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ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

Attitudes, behaviors, opinions, and suggestions of blood donors toward blood donation in Crete, Greece

OBJECTIVE **To assess attitudes, behaviors, opinions, and suggestions of blood donors in Crete, Greece.** METHOD **A cross-sectional study was implemented involving 364 blood donors in hospitals and mobile units between October to December 2022. A standardized questionnaire was used to assess relationships of "attitudes and behaviors", "opinions and suggestions on blood donation" and the "fear of COVID-19", through multiple linear regression analysis.** RESULTS **The majority of donors were males (66.8%), mean age was 38.4 years (±10.7), and 66.5% were active voluntary donors. On the "attitudes and behaviors" scale, the mean score was 3.9 (±0.4) or medium to high levels of positive "attitudes and behaviors". For "opinions and suggestions", the highest mean score was found in the "attracting blood donors" subscale (4.2±0.6), while the mean score of "fear of COVID-19" was 1.8 (±0.7) or low levels of fear/anxiety. Higher (positive) levels of "attitudes and behaviors" are correlated with female gender (β=0.099, p=0.032), regular donation (β=0.160, p=0.002), frequent donation (β=0.066, p=0.042), greater agreement on attracting blood donors (β=0.141, p<0.001), and lower levels of fear/anxiety related to COVID-19 (β=-0.062, p=0.047).** CONCLUSIONS **Cretan (Greek) blood donors seem to have positive attitudes and behaviors, significantly affected by female gender, regular donation and attracting of donation, and lower levels of fear/anxiety related to COVID-19. These new indications should be considered in attracting new blood donors with continuous encouragement and recruitment.**

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2025, 42(4):532–539

N. Rikos,[1]
M. Katsalaki,[2]
A. Titomichelaki,[3]
A. Linardaki,[4]
M. Assargiotaki,[2]
G. Kourlaba,[5]
M. Linardakis[4]

[1]Department of Nursing, School of Health Science, Hellenic Mediterranean University, Heraklion, Crete
[2]"Venizelio" General Hospital of Heraklion, Heraklion, Crete
[3]University General Hospital, Heraklion, Crete
[4]Department of Social Medicine, Faculty of Medicine, University of Crete, Heraklion, Crete
[5]Department of Nursing, School of Health Science, University of the Peloponnese, Tripoli, Greece

Στάσεις, συμπεριφορές, απόψεις και προτάσεις αιμοδοτών για την αιμοδοσία στην Κρήτη

Περίληψη στο τέλος του άρθρου

Key words

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The significance of blood today as the driver of human vitality refers to a universal tradition that influences all cultures. From prehistoric civilizations to the present day, blood has played a vital role in people's lives and worldviews. From the time of Hippocrates onwards, medical science with its studies and innovations has made it possible for blood to be safely donated and received.[1] Nevertheless, blood donation remains an evolutionary riddle in the sense that it is difficult to explain the survival of a systematic human behavior in which people sacrifice their time and vital biological resources to benefit strangers. The special characteristics of blood donation as a behavior have led to the investigation of the motivations behind it by various scientific fields such as economics, marketing, psychology, and sociology.[2]

However, the dynamics and contribution of blood donation have been studied to a satisfactory level in order to identify ways of increasing supply and meeting needs.[3–7]

Worldwide, the blood donation rate is 32 donations per 1,000 people or 119 million annually, while in 2012 in Greece, it was 6 donors per 100 citizens, comprising three types of donation or donors: voluntary unpaid, family/replacement, and paid donors.[7,8] The issue of donor behavior during the COVID-19 pandemic has also been extensively studied in the international literature, given the interest in increased blood needs and in fear and anxiety due to COVID-19 and strict public health measures.[9–13] Most studies have aimed to investigate the perspectives of blood donors during the pandemic concerning what they know about blood donation, how they feel, and how they behave in practice. Obviously, the ultimate aim was to use such evaluations as a means to connect healthcare workers and the community and to increase awareness of blood donation among citizens. Moreover, every present or future study may help transfusion services to prepare for a similar situation in future.[9]

Thus, the current study aimed to assess the attitudes and behaviors of blood donors toward blood donation in Crete, Greece. The collection of further data on the attitude of Cretans toward blood donation will be useful for the implementation of educational programs on blood donation in Crete as part of clinical practice, which requires documented knowledge and strong research findings.

