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SEQUELA AND RISKS OF COVID-19 VACCINES

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Abstract

Billions of people around the world are vaccinated with the COVI19 vaccine. The virus that claimed the lives of millions of people of different races and ages, and the antiviral vaccine is an important means of preventing and protecting against infection for a period of time. Data of the present study which conducted in Basrah city southern of Iraq , showed that male 46% of the vaccinated participants were male more than female ,59% of them between 23 -30 years of age,72% vaccinated with Pfizer and most of them showed symptom for post vaccination after 1-6 day. Fever significantly rise with Pfizer vaccine, post vaccinated complication correlated with persons have chronic diseases , post complications symptom correlate with age and period ,sex and work are not significant .

Keywords: COVID -19, risks, sequela. nursing , vaccines

Introduction

COVID-19 vaccines show excellent efficacy in clinical trials and effectiveness in real-world data, but some people still become infected after vaccination. development of various vaccine platforms during early 2020 related to knowledge existed about the structure and function of coronaviruses causing diseases like severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS)[1] As of 26 December 2021, 8.99 billion doses of COVID-19 vaccines have been administered worldwide based on official reports from national public health agencies.[2], December 2020, more than 10 billion vaccine doses had been preordered by countries[3]. The rapidly growing infection rate of COVID-19 worldwide during 2020 stimulated international alliances and government efforts to urgently organize resources to make multiple vaccines on shortened timelines[4]. Inactivated vaccines consist of virus particles that are grown in culture and then killed using a method such as heat or formaldehyde[5].these type are the Chinese CoronaVac[6][7][8] and the Sinopharm BIBP[9] and WIBP vaccines; the Indian Covaxin; later this year the Russian CoviVac:[10] the Kazakhstani vaccine QazVac:[11] and the Iranian COVIran Barekat.[12] Vaccines in clinical trials include the Valneva COVID-19 vaccine.[13]. Available data showed that fully vaccinated individuals and those previously infected with SARS-CoV-2 have a low risk of subsequent infection for at least 6 months[14,15]. Teachers are the main caregivers and the first line of protection for school children. Their role complements that of parents. During school hours, school teachers are actually the first-respondent in cases of disasters or emergencies. They must be able to deal properly with health emergencies both in normal children, and those children with special health care needs [21] .

Material and methods

The current study included male and female vaccinated with different types of vaccine against COVID 19 people ,they answering the questionnaire prepared in Google format and included first demographic information that included age, gender, period of complications and type of vaccine . The second part include information related to the most important complications after vaccination, include . Fever, Headache, Muscular pain, Ulceration ,Joint pain ,and Stress The data were analyzed using the Statistical Package for Social Sciences (SPSS), version 26. Include Percentage (%) and Chi square (X^2). Na correlation between the variables.

Results and discussion

The increasing incidence of infection is due to waning immunity after the receipt of two doses of the BNT162b2 vaccine is unclear.1012 were enrolled in the study by Hind 2021 , 60.2% were male and 39.8% were female. 84% were symptomatic post vaccination showed fatigue, injection site reactions, fever, myalgia, headache and chills were the most reported side effects. Most symptoms were mild to moderate in term of severity.[16] Andrzejczak-Grządko et al., studied 705 people. 196 of them had been vaccinated with Pfizer and 509 with AstraZeneca. Among those vaccinated with the first dose of the AstraZeneca vaccine, 96.5% reported at least one post-vaccination reaction. And the first dose of the AstraZeneca vaccine causes side effects more often than either dose of the Pfizer vaccine.[17]. Initial findings of Anne et al., 2021 indicated no unexpected patterns of adverse reactions after an additional dose of COVID-19 vaccine; most of these adverse reactions were mild or moderate.[18] Data of Meo et al., showed that the occurrence of adverse effects is reported to be lower in the Pfizer/BioNTech vaccine compared to the Moderna vaccine; however, the Moderna vaccine compared to the Pfizer vaccine is easier to transport and store because it is less temperature sensitive[19]. Study observed that more women than men had received a first dose of Pfizer-BioNTech COVID-19 vaccine during the analytic period. Anaphylaxis is potentially life-threatening and requires immediate treatment [20].

