

## Research Article

# Social Marketing and COVID-19 in Greece: What "Millennials" Think!

Lambros Tsourgiannis<sup>1,2,3\*</sup>, Foteini Perdiki<sup>4</sup>, Vasilios Zoumpoulidis<sup>5</sup>, Vasilios Ferelis<sup>6</sup>

<sup>1</sup>Directorate of Public Health and Social Care of Regional District of Xanthi, Region of Eastern Macedonia and Thrace, Headquarters Xanthi, Greece

<sup>2</sup>International Hellenic University, Department of Accounting and Finance, Campus of Kavala, 65404 Kavala Greece

<sup>3</sup>Hellenic Open University, School of Social Sciences, Management Studies, Patra, Greece

<sup>4</sup>International Hellenic University, Department of Accounting and Finance, Campus of Kavala, 65404 Kavala Greece

<sup>5</sup>International Hellenic University, Department of Accounting and Finance, Campus of Kavala, 65404 Kavala Greece

<sup>6</sup>International Hellenic University, Department of Accounting and Finance, Campus of Kavala, 65404 Kavala Greece

## Abstract.

Social marketing has been developed to create a change in people's attitudes toward the achievement of public health and social welfare. Social marketing techniques are used for health promotion, prevention of injuries, environmental protection, and social awareness.

This study aims to explore the attitudes of Greek citizens toward the impact of social marketing techniques on their awareness of public health in general and their fight against COVID-19 in particular.

A primary survey was conducted in May–June 2021 to a random sample of Greek citizens. Principal component analysis (PCA) was conducted to identify the main attitudes of Greek millennials toward the impact of social marketing on people's awareness regarding public health in general and the fight against COVID-19 in particular. Therefore, two main attitudes were derived from PCA: (a) social marketing contributed significantly into public awareness regarding public health issues and COVID-19 fight, and (b) some social marketing techniques had a negative impact on the use of vaccines as a protection measure toward COVID-19.

Cluster analysis was performed to classify those citizens into groups according to their attitudes toward the use of social marketing in public health and COVID-19 issues. It identified three groups of citizens: (a) those who believe that social marketing has a significant impact on people's awareness regarding public health and protection against COVID-19, (b) those who are uninterested, and (c) those who believe that social marketing contributes to the dissemination of negative information regarding vaccination against COVID-19.

Nonparametric tests, including the Chi-square and Friedman nonparametric tests were performed to develop the profile of those citizens.

**Keywords:** social marketing, millennials, COVID-19

Corresponding Author: Lambros Tsourgiannis; email: ltsourgiannis@gmail.com

**Published:** 1 February 2023

Publishing services provided by Knowledge E

© Tsourgiannis et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the EBEEC Conference Committee.

## OPEN ACCESS

## 1. Introduction

Social marketing is an approach in marketing dealing with social issues according to Kotler and Keller[13]. Social marketing aims to influence behaviour and use the marketing tools in order to offer positive benefits to the society [13], [24]. Moreover, it is widely used in various aspects of the society including breastfeeding and nutrition programs of young women, reduction of alcohol use, and fighting against AIDS[22],[3],[14], [24]. Social marketing is widely used in global health sector as it influences behaviour that benefit people and society [6],[8]. Its methodology is used to make health products and services attractive to consumers and to support the health care providers [17],[4]; [2]. Besides, as Sentruk[24] argues that social marketing is used to influence people to adopt healthy behaviour as well, as it is useful to affect the factors that have significant impact on the process of the behaviour change including awareness, knowledge and attitudes. Firestone [8] identified that social marketing is effective in global health in both health and behavioural outcomes as well as in behavioural factors. The benchmark criteria of social marketing interventions according to Nejad *et al.* [19] are: behaviour change, customer research, audience segmentation, marketing mix exchange and competition whilst Olawepoet. *al.* [20] argued that of the four p's of the marketing mix used in social marketing, the promotion of the campaign is the most applicable. They also support that many of the campaigns used in social marketing aim not only to raise awareness and single communication channels but also to achieve behavioural change through the use of multiple communication channels. Furthermore, the social marketing mix according to Menegaki[18] consists of the product (offer – activation for social benefit), price (relationship cost in terms of time, effort, psychological barrier and disturbance), location (channels to reach to the consumers for information and education) promotion (social communication, visible and measurable results for trust building), public opinion (target audience, secondary target audience, policy makers, social networks, citizen participation, word of mouth communication, support of celebrities, politicians, focus groups and common analysis), partnership (inviting successful businessmen, politicians, stakeholders) policy (legislation and institutional framework) and money control (funds will come from supports and purchasing volunteers).