MATERIAL AND METHOD

Study design, setting and participants

An observational/cross-sectional study was implemented involving 364 blood donors who attended the Blood Center, hospitals or mobile units of Crete, the largest island of Greece (617,360 inhabitants): the "Venizeleio" General Hospital, the University Hospital of Heraklion, the General Hospital of Agios Nikolaos, the General Hospital of Rethymno and the "Agios Georgios" General Hospital of Chania. The study was carried out between October and December 2022, with questionnaires provided to all blood donors, regular and systematic, who attended the blood centers, the mobile unit and the hospital blood centers during this period and were not excluded from blood donation.

Data collection

The weighted questionnaire by Gkirtsou and colleagues was used.[14] The questionnaire consists of 90 items divided into five domains (A to E). A (seven items) comprises questions on the demographic data of the donor, B (14 items) covers general knowledge on blood transfusion and the donor's personal history of voluntary donation, C (24 items) concerns donors' attitudes, behavior, and motivation for donating blood and their experiences in the blood donation units, D (four items) investigates donors' opinions and suggestions to improve the blood-donation process and increase blood donation, and E (seven items) evaluates their behavior and fear due to COVID-19.

Domains B to E determine the score of the following scales: "Attitudes and behaviors" (one scale), "Opinions and suggestions on blood donation" (four subscales), and "fear of COVID-19" (one scale). The responses to items of domains B to E are rated on a Likert scale: 1: absolutely disagree, 2: disagree, 3: midpoint (neither agree nor disagree), 4: agree, and 5: strongly agree, with assessment of the mean score, a higher score indicating greater agreement. The six scales/subscales are: (a) "Attitudes and behaviors toward blood donation", consisting of 24 items with three reversed due to conceptual content, (b) "Opinions and suggestions on improving the blood-donation process" (seven items), (c) "Opinions and suggestions on distance preventing people from donating blood" (eight items), (d) "Opinions and suggestions on attracting blood donors" (five items), (e) "Opinions and suggestions on being discouraged from donating blood" (eight items), and (f) "Fear and anxiety related to COVID-19" (seven items). The reliability of all the responses, assessed with Cronbach's α (see tab. 2), ranged from 0.66 to 0.93 (good/excellent reliability).

Ethical considerations

This study was performed in line with the principles of the Declaration of Helsinki. Ethical approval was obtained from the Research and Bioethics Committee of the Hellenic Mediterranean University of Heraklion Crete (protocol no 839/14.3.2022). The participants in the study were informed about the study objectives, expected outcomes, and associated benefits and risks. Written consent was received from the participants before they answered the questionnaire and the completed questionnaires were returned in a sealed envelope.

Statistical analysis

Data analysis was performed with the Statistical Package for Social Sciences (SPSS) (IBM SPSS, Chicago, Illinois, USA), version 25.0 (2017). Absolute and relative frequency distributions of participants' basic characteristics were estimated, comparing frequencies through 95% confidence intervals (95% CIs). The scores of scales ("Attitudes and behaviors", "Opinions and suggestions on blood donation", and "fear of COVID-19") were assessed using Blom's method (QQ plot) for symmetry, while the reliability of the scales was assessed with Cronbach's alpha coefficient. Correlations between the scale scores were performed using Pearson's parametric method, while multiple linear regression analysis was used to assess the correlation between the "Attitudes and behaviors toward blood donation" scale and the basic and blood donation characteristics of the 364 participants, "Opinions and suggestions on blood donation", and "fear of COVID-19".