Table-1 Distribution of the Variables Related Demographic Characteristics N=81 patients

descriptive statistics of Demographic Variables			
Demographic Variables	Variables Classes	F	Percent
Sex	Male	52	64 %
	Female	29	36 %
	Total	81	100 %
Age	20 - 30	48	59 %
	30 - 40	20	25 %
	40 - 50	13	16 %
	Total	81	100 %
Vaccine	Pfizer	58	72 %
	Sino pharm	23	28 %
	Total	81	100 %
Work	Administrative	43	53 %
	Field work	38	47 %
	Total	81	100 %
Work hours	2 - 5	14	17 %
	6 - 9	45	56 %
	More than 9	22	27 %
	Total	81	100 %
Chronic	No	55	68 %
	Yes	26	32 %
	Total	81	100 %
Symptoms period	1 - 6 day	47	58 %
	7 - 12 day	10	12 %
	More than 12 day	24	30 %
	Total	81	100 %

The table (1) presents the demographic variables of the patients, and the maximum percentages were as follows : male were (52.5 %), age were (36-60) category , severity percentage of infection with COVID-19 (10 -30 %) was (70%) while the severity (more than 60%) was 10%, On other hand the percentage of persons recovered from the infection without treatment were (45%) the others recovered with treatment. In case of post recovery complication , (52%) of recovered persons suffered from Fatigue, Feeling of tiredness or lack of energy, as well as (35%) lost the taste and smell while other post recovery complication were less, table-2 .

Table 2 results the symptoms of the sample

Symptoms of the vaccine (N = 81)									
Vaccine	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
Pfizer	59 %	12 %	17 %	4 %	5 %	3 %	100 %	0.89	Ns
Sino pharm	48 %	18 %	17 %	4 %	4 %	9 %	100 %		

If P – value > 0.05 = Ns (non-significant), except that significant (s)

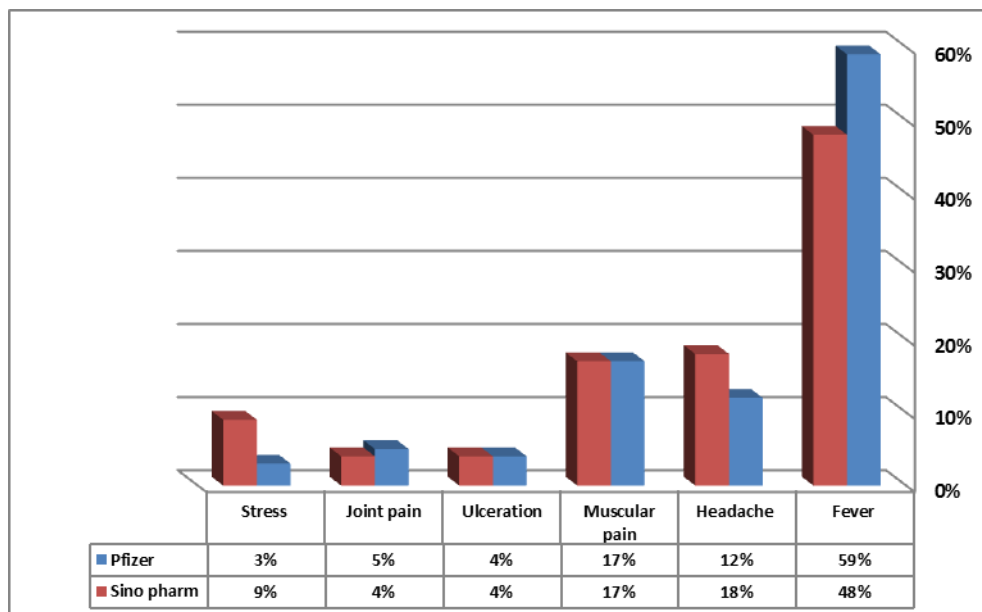


Figure 4.2.1 Symptoms of the vaccine

Table -3 Symptoms of the vaccine with chronic disease

Chronic	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
No	60 %	9 %	20 %	2 %	5 %	4 %	100 %	0.28	Ns
Yes	46 %	23 %	11 %	8 %	4 %	8 %	100 %		

If P – value > 0.05 = Ns (non-significant), except that significant (s)

Comparison of symptoms according to gender, table 3 showed that Body pain, Joints pain or headache. Hair loss, Inability to focus or difficulty thinking or a lack of mental clarity, Insomnia, anxiety disorder or depression and Dizziness or lightheaded when you stand up from sitting or lying down were significantly appear post recovery.

