



# The Open Public Health Journal

Content list available at: <https://openpublichealthjournal.com>



## RESEARCH ARTICLE

# COVID-19 and Internship Opportunities at Health Organizations in Saudi Arabia

Bussma Ahmed Bugis<sup>1,\*</sup>

<sup>1</sup>Department of Public Health, College of Health Sciences, Saudi Electronic University, Saudi Arabia

### Abstract:

#### Background:

Higher education is one of the communities that has been affected by the COVID-19 pandemic, which has caused disruptions and jeopardized supervised internships. COVID-19 has challenged graduating students to find internship opportunities at health organizations during the summer of 2020.

#### Objective:

The purpose of this paper was to explore how COVID-19 impacted summer 2020 internship opportunities for graduating health sciences students in Saudi Arabia.

#### Methods:

This study is a secondary analysis of existing private data. The data set was extracted from the original data of health sciences students who were expected to do their internships during the summers of 2018, 2019, and 2020 to explore summer internship opportunities.

#### Results:

The method of data analysis was descriptive statistics. A total of 440 health sciences students and interns were expected to start their internships during the summers of 2018, 2019, and 2020. Summer internship offers decreased from more than 70% offers in 2018 and 2019 to less than 35% in 2020. Of those who received summer internship offers in summer 2020, the majority received offers from public health organizations (74.67%), while 25.33% received offers from private and other health organizations.

#### Conclusion:

The impact of the COVID-19 pandemic on summer 2020 internship opportunities at health organizations has been profound in Saudi Arabia. Health organizations were influenced by the COVID-19 pandemic to offer summer internship opportunities for graduating students. This study contributes to understanding the present situation in attempting to predict the future impacts of pandemics with characteristics similar to COVID-19 on internships.

**Keywords:** COVID-19, Internship opportunities, Health organizations, Summer, Pandemic, Health sciences, Interns.

### Article History

Received: July 28, 2020

Revised: October 22, 2020

Accepted: November 17, 2020

## 1. INTRODUCTION

Globally, the novel coronavirus COVID-19 has created major changes in everyday practices and activities. Many parties and entities have faced challenges in coping with these changes at all levels. Higher education is one of the communities that has been affected by the virus [1], which has

caused disruptions and jeopardized supervised internships. The delay in graduating students affects their competitiveness for future jobs [2]. COVID-19 has challenged graduating students to find internship opportunities at health organizations during the summer of 2020.

Health organizations behave differently with regard to internship recruitments for summer 2020. The most common predicted behavior is that internship opportunities are reduced for the summer. Some health organizations have cancelled internships altogether in many different countries [3 - 5]. As a

\* Address correspondence to this author at the Department of Public Health, College of Health Sciences, Saudi Electronic University, P.O. Box 15515, Dammam 31454, Saudi Arabia; Tel: +966556137775; E-mail: [bussma31311@yahoo.com](mailto:bussma31311@yahoo.com)

result, graduation is delayed for some interns, which impacts the health job market, job demand, workforce and finance issues, and has rapidly become a serious concern [2, 6, 7].

Internship sites are recommended to actively engage in helping graduating students by offering alternative internship plans that enable students to gain the necessary experience and skills [2, 6]. In some affected countries such as China, higher education communities deliver online training [1]. Participation in US service programs that combine both online training and on-site deployment to health agencies is recommended for summer students because the spread of COVID-19 may be slowed as a result of physical distancing and warmer temperatures [8]. Funding to enable internship availability in the UK is also suggested to overcome the crisis [4] and move toward online training. However, not all trainees have the necessary resources, such as technical requirements, which raise other issues of inequity of opportunities and a lack of organizational awareness of the long-term benefits of internships [9].

This study explores an important area given the COVID-19 pandemic effects globally, internships, and training in particular. The impact of the COVID-19 on training opportunities varies between different fields as different industries responded differently to the pandemic. Within the healthcare sector, there are some areas that boost their activities during COVID-19, such as E-Health, pharmaceutical and medical supplies, and virtual healthcare [10]. However, there are other areas that have been affected negatively, such as ophthalmology, dentistry, and other clinical practices. Although studies related to the impact of COVID-19 on training and internships have been conducted in many countries, to the best of our knowledge, no or limited studies have been performed in Saudi Arabia. The purpose of this paper was to explore how COVID-19 impacted summer 2020 internship opportunities for graduating health sciences students in Saudi Arabia.