RESULTS

The majority of the 364 blood donors were males (66.8%) (tab. 1) and the mean age of all was 38.4 years (±10.7). A percentage of 50.8% were married, 30.8% had a university education and 16.2% held a master's degree or a PhD. Furthermore, 30.5% were farmers, blue-collar workers, etc., while the majority or 86.5% lived in an urban area (>2,000 residents) and 92.6% were permanent residents.

Concerning blood donation, 88.2% of donors stated that they were not first-time donors, while 81.0% knew their blood type (fig. 1). Additionally, 66.5% were active voluntary donors or gave blood at least once a year, 58.2% gave blood not for transfusion needs of a family member or friend, 53.8% had a donor card (systematic or regular donors), and 46.2% noted that another family member was a regular donor. 43.1% stated that they had given blood for the first time as a volunteer and 39.3% for a family member or friend, 23.9% were members of a local blood bank association, 21.2% of males had given blood as army conscripts, and 4.7% had received a transfusion in the past. In general, regarding past donations (results not shown), 2.2% of respondents were first-time donors, 31.0% had given blood 1–3 times, and 37.6% had given blood 10+ times. Concerning blood donation frequency, fewer than half of participants had delayed giving blood for over one year (40.1%; 95% CI: 34.8, 45.5). Of the multiple reasons for the delay, the most frequent response was *"There are no appropriate motivations"* (24.6%) followed by *"I do not have free time (the hours or location of the blood bank station are inconvenient)"* (17.3%).

Table 2 presents the scores of the "Attitudes and behaviors", "Opinions and suggestions on blood donation", and "fear of COVID-19" scales between 1–5, a higher score indicating greater agreement in each scale. In the "Attitudes and behaviors" scale, the mean score was 3.9 (±0.4) or medium to high levels of positive "Attitudes and behaviors" toward blood donation. Of the "Opinions and suggestions on blood donation" subscales, the highest mean score or greater agreement was found for *Attracting blood donors* (4.2±0.6), followed by *Improving the blood-donation process* (3.9±0.6), *Distance preventing people from donating blood* (3.6±0.6), and lastly, *Being discouraged from donating blood*

Table 1. Basic characteristics of the 364 blood donors of the current study.

	n	%
Gender		
Male	243	66.8
Female	121	33.2
Age (years)		
Mean±SD (min, max)	38.4±10.7 (18, 66)	
Marital status		
Married	185	50.8
Single, divorced, or widowed	179	49.2
Education level		
Elementary School graduate	3	0.8
High School graduate	190	52.2
University graduate	112	30.8
MSc or PhD	59	16.2
Occupation		
Farmer, worker, artisan, etc.	111	30.5
Public sector worker, self-employed, university student, housekeeper, unemployed, retired, etc.	253	69.5
Place of residence		
Urban area (2,000+ residents)	315	86.5
Rural area (<2,000 residents)	49	13.5
Residence		
Permanent resident	338	92.9
Temporary resident	26	7.1