COVID-19 pandemic has affected dramatically all societies and economies around the world. Nejad *et al.*[19] argued that regarding the COVID-19, the public which is the main audience can be segmented into different age, job and sex groups as well as to those with underlying health conditions which make them more conscious to COVID-19. They also argued that communication goal should be adherence to healthy behaviour

and instructions related to COVID-19. The most important element to understand those behaviours is market segmentation [16]. Generational cohort consists of one of the most useful market segmentation approaches due to the fact that people participating in the same generation share similar values, experiences and beliefs which affect their purchasing behaviour and attitudes [5],[15], [23]. People born within 1980 and the mid-2000s belong to Generation Y or millennials, and as Kasriel-Alexander [12] declares, millennials are savvy shoppers. They are also considered hero generation, focusing on brands, friends, fun and digital culture. Besides, they are characterized as confident, relaxed, conservative, and with the best educational background compared to other generations[1]. The same authors insist that for millennials safety is a very important element, they appraise teamwork and collaboration, they are multitaskers and influenced to a great extent by friends and peers.

Therefore, this study aims to examine the null research hypotheses below:

**Ho1:** “Greek millennials cannot be put into similar groups based on their mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19.”

**Ho2:** “The demographic and personal characteristics of Greek millennials are not significantly related to their mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19.”

**Ho3:** “Greek millennials mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19 are not significantly related to their preferences about social marketing issues.”

**Ho4:** “Greek millennials mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19 are not significantly related to their belief concerning COVID-19 pandemic.”

## 2. Methodology

For the purposes of the research, a primary electronic survey was carried out between May – June 2021 using a structured questionnaire in a random representative sample of 450 Greek citizens (103 millennials). Prior to the main sampling, a pilot survey took place in April 2021 to evaluate if the research objectives were met by the designed questionnaire. The preliminary survey was performed for a total of 50 citizens. Based on the analyzed results, the survey sample was considered adequate to conduct the final survey with no further modification. Based on the methodology presented by Oppenheim [21], the researchers, in order to have representative sample for the geographical

area of Greece, randomly selected seven regions from a total of thirteen. In the second stage, two prefectures were randomly selected from each studied region. In the next stage, the researchers used volunteer enumerators from each selected prefecture, so that these enumerators could send the questionnaire electronically, through their social networks to citizens of their area. Each enumerator should have sent the questionnaire to 50 people.

As it was not possible to know the number of the respondents from each region (and this is a limitation of the current study), the representativeness of the sample was assessed by checking the proportion of the members of the sample who declared that have an account and use social networks with those of the pilot survey adopting the methodology proposed by Siardos[25].

In particular, the citizens' proportion ( $p$ ) in the pilot survey who affirmed being involved in social networks is 90%, whilst total population in Greece ( $N$ ) is 10,816,286, according to Greek Census data [28]. For this reason, and in order to acquire a representative sample, the sample size should be at the minimum 138 consumers (so as to have  $z=3$  and  $d=5\%$ ). For the purpose of securing a representative sample the questionnaire was electronically delivered to 700 persons. The productive sample amounted to 450 persons (64% response rate), and it is reasonably representative according to Siardos [25] methodology ( $z=1.96$  and  $d=5\%$ ). Additionally, power analysis ( $\beta = 0.95$ ) was carried out by using the G\*POWER 3.1.9.2 software package [9], [26], which revealed a minimum sample size of 111 people for a medium effect size [7]. Therefore, the amount of 450 people could be safely characterized as a fully representative sample size of the Greek population.

