# ORIGINAL PAPER EPEYNHTIKH EPΓAΣIA

# The COVID-19 effects on isolated societies The case of the Greek island of Lemnos

OBJECTIVE To study the consequences of COVID-19 on the inhabitants of Lemnos and to examine the effect of the demographic, professional and medical profiles, as well as the effect of their habits during the pandemic. METHOD Quantitative, primary, synchronous and correlational research was conducted between and within the groups. The survey involved 115 residents of Lemnos. The relevant questionnaires, Fear of COVID-19 (α=0.901) and WHOQOL-BREF (α≥0.841), were used. The statistical tests of independent samples t-test, ANOVA, Kruskal-Wallis, Chi-square, and Spearman were used with a significance level of 5%. RESULTS The economic impact on income was related to occupational status (p<0.001) and COVID-19 disease (p=0.002), while the economic impact on tourism was related to educational level (p=0.019) and the use of social media (p=0.045). Fear of COVID-19 was influenced by gender (p=0.004), the number of vaccines (p<0.001), outings for non-professional reasons (p=0.005) and exercise (p=0.002). Physical health was affected by gender (p=0.012), non-professional reasons (p=0.017), and physical activity (p<0.001). Mental health was affected by gender (p=0.003), age (p=0.043), monthly family income (p=0.031) and physical activity (p=0.030). Social relationships were affected by monthly family income (p=0.007), COVID-19 illness (p=0.036), non-professional outings (p=0.001) and physical activity (p<0.001). CONCLUSIONS The inhabitants of Lemnos felt a high degree of fear for their loved ones. However, the pandemic did not affect their levels of physical or mental health and social relationships. Social media raised the awareness of residents about the economic impact of the pandemic on the island.

ARCHIVES OF HELLENIC MEDICINE 2023, 40(3):363–368 ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2023, 40(3):363–368

- M. Kassimi,
- S. Karachrysafi,
- G. Delis,
- D. Kavvadas,
- T. Papamitsou

Post-graduate Program "Health and Environmental Factors", School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

Η επίδραση της COVID-19 στις απομονωμένες κοινωνίες: Η περίπτωση της Λήμνου

Περίληψη στο τέλος του άρθρου

#### **Key words**

COVID-19 Greece Lemnos island SARS-CoV-2 Societies

> Submitted 6.5.2022 Accepted 28.5.2022

The COVID-19 pandemic rocked the world community between 2020 and 2021. The effect of COVID-19 on people's lives include fear of infection, as well as fear of illness of loved ones. The perceived risk of infection and serious illness of loved ones is the strongest predictor of COVID-19-related fear. Moreover, people with mental health disorders are more likely to be affected by COVID-19 due to their greater vulnerability to stress, compared to the general population. Loneliness, anxiety, depression, panic attacks, mental disorders, health risks and many other issues affect the lives of individuals and society. Stressors include fear of infection, boredom, insufficient supplies, insufficient information, financial loss and stigma. Older adults may experience loneliness due to social distance and isolation.

Another important aspect of the pandemic concerns the mental health and the sensitivity of citizens to news about COVID-19, their feelings and state of mental health, the way they follow government guidelines, and their attitudes and perceptions about the pandemic.<sup>6,7</sup> A large analysis of 200,000 Europeans presented high levels of loneliness among young people, women, people isolated due to chronic illness, and people with a history of mental illness.8 Social distance related to restrictive measures on travel also affects human behavior and society. Therefore, less travel demand was expected.9 Public transport travel fell sharply (90%), with one in five people saying they planned to use air travel less even after the end of the pandemic. In fact, the majority of respondents (80%) stated that they had significantly reduced their outdoor activities and increased distance work. 10 This psychological pressure may lead to long-term problems.11 Prolonged quarantine and restraints, along with an evolving sense of inactivity, boredom, frustration and uncertainty, may lead to psychosomatic or psychological problems, alcohol consumption, and dysfunctional personal and family coping strategies. In addition, staying at home has put some children and adults at increased risk of domestic violence. However,

