situation, education and/or working situation, leisure time activity and eating habits. The questionnaire was accompanied by an appendix to be filled exclusively by foreign volunteers (both first- and second-generation), in which to indicate information about their country of origin, both previous and current knowledge of the Italian language, eating habits acquired in Italy and the habitual consumption of country-of-origin food.

2.4. Adherence to the MD

The KIDMED questionnaire was used to evaluate the adherence to the MD [2,19]. It consists of 16 dichotomous (positive/negative) items, where there are 4 questions denoting a negative connotation to the MD (consumption of fast food, baked goods, sweets, and skipping breakfast) and 12 questions denoting a positive connotation (consumption of oil, fish, fruits, vegetables, cereals, nuts, pulses, pasta or rice, dairy products, and yoghurt). Questions denoting negative connotation are scored with -1 , while positive connotation questions are scored with $+1$ (Table 1). The obtained sum from the answers can then be used to classify the adherence to the MD into three levels: a score ≤ 3 reflects a low adherence to the MD (very low diet quality); a score of $4\text{--}7$ describes a medium adherence (improvement needed to adjust intake to Mediterranean patterns); a score ≥ 8 indicates a high adherence (optimal MD).

Table 1. KIDMED questionnaire to assess the Mediterranean diet (MD) quality.

+1	Takes a fruit or fruit juice every day
+1	Has a second fruit every day
+1	Has fresh or cooked vegetables regularly once a day
+1	Has fresh or cooked vegetables more than once a day
+1	Consumes fish regularly (at least 2–3 times per week)
−1	Goes more than once a week to a fast-food (hamburger) restaurant
+1	Likes pulses and eats them more than once a week
+1	Consumes pasta or rice almost every day (5 or more times per week)
+1	Has cereals or grains (bread, etc.) for breakfast
+1	Consumes nuts regularly (at least 2–3 times per week)
+1	Uses olive oil at home
−1	Skips breakfast
+1	Uses dairy product for breakfast (yoghurt, milk, etc.)
−1	Has commercially baked goods or pastries for breakfast
+1	Takes two yoghurts and/or some cheese (40 g) daily
−1	Takes sweets and candy several times every day

2.5. Statistical Analysis

The MedCalc software version 20.106 for Windows was used to perform all the statistical analyses, establishing the significance at $p < 0.05$. The analyses were conducted using the maximum number of subjects for whom data were available ($n = 103$): this number decreased in analysis considering BMI categories ($n = 79$).

Means and standard deviations (sd) were reported for continuous variables, and percentages for categorical variables. The data were first tested for normal distribution by using the Shapiro–Wilk test for normality. Means were compared through the Student’s *t* test and the Mann–Whitney *U* test for normally and non-normally distributed variables, respectively. Associations between each categorical variable were tested using the Pearson chi-square test. A multiple logistic regression model was employed to evaluate the factors predicting the highest adherence to the MD, i.e., a KIDMED score ≥ 8 (dependent variable).

3. Results

Data were collected on 103 volunteers. A total of 39.8% of volunteers hailed from Mediterranean countries (natives, first-generation immigrants and second-generation immigrants) and 60.2% from non-Mediterranean countries (first-generation and second-generation immigrants). The characteristics of the sample are reported in Table 2. The mean age was 18.5 ± 3.9 years and the highest percentage of volunteers (66.0%) were aged 18–24 years, i.e., early adult or emerging adult. There were no statistically significant differences by gender and age group due to geographical area of origin.

Table 2. Study sample characteristics by geographical area of origin.

	Total Sample	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
Gender (%)				ns
Males	63.1	56.1	67.7	
Females	36.9	43.9	32.3	
Age (years) (mean \pm sd)	18.5 ± 3.9	18.9 ± 4.0	18.3 ± 3.9	ns
Age groups (%)				ns
10–15 years	22.3	22.0	22.6	
15–18 years	11.7	12.2	11.3	
18–24 years	66.0	65.8	66.1	

Data are presented as mean \pm standard deviations (sd) for continuous variables and percentage for categorical variables. Statistical analysis: chi-square test and independent samples *t*-test; ns = not significant.

As language and communication barriers could influence some aspects related to lifestyle, including food consumption, the volunteers were asked about the number of years spent in Italy (Table 3). Regarding the presence in our country, 17.5% of volunteers declared that they had been living in Italy for less than 1 year, most of them (59.5%) for less than 5 years, and 23.0% were born in Italy (second-generation immigrants). Although the last group of volunteers did not experience migration directly and had a path of education and linguistic acquisition that took place in our country, nevertheless they may have been influenced by the culture of their parents or other family members. There were no statistically significant differences between the two groups. Only 1.7% of the first-generation immigrants knew the Italian language before arriving in Italy, and currently about 30.0% of them were still experiencing difficulties. Obviously, these difficulties decreased as the time spent in our country increased, even if among those who had been in Italy for more than 5 years, about 10.0% still had difficulty reading or writing or understanding the Italian language (data not shown).

Table 3. Number of years in Italy by geographical area of origin.

	Total Sample (<i>n</i> = 74)	Mediterranean Volunteers *	Non-Mediterranean Volunteers	<i>p</i> Value
Number of years in Italy (%)				ns
<1 year	17.5	16.6	17.8	
1–5 years	31.1	41.7	29.0	
>5 years	28.4	33.3	27.4	
Born in Italy	23.0	8.4	25.8	

Data are presented as percentages. Statistical analysis: chi-square test; ns = not significant. * Mediterranean volunteers do not include Italian ones, i.e., born in Italy or abroad from Italian parents (*n* = 29).