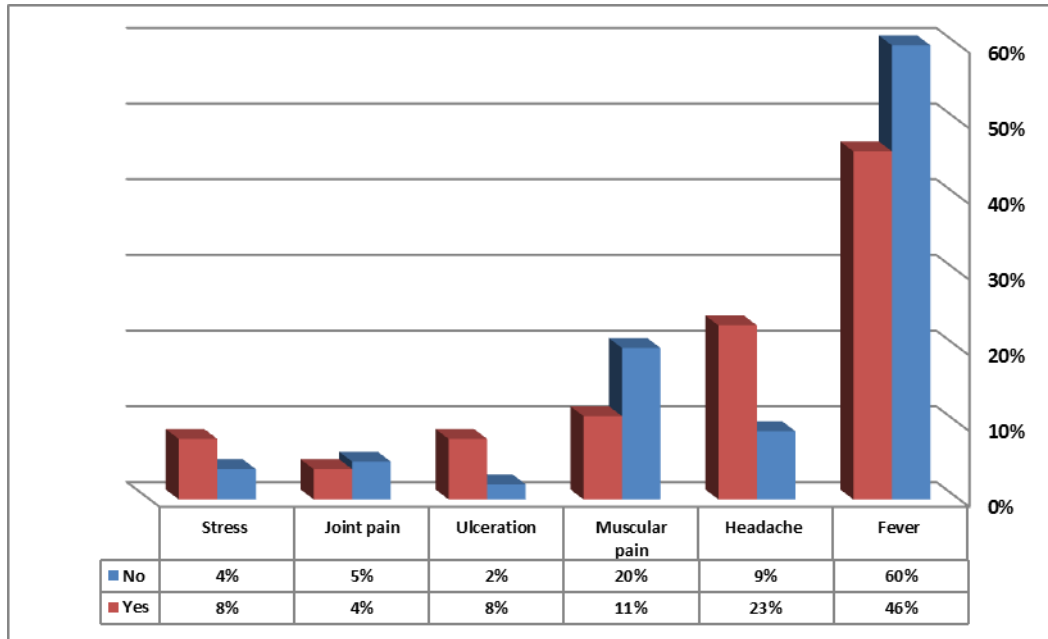


Figure 2 Symptoms of the vaccine with chronic disease

Table 4. Symptoms of the vaccine for age class

Table 4.2.3									
Age	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
20 - 30	61 %	8 %	21 %	0 %	6 %	4 %	100 %	0.052	Ns
30 - 40	40 %	30 %	10 %	15 %	0 %	5 %	100 %		
40 - 50	61 %	8 %	15 %	0 %	8 %	8 %	100 %		

If P – value > 0.05 = Ns (non-significant), except that significant (s)

Table -4 Comparison of symptoms (post complication of COVID-19 infection) according to Recovery with or without treatment revealed a significant relation of Body pain, Joints pain or headache, Shortness of breath or difficulty breathing and Dizziness or lightheaded when you stand up from sitting or lying down core.