364 M. KASSIMI et al

some families have been able to mobilize resilience and functional coping strategies to manage the stress.<sup>12</sup>

At the individual level, social distance abruptly changed daily routines and in addition immediate access to information about the pandemic rapidly developed fear of the unknown and the feeling of isolation from the outside world. Citizens' growing concerns also include financial concerns for both the present and the future. The period of an outbreak brings intense emotions such as anxiety, <sup>13</sup> depression, <sup>14</sup> anger and sadness. <sup>15</sup> There are also correlations with smoking, alcohol abuse, emotional nutrition, and depression. <sup>16</sup>

Greece has not escaped this brutal crisis and obviously requires quick and appropriate answers.<sup>17</sup> In Greece the restrictions have significantly enhanced the feeling of social isolation for a significant part of the population, mainly women, young people under 30 and work suspension, causing not only psychological discomfort but also fear for the future.<sup>18</sup> Furthermore, there is a close connection between the quality of working life and the psychological state.<sup>18</sup> Research on the effects of the pandemic in Greece is minimal, especially for the Greek islands,<sup>19</sup> which have long suffered from inequalities arising from their isolation, such as the long distance from the mainland, problematic transport links, a limited supply of goods, seasonality of social and economic life, and vulnerability to environmental challenges.<sup>20</sup>

The aim of this research was to study the consequences of COVID-19 on the inhabitants of the Greek island of Lemnos. Furthermore, the objective was to examine the effect of the demographic, professional and medical profiles of the inhabitants of Lemnos, and the effect of their habits during the pandemic period on their views on the consequences of the pandemic. The research questions are formulated below:

- (a) What is the level of fear of COVID-19, physical, mental health and social relationships in the inhabitants of Lemnos during the period of COVID-19 and its economic effects?
- (b) How do the demographic, professional, medical profiles and the habits of the inhabitants of Lemnos influence their views on the effects of the pandemic?

# **MATERIAL AND METHOD**

# Research design

Quantitative, primary, synchronous and correlational research was conducted between and within the groups. Primary research

was considered appropriate to extract the opinions of the residents of Lemnos directly,<sup>21</sup> while quantitative research was proposed as the concepts of fear of COVID-19, mental and physical health, social relationships and the economic effects of the pandemic are measurable.<sup>22</sup> Correlational research is necessary to investigate the relationships between the variables, using statistical techniques and numerical data.<sup>23</sup>

#### Population sample

The survey involved 115 residents of Lemnos, of an average age of 42 years, mostly married, women, with 1 or 2 children, with an educational level of at least a bachelor's degree, public or private employees, with a monthly family income of around 2,212 €, without underlying diseases or COVID-19 disease, having been vaccinated with 2–3 doses, and knowing a relative or friend who has had COVID-19. The data collection was performed using the Google forms application, so sampling may be considered convenient.<sup>22</sup> The researcher observed the necessary ethical guidelines related both to the nature of the research and to the psychology of the inhabitants of Lemnos who participated.<sup>24</sup>

#### Measures

The habits of the participants were measured using 3 five-point Likert scale questions for the frequency of non-professional outings, physical exercise, and use of social media. The economic effects of the pandemic were measured with two closed-ended questions about the economic effects on income and tourism on Lemnos. Fear of COVID-19 was measured using 8 five-point Likert 1–5 questions, of which 7 were taken from the Fear of COVID-19 Scale<sup>25</sup> questionnaire on personal fear of illness, and one question from the research by Mertens et al<sup>2</sup> who reported on the fear of illness of loved ones. The WHOQOL-BREF (2012) questionnaire, which is a short version of the WHOQOL-100 (WHOQOL Group, 1998) and was translated and tested in 2001 in the Greek population, was used to measure their physical health (9 questions), mental health (6 questions) and social relationships.<sup>26</sup>The questions in the WHOQOL-BREF (2012) are rated on a five-point scale.