Moreover, multivariate statistical analysis was conducted for the 103 cases that consist of the millennials in the sample of this study. In particular, factor analysis was conducted to identify the main attitudes of Greek millennials towards the impact of social marketing on people awareness regarding public health in general, and the fight against COVID -19 in particular. More specifically, Principal Component Analysis (PCA) was used to identify the variables that accounted for the maximum amount of variance within the data in terms of the smallest number of uncorrelated variables (components). The anti-image correlation matrix, as well as the Bartlett's test of sphericity, and the Measure of Sampling Adequacy (MSA) were used, in order to check the appropriateness of the data for subsequent factor analysis [27]. An orthogonal rotation (varimax method) was conducted and the standard criteria of eigenvalue = 1, scree test and percentage of variance were used in order to determine the factors in the first rotation [10]. Cluster analysis was performed to classify those citizens into groups according to their attitudes towards the

use of social marketing in public health and COVID – 19 issues. Non parametric tests including chi-square and Friedman non parametric test were performed to develop the profile of those citizens. The chosen scale in this research, for the second part of the questionnaire, was the 5-point Likert scale where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree. To ensure the appropriateness of the questionnaire, it has been tested for Content validity, Construct validity and Reliability.

More specifically, construct validity in the present study was guaranteed by using the Varimax method for the extraction of the factors rotation [11]. Hair et al. [10] suggest that Varimax is thought to be one of the most popular orthogonal factor rotation methods, as it focuses on simplifying the columns in a factor matrix. For testing the degree of data suitability, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used, the value of which needs to be above 0.7 so as to be accepted [10]. Besides, in the current study the KMO MSA is 0.888 (Table 3). As we can conclude, all the before mentioned tests verify the construct validity of the study.

Finally, using Cronbach's alpha coefficient, a reliability test measuring the internal consistency was carried out. As Hair et al. declare [10], Cronbach's alpha should be greater than 0.7, so as to be characterized construct reliable. In this survey Cronbach's alpha is 0.946 for the total number of the questions used in factor analysis, and this ensures the reliability of the study.

### 3. Results

The survey involved a total of 450 cases, whilst the 103 of them are millennials, who were asked to answer a series of questions concerning both demographic data but mainly questions related to the impact of social marketing on people awareness regarding public health in general and the fight against COVID -19; their preferences about social marketing issues and their opinion about the pandemic of COVID-19. This study focused on the sample of the 103 millennials.

Therefore, about 45% of the millennials are male and 55% female. Furthermore, about 3% of the respondents have finished the primary school, 23% attended the high school, 62% hold a university degree and 12% of them hold a postgraduate degree. Therefore, most of the respondents, about 84% of them, have a post graduate education and about 62% have a highest education (undergraduate and postgraduate).

The attitudes of Greek millennials towards the impact of social marketing on people awareness regarding public health in general, and the fight against COVID -19 in particular

TABLE 1: Sociodemographic characteristics of the respondents.

Gender	Percentage
Male	44.7%
Female	55.3%
Education	Percentage
Primary School	2.9%
High School	22.9%
University Degree	62.0%
Postgraduate Degree	12.2%
Total	100.0%

The researchers performed principal component analysis (through a varimax rotation) in order to identify the key variables describing the attitudes of the Greek millennials towards the impact of social marketing on people awareness regarding public health in general, and the fight against COVID -19 in particular. The latent root criterion (eigenvalue =1) as well as the percentage of variance were used to determine the number of factors (Table 2). Several different trial rotations were conducted to compare factor interpretability according to Hair et al [10].

