COVID-19 vaccine acceptance and COVID-19–induced income disruption among migrant workers in Saudi Arabia

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Abstract

Background: Neither COVID-19 vaccine acceptance nor income changes among migrant workers during the pandemic has been assessed in Saudi Arabia.

Aims: To assess the correlates of willingness to take the COVID-19 vaccine and a decrease in income during the pandemic among migrant workers in Saudi Arabia.

Methods: An electronic questionnaire was administered to 2403 migrant workers from the Middle East and South Asia employed in agriculture, auto repair, construction, food service (restaurants), municipality, and poultry farms in Al-Qassim Province, Saudi Arabia. The interviews were conducted in the native languages of the workers in 2021. Chi-square was used to assess the associations, and a multiple logistic regression was used to generate the odds ratio. Data analysis was conducted using SPSS version 27.

Results: South Asian workers were 2.30 [95% confidence interval (CI): 1.60–3.32] times more likely to accept the COVID-19 vaccine than those from the Middle East (reference group). Restaurant, agriculture and poultry workers were respectively 2.36 (95% CI: 1.41–3.95), 2.13 (95% CI: 1.29–3.51) and 14.56 (95% CI: 5.64–37.59) times more likely to accept the vaccine than construction workers (reference group). Older (≥ 56 years, reference group ≤ 25 years) workers were 2.23 (95% CI: 0.99–5.03) times, auto repair 6.75 (95% CI: 4.33–10.53) times, and restaurant workers 4.04 (95% CI: 2.61–6.25) times more likely to experience a reduction in income than construction workers.

Conclusions: Workers from South Asia were more likely to accept the COVID-19 vaccine and less likely to experience an income reduction than those from the Middle East.

Keywords: COVID-19, income, migrant workers, migration, expatriates, COVID-19 vaccine, Saudi Arabia

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Introduction

Immigrant workers are considered the backbone of economic prosperity in many countries (*1*). This is especially true in the countries around the Arabian Gulf (i.e. Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates), where migrant workers make up the bulk of the workforce in nearly every sector, including healthcare, construction, automotive and agriculture. For example, in 2019, 38.4% of the population of Saudi Arabia was made up of expatriate workers (*2*), placing it fourth globally in terms of the number of migrant workers employed (*3*). A majority of these workers are recruited from low-income countries to fill low-paying blue-collar positions.

As these migrant workers stay abroad for a prolonged period, they are more likely to suffer from mental disorders such as depression (*4*). They are also at risk of several other health-related conditions. In Saudi Arabia, migrant workers are 14 times as likely to have occupational injuries than locals (*3*) and generally live in accommodation that is overcrowded, which makes them susceptible to the spread of infection (*5*).

Since it was first identified in China, the SARS-CoV-2 virus has had a devastating effect around the world. By the first quarter of 2022, the virus had claimed the lives of more than 5.9 million people globally (*6*). Given its mode of transmission, the droplet-borne virus spreads quickly in closed and crowded environments.

As the pandemic progressed, long-standing structural and socioeconomic health inequalities rendered migrant workers one of the most vulnerable occupational subgroups (*7*). Their occupations and living conditions put them at a greater disadvantage than the general population. When countries imposed lockdowns and travel restrictions, migrant workers were hit the hardest and found themselves economically uncertain. Manual workers in particular suffered dramatically as a result of the pandemic as most of them were laid off or had their incomes reduced with no social security to rely on. Under the continual threat of losing their jobs, housing and income, these workers were understandably less inclined to physically distance themselves or remain at home when unwell, which in turn fuelled the pandemic (*8*).

As the fight against the pandemic continued, vaccination emerged as the go-to method to overcome

COVID-19 because vaccines play a vital role in developing herd immunity. The success of any vaccine to control a pandemic greatly depends on the number of people willing to take it, therefore, the SARS-CoV-2 vaccine acceptance rate became a major concern (*9*). Vaccine hesitancy increased as the pandemic progressed. According to a recently published systematic review, the number of individuals willing to receive the SARS-CoV-2 vaccine decreased over time (*10*). Being a woman, being younger, having a lower income or education level, and belonging to a minority ethnic group were all associated with a reduced desire to be vaccinated. Thus, due to the challenges and risks that migrant workers face, and since migrant workers make up more than one-third of the population in Saudi Arabia, a better understanding of vaccine acceptance among migrants is critical for effective control of the pandemic.