# Reliability-validity

The reliability of the testing was calculated using the Cronbach alpha coefficient. This coefficient is an indicator of the internal consistency of the questionnaire, with values above 0.7 considered acceptable. The reliability for the factor "Fear of COVID-19" was  $\alpha$ =0.901, for "physical health"  $\alpha$ =0.841, for "mental health"  $\alpha$ =0.872 and for "social relationships"  $\alpha$ =0.858. The validity of the questionnaires was confirmed by the creators, and specifically they refer to the validity of the content, i.e., that the questionnaire covers all the different aspects of the concept it measures.

# Data analysis

The statistical analysis was performed in the Statistical Package

COVID-19 AND ISOLATED SOCIETIES 365

for Social Sciences (IBM SPSS), version 24. Normality of variables was tested using the Shapiro-Wilk test. The statistical tests of independent samples t-test, ANOVA, Kruskal-Wallis, Chi-square and Spearman were used at a significance level of 5%.<sup>27</sup>

#### **RESULTS**

The survey involved 115 residents of Lemnos, of an average age 42 years, mostly married (73%), women (73%), with 1 or 2 children (64%), with an educational level of at least a bachelor's degree (66.1%), public or private employees (57.4%), with a monthly family income of around 2,212 €, without underlying diseases (91.3%) or COVID-19 disease (94.8%), having been vaccinated with 2–3 doses (61.4%), and knowing a relative or friend who has had COVID-19 (54.8%). The reliability analysis produced very satisfactory Cronbach alpha factors (0.85–0.91).

# First research question analysis

The levels of fear of COVID-19 were characterized as "moderate" (M=2.62). Participants agreed that during the lockdown, they feared that one of their loved ones would be at risk of becoming infected with the coronavirus (M=3.64). The physical health of the inhabitants was characterized as "well" (M=3.80). Their mental health was rated at moderate to high levels (M=3.56). Considering the negatives of mental health, it was shown that they moderately enjoyed life during the pandemic (M=3.36). The levels of social relationships ranged from moderate to high (M=3.41). Participants stated that they were moderately satisfied with their sex life (M=3.24), and the social roles and activities they had developed (M=3.20). A total of 59.6% (n=68) stated that the pandemic period had not affected their income. However, 64.9% (n=74) reported that the pandemic had brought changes in the number of tourists on Lemnos (tab. 1).

# Second research question analysis

Males presented lower levels of fear of COVID-19 (Fear of COVID-19 males=2.21, Fear of COVID-19 females=2.77, t(113)=-2.941, p=0.004), and higher levels of physical health (physical health males=4.09, physical health females=3.69, t(113)=2.547, p=0.012) and mental health (mental health males=4.00, physical health females=3.40, t(113)=3.092, p=0.003). Age was positively correlated with mental health (rs(115)=0.189, p<0.05) (tab. 2). Educational level was associated with economic implications for tourism on Lemnos ( $x^2(6)$ =15.119, p=0.019) (tab. 3). Holders of a Master's degree or Degree of Philosophy (PhD) suffered less from the economic implications for tourism on Lemnos (38.5%) than

Table 1. Economic impact of COVID-19.

The period of the coronavirus	Category	n	%
Did your income change?	No	68	59.6
	Yes	46	40.4
Did it bring changes to the arrival of tourists on Lemnos?	No	32	28.1
	I don't know	8	7.0
	Yes	74	64.9

**Table 2.** Spearman correlations with age.

Variable	Age
Economic impact on income	-0.081
Economic implications for tourism on Lemnos	0.069
Fear for COVID-19	-0.035
Physical health	0.137
Mental health	0.189*
Social relationships	0.036

<sup>\*</sup>p<0.05

**Table 3.** Chi-square test, economic implications for tourism on Lemnos,\* educational level.

Economic implications for tourism in Lemnos				mnos		
x²(6)=15.119,	1	No	I don	t know	Y	'es
p=0.019	n	%	n	%	n	%
Educational level						
High school	8	32.0	0	0.0	17	68.0
College	2	15.4	1	7.7	10	76.9
Bachelor	11	22.0	2	4.0	37	74.0
Master-PhD	11	42.3	5	19.2	10	38.5
Total	32	28.1	8	7.0	74	64.9