TABLE 2: The attitudes of Greek millennials towards the impact of social marketing on people awareness regarding public health in general and the fight against COVID -19.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.363	61.360	61.360	7.363	61.360	61.360
2	1.730	14.413	75.772	1.730	14.413	75.772
3	0.573	4.775	80.547			
4	0.535	4.461	85.008			
5	0.410	3.415	88.423			
6	0.291	2.422	90.846			
7	0.282	2.351	93.197			
8	0.248	2.064	95.260			
9	0.191	1.595	96.855			
10	0.169	1.408	98.264			
11	0.116	0.963	99.227			
12	0.093	0.773	100.00			

Two factors are formed interpreting 75.77% of total volatility. From charging variables to each of the two factors (Table 3) we can define them as follows: (a) social marketing contribute to people awareness towards public health issues and keeping measures against COVID-19, (b) social marketing has negative impact on people's attitudes towards vaccination.

TABLE 3: The main factors affecting attitudes of Greek millennials towards the impact of social marketing on people awareness regarding public health in general and the fight against COVID -19.

	Component	
	1	2
Social Marketing can contribute to citizens' information against COVID -19 contagion	0.878	0.167
Social Marketing can affect the daily routine of people regarding the protection of physical health	0.875	0.001
Social Marketing can affect the daily routine of people regarding the protection of mental health	0.870	0.079
Social Marketing can contribute to citizens' information about self-protection measures against COVID -19	0.864	0.209
Social Marketing can contribute to citizens' awareness regarding keeping measures against COVID -19 contagion	0.858	0.143
Social Marketing can affect public health about vaccination	0.850	0.192
Social Marketing can contribute to citizens' information about the protection of public health.	0.838	0.220
Social Marketing can contribute to citizens' information about health nutrition issues.	0.798	-0.004
Social Marketing through social networks encourages people to vaccinate against COVID-19	0.719	0.428
Social Marketing is more effective regarding the effectiveness of the protection of public health mostly from COVID -19 through relative advertisements on social networks	0.682	0.305
Social marketing through social networks may cause doubts about the effectiveness of the vaccines against COVID-19	0.085	0.945
Social marketing through social networks may cause concerns about possible side-effects of some vaccines against COVID-19	0.164	0.941

KMO MSA = 0.888 Bartlett test of Sphericity = 970.288 P <0.001

In the next stage the researchers conducted cluster analysis in order to group Greek millennials in relation to their attitudes towards the impact of social marketing on people awareness regarding public health in general, and the fight against COVID -19. They identified three groups of people (Table 4): (a) those who believe that social marketing contributes to people awareness towards public health issues, (b) indifferent, and (c) those who believe that social marketing has negative impact on people's attitudes towards vaccination. In particular, the millennials who believe that social marketing contributes to people awareness towards public health issues mainly think that social marketing can contribute to citizens' information: (i) against COVID -19 contagion, (ii) about self-protection measures against COVID-19, (iii) about the protection of public health and (iv) about health nutrition issues. They also believe that social marketing can affect the daily routine of people regarding the protection of physical and mental health, may contribute to citizens' awareness regarding keeping measures against COVID -19 contagion, affects public health about vaccination, encourages people to vaccinate

against COVID-19 through social networks. Finally, they have the impression that social marketing is more effective regarding the effectiveness of the protection of public health mostly from COVID -19 through relative advertisements on social networks. The indifferent millennials do not pay attention to any of the identified factors. Finally, those who believe that social marketing has negative impact on people’s attitudes towards vaccination believe that social marketing through social networks may cause doubts about the effectiveness of the vaccines against COVID-19 and may cause concerns about possible side-effects of some vaccines against COVID-19.

TABLE 4: Classification of the Greek millennials regarding their attitudes towards the impact of social marketing on people awareness regarding public health in general and the fight against COVID -19.

Factors enterprises' attitudes towards overtourism	Cluster			P
	Those who believe that social marketing contributes to people awareness towards public health issues	Indifferent	Those who believe that social marketing has negative impact on people's attitudes towards vaccination	
Social marketing contributes to people awareness towards public health issues and keeping measures against COVID-19	0.61962	-2.74293	-0.05093	0.001
social marketing has negative impact on people's attitudes towards vaccination	-0.95201	-0.85515	0.64154	0.001
N=103	31	18	54	

Therefore, **Ho1**: “Greek millennials cannot be put into similar groups based on their mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19.”can be rejected.