SD: Standard deviation

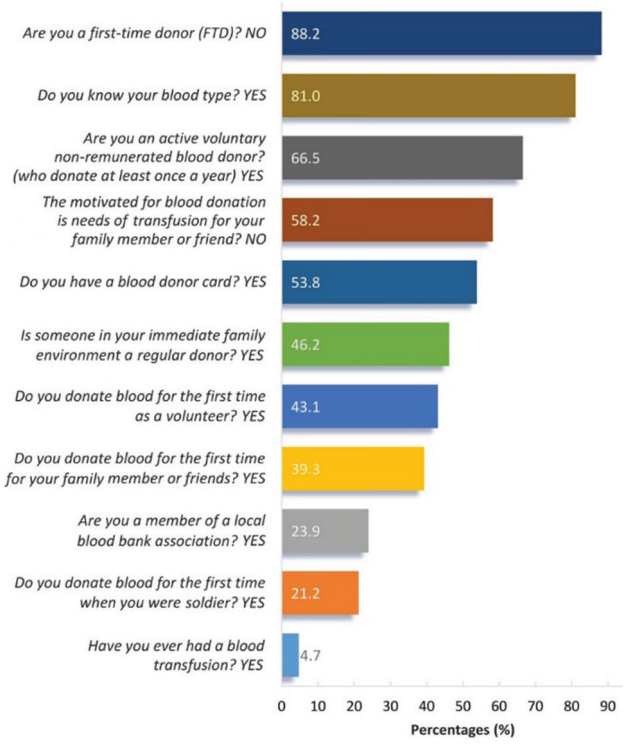

Figure 1. Hierarchical frequency responses of the 364 blood donors of the current study to questions about blood donation.

Table 2. Scores of attitudes and behaviors, opinions and suggestions on blood donation, and fear of COVID-19 scales in the 364 blood donors of the current study.

Scales/subscales	Mean	SD	Median	Min	Max	Cronbach's α
Attitudes and behaviors toward blood donation (higher score → greater agreement for positive attitudes and behaviors)	3.9	0.4	3.9	2.2	4.8	0.816
Opinions and suggestions (higher score → greater agreement for opinions and suggestions subscales)						
On improving the blood donation process	3.9	0.6	4.0	1.7	5.0	0.823
On distance preventing people from donating blood	3.6	0.6	3.5	1.0	5.0	0.659
On attracting blood donors	4.2	0.6	4.0	1.8	5.0	0.759
On being discouraged from donating blood	2.8	1.0	2.9	1.0	5.0	0.928
Fear and anxiety related to COVID-19 (higher score → greater agreement for fear and anxiety)	1.8	0.7	1.7	1.0	3.6	0.837

(2.8±1.0). For the "fear of COVID-19" scale, the mean score was 1.8 (±0.7) or with low levels of fear and anxiety. Figure 2 presents the frequency of responses with a higher and medium/lower degree of agreement for "Attitudes and behaviors", "Opinions and suggestions", and "fear of COVID-19" on blood donation. Fewer than half of participants presented the significantly lowest degree of agreement (*"agree and or strongly agree"*) for "Attitudes and behaviors" (40.7%, $p<0.05$), "Opinions and suggestions on distance preventing people from donating blood" (23.6%, $p<0.05$), and "Opinions and suggestions on being discouraged from donating blood" (11.8%, $p<0.05$). On the contrary, over half of respondents presented the significantly highest degree of agreement for "Opinions and suggestions on attracting blood donors" (67.3%, $p<0.05$). It is noted that on the "fear of COVID-19" scale none of the participants had a higher degree of agreement with fear or anxiety related to COVID-19 (0.0%).

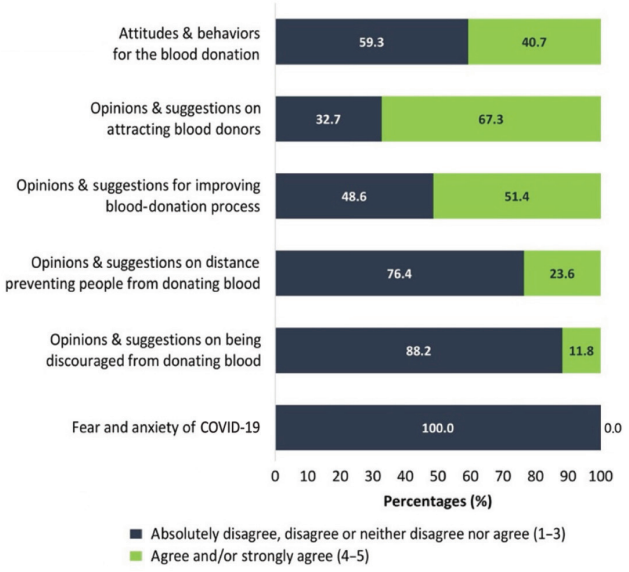

Figure 2. Frequency responses of the 364 blood donors of the current study in higher and medium/lower agreement with attitudes and behaviors, opinions and suggestions, and fear of COVID-19 on blood donation.