PhD: Doctor of Philosophy

high school (68%), college (76.9%) and bachelor's degree graduates (74%). The economic impact on income was associated with job status (x²(4)=28.584, p<0.001). All freelancers reported an economic impact on their income, and 45.8% of private employees. No impact was suffered by retired people and a low impact was suffered by state employees (26.8%) and the unemployed (34.5%). The economic impact on income was associated with infection with COVID-19 (p<0.001) (tab. 4). All participants who were infected with COVID-19 reported an economic impact on their income. Infection with COVID-19 affected social relationships, with higher levels shown in non-patients (social relationships,

366 M. KASSIMI et al

**Table 4.** Chi-square test, economic impact on income, infection with COVID-19.

		Eco	Economic impact on income		
			No		Yes
x <sup>2</sup> (1)=9.362, p=0.002		n	%	n	%
Infection of COVID-19	No	68	63.0	40	37.0
	Yes	0	0.0	6	100.0
Total		68	59.6	46	40.4

non-patients=3.46, social relationships, patients=2.63, t(113)=2.118, p=0.036). Monthly income was correlated with mental health (p<0.05) and social relationships (p<0.01) (tab. 5). The number of doses of vaccine received was correlated with fear of COVID-19 (p<0.01). The use of social media during lockdown was high to very high (M=4.40), while outings from home were frequent for non-professional reasons (M=3.68). Outings for non-professional reasons were correlated with fear of COVID-19 (p<0.01), physical health (p<0.01) and social relationships (p<0.01) (tab. 6). Physical activity was correlated with fear of COVID-19 (rs(115)=-0.283, p<0.01), physical health (rs(115)=0.425,

**Table 5.** Spearman correlations with monthly money income.

Variable	Monthly money income
Economic impact on income	-0.177
Economic implications for tourism on Lemnos	0.080
Fear for COVID-19	0.014
Physical health	0.150
Mental health	0.208*
Social relationships	0.261**

<sup>\*</sup>p<0.05, \*\*p<0.01

Table 6. Spearman correlations with outings for non-professional reasons.

Variable	Outings for non-professional reasons
Economic impact on income	-0.086
Economic implications for tourism on Lemnos	0.061
Fear for COVID-19	-0.261**
Physical health	0.222**
Mental health	0.178
Social relationships	0.307**

<sup>\*\*</sup>p<0.01

p<0.01), mental health (rs(115)=0.203, p<0.01) and social relationships (rs(115)=0.370, p<0.01). Use of social media was correlated with the economic implications for tourism on Lemnos (rs(114)=0.188, p<0.01).

#### **DISCUSSION**

The aim of the research was to study the consequences of COVID-19 on the inhabitants of Lemnos, as well as the effect of the demographic, professional and medical profiles of the inhabitants of Lemnos on their views on the consequences of the pandemic.

In the first research question, respondents agreed that during lockdown, they feared that one of their loved ones would be at risk of becoming infected with the coronavirus. However, they themselves felt moderate levels of fear of the coronavirus. In another study, a large percentage of participants (46.22%) were more concerned about the health of their loved ones than for themselves.<sup>2</sup>

It seems that their levels of mental health were not particularly affected, except in relation to the parameter of enjoyment of their daily life. Evidence suggest that in some cases, people were able to mobilize their resilience and functional coping strategies.<sup>12</sup> The inhabitants of Lemnos were satisfied with their physical health during the CO-VID-19 period. The existence of social support and interaction contributed to the strengthening of social cohesion, which, in turn, had a positive impact on the well-being and health of individuals.<sup>15</sup> Regarding the social relationships of the respondents during the lockdown, moderate to high levels were observed. However, there was a small effect of the pandemic on social relationships, especially in terms of social activities and sex life. The restrictions significantly enhanced the feeling of social isolation for a significant part of the Greek population.<sup>18</sup>

The second research question revealed that women had a greater fear of COVID-19, and appeared to feel less physically and mentally healthy than men. Younger people also showed worse mental health, indicating that in the psychological field, the pandemic had a greater impact on young people. <sup>18</sup> Patients with COVID-19 seemed to be more concerned about the financial impact on their income, probably because they could not work, while they felt that they were socially disadvantaged compared to non-patients, probably due to their isolation.