Particular attention was given to the preference for Italian food or country-of-origin food by foreign volunteers, both first- and second-generation (Table 4). Only a minority of them (18.6%) stated that they consumed mainly country-of-origin food, 31.4% Italian food and 50.0% both equally. There were no statistically significant differences between the two groups of volunteers (both Mediterranean, excluding Italians, and non-Mediterranean groups). The data also show that the consumption of country-of-origin food occurred mainly on a weekly basis, except in the case of drinks and sweets, whose consumption instead mainly marked religious events or special occasions (data not shown).

Table 4. Type of food habitually consumed by geographical area of origin.

	Total Sample (<i>n</i> = 74)	Mediterranean Volunteers *	Non-Mediterranean Volunteers	<i>p</i> Value
Type of food (%)				ns
Country-of-origin food	18.6	16.7	19.0	
Italian food	31.4	33.3	31.0	
Both country-of-origin and Italian food	50.0	50.0	50.0	

Data are presented as percentages. Statistical analysis: chi-square test; ns = not significant. * Mediterranean volunteers do not include Italian ones, i.e., born in Italy or abroad from Italian parents (*n* = 29).

The volunteers were also asked about water consumption (data not shown). The results show that more than half of the sample in both groups drank less than one litre of water a day, i.e., below the recommendations for adolescents corresponding to at least two litres [20]. A noteworthy aspect is the fact that 22.0% of the Mediterranean and 6.5% of the non-Mediterranean volunteers failed to quantify their daily water consumption. However, the differences were not statistically significant (*p* = ns).

An important percentage of the volunteers of both groups were found not to have lunch (19.5%) or dinner (14.6%) every day but to consume these two meals only a few days a week, due to lack of time, study or work commitments, lack of appetite and fatigue. The tendency of eating between meals was once a day (for 35.9% of volunteers) or twice a day (for 36.9% of them) (data not shown). Data on the habit of away-from-home eating both for lunch and dinner is shown in Table 5. In general, the non-Mediterranean volunteers ate less outside the home, even if the differences between the two groups were not statistically significant. In particular, 21.0% of them (compared to 12.2% of the Mediterranean volunteers) never had lunch away from home, and 29.0% (compared to 24.4% of the Mediterranean volunteers) never had dinner away from home. A total of 63.3% of the sample reported away-from-home eating as an occasion to socialize (data not shown).

Table 5. Away-from-home eating by geographical area of origin.

	Total Sample	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
Lunch (%)				ns
Never	17.5	12.2	21.0	
Monthly	32.0	36.6	29.0	
Weekly	49.5	51.2	47.4	
Every day	1.0	0.0	1.6	
Dinner (%)				ns
Never	27.2	24.4	29.0	
Monthly	40.7	36.6	43.6	
Weekly	32.1	39.0	27.4	
Every day	0.0	0.0	0.0	

Data are presented as percentages. Statistical analysis: chi-square test; ns = not significant.

The volunteers were also asked if they normally eat different food from their family members or roommates (Table 6). A total of 72.5% of the Mediterranean volunteers and 53.3% of the non-Mediterranean volunteers declared that they always or sometimes eat differently from those who live with them.

Table 6. Eating differently from family members or roommates by geographical area of origin.

	Total Sample	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
Eating differently from family members or roommates (%)				0.048
Always	13.0	7.5	16.7	
Sometimes	48.0	65.0	36.6	
Never	39.0	27.5	46.7	

Data are presented as percentages. Statistical analysis: chi-square test.

In Table 7 are reported the physical characteristics of the volunteers by their geographical provenience. The mean BMI ($22.3 \pm 4.3 \text{ kg/m}^2$) indicates a normal weight status for both groups, even if there are statistically significant differences ($p = 0.030$). A noteworthy aspect is that about 22.0% of the volunteers did not know or remember their weight or height or both, and therefore in these cases it was not possible to calculate the BMI value. Considering the BMI categories, 70.8% of the sample was of normal weight. The number of volunteers in the extreme categories was small: 8.9% of the volunteers were underweight and 3.8% were obese (all coming from non-Mediterranean countries). There were no statistically significant differences between the two groups.

Table 7. Physical characteristics by geographical area of origin.

	Total Sample (<i>n</i> = 80)	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
Weight (kg) (mean ± sd)	63.3 ± 15.0	60.0 ± 10.8	65.7 ± 17.2	ns
Height (cm) (mean ± sd)	167.0 ± 11.0	167.3 ± 10.4	166.7 ± 11.2	ns
BMI (kg/m ²) (mean ± sd)	22.3 ± 4.3	21.4 ± 2.5	23.6 ± 5.2	0.030
BMI categories (%)				ns
Underweight	8.9	11.4	6.8	
Normal weight	70.8	80.0	63.7	
Overweight	16.5	8.6	22.7	
Obese	3.8	0.0	6.8	

BMI = body mass index. Data are presented as mean ± sd for continuous variables and percentage for categorical variables. Statistical analysis: chi-square test and independent samples *t*-test or Mann–Whitney U test; ns = not significant.

In Table 8, the adherence to the MD is reported using the KIDMED questionnaire. A mean KIDMED score (5.6 ± 2.6 for Mediterranean and 6.4 ± 2.6 for non-Mediterranean volunteers) indicates a medium adherence, without significant differences between groups. Most of the sample had a medium adherence to the MD (respectively, 51.2% of volunteers from Mediterranean countries and 40.3% of volunteers from other countries); there was also a great percentage of the sample (36.9%) having a high adherence to the MD, mainly represented by non-Mediterranean volunteers (45.2%).

