


**Research Article**

## Greek CPR BLS Certified Providers have Confidence in Covid19 Vaccination. A Cohort Analysis in the Pre-Mandatory Vaccination Period by the Hellenic Society of Cardiology

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### Abstract

**Objective:** To evaluate the attitude towards vaccination (in general and especially towards Covid19) in a sizeable cohort of Greek Basic Life Support (BLS) certified providers.

**Methods:** Certified providers from courses held by the Hellenic Society of Cardiology mainly in Athens, Greece (5.513 BLS participants) were asked to complete an electronic survey during June 2021. The study took place during the early stages of worldwide Covid19 vaccination and, more importantly, before any mandatory anti-Covid19 vaccination health policies were introduced. Notable that all providers attended the certified BLS seminars on a voluntary basis.

**Results:** The vast majority had undergone vaccination against Covid19. Among those that had not been vaccinated, doubt towards vaccine's effectiveness was reported as the main motive, followed by the fear of possible side-effects. The majority of the responders had vaccinated their children in accordance to the National Greek vaccination programming and more than half had also been vaccinated against common flu. Regarding the responders' trust in the effectiveness of the Covid19 vaccine, it is correlated with previous Covid19 infection, a health-related profession, having a close family member or friend with a previous Covid19 infection, trust towards Covid19 vaccines and vaccines in general and the reliance that Covid19 vaccines can both help intercept the pandemic and promote public health. As their source of medical information, they trust their personal physician and other specialized scientists and much less the government officials or relatives and friends.

**Conclusion:** Greek certified BLS providers report great confidence in the effectiveness of vaccination in general and especially against Covid19, irrespective of any mandatory vaccination policies. This positive stance can be attributed to their general life-saving voluntarism or to an inherent trust in modern, evidence-based medical science, both partially also reflected in their initial willingness to train in CPR. As their source of medical information, they value heavily medical scientists, a finding that could significantly aid planning in future worldwide health crises response.

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### Introduction

Since the outbreak of Sars-CoV-2, the World Health Organization (WHO) has authorized eight vaccines for emergency use. Although research is still

ongoing, and evidence-based data are being collected, all health policies and institutions are targeting towards establishing the best public health policies. During the current pandemic (as has repeatedly happened in the past) there have been voices of disbelief regarding the efficacy and safety of vaccines. Current registries, publicly available, that examined the safety and efficacy of vaccination against Sars-CoV-2 raised no major safety issues, while vaccines seem to be efficient in protecting from severe disease and death [1]. This particular topic has given space to severe and ferocious discussion, both in scientific and public media fora. In this study we attempted to evaluate the attitude towards vaccination (in general and especially towards Covid19) of Greek Basic Life Support (BLS) certified providers. The rationale behind the attempt was the possible correlation between a general life-providing voluntarism or the inherent trust in medical science, that are the values upon which all life-support voluntary seminars are based upon, and a positive attitude towards vaccination. It has been shown that certified BLS providers maintain their willingness to provide cardiopulmonary resuscitation (CPR) to arrest victims during the pandemic, even during the pre-vaccination era [2]. The innate altruism that is revealed, may further correlate to a trust in science expressed through a trust in vaccination. Certified providers from courses held mainly in Athens, Greece were asked to complete an electronic survey regarding relevant topics during June 2021. The study took place during the early stages of worldwide Covid19 vaccination, and importantly before any mandatory anti-Covid19 vaccination policies were introduced. Notable that all providers attended the certified BLS seminars on a voluntary basis [2, 3].

## Methods

Certified BLS providers from seminars held in Greece during the three years preceding the Covid19 pandemic were provided with and were asked to answer an electronic survey, through a web-survey tool. The seminars were organized and certified by the Cardiopulmonary Resuscitation Working Group of the Hellenic Society of Cardiology (HSC) in association with the European Resuscitation Council (ERC). The electronic survey included general demographic information and questions regarding vaccination status -attitude towards Sars-CoV-2 vaccination as well as towards the general vaccination policy. Furthermore, the survey included questions about the pandemic-oriented attitude of the providers towards medicine and science. The study took place during the early stages of worldwide Covid19 vaccination, and importantly before any mandatory anti-Covid19 vaccination policies were introduced. Moreover, all providers both attended the certified BLS seminars and answered the survey on a voluntary basis and no incentive was offered.