Respondents reported that they frequently or very often used social media during lockdown, and often went out of their house for non-professional reasons. People who went out more often for non-professional reasons and

COVID-19 AND ISOLATED SOCIETIES 367

performed physical activity seemed to feel more physically healthy, with more social relationships, but also less fear of COVID-19. In addition, participants who performed physical activity at a higher frequency, felt mentally healthier.<sup>15</sup>

Participants who used social media more frequently showed higher agreement with the economic impact on tourism on Lemnos, possibly due to the impact of the spread of news. As has already been pointed out, social media can have an impact on how the COVID-19 pandemic is explored, shaped and even managed.<sup>28</sup>

The present study is representative of the island of Lemnos and especially for residents of an average age of 42 years, married, women, with 1 or 2 children, with a high level of education, who work as public or private employees with a high monthly family income over  $2,000 \in$ , with no underlying diseases, or who have been vaccinated with 2–3 doses, and know a relative or friend who has had COVID-19.

A limitation was the small size of the sample, which did not allow the application of parametric tests. Furthermore,

although an attempt was made to calculate the exact percentage of the financial impact on the income of the participants and tourism on Lemnos, the participants did not understand the respective questions and answered whether their income and tourism had been affected or not.

In conclusion, the inhabitants of Lemnos only felt a high degree of fear for their loved ones. The pandemic did not particularly affect their levels of physical and mental health, and social relationships, other than the daily enjoyment of life and social activities. The groups that were most affected psychologically were young people and women, who were also physically affected. The economic impact on tourism of the island was high. The use of social media raised the awareness of the residents about the problem of the economic impact on tourism on the island. The effect of extroversion, socialization and sports during the pandemic period was refreshing. Future research is proposed, as isolated societies are quite different than the rest population regarding the psychological and socioeconomic impact of the pandemic.

#### ΠΕΡΙΛΗΨΗ

# Η επίδραση της COVID-19 στις απομονωμένες κοινωνίες: Η περίπτωση της Λήμνου

Μ. ΚΑΣΣΙΜΗ,¹ Σ. ΚΑΡΑΧΡΥΣΑΦΗ,¹ Γ. ΔΕΛΗΣ,¹ Δ. ΚΑΒΒΑΔΑΣ,¹ Θ. ΠΑΠΑΜΗΤΣΟΥ¹ Διιδρυματικό Πρόγραμμα Μεταπτυχιακών Σπουδών «Υγεία και Περιβαλλοντικοί Παράγοντες», Τμήμα Ιατρικής, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, Θεσσαλονίκη