The detrimental effects of the SARS-CoV-2 pandemic on income also affected migrant workers greatly. Studies that investigated changes to the income of migrant workers in the Middle East during the pandemic are scarce. One study estimated that low-skilled migrant Indian workers in Saudi Arabia may have lost up to 36% of their expected salaries due to COVID-19-related layoffs (*11*). Thus, there is a need for studies that investigate the effects of the pandemic on income to determine the true magnitude of the problem.

The fight against the COVID-19 pandemic in Saudi Arabia depends greatly on the effort made to attend to the weakest link – the migrant population. Investigation of the effects of the pandemic on this valuable population in relation to income and vaccination is critical. Therefore, we conducted a cross-sectional survey among migrant workers employed in different occupational sectors in Saudi Arabia. Our primary research objectives were to assess their willingness to receive the COVID-19 vaccine, to compile the reasons for their unwillingness to receive such a vaccine, and to determine how the pandemic affected their income.

Methods

Study design

Between March and April 2021, we conducted a cross-sectional survey in 3 major cities, Buraidah, Bukaryiah and Onaizah, in Al-Qassim Province, Saudi Arabia. We included 6 occupation groups: auto repair workers, construction workers, crop farm workers, municipal street cleaners, poultry farm workers and restaurant employees. We recruited the participants by convenience sampling, with a minimum of 384 participants from each group. The minimum number for each group was calculated with the following assumptions: population size: 500 000, 95% confidence interval (CI), and 5% margin of error. The required sample size was 2304 (384 × 6). Workers were included if they were non-Saudi and had been employed in Saudi Arabia for at least one year. We excluded those who refused to participate, did not speak Arabic, Bengali, English, Hindi, or Urdu or did not complete an important area of the survey.

We recruited medical students and translators to form 6 teams, each with at least 4 translators (one fluent in each language: Arabic, Bengali, Hindi or Urdu). We then trained the team members on SurveyMonkey and assigned each team to one occupation group to collect data. The translators were compensated with certificates and money. Each participant from the Middle East or South Asia was interviewed by one interviewer who spoke their native language (Arabic, Bengali, Hindi or Urdu); participants from other regions were interviewed in English. Each survey took about 10–15 minutes to complete.

Ethical approval and confidentiality

Each participant received an informed consent form that included a brief description of the study and information on their rights, risks and data confidentiality. They were given a chance to read the form or have it read to them. The participants were enrolled in the study once they signed the consent form. They had the right to withdraw from the study at any phase and did not provide any personal identification details; instead, each questionnaire had a unique identification code. The data were analysed, reported and published for groups rather than for individuals. The information that the participants provided was kept confidential. Our study was approved by the Qassim region research ethics committee (*4*).

Measurement tool

A structured online questionnaire in 5 languages was filled out by the research assistants for the data collection. It consisted of 2 parts: sociodemographic characteristics and a COVID-19 questionnaire.

Language selection and translation

According to 2018 data, the top 7 countries of origin for migrant workers in Saudi Arabia were India (Hindi), Pakistan (Urdu), Bangladesh (Bengali), Egypt (Arabic), Syria (Arabic), Yemen (Arabic) and the Philippines (English) (*12*). Initially, we developed the questionnaire in English, then it was translated into Hindi, Urdu, Bengali and Arabic.

After translating the questionnaire, a second native speaker reviewed each version for accuracy. Pilot testing was then conducted to verify the accuracy and feasibility of the translations. The English version was initially pilot-tested by the research team members (~10) to assess both the questionnaire and the collection platform (SurveyMonkey) for form and function. After modifying the platform's presentation and logic settings, the questionnaire was subjected to field testing. Approximately 10–15 participants from each language group were involved in the pilot testing. There were no significant modifications made to the questionnaire after the final pilot stage.