Table 8. Adherence to the MD by geographical area of origin.

	Total Sample	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
KIDMED score (mean ± sd)	6.1 ± 2.6	5.6 ± 2.6	6.4 ± 2.6	ns
Adherence to the MD (%)				ns
Low	18.4	24.4	14.5	
Medium	44.7	51.2	40.3	
High	36.9	24.4	45.2	

MD= Mediterranean diet. Data are presented as mean ± sd for continuous variables and percentage for categorical variables. Statistical analysis: chi-square test and independent samples *t*-test; ns = not significant.

The adherence to the MD was deepened by analysing the responses to each single question of the KIDMED questionnaire, shown in Table 9. Among the behaviours with a negative connotation with respect to the MD, those that prevailed were the consumption of baked goods or pastries for breakfast (by 46.3% of the Mediterranean and 53.2% of the non-Mediterranean volunteers) and skipping breakfast due to lack of time, a desire to sleep longer in the morning and a lack of appetite (by 31.7% of the Mediterranean and 41.9% of the non-Mediterranean volunteers), without significant differences. Among the behaviours with a positive connotation with respect to the MD, the use of extra-virgin olive oil was the most widespread among all the participants in the study (all the Mediterranean volunteers and 93.5% of the non-Mediterranean ones stated that they use it regularly at home), followed by the consumption of pasta or rice almost every day (73.2% of the Mediterranean and 88.7% of the non-Mediterranean volunteers, $p = 0.042$). The less followed behaviour with a positive connotation with respect to the MD was the daily consumption of two yoghurts and/or some cheese (40 g) (by 17.1% of the Mediterranean and 29.0% of the non-Mediterranean volunteers).

Table 9. Responses to the KIDMED questionnaire by geographical area of origin.

KIDMED Questionnaire (%)	Total Sample	Mediterranean Volunteers	Non-Mediterranean Volunteers	<i>p</i> Value
Takes a fruit or fruit juice every day ¹	71.8	63.4	77.4	ns
Has a second fruit every day ¹	40.8	26.8	50.0	0.019
Has fresh or cooked vegetables regularly once a day ¹	67.0	70.7	64.5	ns
Has fresh or cooked vegetables more than once a day ¹	40.8	41.5	40.3	ns
Consumes fish regularly (at least 2–3 times per week) ¹	46.6	43.9	48.4	ns
Goes more than once a week to a fast-food (hamburger) restaurant ²	15.5	12.2	17.7	ns
Likes pulses and eats them more than once a week ¹	69.9	63.4	74.2	ns
Consumes pasta or rice almost every day (5 or more times per week) ¹	82.5	73.2	88.7	0.042
Has cereals or grains (bread, etc.) for breakfast ¹	74.8	65.9	80.6	ns
Consumes nuts regularly (at least 2–3 times per week) ¹	45.6	48.8	43.5	ns
Uses olive oil at home ¹	96.1	100.0	93.5	ns
Skips breakfast ²	37.9	31.7	41.9	ns
Uses dairy product for breakfast (yoghurt, milk, etc.) ¹	73.8	58.5	83.9	0.004
Has commercially baked goods or pastries for breakfast ²	50.5	46.3	53.2	ns
Takes two yoghurts and/or some cheese (40 g) daily ¹	24.3	17.1	29.0	ns
Takes sweets and candy several times every day ²	25.2	29.3	22.6	ns

Data presented as percentages are referred to as “yes” answers. Statistical analysis: chi-square test; ns = not significant. ¹ “Yes” answers with a positive score (+1). ² “Yes” answers with a negative score (−1).

Regarding the consumption of fruit and vegetables, 63.4% of the Mediterranean volunteers and 77.4% of the non-Mediterranean ones consumed fruit or fruit juice every day and 70.7% of the Mediterranean and 64.5% of the non-Mediterranean volunteers ate fresh or cooked vegetables regularly once a day; it is important to underline that only a small percentage of the sample (40.8%) ate a second fruit every day (with statistically significant differences between the groups, $p = 0.019$) or fresh or cooked vegetables more than once a day. Therefore, we are still far from the recommendations relating to the daily consumption of at least 400 g (i.e., five portions) of fruit and vegetables [21], which, however, do not include fruit juices, instead mentioned in the KIDMED questionnaire together with fruit. Pulses were regularly consumed by 63.4% of the Mediterranean and 74.2% of the non-Mediterranean volunteers. Less than 50.0% of the sample from both groups consumed fish regularly (at least 2–3 times per week).

Crude and adjusted odd ratios for lifestyle and dietary factors associated with a greater adherence to the MD, obtained from a multiple regression model, are shown in Table 10.

Table 10. Odds ratio (OR) and 95% confidence intervals (CI) from logistic regression analysis showing the association of adherence to the MD with selected lifestyle and dietary factors.