The correlations between the scale scores (tab. 3)

Table 3. Correlations of scores of attitudes and behaviors, opinions and suggestions on blood donation, and fear of COVID-19 in the 364 blood donors of the current study.

	1	2	3	4	5
	r-Pearson				
1. *Attitudes and behaviors toward blood donation* (higher score → greater agreement for positive attitudes and behaviors)	–				
2. *Opinions and suggestions on improving the blood donation process* (higher score → greater agreement for opinions and suggestions subscales)	0.181*				
3. Opinions and suggestions on distance preventing people from donating blood	-0.060	0.242**			
4. Opinions and suggestions on attracting blood donors	0.221**	0.518**	0.290**		
5. Opinions and suggestions on being discouraged from donating blood	-0.090	0.154*	0.404**	0.192**	
6. *Fear and anxiety related to COVID-19* (higher score → greater agreement for fear and anxiety)	-0.113*	0.060	0.129*	0.050	0.169**

*p<0.05 **p<0.001

showed that the highest (positive) score of "Attitudes and behaviors" is correlated with higher levels of "Opinions and suggestions on improving the blood-donation process" (r=0.181, p<0.05) and "Opinions and suggestions on attracting blood donors" (r=0.221, p<0.001), or with lower levels of fear and anxiety related to COVID-19 (r=-0.113, p<0.05). Higher fear and anxiety related to COVID-19 is also related with higher levels of "Opinions and suggestions on distance preventing people from donating blood" (r=0.129, p<0.05) and "Opinions and suggestions on being discouraged from donating blood" (r=0.169, p<0.001).

Finally, as shown in table 4, based on multiple regression analysis, higher (positive) levels of "Attitudes and behaviors" are correlated with female gender (unstandardized coefficient of β=0.099, p=0.032), regular donation (β=0.160, p=0.002), frequent donation (β=0.066, p=0.042), greater agreement on attracting blood donors (β=0.141, p<0.001), and lower levels of fear and anxiety related to COVID-19 (β=-0.062, p=0.047).

DISCUSSION

The present study aimed to assess the attitudes and behaviors of blood donors and increase the available data, focusing on the period of the COVID-19 pandemic and the way in which, in combination with their personal characteristics or lifestyle, it affected their blood donation behavior. The data collected indicated that: (a) almost all donors (9/10) had already given blood many times, with medium to high levels of positive "Attitudes and behaviors toward blood donation", (b) they had low fear and anxiety related to COVID-19, (c) higher positive levels for "Attitudes and behaviors toward blood donation" were significantly correlated with higher levels of "Opinions and suggestions on improving the blood-donation process" or with lower levels of fear and anxiety related to COVID-19 (p<0.05), and (d) higher (positive) levels of "Attitudes and behaviors" are correlated with female gender, regular donation and attracting of donations, and lower levels of fear/anxiety related to COVID-19 (p<0.05).

The aspects of blood donation behavior investigated in the present study concerned donors' attitude and views, when faced with the fear of the new virus that appeared worldwide in 2019–2020.[7,9] Healthcare professionals in blood centers and units attempted to find new ways of attracting donors while reducing the transmissibility of the virus as far as possible, in quite unsafe conditions. A typical example in the international literature is a study in Brazil.[15] The blood center studied had a high collection capacity prior to the pandemic (approximately 6,000 units/month, with one third originating from mobile units). In order to handle the restrictions due to increased mortality, measures

Table 4. Multiple linear regression of attitudes and behaviors toward blood donation in relation to basic and blood donation characteristics of the 364 participants of the study, opinions and suggestions on blood donation, and fear of COVID-19.