## Questionnaire

The survey was developed by the authors after several focus group sessions and was agreed on by the members of the working group of CPR of the HCS. It included demographic questions and information regarding level of education, professional status and vaccination status. Most questions were targeted to the Sars-CoV-2 pandemic; attitude towards vaccination, level of fear towards the virus, experience with the virus, up-to-date status towards the pandemic and point of view regarding public health and the role vaccination plays in promoting it were included. The full questionnaire is available in the Table. The goal of the study was to establish correlations, should they exist, of factors inquired in the questionnaire and the attitude and stance of certified BLS providers towards vaccination. Also, it was attempted to establish if a favorable attitude could be attributed to the BLS providers' innate voluntarism and altruism. Lastly, a connection between the actual act of CPR and the opinion of each responder towards public health was pursued. No identifying information was collected from the participants. The guidelines outlined in the Declaration of Helsinki were followed. The study was approved by the Hellenic Cardiological Society Scientific & Ethics Committee.

## Statistical Analysis

All statistical analyses were performed by MedCalc Statistical Software version 19.1 (MedCalc Software by, Ostend, Belgium, 2019). Categorical data are expressed as group % percentages. Numerical data and rating scale questions as expressed as mean  $\pm$  1 standard deviation. Possible association of the various variables was assessed to check if there is a relationship between answers to the various questions by means of utilizing a multiple-regression analysis model, further confirmed by analysis of variance.

## Results

### Responders' Demographic Characteristics

Out of the 5513 certified providers, 1116 (20.24%) almost all (98.56%) completely filled out the questionnaire. Responders were predominantly female (67.54%) and college or university graduates (46.51%) with a mean age of 38 years. The majority (64.20%) were healthcare workers and of those 384 (34.88%) were nurses. Most healthcare professionals (62.8%) provided care to Covid19 patients during the pandemic.

### Responders' Life with Covid19

The vast majority of the responders (86.43%) reported living in the same house with another person during the pandemic, and 25.11% reported living with elderly people or people belonging in vulnerable groups. Regarding comorbidities, 13.66% of the responders reported suffering

from a chronic illness. More than half (54.63%) had a family member or a close friend had been diagnosed with Covid19 and 136 (12.23%) had contracted the virus themselves. The majority of the health care providers 62.21% provided health care to a patient with Covid19 during the pandemic. From a scale of 1-10 (10 being the maximum) the responders classified their fear of contracting Covid19 to  $5.5\pm 2.5$  and their fear of the health hazard if contracting the virus to  $3.99\pm 2.39$ . Responders agree ( $7.46\pm 2.37$ ) that Covid19 is an extremely serious disease and methodically follow ( $9.02\pm 1.05$ ) the personal hygiene protection measures required for virus spread protection (mask use, hand washing, social distancing etc.). The belief that Covid19 is a serious disease was correlated and accentuated by the trust towards information provided by personal doctors ( $r= 0.1250$ ,  $p=0.0001$ ), pandemic scientists ( $r= 0.2288$ ,  $p<0.0001$ ) and even government officials ( $r= 0.0668$ ,  $p=0.032$ ). Also, older age ( $r= 0.1807$ ,  $p<0.0001$ ) and female sex ( $r= 0.09283$ ,  $p=0.003$ ) were additionally correlated with the belief that the virus causes a serious illness.

### Responders' Attitude Towards Vaccination

The majority of the responders (57.82%) reported that they were vaccinated for the common flu in the initial pandemic years (2019-2020), while an even more emphatic majority (89.96%) have vaccinated their children according to the Greek National Vaccination Schedule (e.g. against measles, diphtheria, tetanus etc). Regarding Covid19, almost all (87.97%) reported to have undertaken vaccination, a finding of special magnitude as this had occurred before any action or legal measure for mandatory vaccination had been applied in our country. Out of the 12.03% that reported not having been vaccinated against Covid19, the top reasons for their decision were doubt towards the safety and effectiveness of coronavirus vaccines (34.33%), fear of any dangerous side effects (19.90%) and belief that vaccine would not provide additional safety (to prior Covid19 disease) (15.42%). Analytical data are displayed in the Table.