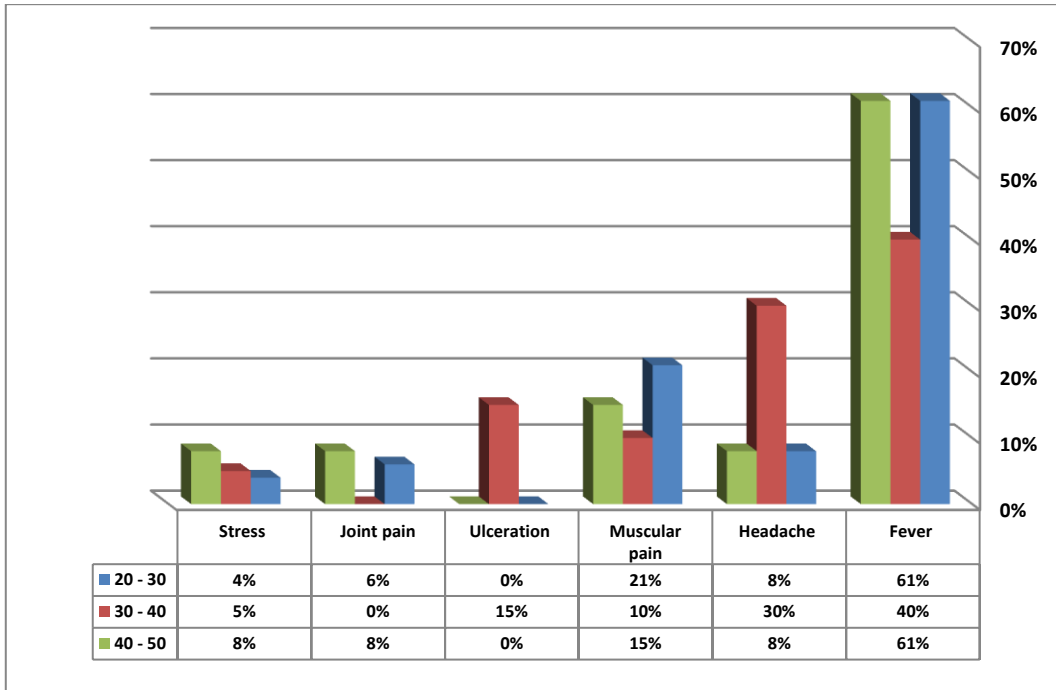


Figure 3 Symptoms of the vaccine for age class

Table -5 Symptoms of the vaccine according to Symptoms period

Symptoms period	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
1 - 6 hours	47 %	19 %	21 %	0 %	9 %	4 %	100 %	0.057	Ns
7 - 12 hours	90 %	0 %	10 %	0 %	0 %	0 %	100 %		
More than 12 hours	58 %	8 %	13 %	13 %	0 %	8 %	100 %		

If P – value > 0.05 = Ns (non-significant), except that significant (s)*

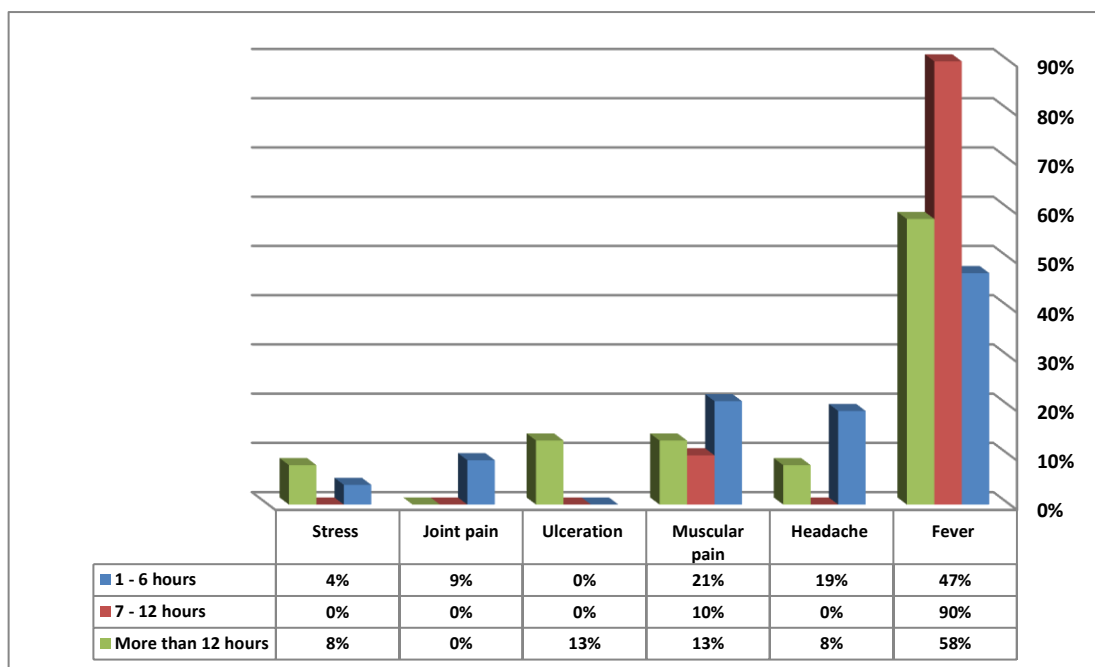


Figure 4 Symptoms of the vaccine according to Symptoms period

Table -6 Symptoms of the vaccine according to sex

Sex	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
Male	50 %	17 %	17 %	6 %	4 %	6 %	100 %	0.47	Ns
Female	66 %	7 %	17 %	0 %	7 %	3 %	100 %		

*If P – value > 0.05 = Ns (non-significant), except that significant (s)