	Scale of attitudes and behaviors toward blood donation (higher score / greater agreement for positive attitudes and behaviors)		
Factors	**Unstandardized coefficient β**	**Standard error**	**p-value**
Gender (1: males, 2: females)	0.099	0.046	0.032
Age (years)	0.003	0.002	0.244
Education level (1: Elementary School, 2: High School, 3: University, 4: MSc or PhD)	-0.050	0.027	0.062
Regular donor (1: no, 2: yes)	0.160	0.052	0.002
Blood donation frequency in past (1: first time, 2: 1–3 times, 3: 3–10 times, 4: >10 times)	0.066	0.032	0.042
Scale of Opinions and suggestions (higher score → greater agreement):			
On improving the blood donation process	0.070	0.038	0.065
On distance preventing people from donating blood	-0.067	0.040	0.099
On attracting blood donors	0.141	0.038	<0.001
On being discouraged from donating blood	-0.024	0.022	0.282
Scale of Fear and anxiety related to COVID-19 (higher score → greater agreement for fear and anxiety)	-0.062	0.031	0.047
R^2 *(adjusted)*	0.196 (0.173)		

were taken to reduce the transmission of the virus while allowing blood needs to be met (e.g., >1.5 m between chairs, high-alcohol content gel dispensers, a pre-reception area providing detailed information on risk factors). By activating the sense of security and responsibility seen in people in periods of crisis,[16–18] these actions resulted in a median increase of approximately 15% in weekly blood donations.[15] Similarly, in Greece, a study investigating the frequency of participation during the COVID-19 lockdowns (2019–2020) found that participation in and contribution to blood donation did not change significantly, probably because donors' views and attitudes give rise to better conditions, thereby balancing blood supply and requirements.[18]

The present study on 364 Cretan donors was preceded by a previous study on 416 donors at blood centers and units in Northern Greece in January–March 2021 using the same assessment instrument.[14] The study found a good level of knowledge and positive "Attitudes and behaviors" toward blood donation, while the views, attitudes, and proposals for the improvement and promotion of blood donation were correlated with increased anxiety/fear related to COVID-19. The Cretan blood donors had similar "Attitudes and behaviors" toward blood donation, "Opinions and suggestions on improving the blood-donation process", and "Opinions and suggestions on distance preventing people from donating blood". In practice, 1.5 years after the end of the strict pandemic measures, Cretan blood donors appear to express greater agreement on "Attracting blood donors and on being discouraged from donating blood" ($p<0.05$) than their Northern Greek counterparts. Nevertheless, it should be noted that the present study was carried out in a period of looser measures and restrictions, with higher vaccination and infection rates, and under completely different environmental conditions (e.g., the warmer microclimate of Crete). In contrast to the previous study, lower anxiety/fear of COVID-19 and high frequency of blood donation were correlated with more positive attitudes and behaviors ($p<0.05$), adding newer data to the present assessment.[14]

On an international level, in a cross-sectional study from June to October 2020, just after the start of the pandemic, found in 403 volunteer donors in South India that fear of COVID-19 infection was the main reason for not donating. The overall knowledge, attitude and practice score was satisfactory, being 76%, while the overall positive attitudes and practices scores were higher, 85% and 78%, respectively.[9] Over the course of a year, from May 2020 to May 2021, a cross-sectional study assessed 424 blood donors and 372 healthcare professionals in Saudi Arabia to determine the impact of the COVID-19 pandemic on blood donation services. They found that a major solution to overcome the blood shortage during the pandemic was the organization of mobile blood drives at people's homes, work, and education sites. Moreover, significant correlations were found between blood donation during the pandemic and donor age ($p=0.019$) and marital status ($p=0.001$).[10] Similarly, scheduling personal donation appointments proved to be an effective way of dealing with donor insecurity and attendance,[11] presumably assuaging their fears.