From a scale of 1-5 (5 being the best) the responders self-described their health status as rather well ( $4.09\pm 0.87$ ), despite the numerous somatic and psychological effects that the pandemic had caused. Confidence towards Covid19 vaccination was expectedly strongly associated with trust towards vaccines in general ( $r= 0.5855$   $p<0.0001$ ). This positive stance was irrelevant to a possible health-related profession, the responder's age or his/her underlying health status ( $p =$  all non-significant). Regarding our BLS providers' self-reported knowledge towards the coronavirus ( $7.96\pm 2.0$ )— scale 0-10, 10 best), its vaccines ( $7.36\pm 2.34$ ) and the vaccines in general ( $7.58\pm 2.22$ ), they vastly answered to be up to date, also irrespective of a possible medical/ nursing profession or their age. Whether this finding reflects a sincere and comprehensible inherent interest in medical issues or

a flawed assumption of knowledge, coming from social and traditional media, cannot be clarified. Consequently to them being well informed, they agree to personal hygiene protection measures ( $9.02\pm 1.05$ ). Also in this context, they strongly agree that vaccination is beneficial ( $8.46\pm 2.20$ ), (scale 0-10, 10: completely agree) and therefore they trust vaccines generally ( $8.40\pm 2.02$ ) as well as against Covid19 ( $6.87\pm 2.70$ ). Sources of medical information do not carry the same weight, a rather fortunate finding; the responders trust (in diminishing order) their personal physician ( $7.74\pm 2.1$ ) and the specialized scientists ( $7.10\pm 2.68$ ), less the government officials ( $5.48\pm 2.86$ ) and far less relatives and friends ( $3.90\pm 2.35$ ) in regards to information provided about the pandemic. Such a finding, as was recorded and proved in a strict scientific manner, could significantly aid in the dissemination of knowledge and advice planning in similar future health events of this worldwide extent. In a multiple regression analysis model, factors that were found to correlate with a positive attitude towards Covid19 vaccination (and obviously the responders being vaccinated against Covid19) were: a previous Covid19 infection ( $r=0.207$ ,  $p<0.0001$ ), a health-related profession ( $r=0.109$ ,  $p=0.0005$ ) and having a close family member or friend with a previous Covid19 infection ( $r=0.075$ ,  $p=0.017$ ). Responders that had been vaccinated themselves against the common flu were also vaccinated against Covid19 ( $r=0.188$ ,  $p<0.0001$ ), but their decision to vaccinate against Covid19 was unrelated to them vaccinating their children against other, vaccine-preventable potentially life-threatening diseases ( $r=0.010$ ,  $p=0.7465$ ). It is rather anticipated that a positive attitude towards Covid19 vaccination is associated with trusting vaccines in general ( $r=0.2887$ ,  $p<0.0001$ ) and the confidence that Covid19 vaccines can both help intercept the pandemic ( $r= 0.06190$ ,  $p=0.049$ ) and promote public health ( $r=0.1546$ ,  $p<0.000$ ). All correlations found in the multiple regression analysis models can be found in detail in Table 2. Other variables tested in our regression analysis model to predict a positive attitude towards Covid19 vaccine in our questionnaire's group of BLS providers, but resulted statistically negative, were age, sex, educational level, suffering from a chronic health problem/ disease, living in the same house with other people during the pandemic, subjective fear of contacting the virus or any degree of one's perception regarding the severity of the disease or its consequences.

- What is your gender?

female (67.54%)

male

- What is your age;

$37.63\pm 11.28$  years

- Do you live in the same house with another person during the pandemic?