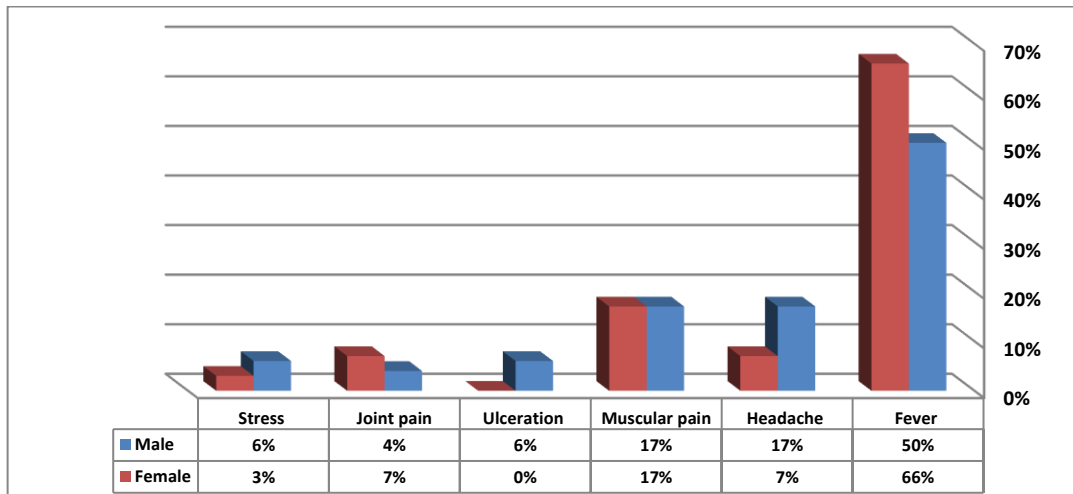


Figure.5 Symptoms of the vaccine according to sex

Table -7 Symptoms of the vaccine according to work

Work	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
Administrative	49 %	14 %	18 %	5 %	7 %	7 %	100 %	0.76	Ns
field work	63 %	13 %	16 %	2 %	3 %	3 %	100 %		

If P – value > 0.05 = Ns (non-significant), except that significant (s)*

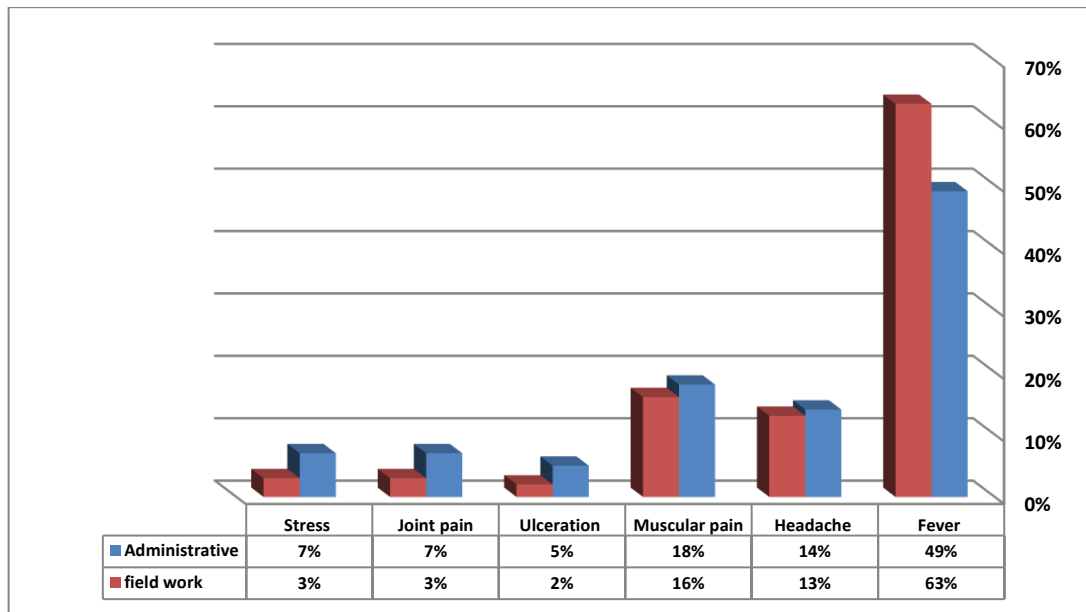


Figure.6 Symptoms of the vaccine according to work

Table -7 Symptoms of the vaccine according to work hours

Work hours	Symptoms						Total	Significant	
	Fever	Headache	Muscular pain	Ulceration	Joint pain	Stress		P value	Sig.
2 – 5	58 %	8 %	27 %	0 %	7 %	0 %	100 %	0.58	Ns
6 – 9	51 %	20 %	16 %	2 %	4 %	7 %	100 %		
More than 9	64 %	5 %	14 %	9 %	5 %	5 %	100 %		