Αρχεία Ελληνικής Ιατρικής 2023, 40(3):363-368

ΣΚΟΠΟΣ Μελέτη των επιπέδων σωματικής, ψυχικής υγείας και κοινωνικών σχέσεων των κατοίκων της Λήμνου κατά την περίοδο της COVID-19, καθώς και των οικονομικών επιπτώσεων σε σχέση με τα παραπάνω. ΥΛΙΚΟ-ΜΕΘΟΔΟΣ Διεξήχθη μια ποσοτική, πρωτογενής έρευνα, συγχρονική και συσχέτισης μεταξύ και εντός των ομάδων σε μη πειραματικό σχεδιασμό. Στην έρευνα συμμετείχαν 115 κάτοικοι της Λήμνου, μέσης ηλικίας 42 ετών. Χρησιμοποιήθηκαν τα έγκυρα ερωτηματολόγια Fear of COVID-19 (α=0,901) και WHOQOL-BREF (α≥0,841). Εφαρμόστηκαν οι στατιστικοί έλεγχοι independent samples t-test, ANOVA, Kruskal-Wallis, x² και Spearman σε στάθμη σημαντικότητας 5%. Τηρήθηκαν τα απαραίτητα ηθικά ζητήματα. ΑΠΟΤΕΛΕΣΜΑΤΑ Τα επίπεδα φόβου για την COVID-19 χαρακτηρίστηκαν μέτρια. Η σωματική υγεία των κατοίκων χαρακτηρίστηκε καλή, η ψυχική υγεία μέτρια προς καλή, ενώ τα επίπεδα κοινωνικών σχέσεων κυμάνθηκαν σε μέτρια προς υψηλά επίπεδα. Η πλειοψηφία δήλωσε ότι η πανδημία δεν έφερε αλλαγές στο εισόδημα, αλλά μόνο στον τουρισμό. Οι οικονομικές επιπτώσεις σχετίστηκαν με την επαγγελματική κατάσταση, τη σωματική υγεία, τη νόσηση από COVID-19 και τη μείωση του τουρισμού. ΣΥΜΠΕΡΑΣΜΑΤΑ Οι κάτοικοι της Λήμνου αισθάνθηκαν σε υψηλό βαθμό φόβο μόνο για τα αγαπημένα τους πρόσωπα. Η πανδημία δεν επηρέασε ιδιαίτερα τα επίπεδα της σωματικής υγείας, της ψυχικής υγείας και των κοινωνικών σχέσεων παρά μόνο την καθημερινή απόλαυση της ζωής και τις κοινωνικές δραστηριότητες. Οι ομάδες που επηρεάστηκαν ψυχολογικά περισσότερο ήταν οι νέοι και οι γυναίκες, οι οποίες επηρεάστηκαν και σωματικά. Οι οικονομικές επιπτώσεις ήταν υψηλές στον τουρισμό του νησιού. Ο βασικός παράγοντας υποκίνησης για εμβολιασμό ήταν ο φόβος για την ασθένεια.

**Λέξεις ευρετηρίου:** Ελλάδα, Κοινωνίες, Κορωνοϊός, Λήμνος, SARS-CoV-2

368 M. KASSIMI et al

#### References

- SCHIMMENTI A, BILLIEUX J, STARCEVIC V. The four horsemen of fear: An integrated model of understanding fear experiences during the COVID-19 pandemic. Clin Neuropsychiatry 2020, 17:41–45
- 2. MERTENS G, GERRITSEN L, DUIJNDAM S, SALEMINK E, ENGELHARD IM. Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. *J Anxiety Disord* 2020, 74:102258
- 3. YAO H, CHEN JH, XU YF. Patients with mental health disorders in the COVID-19 epidemic. *Lancet Psychiatry* 2020, 7:e21
- 4. SINGH J, SINGH J. COVID-19 and its impact on society. *Electron Res J Soc Sci Humanit* 2020, 2:168–172
- BROOKS SK, WEBSTER RK, SMITH LE, WOODLAND S, WESSELY S, GREENBERG N ET AL. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *Lancet* 2020, 395:912–920
- BUDD L, ISON S. Responsible transport: A post-Covid agenda for transport policy and practice. *Transp Res Interdiscip Per*spect 2020, 6:100151
- TAYLOR S, LANDRY CA, PALUSZEK MM, RACHOR GS, ASMUNDSON GJG. Worry, avoidance, and coping during the COVID-19 pandemic: A comprehensive network analysis. *J Anxiety Disord* 2020, 76:102327
- 8. VARGA TV, BU F, DISSING AS, ELSENBURG ESK, HERRANZ BUSTA-MANTE JJ, MATTA J ET AL. Loneliness, worries, anxiety, and precautionary behaviours in response to the COVID-19 pandemic: A longitudinal analysis of 200,000 Western and Northern Europeans. *Lancet Reg Health Eur* 2021, 2:100020
- DE VOS J. The effect of COVID-19 and subsequent social distancing on travel behavior. Transp Res Interdiscip Perspect 2020, 5:100121
- 10. DE HAAS M, FABER R, HAMERSMA M. How COVID-19 and the Dutch "intelligent lockdown" change activities, work and travel behaviour: Evidence from longitudinal data in the Netherlands. Transp Res Interdiscip Perspect 2020, 6:100150
- 11. KAVVADAS D, STOILA N, TSOPANOGLOU E, PAPAMITSOU T, KAVVADA A SIOGA A. From the Athenian plague to Covid-19: A historical review of epidemics and their impact on mental health. Arch Hellen Med 2021, 38:448–458
- 12. GIANNOPOULOU I, TSOBANOGLOU GO. COVID-19 pandemic: Challenges and opportunities for the Greek health care system. *Ir J Psychol Med* 2020, 37:226–230
- CHERISTANIDIS S, KAVVADAS D, MOUSTAKLIS D, KYRIAKIDOU E, BATZOU D, SIDIROPOULOS E ET AL. Psychological distress in primary healthcare workers during the COVID-19 pandemic in Greece. Acta Med Acad 2021, 50:252–263
- 14. KAVVADAS D, PAPAMITSOUT, CHERISTANIDIS S, KOUNNOUV. Emotional crisis during the pandemic: A mini-analysis in children and adolescents. *Arch Hellen Med* 2021, 38:237–239
- 15. ANASTASIOU E, DUQUENNE MN. What about the "social aspect of COVID"? Exploring the determinants of social isolation on