no	How would you describe the state of your health? (4.09±0.87)
yes (86.43%)	1-5 (1=very bad, 5=very good)
- During the pandemic, do you live in the same house with elderly people or people in vulnerable groups?	Were you vaccinated for the common flu in 2019-2020?
no	no
yes (25.11%)	yes (57.82%)
Do you suffer from a chronic disease/illness?	Have you vaccinated your child(ren) according to the national vaccination schedule (eg for measles, diphtheria, tetanus, etc.)?
no	no
yes (13.66%)	yes (89.96%)
Have you been sick with Covid19?	Have you been vaccinated for Covid19?
no	no
yes (12.23%)	yes (87.97%)
Has anyone in your close family or any of your close friends been sick with Covid19?	If you have <u>not been vaccinated</u> against Covid19, what is the most important reason (choose only one -the most important- of the following)?
no	<ul style="list-style-type: none"> <li>• I doubt the safety and effectiveness of coronavirus vaccines (34.33%)</li> <li>• I am afraid that dangerous side effects will happen to me (19.90%)</li> <li>• I believe that I will not be infected (3.48%)</li> <li>• I do not think I am in grave danger if I am infected with Covid19 (9.95%)</li> <li>• I have already been infected with Covid19, so I think the vaccine will not give me anything more (15.42%)</li> <li>• I'm afraid because I'm suffering from a chronic illness (2.99%)</li> <li>• My doctor did not allow me to do so due to my health condition (3.48%)</li> <li>• My religion is against vaccination (0.50%)</li> <li>• I'm planning a pregnancy and I'm afraid to get the vaccine (7.46%)</li> <li>• <u>I'm pregnant and I'm afraid to get the vaccine (7.46%)</u></li> </ul>
yes (54.63%)	- I'm afraid I will contact COVID19 (5.50±2.5)
Do you work in healthcare services (eg hospital, health center, private practice, EMS, etc.)?	0-10, (I absolutely disagree=0, I strongly agree=10)
no	- I'm afraid my relatives and friends will contact COVID19 (6.35±2.51)
yes (64.24%)	0-10, (I absolutely disagree=0, I strongly agree=10)
If you work in healthcare services, what is your profession?	- I'm afraid I will be in great danger if I contact Covid19 (3.99±2.39)
<ul style="list-style-type: none"> <li>• Physician (17.26%)</li> <li>• Nurse (34.88%)</li> <li>• Paramedic staff (5.09%)</li> <li>• Administrative staff (2.45%)</li> <li>• Pharmacist (1.54%)</li> <li>• Rescuer / ambulance crew (1.36%)</li> <li>• Other (but I work in a healthcare service) (5.27%)</li> <li>• Other (not in healthcare service) (32.15%)</li> </ul>	0-10, (I absolutely disagree=0, I strongly agree=10)
During the pandemic, did you provide health care as a health professional to a patient with Covid19?	- I'm afraid my relatives and friends will be in great danger if they contact Covid19. (5.60±2.59)
no	
yes (37.39%)	
What is your highest education level?	
High school graduate (22.49%)	
College/ university graduate (46.51%)	
Postgraduate / doctoral degree (31.00%)	
How would you describe your financial situation? (2.98±0.88)	
1-5 (1=very bad, 5=very good)	

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- 0-10, (I absolutely disagree=0, I strongly agree=10)  
- Covid19 is an extremely serious disease. (7.46±2.37)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I think I'm up-to-date regarding coronavirus and Covid19. (7.96±2.0)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I think I'm up-to-date informed regarding vaccines in general. (7.58±2.22)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I think I'm up-to-date informed regarding coronavirus vaccines. (7.36±2.34)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- In general, I think vaccination is beneficial. (8.46±2.20)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I apply the personal hygiene protection measures for the coronavirus (eg mask where advised, hand washing, keeping a distance of 1.5 meters). (9.02±1.05)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust government officials with the information they provide about Covid19 (5.48±2.86)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust the scientists with the information they provide about Covid19 pandemic (7.10±2.68)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust my personal physician(s) with the information they provide me regarding Covid19. (7.74±2.1)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust my relatives and friends with the information they provide me regarding Covid19. (3.90±2.35)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I'm worried about the side effects that Covid19 vaccines may have. (5.80±2.79)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust the vaccines altogether (8.40±2.02)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- I trust the vaccines against Covid19. (6.87±2.70)  
0-10, (I absolutely disagree=0, I strongly agree=10)  
- Vaccination against Covid19 can help stop the pandemic. (7.91±2.52)  
0-10, (I absolutely disagree=0, I strongly agree=10)

- Vaccination against Covid19 promotes public health. (7.94±2.56)

0-10, (I absolutely disagree=0, I strongly agree=10)

**Table 1:** Questionnaire and responses.

The anonymous questionnaire that was -via web- sent to BLS certified providers, titled “Vaccines against covid19 and BLS training / certification”.