### 3.1. Profiling each group of Greek millennials according to their demographic characteristics and their preferences about social marketing issues.

The chi-square analysis that has been conducted for each group of Greek millennials indicated (Table 5) that “those who believe that social marketing contributes to people awareness towards public health issues” and “those who believe that social marketing has negative impact on people’s attitudes towards vaccination” have similar demographic profile, whilst there is no significant association between the “indifferent”



group and the examined demographic characteristics. In particular, most of them have a bachelor degree and are civil servants.

TABLE 5: Profiling each group of Greek millennials according to their demographics.

Demographic Characteristics		Those who believe that social marketing contributes to people awareness towards public health issues	Indifferent	Those who believe that social marketing has negative impact on people's attitudes towards vaccination			
Education	Primary School	$\chi^2=8.000$ ( $P<0.05$ )	10%	n.s	17%	$\chi^2=83.407$ ( $P<0.001$ )	0.7%
	High School		48%		50%		18.0%
	University Degree		42%		33%		78.0%
	Postgraduate Degree		0%		0%		3.3%
Occupation	Civil Servant	$\chi^2=10.774$ ( $P<0.05$ )	39%	n.s	67%	$\chi^2=19.556$ ( $P<0.001$ )	37%
	Private Employee		26%		0%		17%
	Free Licensed		16%		0%		19%
	Student		0%		0%		6%
	Unemployed		16%		17%		11%
	Housekeeping		3%		17%		11%

Hence, the research hypothesis **Ho2**: “The demographic and personal characteristics of Greek millennials are not significantly related to their mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19.” can be rejected.

Furthermore, as Table 6 indicates, “those who believe that social marketing contributes to people awareness towards public health issues” and “those who believe that social marketing has negative impact on people’s attitudes towards vaccination” are familiar with the definition of social marketing, watch advertisements relative to social marketing, have accounts on social networks and follow them, watch advertisements relative to social marketing on social media. Most of them believe that social marketing is connected to the public health and plan to vaccinate themselves against COVID-19. On the other hand, no significant association was found between the “indifferent” group and their preferences about social marketing issues.

Hence, the research hypothesis **Ho3**: “Greek millennials mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19 are not significantly related to their preferences about social marketing issues.” can be rejected

Friedman non parametric test was employed to profile the millennials of the three identified groups towards their opinion about the pandemic of COVID-19. As Table 7

TABLE 6: Profiling each group of Greek millennials according to their preferences about social marketing issues.

Preferences about social marketing issues		Those who believe that social marketing contributes to people awareness towards public health issues		Indifferent		Those who believe that social marketing has negative impact on people's attitudes towards vaccination	
Familiar with the term of social marketing	NO	n.s	39%	n.s	17%	$\chi^2=24.000$ ( $P<0.001$ )	17%
	YES		61%		83%		83%
Watch advertisements relative to social marketing	NO	$\chi^2=23.516$ ( $P<0.05$ )	6%	n.s	0%	$\chi^2=39.185$ ( $P<0.001$ )	7%
	YES		94%		100%		93%
Have an account and follow social networks	NO	$\chi^2=23.516$ ( $P<0.001$ )	6%	n.s	50%	$\chi^2=42.667$ ( $P<0.001$ )	6%
	YES		94%		50%		94%
Watch advertisements relative to social marketing on social media	NO	$\chi^2=20.161$ ( $P<0.001$ )	10%	n.s	50%	$\chi^2=39.185$ ( $P<0.001$ )	7%
	YES		90%		50%		93%
Social marketing is connected to the public health	NO	$\chi^2=14.226$ ( $P<0.001$ )	16%	n.s	33%	$\chi^2=24.000$ ( $P<0.001$ )	17%
	YES		84%		67%		83%
Plan to vaccinate themselves against COVID-19	Have been infected by covid-19	$\chi^2=12.933$ ( $P<0.05$ )	13%	n.s	0%	$\chi^2=42.148$ ( $P<0.001$ )	11%
	Have been vaccinated against covid-19		6%		17%		4%
	Plan to vaccinate myself against covid-19		42%		50%		24%
	Nothing from the above		39%		33%		61%