Factors	Unadjusted OR (95% CI)	<i>p</i> Value	Adjusted OR (95% CI)	<i>p</i> Value
Gender				
Males vs. females	0.70 (0.31–1.60)	ns	0.51 (0.16–1.64)	ns
Age				
<18 years vs. ≥18 years	1.64 (0.71–3.76)	ns	1.39 (0.46–4.18)	ns
Geographical area of origin				
Mediterranean countries vs. non-Mediterranean countries	0.39 (0.16–0.94)	0.035	0.22 (0.07–0.72)	0.012
BMI				
Underweight/normal weight vs. overweight/obese	0.92 (0.27–3.08)	ns	2.62 (0.54–12.73)	ns
Breakfast consumption				
Yes vs. no	4.29 (1.65–11.14)	0.003	6.02 (1.61–22.48)	0.008
Eating between meals				
Yes vs. no	2.78 (0.85–9.03)	ns	2.45 (0.56–10.74)	ns
Eating differently from roommates				
No vs. yes	1.64 (0.73–3.7)	ns	1.84 (0.58–5.85)	ns
Daily fruit consumption				
Yes vs. no	5.31 (1.68–16.78)	0.004	9.97 (2.37–41.90)	0.002
Daily vegetables consumption				
Yes vs. no	7.29 (2.32–22.90)	0.001	14.27 (3.39–60.02)	0.000

BMI = body mass index. OR = odds ratio; CI = confidence interval. Statistical analysis: multiple logistic regression; ns = not significant.

Geographical provenience, breakfast consumption and the consumption of fruit and vegetables all had a significant effect on a greater adherence to the MD, whereas the remaining variables did not significantly affect the adherence. The result shows that volunteers consuming breakfast had about a six-fold greater likelihood of being in the highest tertile of adherence to the MD compared to those not having daily breakfast (adjusted OR 6.02, 95% CI 1.61–22.48; *p* value = 0.008). At the same time, volunteers eating daily fruit and vegetables were, respectively, about ten and fourteen times more likely to have a greater adherence to the MD than those who did not consume fruit or vegetables (adjusted OR 9.97, 95% CI 2.37–41.90; *p* value = 0.002 and adjusted OR 14.27, 95% CI 3.39–60.02; *p* value = 0.000, respectively). Moreover, the Mediterranean volunteers were about 25% less likely to comply with the MD than the non-Mediterranean volunteers (adjusted OR 0.22, 95% CI 0.07–0.72; *p* value = 0.012).

4. Discussion

The aim of this study was to evaluate if and to what extent the encounter between different cultures in a context of globalization may have influenced lifestyle, eating habits and nutritional status in adolescents, regarding the adherence to the MD.

Over the last 20 years, due to the transition of Italy into a multi-ethnic and multicultural society, a slow and natural process of inclusion and integration between different population groups has begun to be realized. To the best of our knowledge, few studies on the lifestyle, eating habits and nutritional status of adolescents of different geographical proveniences have been published, and those that have are often oriented towards a specific ethnic group [13,22,23]. Generally, besides the length of stay in the host country, mostly due to an acculturation process, foreigners partially integrate behaviours and cultural aspects of the host population whilst maintaining aspects of their own culture to varying degrees. This has been highlighted in some adult dietary studies, which suggest gradual adaptation to the natives' eating habits according to the number of years spent in the host country. Moreover, the ethnic group may play different roles in the acquisition of dietary habits for immigrants [24]. In our study, the volunteers represent the different cultures and geographical proveniences currently living in Italy; for this reason, our results cannot be precisely interpreted due to the cultural heterogeneity and cannot be easily compared with other studies in the literature. The study sample is comparable by gender, age and time spent in Italy, according to the geographical provenience. Our investigation suggests that both first-generation and second-generation immigrant adolescents have the tendency to adopt Italian dietary habits because of the natural process of integration in the new culture and lifestyle. Only a few volunteers were found to eat exclusively country-of-origin foods (mainly on a weekly frequency), while most of the sample ate them as well as Italian food. Thus, there is still coexistence between integration into the new culture and being rooted in one's values: holidays and anniversaries represent an opportunity to consolidate the link with one's origins, through the consumption of typical sweets and drinks.

In adolescents, dietary habits vary according to migration status, but such investigations have thus far been limited [25,26]. Moreover, it is worth noting that there are numerous differences in the definition of "adolescence" by age, which make comparison difficult. The most recent data in the literature on Italian adolescents investigating health-related behaviours derive from the Health Behaviour in School-aged Children (HSBC) surveillance system, which monitors over time Italian adolescents aged 11–15 [27]. This age group does not coincide with the broader adolescent age classification corresponding to 10–24 years, which was considered in our study [14].

Autonomy is the process by which adolescents take responsibility and parents become less responsible for their adolescent's nutritional decision making. Moreover, first-generation and second-generation immigrants must simultaneously face the transition both to adulthood and to the host society. Influences in the home environment diminish in adolescence and compete with external influences: peer pressure and needs for acceptance and conformity become important as adolescents increasingly purchase and consume food away from home. Foods and beverages selected outside the home may have a considerable influence on overall dietary quality and consequently on health [28], even if it has been demonstrated that adolescent nutritional autonomy does not necessarily result in less healthful diets [29]. Our results show that the frequency of away-from-home eating is mainly weekly in the case of lunch and monthly in the case of dinner, without differences due to the geographical origin. The habits of away-from-home eating are also highlighted by the KIDMED questionnaire: the percentage of adolescents who went to a fast-food restaurant more than once a week was 15.5% (17.7% of the non-Mediterranean volunteers and 12.2% of the Mediterranean ones). Moreover, 72.5% of the Mediterranean volunteers and 53.3% of the non-Mediterranean ones declared that they always or sometimes eat differently from those who live with them, thus demonstrating the autonomy in food choices typical of this age group.