## 2. MATERIALS AND METHODS

This study is a secondary analysis of existing data that

aims to describe the impact of COVID-19 on summer 2020 internship opportunities at health organizations in Saudi Arabia. The existing data set used for this study is available at the College of Health Sciences (CHS) at the Saudi Electronic University (SEU). The data set was obtained from the CHS internship unit to explore internship opportunities during the summers of 2018, 2019, and 2020. Presenting and analyzing data from similar periods in different years, summers in this study is important to measure if internship opportunities differ in the COVID-19 confounding factor. It provides information on how many health organizations students applied for summer 2020 and how many offers they received for summer internships. The data of this study were extracted from the original data of health sciences students who were expected to do their internships during the summers of interest. Data were updated until 31 March 2020. Data related to this set are not publicly available. Therefore, the only data source comes from the CHS at SEU.

Comparative analysis was used to measure the association between the COVID-19 pandemic and summer 2020 internship opportunities in Saudi Arabia. Odds ratio (OR) tests were used to determine whether the gender, the number of student internship applications, and the type of health organization had, on average, an impact on the internship opportunities at health organizations during summer 2020. In addition, chi-square tests ( $X^2$ ) were used to measure the goodness of fit. An online calculator socscistatistics.com was used to calculate ORs and ( $X^2$ ).

## 3. RESULTS

A total of 440 health sciences students and interns were expected to start their internships during the summers of 2018, 2019, and 2020. Out of 440 interns, 235 (53.41%) received summer internship offers from different health organizations in Saudi Arabia as scheduled, while 205 (46.59%) did not receive summer internship offers. Fig. (1) shows the number of expected interns and summer internship opportunities from 2018 to 2020. Summer internship offers decreased from more than 70% in 2018 and 2019 to less than 35% in 2020.

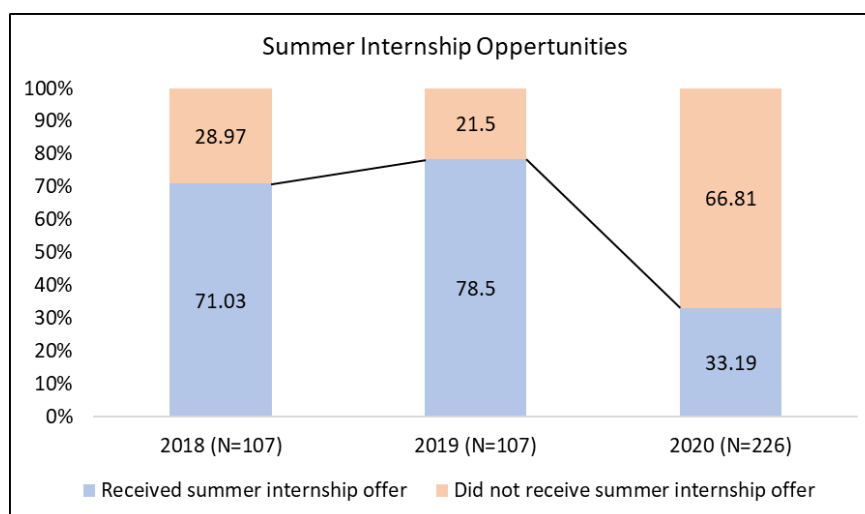


Fig. (1). Summer internship opportunities from 2018 to 2020.

**Table 1. Summer 2020 internship opportunities.**

Summer 2020	Expected Interns	Received Offers	Significance Level
<b>Gender <sup>a</sup></b>	<b>N = 226</b>	<b>N = 75</b>	<b>OR (95% CI)</b>
Male	102 (45.13%)	36 (48.00%)	Reference group
Female	124 (54.87%)	39 (52.00%)	1.12 (0.66 to 1.89)
<b>Overall fit</b>	$(\chi^2) = 0.19, df = 1, P = 0.666$		-
<b>Application letters per student <sup>a</sup></b>	<b>N = 226</b>	<b>N = 75</b>	<b>OR (95% CI)</b>
0	24 (10.62%)	0	Reference group
1-5	176 (77.88%)	67 (89.33%)	0.05 (0.00 to 0.89) **
6-10	23 (10.18%)	7 (9.33%)	0.06 (0.00 to 1.18) *
10+	3 (1.33%)	1 (1.33%)	0.05 (0.00 to 1.41) *
<b>Overall fit</b>	$(\chi^2) = 8.92, df = 3, P = 0.030^{**}$		-
<b>Applications to health organization <sup>a</sup></b>	<b>N = 520</b>	<b>N = 75</b>	<b>OR (95% CI)</b>
Public	274 (52.69%)	56 (74.67%)	Reference group
Private	79 (15.19%)	4 (5.33%)	4.04 (1.42 to 11.48) ***
Other	167 (32.12%)	15 (20.00%)	2.28 (1.25 to 4.15) ***
<b>Overall fit</b>	$(\chi^2) = 13.42, df = 2, P = 0.001^{***}$		-

<sup>a</sup> Percentage of column total

Statistically significant at \*  $\alpha = 0.10$ ; \*\*  $\alpha = 0.05$ ; \*\*\*  $\alpha = 0.01$  level.