indicates “those who believe that social marketing contributes to people awareness towards public health issues” and “those who believe that social marketing has negative impact on people’s attitudes towards vaccination” have similar opinions about the

pandemic. In particular, they mainly believe that the pandemic consists of a real threat for public health and that vaccination consist of the only solution against it. Moreover, in a lower degree, they think that there are significant differences among the existed vaccines against COVID-19 regarding their effectiveness, and what is more, they do not cause any significant side effects. On the other hand, the “indifferent” group mostly think that the existed vaccines against COVID-19 do not cause any significant side-effects and that there are significant differences among them regarding their effectiveness. A smaller number of them believe that the pandemic consists of a real threat for public health and that vaccination is the only solution against it.

TABLE 7: The opinion of each group of the Greek Millennials about the pandemic of COVID-19.

	Those who believe that social marketing contributes to people awareness towards public health issues ( $\chi^2=30.595$ ; $P<0.001$ )	Indifferent ( $\chi^2=8.025$ ; $P<0.001$ )	Those who believe that social marketing has negative impact on people's attitudes towards vaccination ( $\chi^2=30.705$ ; $P<0.001$ )
The pandemic of COVID-19 is a real threat for public health.	3.37	2.30	3.11
The vaccination against COVID -19 is the only solution against the pandemic.	2.58	1.40	2.63
The existed vaccines against COVID-19 do not cause any significant side effects.	1.72	3.30	2.04
There are significant differences among the existed vaccines against COVID-19 regarding their effectiveness.	2.33	3.00	2.23

Therefore, the research hypothesis **Ho4**: “Greek millennials mindset towards the impact of social marketing on people awareness as regards public health in general and the struggle against COVID -19 are not significantly related to their belief concerning COVID-19 pandemic.” can be rejected.

## 4. Discussion

This study has indicated that most of the millennials in Greece believe that social marketing is an important tool in the fight of the humanity against COVID-19 pandemic of, supporting the arguments of Cheng [6]; Firestone *et. al.* [8] and Sentruk[24], according to whom social marketing is very useful in global health sector as it influences behaviour that benefits people and society and affects the factors that have significant impact on the process of the behaviour change including awareness, knowledge and attitudes.

Moreover, McKinney, [16] supported that the most important element to understand those behaviours is market segmentation, whilst Nejad *et.al.* [19] argued that regarding COVID-19, the public which is the main audience can be segmented into different age, job and sex groups, as well as into those with underlying disease which makes them more conscious to COVID-19. This study supported the above findings as it segments Greek citizens of Generation Y. known as millennials, according to their attitudes towards the impact of social marketing on the awareness of people regarding public health in general, and the fight against COVID -19 in particular, and profiled them according to their demographic characteristics. Moreover, this study supports the findings of Twumet.*al.* study [29] that took place in Ghana. They argued that attitude, social norm, perceived behavioural control, perceived susceptibility and cues to action were found to be predictors of COVID-19 vaccination intention; what is more, in order to enhance the effectiveness of COVID-19 social marketing campaigns, socialmarketing theories such as the TPB and HBM can aid in assessing the intention of the target population to be vaccinated. The current study also supports the findings of Mongilala *et.al.* [30], who found that Generation Z in Indonesia has bigger means than the Millennial generation towards the Social Marketing Campaign Effectiveness.