Among the 16 questions of the KIDMED test, 4 refer to breakfast intake and quality. A significant decline in daily breakfast consumption has been observed in most countries, including Italy [30]. Breakfast is considered the "most important meal of the day", and recent scientific reviews have addressed many aspects related to its essential role in the diet and its possible impact on body weight control, as well as on other physiological, social and

cultural aspects. Breakfast consumption is positively associated with an adequate nutrient intake in children and adolescents. By contrast, skipping breakfast in young people might lead to weight gain and the onset of overweight and obesity [31]. In our sample, 31.7% of the Mediterranean volunteers and 41.9% of the non-Mediterranean ones (37.9% of the total sample) declared that they skipped breakfast, due to lack of time or appetite and a desire to sleep longer in the morning; this result is in line with those of other studies conducted on Italian adolescents [30,32]. The higher percentage of non-Mediterranean volunteers skipping breakfast might be due to previous dietary habits, for example, a different lifestyle, meal structure and organization during the day.

Adolescence is also considered a critical window for the development of overweight and obesity, and there is consistent evidence showing that excess weight in youth tends to track into adulthood [33]. The aetiology of adolescent overweight and obesity is multifactorial. The main contributing factors are difficult to pinpoint, but it is believed to be a complex interaction of environmental, metabolic, psychological, genetic and lifestyle behaviours [33]. While mean BMI and obesity prevalence in several high-income countries have reached a plateau, their rates have accelerated in low-income countries [34]. Most of our sample was of normal weight, independently from geographical provenience, with few volunteers allocated in the extreme categories of BMI: 8.9% were underweight (11.4% of the Mediterranean volunteers and 6.8% of the non-Mediterranean ones) and 3.8% were obese (all coming from non-Mediterranean countries). The prevalence of volunteers with a normal weight agrees with results from other studies which, however, do not consider the multicultural aspects which have been considered in our study [33,35].

Exploring the relationship between the MD and overweight/obesity is complex, and there are important methodological differences and limitations in the studies that make it difficult to compare results. Buckland and co-workers [36] identified 21 epidemiological studies that explored the relationship between the MD and weight. Of these, 13 studies reported that MD adherence was significantly related to less overweight/obesity or more weight loss, while 8 of them found no evidence of this association. Our results show that the non-Mediterranean volunteers had a significantly higher BMI than the Mediterranean volunteers (23.6 ± 5.2 vs. 21.4 ± 2.5 kg/m², $p = 0.000$), even if their adherence to the MD was better. These results could be explained by other factors; however, either these will be further explored later (sedentary habits and physical activity) or they are not considered in the study (environmental factors and genetics).

It is generally believed that Mediterranean countries have a higher adherence to the MD compared to other non-Mediterranean countries. In recent years, a global shifting from the MD has instead been documented, especially in the Mediterranean regions that have experienced the greatest loss of adherence as opposed to the non-Mediterranean countries, to such an extent that a nutrition transition issue has emerged also for Mediterranean populations. Moreover, this downward trend has been observed in particular for the younger age groups, i.e., children and adolescents, who are more likely to select more globalized and Western-style foods [16,37,38]. Some indexes based on the adherence to the Mediterranean dietary pattern have been developed: among them, the KIDMED questionnaire is an easy, valid and accurate tool used in children and adolescents. According to our findings, the mean KIDMED score (6.1 ± 2.6) indicates a medium adherence to the MD. A high adherence to the MD (KIDMED score ≥ 8) was found in 36.9% of the respondents, 24.4% of the Mediterranean volunteers and 45.2% of the non-Mediterranean ones. These differences revealed different ways of using the nutritional resources of the Mediterranean basin, in other words, different approaches to the MD. Moreover, the importance of breakfast as well as of the consumption of fruit and vegetables has been demonstrated in relation to the likelihood of adhering better to the MD, as reported elsewhere [37,39]. The WHO recommends for adolescents a daily consumption of five portions (400 g) of fruit and vegetables [21], but their levels in adolescent diets are often low. A meta-analysis conducted between 2003 and 2011 found that in low/middle-income countries, 74.3% of adolescents aged from 12 to 15 years consumed fruit and vegetables less than five times per day [40]. Our results

confirm this datum, also considering that the first question of the KIDMED questionnaire considers fruit and fruit juice equivalent [41]. Instead, fruit has a different macronutrient composition, including less energy from sugar compared with fruit juice or any other fruit beverages, such that several studies have declared that daily intake of fruit juice is not recommended [42]. Moreover, water consumption is below the recommendations for adolescents, corresponding to at least two litres a day [20].

The general limitation of this kind of study could be due to the use of self-reported answers, which may have led to bias and misreporting affecting the reliability; moreover, some investigated variables were based on participants' perceptions, which may not reflect real conditions. Weight and height as self-reported and not measured might not correspond to the true physiological variables. However, the use of self-reported anthropometric measurements can be used for weight classification purposes [43]. Another limitation of the study is related to the small sample size and to the fact that the sampling covered a geographically limited area. Generalizations and extrapolations should thus be made cautiously; the fact that the volunteers attended a multicultural centre presupposes a context of integration that is not always present in other situations. Thus, further investigations are recommended, involving larger and multi-centre populations. Despite these limitations, this study also has some strengths. The most important relates to the fact that the participants of this study were part of a population group that has not been widely assessed. Moreover, the questionnaires were not emailed or sent through an online system, but instead were completed during face-to-face interviews, thus optimizing data quality: the answers were immediately checked in the presence of the subject to avoid incomplete and/or inconsistent reporting. Finally, our results emphasize that the migration component that has rarely been considered in previous studies is fundamental regarding dietary behaviour at these ages.