*If P – value > 0.05 = Ns (non-significant), except that significant (s)

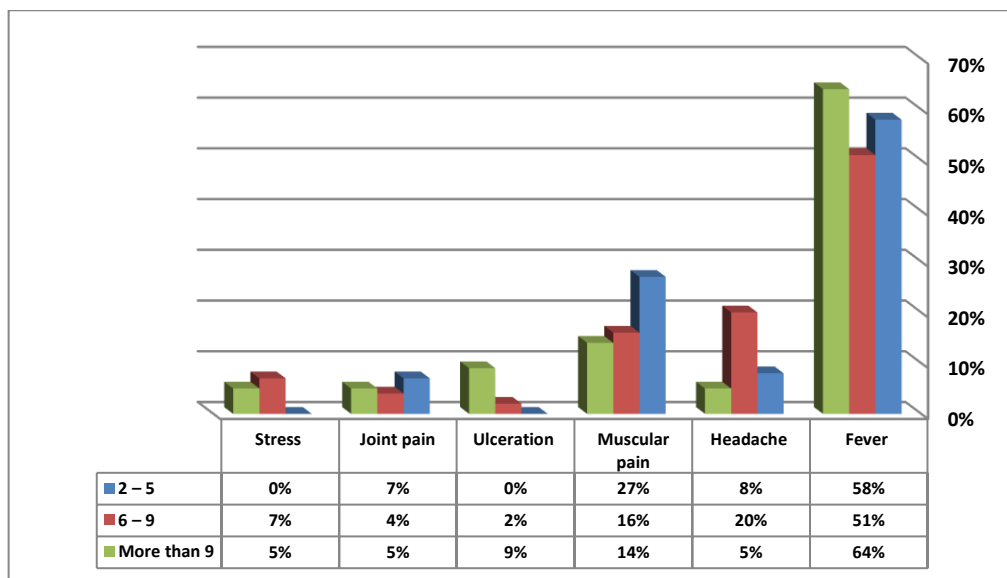


Figure.7 Symptoms of the vaccine according to work hours

Conclusion

There are many concerns and refraining from taking the anti-COVID19 vaccine, which the anti-Coronavirus vaccine may cause from pathological complications. The results of the current study concluded that the pathological complications that appear after vaccination have no significant effect.