Sociodemographic characteristics

Each participant was asked about their profession, age, ethnicity (Middle Eastern, South Asian, other), education status, marital status, living condition and self-rated health status.

COVID-19 questionnaire

Participants were asked if they had ever been diagnosed with COVID-19 and if yes, whether they had been hospitalized; if they were aware of the COVID-19 vaccine; whether they would accept the vaccine once approved; and how the COVID-19 pandemic had affected their income.

Data analysis

Data analysis was conducted using *SPSS*, version 27. The data were cleaned and frequencies and percentages were reported for categorical variables. Chi-square was used to assess the associations of COVID-19 vaccine acceptance and a decrease in income variables with a number of sociodemographic variables. *P*-value < 0.05 was considered statistically significant. Binary logistic regression was used to determine adjusted associations of COVID-19 vaccine acceptance and a decrease in income variable. The reference category for a decrease in income variable included participants whose salary had not changed or had increased. A backward selection procedure was used to find the most parsimonious model and Hosmer–Lemeshaw goodness of fit test was used to determine the model fitness. The odds ratio and 95% confidence interval for covariates were reported.

Results

Sociodemographic characteristics

We recruited 2403 migrant workers distributed across 6 different unskilled labour sectors: crop farm workers (*n* = 411, 17.1%), construction workers (*n* = 402, 16.7%), restaurant workers (*n* = 402, 16.7%), city cleaners (*n* = 399, 16.6%), auto repair workers (*n* = 395, 16.4%) and poultry farm workers (*n* = 394, 16.4%). Demographic and lifestyle traits are presented in Table 1. The mean age of the participants was approximately 35 (standard deviation = 9.48, range 18–70) years. Migrants from 2 ethnic groups made up the majority of our sample: South Asians (*n* = 1399, 58.2%) and Middle Easterners (*n* = 951, 39.6%). Bangladesh, India, Nepal and Pakistan were among the South Asian countries represented. Bangladeshi workers comprised almost a quarter (24.3%) of the total sample size, followed by Indians (*n* = 485, 20.2%). Middle Eastern migrant workers were from Egypt, Jordan, Palestine, Sudan, Syria and Yemen. Egyptian workers accounted for the largest proportion at 15%. Most of the workers were married (70%), and nearly all shared a room with their co-workers (*n* = 2037, 84.7%). Approximately half of the sample (*n* = 1157, 48.1%) had only completed secondary school (grades 7–10).

Table 1 Demography of migrant workers (*n* = 2403) in Al-Qassim Province, Saudi Arabia, 2021

Characteristic	No.	%
Age (years)		
≤ 25	412	17.1
26–40	1360	56.6
41–55	578	24.1
≥ 56	53	2.2
Ethnicity		
Middle Eastern	951	39.6
South Asian	1399	58.2
Other	53	2.2
Education status		
No education	462	19.2
Primary (grades 1–6)	605	25.2
Secondary (grades 7–10)	1157	48.1
Higher education (Bachelor's or Master's degree)	179	7.4
Marital status		
Not married	720	30.0
Currently married	1683	70.0
Living arrangements		
Single room	241	10.0
Room shared with co-workers	2035	84.7
With family	127	5.3
Profession		
Construction worker	402	16.7
City cleaner	399	16.6
Auto repair worker	395	16.4
Restaurant worker	402	16.7
Farm worker	411	17.1
Poultry worker	394	16.4
Self-rated health		
Excellent	888	37.0
Very good	1023	42.6
Good	336	14.0
Fair/poor/very poor	156	6.5

COVID-19 diagnosis and hospital admission

The overwhelming majority of the migrant workers in our sample (96.5%) had never been diagnosed with COVID-19. About a quarter (22.9%) of those who had contracted the virus reported severe symptoms and hospitalization; 77.1% reported not being hospitalized. A summary describing COVID-19 diagnosis and hospital admission among the migrant workers is shown in Table 2.