5. Conclusions

This pilot study contributes data of interest on the dietary behaviours of adolescents of different cultures and geographical proveniences. Most of the sample was of normal weight and adhered moderately to the MD, but there was still the existence of incorrect dietary habits. The data from this study underline the need to encourage the practice of a Mediterranean lifestyle and the implementation of policies at both national and local levels to promote a healthy diet among all population groups, particularly children and adolescents, also considering that eating constitutes a key medium for social inclusion and intercultural dialogue.

Author Contributions: F.I., M.S.F. and E.V. conceptualized and designed the current research, performed the observational study and data analysis, and wrote and critically reviewed the manuscript. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The investigation was carried out following the rules of the 1975 Declaration of Helsinki, revised in 2013. Ethical review and approval were waived for this study because it did not involve any invasive procedure or laboratory assessment or induce lifestyle changes or dietary intake modifications.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. In the case of minors, the release was signed by parents or guardians.

Data Availability Statement: The archived data and all the elaboration and analysis generated and used for the presentation of results in this study are fully available upon request from the corresponding author.

Acknowledgments: The authors gratefully thank all the participants in this study that provided time for interviews. With their collaborative attitude, the respondents supported the fieldwork and contributed to the provision of high-quality results.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

1. Trichopoulou, A.; Martínez-González, M.A.; Tong, T.Y.; Forouhi, N.G.; Khandelwal, S.; Prabhakaran, D.; Mozaffarian, D.; de Lorgeril, M. Definitions and potential health benefits of the Mediterranean diet: Views from experts around the world. *BMC Med.* **2014**, *12*, 112. [CrossRef] [PubMed]
2. Serra-Majem, L.; Ribas, L.; García, A.; Perez-Rodrigo, C.; Aranceta, J. Original communication. Nutrient adequacy and Mediterranean Diet in Spanish school children and adolescents. *Eur. J. Clin. Nutr.* **2003**, *57*, 35–39. [CrossRef] [PubMed]
3. Bach-Faig, A.; Berry, E.M.; Lairon, D.; Reguant, J.; Trichopoulou, A.; De Medina, F.X.; Battino, M.; Belahsen, R.; Miranda, G.; Serra-Majem, L. Mediterranean diet pyramid today. Science and cultural updates. *Public Health Nutr.* **2011**, *14*, 2274–2284. [CrossRef]
4. Becerra-Tomás, N.; Blanco-Mejía, S.; Vigiouliouk, E.; Khan, T.; Kendall, C.W.C.; Kahleova, H.; Rahelić, D.; Sievenpiper, J.L.; Salas-Salvadó, J. Mediterranean diet, cardiovascular disease and mortality in diabetes: A systematic review and meta-analysis of prospective cohort studies and randomized clinical trials. *Crit. Rev. Food Sci. Nutr.* **2020**, *60*, 1207–1227. [CrossRef] [PubMed]
5. Esposito, K.; Maiorino, M.I.; Bellastella, G.; Chiodini, P.; Panagiotakos, D.; Giugliano, D. A journey into a Mediterranean diet and type 2 diabetes: A systematic review with meta-analyses. *BMJ Open.* **2015**, *5*, e008222. [CrossRef] [PubMed]
6. Soltani, S.; Jayedi, A.; Shab-Bidar, S.; Becerra-Tomás, N.; Salas-Salvadó, J. Adherence to the Mediterranean diet in relation to all-cause mortality: A systematic review and dose–response meta-analysis of prospective cohort studies. *Adv. Nutr.* **2019**, *10*, 1029–1039. [CrossRef] [PubMed]