Concerning motivation, blood donor satisfaction, and intention to return during the pandemic, a retrospective survey evaluated the findings of approximately 7,500 German donors who had a donation appointment in the first four weeks of the pandemic. More than half of the donors wanted to continue to contribute in spite of the fear and anxiety of the pandemic, while most of them were extremely satisfied with their last donation or felt safe during their appointment. A basic request of donors was for more information on how to deal with the pandemic, while their intention to return for further donations was associated with their overall satisfaction (odds ratio 1.67, $p<0.05$) and the feeling of being safe during blood donation (odds ratio 1.33, $p<0.05$).[9] Similarly, the study assessed the knowledge, attitudes and beliefs of 503 donors during the pandemic, finding that fear of infection and reduced blood donor motivation were the major deterrents to blood donation. They also identified the top three motivational factors: direct patient request to donate (30%), family/friends need (26%), and social media campaigns (26%). However, with the passage of time and efforts to manage COVID-19 transmission, this insecurity and fear appear to be reduced, as the results of the present study showed.[20] There appear to be social groups who are not hindered in their intention to donate blood, constituting "hidden reservoirs" of donors in times of crisis such as natural disasters, earthquakes, accidents or epidemics.[5,6,21–23] Thus, taking the positive attitudes and behaviors of voluntary blood donors into account, using them and those who are able to engage in systematic donation is a primary factor in meeting blood needs, by providing them with constant information, education, and awareness initiatives. Of course, more incentives should be provided to donors as part of this strategy to meet needs, given the gradual restoration of all health services after the pandemic (surgeries, emergencies, etc.).[7]

The present study has some weaknesses found in any research. The difficulty of selecting a fully representative sample of blood donors from the island of Crete automatically limits the generalization of the results, while any

comparison with other similar studies is made with reservations. The use of a different instrument for the assessment of donors' attitudes and views is also a limitation, while the views of potential future donors who could become systematic registered donors are excluded. The focus is on the views of potential donors during a pandemic crisis. However, this difficulty is also a strength of this study, which blood center healthcare professionals are called upon to evaluate during and after the crisis. They also take donors' views into account in order to implement practices that facilitate the continuation of blood donation, meet blood needs, and reduce the cost per unit of blood.[8,16,24]

In conclusion, the present study assessed the attitudes and behaviors of Cretan (Greek) blood donors during the COVID-19 pandemic. Given the usefulness of the results in the implementation of educational programs on blood donation in Crete, as part of clinical practice, it is noted that Cretan donors give blood more frequently, with medium to high levels of positive attitudes and behaviors towards blood donation, greater agreement on "Attracting blood donors" and lower agreement on "Being discouraged from donating blood". However, it appears that their positive attitudes and behaviors towards blood donation are significantly affected by female gender, regular donation and attracting of donation, and lower levels of fear/anxiety related to COVID-19. These new indications concerning the literature on Greece and Cretan donors in particular should be taken into account in attracting new blood donors with continuous encouragement and recruitment.

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ΠΕΡΙΛΗΨΗ

Στάσεις, συμπεριφορές, απόψεις και προτάσεις αιμοδοτών για την αιμοδοσία στην Κρήτη

Ν. ΡΙΚΟΣ,[1] Μ. ΚΑΤΣΑΛΑΚΗ,[2] Α. ΤΙΤΟΜΙΧΕΛΑΚΗ,[3] Α. ΛΙΝΑΡΔΑΚΗ,[4] Μ. ΑΣΣΑΡΓΙΩΤΑΚΗ,[2] Γ. ΚΟΥΡΛΑΜΠΑ,[5] Μ. ΛΙΝΑΡΔΑΚΗΣ[4]