Provided is the number (N) of responders to each answer and the corresponding percentage % in parenthesis (per total number of responders – categorical variables) or the mean ± SD (standard deviation) for numerical and for rating scale variables.

	p	r
a/ positive attitude towards Covid19 vaccine and		
sex	0.8025	-0.007
sick with Covid19	<0.0001	0.207
family or close friend sick with Covid19	0.0177	0.075
living with other(s)	0.1579	-0.044
healthcare worker	0.0005	0.109
children vaccinated	0.7465	0.01
common flu vaccinated	<0.0001	0.188
chronic illness	0.2847	-0.033
Covid19 health care professional	0.3571	-0.029
b/ Covid19 is a serious disease and		
sex	0.0028	-0.092
age	<0.0001	0.18
general health condition	0.8384	0.006
been sick with Covid19	0.5777	0.017
educational level	0.3726	0.027
trust in personal physician	0.0001	0.125
trust in specialized scientists	<0.0001	0.2288
trust in government officials	0.0319	0.06681
trust in relatives and friends	0.7537	-0.009779
c/ vaccination is beneficial and		
sex	0.6271	-0.01534
age	0.5055	0.02037
general health condition	0.0564	0.05831
chronic illness	0.3902	-0.02628
educational level	0.0186	0.07189
health care worker	0.5022	0.02053

**Table 2:** Multiple regression analysis models.

Factors affecting three different attitudes (a/ positive attitude towards Covid19 vaccine, b/ belief that Covid19 is a serious disease, c/ confidence that the vaccination is beneficial) of officially trained BLS providers during the Covid19 pandemic period. Shown are the results of the multiple regression analysis of various factors on the responders' attitude. r partial is the partial correlation coefficient i.e. the coefficient of correlation of the independent variable with the dependent variable (i.e. attitude), adjusted for the effect of the other variables in the model.

\*p<0.05: the partial correlation is statistical significant –

The variance in all three models was significant on the levels of p<0.0001, therefore all multiple correlations were indeed statistically significant.

## Discussion

The purpose of this study was to examine the attitude and disposition of BLS certified rescuers towards vaccination against Covid19 and vaccination in general. This was mediated by a questionnaire that was sent, answered and evaluated in an era that vaccination was not officially obligatory and the corresponding vaccines were still in an early, though promising phase [4,5]. Nevertheless, their emergency use had been cleared by the FDA [6]. Recently and in the same population of Greek certified BLS providers, a keen attitude towards the act of CPR was noticed and associated with a humanitarian and altruistic mentality that is common among “good-Samaritan” CPR providers [2]. In a similar manner, the current study, representing rescuers’ attitude towards vaccination during a worldwide pandemic era, tends to exhibit a positive and willing inclination towards vaccination. This may be attributed to a number of factors. The majority of the responders were health workers, which can be associated with both an enhanced sense of altruism and a higher level of trust in the science behind medical industry manufacturing and production of pharmaceutical products. Most health professionals also provided care to Covid19 patients during the pandemic, a fact that may attributed to the notion that vaccination can be beneficial through its preventative character. Most responders had been vaccinated for the common flu and had vaccinated their children according to the national vaccination plan, which also shows strong belief and trust in vaccination as a modern evidence-based medical process. Although the level of fear of contracting or severely getting sick with Covid19, documented through this questionnaire, was not particularly high, responders answered that they followed all protocols and prevention measures, required for the virus outbreak containment (mask use, hand washing, effective social distancing etc.). However, the notion that Covid19 is a serious disease was accentuated by the trust towards information provided by personal doctors, pandemic scientists and (to a lesser extent) government officials, a fact that can be attributed to the faith in science and in the measures taken by the government to contain the pandemic; thus creating a feeling of involvement in this coordinated effort to meet the pandemic’s end. The misbelief and mistrust of health authorities has shown to affect willingness for vaccination and vaccine trials enrollment in serious infections such as HPV and HIV, in Europe and in the United States [7,8]. The mistrust for the Covid-19 vaccination started since the enrollment for the vaccination trial and was attributed to the lack of transparency during the initial outbreak, as well as vaccine scandals in recent years [9]. This hesitancy was evident in the pre vaccine era, even in university students. In a descriptive analysis on the 735 students in Italy that answered to the question on the intention to vaccinate showed that 86.1% students reported that they would choose to have a vaccination for the COVID-19 coronavirus; on the other