7. García-Hermoso, A.; Ezzatvar, Y.; López-Gil, J.F.; Ramírez-Vélez, R.; Olloquequi, J.; Izquierdo, M. Is adherence to the Mediterranean diet associated with healthy habits and physical fitness? A systematic review and meta-analysis including 565 421 youths. *Br. J. Nutr.* **2020**, 1–12. [CrossRef] [PubMed]
8. Naja, F.; Hwalla, N.; Hachem, F.; Abbas, N.; Al Zahraa Chokor, F.; Kharroubi, S.; Chamieh, M.C.; Jomaa, L.; Nasreddine, L. Erosion of the Mediterranean diet among adolescents: Evidence from an Eastern Mediterranean Country. *Br. J. Nutr.* **2021**, *125*, 346–356. [CrossRef]
9. Veronese, N.; Notarnicola, M.; Cisternino, A.M.; Inguaggiato, R.; Guerra, V.; Reddavid, R.; Rotolo, O.; Zinzi, I.; Leandro, G.; Tutino, V.; et al. Trends in adherence to the Mediterranean diet in South Italy: A cross sectional study. *Nutr. Metab. Cardiovasc. Dis.* **2020**, *30*, 410–417. [CrossRef]
10. Kontogianni, M.D.; Vidra, N.; Farmaki, A.E.; Koinaki, S.; Belogianni, K.; Sofrona, S.; Magkanari, F.; Yannakoulia, M. Adherence Rates to the Mediterranean Diet Are Low in a Representative Sample of Greek Children and Adolescents. *J. Nutr.* **2008**, *138*, 1951–1956. [CrossRef]
11. Bodvarsson, Ö.B.; Van den Berg, H. *The Economics of Immigration. Theory and Policy*; Springer: Berlin, Germany, 2013.
12. Casali, M.E.; Borsari, L.; Marchesi, I.; Borella, P.; Bargellini, A. Lifestyle and food habits changes after migration: A focus on immigrant women in Modena (Italy). *Ann. Ig.* **2015**, *27*, 5.
13. Cataldo, F.; Pacchini, M.; Accomando, S.; Pittaresi, N.; Salvioli, G.P. The Italian Society of Pediatrics national working group on immigrant children (GLNBI). Dietary habits in children of immigrant families from developing countries: An Italian multicentre study. *Ital. J. Pediatr.* **2006**, *32*, 288–295.
14. Sawyer, S.M.; Azzopardi, P.S.; Wickremarathne, D.; Patton, G.C. The age of adolescence. *Lancet Child Adolesc. Health* **2018**, *2*, 223–228. [CrossRef]
15. Daly, A.N.; O’Sullivan, E.J.; Kearney, J.M. Conference on Nutrition, health and ageing—Translating science into practice Postgraduate Symposium. Considerations for health and food choice in adolescents. *Proc. Nutr. Soc.* **2021**, 1–12. [CrossRef] [PubMed]
16. Noale, M.; Nardi, M.; Limongi, F.; Siviero, P.; Caregaro, L.; Crepaldi, G.; Maggi, S. For the Mediterranean Diet Foundation Study Group. Adolescents in southern regions of Italy adhere to the Mediterranean diet more than those in the northern regions. *Nutr. Res.* **2014**, *34*, 771–779. [CrossRef] [PubMed]
17. Di Renzo, L.; Gualtieri, P.; Pivari, F.; Soldati, L.; Attinà, A.; Cinelli, G.; Leggeri, C.; Caparello, G.; Barrea, L.; Scerbo, F.; et al. Eating habits and lifestyle changes during COVID-19 lockdown: An Italian survey. *J. Transl. Med.* **2020**, *18*, 229. [CrossRef]
18. World Health Organization. *Physical Status: The Use of and Interpretation of Anthropometry*; Report of a WHO Expert Committee; WHO Technical Report Series: Geneva, Switzerland, 1995; ISBN 92 4 120854 6.
19. Serra-Majem, L.; Ribas, L.; Ngo, J.; Ortega, R.M.; García, A.; Perez-Rodrigo, C.; Aranceta, J. Food, youth and the Mediterranean diet in Spain. Development of KIDMED, Mediterranean Diet Quality Index in children and adolescents. *Public Health Nutr.* **2004**, *7*, 931–935. [CrossRef]
20. CREA Centro di Ricerca per gli Alimenti e la Nutrizione. Linee Guida per Una Sana Alimentazione Italiana; Revisione 2018. Available online: <https://www.Crea.Gov.It/En/Web/Alimenti-e-Nutrizione/-/Linee-Guida-per-Una-Sana-Alimentazione-2018> (accessed on 15 December 2021).
21. WHO-World Health Organization. WHO European Food and Nutrition Action Plan 2015–2020. Increasing Fruit and Vegetable Consumption to Reduce the Risk of Noncommunicable Diseases. Available online: <https://www.euro.who.int/en/health-topics/>