[1]Τμήμα Νοσηλευτικής, Σχολή Επιστημών Υγείας, Ελληνικό Μεσογειακό Πανεπιστήμιο, Ηράκλειο, Κρήτη, [2]«Βενιζέλειο» Γενικό Νοσοκομείο Ηρακλείου, Ηράκλειο, Κρήτη, [3]Πανεπιστημιακό Γενικό Νοσοκομείο, Ηράκλειο, Κρήτη, [4]Τμήμα Κοινωνικής Ιατρικής, Ιατρική Σχολή, Πανεπιστήμιο Κρήτης, Ηράκλειο, Κρήτη, [5]Τμήμα Νοσηλευτικής, Σχολή Επιστημών Υγείας, Πανεπιστήμιο Πελοποννήσου, Τρίπολη

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ΣΚΟΠΟΣ Αξιολόγηση συμπεριφορών, απόψεων και προτάσεων αιμοδοτών στην Κρήτη. **ΥΛΙΚΟ-ΜΕΘΟΔΟΣ** Διεξήχθη συγχρονική μελέτη με τη συμμετοχή 364 αιμοδοτών σε νοσοκομεία και κινητές μονάδες κατά το χρονικό διάστημα Οκτωβρίου–Δεκεμβρίου 2022. Χρησιμοποιήθηκε ένα τυποποιημένο ερωτηματολόγιο για την αξιολόγηση των σχέσεων στάσεων και συμπεριφορών, απόψεων και προτάσεων αναφορικά με την αιμοδοσία και τον φόβο της COVID-19, μέσω ανάλυσης πολλαπλής γραμμικής παλινδρόμησης. **ΑΠΟΤΕΛΕΣΜΑΤΑ** Η πλειοψηφία των αιμοδοτών ήταν άνδρες (66,8%), η μέση ηλικία ήταν τα 38,4 έτη (±10,7) και το 66,5% αυτών ήταν ενεργοί εθελοντές δότες. Στην κλίμακα «στάσεις και συμπεριφορές» η μέση βαθμολογία ήταν 3,9 (±0,4) ή μεσαία έως υψηλά επίπεδα θετικών στάσεων και συμπεριφορών. Για τις «γνώσεις και προτάσεις», η υψηλότερη μέση βαθμολογία βρέθηκε στην υποκλίμακα «προσέλκυση αιμοδοτών» (4,2±0,6), ενώ η μέση βαθμολογία του «φόβου για την COVID-19» ήταν 1,8 (±0,7) ή χαμηλά επίπεδα φόβου/άγχους. Τα υψηλότερα (θετικά) επίπεδα στάσεων και συμπεριφορών συσχετίζονταν με το γυναικείο φύλο (β=0,099, p=0,032), την τακτική δωρεά (β=0,160, p=0,002), τη συχνή δωρεά (β=0,066, p=0,042), τη μεγαλύτερη συμφωνία όσον αφορά στην προσέλκυση αιμοδοτών (β=0,141, p<0,001) και τα χαμηλότερα επίπεδα φόβου/άγχους σχετικά με την COVID-19 (β=-0,062, p=0,047). **ΣΥΜΠΕΡΑΣΜΑΤΑ** Οι Κρητικοί (Έλληνες) αιμοδότες φαίνεται να έχουν θετικές στάσεις και συμπεριφορές, που επηρεάζονται σημαντικά από το γυναικείο φύλο, την τακτική αιμοδοσία και την προσέλκυση αιμοδοσίας και χαμηλότερα επίπεδα φόβου/άγχους που σχετίζονται με την COVID-19. Οι εν λόγω νέες ενδείξεις θα πρέπει να λαμβάνονται υπ' όψιν για την προσέλκυση νέων αιμοδοτών με συνεχή ενθάρρυνση και στρατολόγηση.

Λέξεις ευρετηρίου: Δωρεά αίματος, COVID 19, Κοινότητα, Πανδημία, Συμπεριφορές

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Corresponding author:

N. Rikos, 36 N. Xilouri street, 713 07 Heraklion, Crete, Greece
e-mail: rikosn@gmail.com