In particular, this study identified that Greek millennials who believe that social marketing contributes to people awareness towards public health issues, mainly think that social marketing can contribute to citizens' information: (i) against COVID -19 contamination, (ii) about self-protection measures against COVID-19, (iii) about the protection of public health and (iv) about health nutrition issues. They also believe that social marketing can affect the daily routine of people regarding the protection of physical and mental health, may contribute to citizens' awareness regarding keeping measures against COVID -19 contamination, affect public opinion about vaccination, encourages people to vaccinate against COVID-19 through social networks. Finally, they have the impression that social marketing is more effective regarding the effectiveness of the protection of public health mostly from COVID -19 through relative advertisements on

social networks. They mainly believe that the pandemic consists of a real threat for public health and that vaccination is the only solution against it. Moreover, in a lower degree, they think that there are significant differences among the existed vaccines against COVID-19 regarding their effectiveness, as well that they do not cause any significant side effects. They are also familiar with the definition of social marketing, watch advertisements relative to social marketing, have accounts on social networks and follow them, watch advertisements relative to social marketing on social media. Most of them believe that social marketing is connected to the public health and plan to vaccinate themselves against COVID-19, whilst they have a bachelor degree and are civil servants. On the other hand, the indifferent millennials do not pay attention to any of the identified factors, and no significant association was found between them and the examined demographic characteristics and their preferences about social marketing issues. Furthermore, they mostly think that the existed vaccines against COVID-19 do not cause any significant side-effects, and that there are significant differences among them regarding their effectiveness. A small number of them believe that the pandemic consists of a real threat for public health and that vaccination consist of the only solution against it. Finally, those who believe that social marketing has negative impact on peoples' attitudes towards vaccination believe that social marketing through social networks may cause doubts about the effectiveness of the vaccines against COVID-19 and may cause concerns about possible side-effects of some vaccines against COVID-19. They mostly think that pandemic is a real threat for public health and that vaccination isa one-way path for fighting it. In a lower degree, they think that there are significant differences among the existed vaccines against COVID-19 regarding their effectiveness, and what is more, that they do not cause any significant side effects. They are familiar with the definition of social marketing, watch advertisements relative to social marketing, have accounts on social networks and follow them, watch advertisements relative to social marketing on social media. Most of them believe that social marketing is connected to the public health and plan to vaccinate themselves against COVID-19, whilst they have a bachelor degree and are civil servants.

Hence, the relative stakeholders should use social marketing techniques in order to enhance the awareness of Greek Millennials who are well educated and technological savvy and are the productive part of the society regarding the prevention measures and vaccination against COVID -19.

## References

- [1] Benckendorff P, Moscardo G, Pendergast D, editors. *Tourism and generation Y*. Cabi; 2010.
- [2] Berg R, Mitchell S. *Social marketing: Leveraging the private sector to improve contraceptive access, choice, and use*. New York: Futures Group; 2013.
- [3] Nuray B, Kubacki K, Rundle-Thiele S, Pang B. A systematic review of stakeholder involvement in social marketing interventions. *Australasian Marketing Journal*. 2016;24:8–19.
- [4] Cairns G, Mackay B, MacDonald L. *The SAGE handbook of social marketing*. Hastings G, Angus K, Bryant C, editors. London: SAGE; 2011. *Social marketing and international development*.
- [5] Chaney D, Touzani M, Ben Slimane K. Marketing to the (new) generations: Summary and perspectives. *Journal of Strategic Marketing*. 2017;25(3):179–189.
- [6] Cheng H, Kotler P, Lee N. *Social marketing for public health: Global trends and success stories*. Sudbury, MA: Jones & Bartlett; 2011.
- [7] Cohen J. *Statistical power analysis for the behavioral sciences*. 2nd ed. Hillsdale, NJ: Erlbaum; 1988. p. 273–406.
- [8] Firestone R, Rowe CJ, Modi SN, Sievers D. The effectiveness of social marketing in global health: A systematic review. *Health Policy and Planning*. 2017;32(1):110–124.
- [9] Faul F, Erdfelder E, Buchner A, Lang A. Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*. 2009;41(4):1149–1160.
- [10] Hair JF, Anderson RE, Tatham RL, Black WC. *Multivariate data analysis*. New Jersey: Prentice Hall Inc.; 1998.
- [11] Kaiser HF. An index of factorial simplicity. *Psychometrika*. 1974;39:31–36.
- [12] Kasriel-Alexander D. Top 10 global consumer trends for 2015, international 3. *Euromonitor International*. 2015:37. Available from: [https://go.euromonitor.com/rs/euromonitorinternational/images/WP-TP10CT15\\_EMI.pdf](https://go.euromonitor.com/rs/euromonitorinternational/images/WP-TP10CT15_EMI.pdf)
- [13] Kotler P, Keller KL. *Marketing management*. Prentice Hall; 2012.
- [14] Low-Beer D, Stoneburner R. Behaviour and communication change in reducing HIV: Is Uganda unique? *African Journal of AIDS Research*. 2003;2(1):9–21.
- [15] Marjanen H, Kohijoki AM, Saastamoinen K, Engblom J. Old dogs learning new tricks? The effect of age and generation on shopping behaviour. *The International Review of Retail, Distribution and Consumer Research*. 2019;29(5):549–567.