- disease-prevention/nutrition/activities/technical-support-to-member-states/promoting-fruit-and-vegetable-consumption (accessed on 1 March 2022).
22. Allen, M.L.; Elliott, M.N.; Morales, L.S.; Diamant, A.L.; Hambarsoomian, K.; Schuster, M.A. Adolescent participation in preventive health behaviors, physical activity, and nutrition: Differences across immigrant generations for Asians and Latinos compared with Whites. *Am. J. Public Health* **2007**, *97*, 337–343. [\[CrossRef\]](#)
 23. Brown, A.G.M.; Houser, R.F.; Mattei, J.; Rehm, C.D.; Mozaffarian, D.; Lichtenstein, A.H.; Foltz, S.C. Diet quality among US-born and foreign-born non-Hispanic blacks: NHANES 2003–2012 data. *Am. J. Clin. Nutr.* **2018**, *107*, 695–706. [\[CrossRef\]](#)
 24. Méjean, C.; Traissac, P.; Eymard-Duvernay, S.; Delpeuch, F.; Maire, B. Influence of acculturation among Tunisian migrants in France and their past/present exposure to the home country on diet and physical activity. *Public Health Nutr.* **2009**, *12*, 832–841. [\[CrossRef\]](#)
 25. Llull, R.; Bibiloni, M.; Pons, A.; Tur, J.A. Food consumption patterns of Balearic Islands' adolescents depending on their origin. *J. Immigr. Minor Health* **2015**, *1*, 358–366. [\[CrossRef\]](#) [\[PubMed\]](#)
 26. Te Velde, S.J.; Wind, M.; van Lenthe, F.J.; Klepp, K.I.; Brug, J. Differences in fruit and vegetable intake and determinants of intakes between children of Dutch origin and non-Western ethnic minority children in the Netherlands—A cross sectional study. *Int. J. Behav. Nutr. Phys. Act.* **2006**, *3*, 31. [\[CrossRef\]](#) [\[PubMed\]](#)
 27. Nardone, P.; Pierannunzio, D.; Donati, S.; Spinelli, A.; Pizzi, E.; Ciardullo, S.; Andreozzi, S.; Cavallo, F.; Vieno, A.; Lazzeri, G.; et al. 2018 HBSC-Italia Group. *La Sorveglianza HBSC 2018—Health Behaviour in School-Aged Children: Risultati dello Studio Italiano Tra i Ragazzi di 11, 13 e 15 anni*; Istituto Superiore di Sanità: Roma, Italy, 2020; pp. 1–65.
 28. Todd, J.E.; Mancino, L.; Lin, B.H. *The Impact of Food Away from Home on Adult Diet Quality*; Economic Research Report-USDA; U.S. Department of Agriculture, Economic Research Service: Washington, DC, USA, 2010; Volume 90, pp. 1–24. Available online: https://www.ers.usda.gov/webdocs/publications/46352/8170_err90_1_.pdf (accessed on 17 June 2022).
 29. Bassett, R.; Chapman, G.E.; Beagan, B.L. Autonomy and control: The co-construction of adolescent food choice. *Appetite* **2008**, *50*, 325–332. [\[CrossRef\]](#) [\[PubMed\]](#)
 30. Nardone, P.; Pierannunzio, D.; Ciardullo, S.; Lazzeri, G.; Cappello, N.; Spinelli, A. The 2018 HBSC-Italia Group. Dietary habits among Italian adolescents and their relation to socio-demographic characteristics. *Ann. Ist. Super. Sanità* **2020**, *56*, 504–513.
 31. Wicherski, J.; Schlesinger, S.; Fischer, F. Association between Breakfast Skipping and Body Weight—A Systematic Review and Meta-Analysis of Observational Longitudinal Studies. *Nutrients* **2021**, *13*, 272. [\[CrossRef\]](#)
 32. Monzani, A.; Ricotti, R.; Caputo, M.; Solito, A.; Archero, F.; Bellone, S.; Prodam, F. A systematic review of the association of skipping breakfast with weight and cardiometabolic risk factors in children and adolescents. What should we better investigate in the future? *Nutrients* **2019**, *11*, 387. [\[CrossRef\]](#)
 33. Toselli, S.; Grigoletto, A.; Zaccagni, L.; Rinaldo, N.; Badicu, G.; Grosz, W.R.; Campa, F. Body image perception and body composition in early adolescents: A longitudinal study of an Italian cohort. *BMC Public Health* **2021**, *21*, 1381. [\[CrossRef\]](#)
 34. Abarca-Gómez, L.; Abdeen, Z.A.; Hamid, Z.A.; Abu-Rmeileh, N.M.; Acosta-Cazares, B.; Acuin, C. NCD Risk Factor Collaboration (NCD-RisC) group. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: A pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *Lancet* **2017**, *390*, 2627–2642. [\[CrossRef\]](#)
 35. Di Giacomo, D.; Ranieri, J.; Fiasca, F.; Mattei, A. Lifestyle, body mass index and wellness in youth: Strengthens and weakness in Italian youth. *Health Psychol. Res.* **2019**, *7*, 8035. [\[CrossRef\]](#)
 36. Buckland, G.; Bach, A.; Serra-Majem, L. Obesity and the Mediterranean diet: A systematic review of observational and intervention studies. *Obs. Rev.* **2008**, *9*, 582–593. [\[CrossRef\]](#)
 37. Rosi, A.; Paolella, G.; Biasini, B.; Scazzina, F. SINU Working Group on Nutritional Surveillance in Adolescents. Dietary habits of adolescents living in North America, Europe or Oceania: A review on fruit, vegetable and legume consumption, sodium intake, and adherence to the Mediterranean Diet. *Nutr. Metab. Cardiovasc. Dis.* **2019**, *29*, 544–560. [\[CrossRef\]](#) [\[PubMed\]](#)
 38. Buscemi, S. What are the determinants of adherence to the Mediterranean diet? *Int. J. Food Sci. Nutr.* **2021**, *72*, 143–144. [\[CrossRef\]](#) [\[PubMed\]](#)
 39. Mitri, R.N.; Boulos, C.; Ziade, F. Mediterranean diet adherence amongst adolescents in North Lebanon: The role of skipping meals, meals with the family, physical activity and physical well-being. *Br. J. Nutr.* **2021**, 1–8. [\[CrossRef\]](#) [\[PubMed\]](#)
 40. Caleyachetty, R.; Echouffo-Tcheugui, J.B.; Tait, C.A.; Schilsky, S.; Forrester, T.; Kengne, A.P. Prevalence of behavioural risk factors for cardiovascular disease in adolescents in low-income and middle-income countries: An individual participant data meta-analysis. *Lancet Diabetes Endocrinol.* **2015**, *3*, 535–544. [\[CrossRef\]](#)
 41. Altavilla, C.; Caballero-Pérez, P. An update of the KIDMED questionnaire, a Mediterranean Diet Quality Index in children and adolescents. *Public Health Nutr.* **2019**, *22*, 2543–2547. [\[CrossRef\]](#)
 42. Wang, D.D.; Li, Y.; Bhupathiraju, S.N.; Rosner, B.A.; Sun, Q.; Giovannucci, E.L.; Rimm, E.B.; Manson, J.E.; Willett, W.C.; Stampfer, M.J.; et al. Fruit and Vegetable Intake and Mortality Results From 2 Prospective Cohort Studies of US Men and Women and a Meta-Analysis of 26 Cohort Studies. *Circulation* **2021**, *143*, 1642–1654. [\[CrossRef\]](#)
 43. Davies, A.; Wellard-Cole, L.; Rangan, A.; Allman-Farinelli, M. Validity of Self-Reported Weight and Height for BMI Classification: Cross-Sectional Study among Young Adults. *Nutrition* **2020**, *71*, 110622. [\[CrossRef\]](#)