side, 13.9% students showed a low intention to vaccinate. This means that more than one student out of 10 showed low intention to vaccinate (vaccine hesitancy). It should be noted that this intension was similar when comparing healthcare students versus non-healthcare students [10]. It is evident that these results are similar to the results of our current study that was performed after the approval of the vaccines against Covid-19, showing that no progression towards the understanding of the necessity of the vaccines was present. A high rate of vaccine skepticism among medical staff was also observed in the same period in a study performed in Israel where the acceptance rate was 78% for medical doctors and 61% for nurses, while for the general population the acceptance rate reached 75% [11]. In contrast to our study, the presence of a relative with a Covid -19 infection was a discouraging factor for accepting the necessity for vaccination [11]. Of greatest concern to both physicians and the general population alike are the fear of the vaccine’s safety, given its rapid development. The skepticism for the safety and the need for the vaccination can be also attributed to conspiracy theories that emerged since the outbreak of the pandemic. In the study performed in the United Kingdom, approximately 50% of this population showed little evidence of conspiracy thinking, 25% showed a degree of endorsement, 15% showed a consistent pattern of endorsement, and 10% had very high levels of endorsement. Higher levels of coronavirus conspiracy thinking were associated with less adherence to all government guidelines and less willingness to take diagnostic or antibody tests or to be vaccinated [12]. In our study the trust towards the government officials for the information they provide about Covid19 pandemic was rather neutral ( $5.48 \pm 2.86$ ) with a scale of 0-10, (I absolutely disagree=0, I strongly agree=10), showing that the conspiracy theory has a significant role for their decision. However the attitude towards the information provided from the scientists was better ( $7.10 \pm 2.68$ ) 0-10, (I absolutely disagree=0, I strongly agree=10). In our current era, the current position of social media platforms in propagating vaccine hesitancy and explore next steps in how social media may be used to improve health literacy and foster public trust in vaccination [13]. Our study showed that a positive attitude, trust and belief that the vaccines are a means to end the pandemic were prominent and were associated with a previous Covid19 infection or with having a close family member or friend with a previous Covid19 infection, which may reflect an innate fear deriving from personal experience and struggle with the virus. It was also prominent, not being a surprise, that trust towards the effectiveness of Covid19 vaccines and vaccines in general, and the reliance that Covid19 vaccines can both help intercept the pandemic and promote public health were also associated with a keen and positive attitude towards Covid19 vaccination. Responders that were vaccinated against the common flu were also vaccinated against Covid19 which is an indication that the general belief in the possibilities and

capabilities that vaccines offer often go beyond specific illnesses or specific vaccine-types. Lastly, being vaccinated against Covid19 was not statistically associated with age, sex, education level, having a chronic health issue, with living in the same house with other people during the pandemic, with the fear of contracting the virus or any personal perception of the severity of the disease. This fact, although surprising, is indicating that innate trust in the effectiveness of vaccination as a means of assisting public health, promoting science values and trusting what science has to provide exceeds demographics or even the natural fear of the unknown; a part of the altruism and voluntarism that tends to characterize BLS providers and rescuers.

### Limitations

Limitations of this study include a selection bias, as only a fraction of all registered certified BLS providers answered the online questionnaire. Furthermore, the responders had been trained under a specific certified official Greek organization, representing largely health providers. The study results reflect the pre-mandatory vaccination era of Covid19 pandemic in Greece, and the compulsory legislation that followed could have various effects on one's self willingness to vaccinate. Generalization to other time periods or geographical regions should be undertaken with great caution.

### Conclusion

Greek certified BLS providers report great confidence in the effectiveness of vaccination in general and especially against Covid19, even before any mandatory vaccination policies were put in effect. As their source of medical information, they value heavily medical scientists a finding that could significantly aid planning in future worldwide health crises response. The positive Covid19 vaccine stance can be attributed to their general life-providing voluntarism or to an inherent trust in medical science, reflected by their initial willingness to train in CPR. It is evident that enhanced multidisciplinary educational interventions are needed and are the preferred strategy to improve students' adherence, attitude and knowledge about vaccinations.

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