REFERENCES

- [1] Li YD, Chi WY, Su JH, Ferrall L, Hung CF, Wu TC (December 2020). "Coronavirus vaccine development: from SARS and MERS to COVID-19". *Journal of Biomedical Science*. 27 (1): 104. doi:10.1186/s12929-020-00695-2. 7749790. PMID 33341119.
- [2] Richie H, Ortiz-Ospina E, Beltekian D, Methieu E, Hasell J, Macdonald B, et al. (5 March 2020). "Coronavirus (COVID-19) Vaccinations – Statistics and Research". *Our World in Data*. Retrieved 7 February 2021.
- [3] Mullard A (November 2020). "How COVID vaccines are being divvied up around the world". *Nature*. doi:10.1038/d41586-020-03370-6. PMID 33257891. S2CID 227246811.
- [4] "Update on WHO Solidarity Trial – Accelerating a safe and effective COVID-19 vaccine". *World Health Organization (WHO)*. 27 April 2020.
- [5] 641.2004.01272.x. PMID 15479434. S2CID 154670.
- [6] "Safety and Immunogenicity Study of Inactivated Vaccine for Prevention of SARS-CoV-2 Infection (COVID-19) (Renqiu)". *ClinicalTrials.gov*. 12 May 2020. NCT04383574. Archived from the original on 11 October 2020. Retrieved 14 July 2020.
- [7] "Clinical Trial of Efficacy and Safety of Sinovac's Adsorbed COVID-19 (Inactivated) Vaccine in Healthcare Professionals (PROFISCOV)". *ClinicalTrials.gov*. 2 July 2020. NCT04456595. Archived from the original on 11 October 2020. Retrieved 3 August 2020.
- [8] PT. Bio Farma (10 August 2020). "A Phase III, observer-blind, randomized, placebo-controlled study of the efficacy, safety, and immunogenicity of SARS-COV-2 inactivated vaccine in healthy adults aged 18–59 years in Indonesia". *Registri Penyakit Indonesia*. Archived from the original on 11 October 2020. Retrieved 15 August 2020.
- [9] Chen W, Al Kaabi N (18 July 2020). "A Phase III clinical trial for inactivated novel coronavirus pneumonia (COVID-19) vaccine (Vero cells)". *Chinese Clinical Trial Registry*. Retrieved 15 August 2020.
- [10] Ivanova P (20 February 2021). "Russia approves its third COVID-19 vaccine, CoviVac". *Reuters*. Retrieved 11 April 2021.
- [11] "Kazakhstan rolls out its own COVID-19 vaccine". *Reuters*. 27 April 2021. Retrieved 2 July 2021.
- [12] "FarsNews Agency Iran Licenses Emergency Injection of Home-Made Anti-Coronavirus Vaccine". *Fars News Agency*. 14 June 2021. Retrieved 25 August 2021.
- [13] "VLA2001 COVID-19 Vaccine". *Precision Vaccinations*. 31 December 2020. Retrieved 11 January 2021.
- [14] "Coronavirus Disease 2019 (COVID-19)". *Centers for Disease Control and Prevention (CDC)*. 11 February 2020. Retrieved 4 December 2021. Public Domain This article incorporates text from this source, which is in the public domain.
- [15] Levin EG, Lustig Y, Cohen C, Fluss R, Indenbaum V, Amit S, et al. (6 October 2021). "Waning Immune Humoral Response to BNT162b2 Covid-19 Vaccine over 6 Months". *New England Journal of Medicine*. 385 (24): e84. doi:10.1056/NEJMoa2114583. PMC 8522797. PMID 34614326.
- [16] Hind B Almufty 1, Shinah A Mohammed 2, Arshad M Abdullah 3, Muayad A Merza Potential adverse effects of COVID19 vaccines among Iraqi population; a comparison between the three available vaccines in Iraq; a retrospective cross-sectional study *Diabetes Metab Syndr*, . Sep-Oct 2021;15(5):102207. doi: 10.1016/j.dsx.2021.102207. Epub 2021 Jul 12.
- [17] Andrzejczak-Grządka S, Czudy Z, Donderska M :Side effects after COVID-19 vaccinations among residents of Poland *Eur Rev Med Pharmacol Sci*. 2021 Jun;25(12):4418-4421. doi: 10.26355/eurrev_202106_26153.
- [18] Anne M Hause, James Baggs, Julianne Gee, Paige Marquez, Tanya R Myers, Tom T Shimabukuro, David K Shay : Safety Monitoring of an Additional Dose of COVID-19 Vaccine - United States, August 12-September 19, 2021:MMWR Morb Mortal Wkly Rep, .2021 Oct 1;70(39):1379-1384. doi: 10.15585/mmwr.mm7039e4.
- [19] Meo S A, Bukhari A, Akram J, Meo A S, Klonoff ,D C. :COVID-19 vaccines: comparison of biological, pharmacological characteristics and adverse effects of Pfizer/BioNTech and Moderna Vaccines:*Eur Rev Med Pharmacol Sci*. 2021 Feb;25(3):1663-1669. doi: 10.26355/eurrev_202102_24877.

- [20] CDC. COVID-19 vaccination: clinical considerations. Interim considerations: preparing for the potential management of anaphylaxis after COVID-19 vaccination. Atlanta, GA: US Department of Health and Human Services, CDC; 2020. <https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/anaphylaxis-management.html>
- [21] WASFI DHAHIR ABID ALI , LUAY ABDULWAHID SHIHAB , MARYAM ABDULKAREEM ABDULRAZQAQ , NOOR SABAH DAIF , & NABAAMUSSAB HASSAN, ASSESSMENT OF TEACHERS' KNOWLEDGE ABOUT FIRST AID SOME BASRAH CITY SCHOOLS, BEST: International Journal of Humanities, Arts, Medicine and Sciences (BEST: IJHAMS) ISSN (P): 2348-0521, ISSN (E): 2454-4728 Vol. 9, Issue 02, Feb 2021, 7-12.