Regarding statistics on the impact of the COVID-19 pandemic on summer 2020 internship opportunities at health organizations, Table 1 presents information about the expected number of summer interns and the number of those who received official summer internship positions in different cities across Saudi Arabia. There were 226 students who were expected to start their internships during summer 2020, including 124 females and 102 males. Females received more summer internship offers than males. However, there was no significant difference in the proportions of females ( $P = 0.666$ ).

The number of expected summer interns who requested application letters to supplement their summer internship applications is associated with the number of summer offers received ( $p \leq 0.05$ ). Expected interns who requested 1-5 application letters were more likely to receive summer internship offers than others at a 0.05 level of significance. In addition, students who requested 6 or more application letters were more likely to receive summer internship offers (0.10 level of significance). More than 10% of expected summer interns did not apply for summer internships at all.

A strong association ( $p \leq 0.001$ ) was identified between the number of summer internship applications to different types of health organizations and the number of received summer offers. Of those who received summer internship offers, the majority received offers from public health organizations (74.67%), while 20% received offers from other health organizations that provide healthcare services to specified employees and their relatives. Finally, 5.33% of the received offers were from private health organizations.

**4. DISCUSSION**

COVID-19 has affected many sectors in Saudi Arabia, such as healthcare, education, and others [11]. In correspondence with COVID-19, health organizations in Saudi Arabia have responded differently toward internship programs as to suspend all internship activities, apply fully online activities, require physical presence activities, or combine

online and physical presence activities [11]. This study indicated the significant association between the COVID-19 pandemic on summer 2020 internship opportunities for graduating health sciences students in Saudi Arabia. Findings show that there was a reduction of more than 50% in summer 2020 internship offers compared to summer 2018 and summer 2019. This reduction is believed to be associated with the COVID-19 pandemic and its related containment measures. This reduction was expected as health organizations were requested to apply specific precautions to minimize the spread of COVID-19 within health organizations, such as limit treatments to only emergency cases, cut down the number of physical attendances, and more [12]. As a result, the majority of expected summer interns did not receive an internship offer at health organizations in Saudi Arabia. There was no significant difference between the summer internship offers of females and males.

Interns who requested 1-5 application letters for summer internship opportunities at different health organizations secured internship positions more than those who requested more than 5 application letters. In addition, the study reported more than 10% of expected interns did not apply for summer internships and this might be due to their understanding of the COVID-19 situation as Bugis has pointed that the majority of interns who got their internship activities suspended during the pandemic have understood the pandemic situation [11]. The primary existed data of this study do not provide reasons why no summer application letters were issued for them.

In addition, the number of summer internship offers received from different types of health organizations during the COVID-19 pandemic is associated with the number of applications submitted to these health organizations. Summer internship offers were mostly received from public health organizations. Smaller percentages of summer offers were received from private and other health organizations. The association of internships and health organization types is supported by previous literature [11].

## CONCLUSION

In this study, we performed an analysis of private existing data to identify the association between the COVID-19 pandemic and the internship opportunities. The impact of the COVID-19 pandemic on summer 2020 internship opportunities at health organizations has been profound in Saudi Arabia. Although many existing reports have highlighted the challenges to graduating students' internship activities and opportunities during the COVID-19 pandemic, which may cause delays in their graduation and their preparedness for future jobs, the reflected reality should not be overlooked. Understanding the present situation is helpful for predicting the future impacts of pandemics with characteristics similar to COVID-19.

There are limited numbers of similar studies in the literature regarding the impact of COVID-19 on internships in Saudi Arabia. This study is the first one that revealed the impact of the pandemic on internship opportunities at health organizations in Saudi Arabia, which may also be applied to other fields. The limitation of this study is that the data provided by the existed data is limited and therefore advanced analyses on other variables cannot be conducted. Within the limitations of this study, the results suggest that the COVID-19 pandemic is associated with the number of internship opportunities at health organizations in Saudi Arabia. The study has practice implications for the higher education health sciences programs that involve internship requirements to consider during pandemic events. Finally, further original researches are recommended to study the roles and responsibilities of health organizations regarding internships during pandemics.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study was reviewed and approved by the Saudi Electronic University Research Ethics Committee, Saudi Arabia with approval number SEUREC-CHS20111.