- [16] McKinney LN, Legette-Traylor D, Kincade DH, Holloman LO. Selected social factors and the clothing buying behaviour patterns of black college consumers. *The International Review of Retail, Distribution and Consumer Research*. 2004;4:389–406.
- [17] Meadley J, Pollard R, Wheeler M. Review of DFID approach to social marketing. London: DFID Health Systems Resource Centre; 2003.
- [18] Menegaki AN. A social marketing mix for renewable energy in Europe based on consumer stated preference surveys. *Renewable Energy*. 2012;39:30–39.
- [19] Nejad MS, Harooni J, Charkazi A, Shams M, Latifi M. Using social marketing to promote preventive behaviors related to COVID-19. *Journal of Lifestyle Medicine*. 2021;11(2):52.
- [20] Olawepo JO, Pharr JR, Kachen A. The use of social marketing campaigns to increase HIV testing uptake: A systematic review. *AIDS Care*. 2019;31(2):153–162.
- [21] Oppenheim AN. Questionnaire design, interviewing and attitude measurement. New York: Continuum; 2000.
- [22] Parkinson J, Russell-Bennett R, Previte J. Mum or bub? Which influences breastfeeding loyalty. *Australasian Marketing Journal*. 2012;20:16–23.
- [23] Parment A. Generation Y vs. Baby boomers: Shopping behavior, buyer involvement and implications for retailing. *Journal of Retailing and Consumer Services*. 2013;20(2):189–199.
- [24] Şentürk T. Rethinking social marketing and behavioural change in times of covid-19 pandemic. *Celal Bayar Üniversitesi Sosyal Bilimler Dergisi*. 2021;19(01):321–338.
- [25] Siardos G. Methodology of agricultural sociological research. Thessaloniki, Greece: Ziti Publications; 1997. 367 p.
- [26] Tsourgiannis L, Delias P, Polychronidou P, Karasavoglou A, Valsamidis S. Profiling tourists who have holidays in the region of eastern Macedonia and Thrace in Greece. *Procedia Economics and Finance*. 2015;33:450–460.
- [27] Zikmund WG, Babin BJ, Carr J, Griffin M. Business research methods. Cengage Learning; 2013.
- [28] ELSTAT. Demographic characteristics / 2011. 2020. Available from: <https://www.statistics.gr/el/statistics/-/publication/SAM03/>
- [29] Twum KK, Ofori D, Agyapong GKQ, Yalley AA. Intention to vaccinate against COVID-19: A social marketing perspective using the theory of planned behaviour and health belief model. *Journal of Social Marketing*. 2021;11(4):549–574.
- [30] [30] Mongilala D, Saerang DP, Tielung MV. Comparative analysis of social marketing campaign effectiveness in social media between millennial and generation z (case

study of “disiplin 3m” covid-19 prevention campaign). *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*. 2021;9(3):468–477.