- the Greek population during the COVID-19 lockdown. *Soc Sci* 2021, 10:27
- DOUGLAS M, KATIKIREDDI SV, TAULBUT M, McKEE M, McCARTNEY G. Mitigating the wider health effects of COVID-19 pandemic response. *Br Med J* 2020, 369:m1557
- 17. TSAPOU K, PSARRA E, KONSTANTINOU J, KAVVADAS D, CHERISTANID-IS S, SIDIROPOULOS E ET AL. The socio-psychological impact of the COVID-19 pandemic on Greek society: A survey of Greek adults. *Arch Hellen Med* 2022, 39:89–97
- ANASTASIOU E, DUQUENNE MN. Coronavirus in society: The geography of social distancing measures in Greece. *Demo News* 2020, 41:1–6
- 19. PARASCHI EP. Accessibility, tourism and social welfare: Covid-19 and a new quality-of-life tourism model for the Greek islands. *IACuDiT* 2020, 6:10–21
- 20. EUROPEAN OBSERVATION NETWORK FOR TERRITORIAL DEVELOP-MENT AND COHESION. The development of the islands – European Islands and Cohesion Policy (EUROISLANDS): Targeted analysis 2013/2/8 – Inception report. ESPON, 2013. Available at: www.espon.eu/sites/default/files/attachments/inception\_ report\_full\_version.pdf
- 21. COHEN L, MANION L, MORRISON K. *Research methods in education*. 6th ed. Routledge Falmer, New York, NY, 2007. Available at: www.gtu.ge/Agro-Lib/RESEARCH METHOD COHEN ok.pdf
- 22. CRESWELL JW. Research design: Qualitative, quantitative, and mixed methods approaches. 4th ed. SAGE Publications Inc, London. 2013
- 23. MUIJS D. *Doing quantitative research in education with SPSS*. 2nd ed. SAGE, London, 2011
- 24. OATES J. BPS code of human research ethics. 2nd ed. The British Psychological Society, Leicester, 2021
- 25. AHORSU DK, LIN CY, IMANI V, SAFFARI M, GRIFFITHS MD, PAKPOUR AH. The fear of COVID-19 Scale: Development and initial validation. *Int J Ment Health Addict* 2022, 20:1537–1545
- 26. GINIERI-COCCOSSIS M, ANTONOPOULOUV, TRIANTAFILLOU E, CHRISTODOULOU GN. Translation and cross-cultural adaptation of WHOQOL-100 in Greece: Part 1. *Psihijatrija Danas* 2001, 22:5–16
- 27. FIELD A. *Discovering statistics using IBM SPSS*. 5th ed. Sage Publications Ltd, London, 2017
- 28. CUELLO-GARCIA C, PÉREZ-GAXIOLA G, VAN AMELSVOORT L. Social media can have an impact on how we manage and investigate the COVID-19 pandemic. *J Clin Epidemiol* 2020, 127:198–201

# Corresponding author:

T. Papamitsou, Laboratory of Histology and Embryology, School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

e-mail: thpapami@auth.gr\_

.....