## HUMAN AND ANIMAL RIGHTS

Not applicable.

## CONSENT FOR PUBLICATION

Not applicable.

## AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article is available in the College of Health Sciences at the Saudi Electronic University ([www.seu.edu.sa](http://www.seu.edu.sa)).

## FUNDING

None.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

## ACKNOWLEDGEMENTS

The author wishes to thank the College of Health Sciences at the Saudi Electronic University for permitting the use of their existing data for research purposes.

## REFERENCES

- [1] Crawford J, Butler-Henderson K, Rudolph J, Glowatz M. COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *J App Learn Teach* 2020; 3(1): 1-20. [<http://dx.doi.org/10.37074/jalt.2020.3.1.7>]
- [2] Zhai Y, Du X. Addressing collegiate mental health amid COVID-19 pandemic. *Psychiatry Res* 2020; 288113003 [<http://dx.doi.org/10.1016/j.psychres.2020.113003>] [PMID: 32315885]
- [3] National Institute on Drug Abuse: Notice: The 2020 NIH Summer Program has been cancelled. 2020. [irp.drugabuse.gov/training/summer-program](http://irp.drugabuse.gov/training/summer-program)
- [4] Association of Employment and Learning Providers. Apprenticeships on the brink of collapse after Education Department refuses to implement Cabinet Office Covid-19 guidelines 2020. [aelp.org.uk/news/news/press-releases/apprenticeships-on-the-brink-of-collapse-after-education-department-refuses-to-implement-cabinet-office-covid-19-guidelines/](http://aelp.org.uk/news/news/press-releases/apprenticeships-on-the-brink-of-collapse-after-education-department-refuses-to-implement-cabinet-office-covid-19-guidelines/)
- [5] SHAPE-SEA: Suspending The Dream of Greener Pastures. The Effect of Covid-19 on the Indonesian Technical Intern Trainee Program in Japan 2020. [shapesea.com/op-ed/covid-19/suspending-the-dream-of-greener-pastures-the-effect-of-covid-19-on-the-indonesian-technical-intern-trainee-program-in-japan](http://shapesea.com/op-ed/covid-19/suspending-the-dream-of-greener-pastures-the-effect-of-covid-19-on-the-indonesian-technical-intern-trainee-program-in-japan)
- [6] Gallagher TH, Schleyer AM. We signed up for this! Student and trainee responses to the Covid-19 pandemic. *N Engl J Med* 2020; 382(25): e96. [<http://dx.doi.org/10.1056/NEJMp2005234>] [PMID: 32268020]
- [7] DeWitt DE. Fighting COVID-19: Enabling graduating students to start internship early at their own medical school. *Ann Intern Med* 2020; 173(2): 143-4. [<http://dx.doi.org/10.7326/M20-1262>] [PMID: 32259191]
- [8] Bauchner H, Sharfstein J. A bold response to the COVID-19 pandemic: Medical students, national service, and public health. *JAMA* 2020; 323(18): 1790-1. [<http://dx.doi.org/10.1001/jama.2020.6166>] [PMID: 32267488]
- [9] Montacue R. social mobility and COVID-19 2020. Available from: [www.suttontrust.com/our-research/social-mobility-and-covid-19](http://www.suttontrust.com/our-research/social-mobility-and-covid-19)
- [10] Financial Management: 10 business sectors boosted by coronavirus concerns. [fm-magazine.com/news/2020/apr/business-sectors-boosted-by-coronavirus-concerns.html](http://fm-magazine.com/news/2020/apr/business-sectors-boosted-by-coronavirus-concerns.html)
- [11] Bugis BA. The impact of the COVID-19 pandemic on internship activities at health organizations in Saudi Arabia. *Hosp Top* 2020; : 1-7. [<http://dx.doi.org/10.1080/00185868.2020.1826894>] [PMID: 33021464]
- [12] Saudi Patient Safety Center: COVID-19 Safety Guide for Healthcare Professionals. [spsc.gov.sa/English/PublishingImages/Pages/COVID-19/COVID-19%20Safety%20Guide%20for%20Healthcare%20Workers%20version%203.0.pdf](http://spsc.gov.sa/English/PublishingImages/Pages/COVID-19/COVID-19%20Safety%20Guide%20for%20Healthcare%20Workers%20version%203.0.pdf)