Awareness of and attitude towards receiving the COVID-19 vaccine

Most participants (87.8%) reported being aware of a COVID-19 vaccine, and an overwhelming majority

(91%) reported being willing to accept the vaccine once available. Age (P = 0.001), ethnicity (P < 0.0001), profession (P < 0.0001) and self-rated health (P = 0.001) were all statistically significantly associated with vaccine acceptance. South Asian workers were the most likely to accept (93.1%) the vaccine upon its approval: compared with Middle Easterners, they were more than twice as likely to accept a vaccine once it was available [odds ratio (OR) = 2.30, 95% confidence interval (CI): 1.60–3.32].

Occupation appeared to have a marked influence on vaccine acceptance. Restaurant workers were the least likely to accept vaccination (84.3%) (Table 3). Poultry workers ranked the highest for vaccine acceptance (93.2%); they were 14.56 (95% CI: 5.64–37.59) times more likely to accept a vaccine than construction workers (reference group) (P < 0.0001) (Table 3).

Among the reasons given for refusing the COVID-19 vaccine, self-reported excellent health was the most cited (43%), followed by fear of the vaccine's adverse effects (30%). Not being aware of the vaccine and not having a specific reason (both 11%) were the third most commonly cited reasons for refusal. Having immunity due to a previous infection and having already received one dose of the vaccine were the least common reasons for refusal, both accounting for 2% of all reasons stated.

Table 2 The effects of COVID-19 and the willingness to accept the COVID-19 vaccine among migrant workers (n = 2403) in Al-Qassim Province, Saudi Arabia 2021

Variable	No.	%
Diagnosed with COVID-19		
Yes	83	3.5
No	2320	96.5
Hospital admission due to COVID-19		
Yes	19	22.9
No	64	77.1
Awareness of COVID-19 vaccine		
Yes	2111	87.8
No	292	12.2
Vaccine acceptance prior to mandate		
Yes	2190	91.1
No	213	8.9
Income affected during pandemic		
No change	1744	72.6
Yes, decreased	641	26.7
Yes, increased	18	0.7

Table 3 Adjusted associations for vaccine acceptance among expatriate workers (n = 2403) in Al-Qassim Province, Saudi Arabia, 2021

Characteristic	No.	%	OR	95% CI	*P*
Age (years)					
≤ 25	365	88.6	1.0 R	–	–
26–40	1262	92.8	1.58	1.08–2.32	0.020
41–55	517	89.4	1.00	0.65–1.54	0.990
≥ 56	46	86.8	0.99	0.41–2.44	0.990
Ethnicity					
Middle Eastern	848	89.2	1.0 R	–	–
South Asian	1302	93.1	2.30	1.60–3.32	< 0.0001
Other	40	75.5	0.35	0.18–0.73	0.005
Profession					
Construction worker	354	88.1	1.0 R	–	–
Poultry worker	389	93.2	14.56	5.64–37.59	< 0.0001
Restaurant worker	363	84.3	2.36	1.41–3.95	0.001
Farm worker	379	90.3	2.13	1.29–3.51	0.003
City cleaners	372	92.2	1.34	0.80–2.26	0.270
Auto repair worker	333	98.7	0.89	0.58–1.38	0.610
Self-rated health					
Excellent	790	89.0	1.0 R	–	–
Good	314	93.1	1.43	0.87–2.39	0.160
Very good	952	93.5	1.31	0.92–1.87	0.130
Fair/poor/very poor	134	85.9	0.65	0.38–1.11	0.110

Predicted probability is of membership for "Yes" value.
Estimates were obtained via multiple logistic regression.
OR = odds ratio.
CI = confidence interval.
R = reference group.

Effect of the pandemic on income

Almost three-quarters (72.6%) of the workers reported that the COVID-19 pandemic had not impacted their income. Of the 27.4% who did report an impact on their income, income reduction was by far the most reported change (97.3%). Only 2.7% reported a wage or salary increase. Individuals aged ≥ 56 years were more than twice as likely to experience a drop in their income than workers aged ≤ 25 years or less (OR = 2.23, 95% CI: 0.99–5.03) (Table 4). Middle Easterners were the most likely (55.2%) to report a decrease in their income due to the pandemic compared with only 6.5% of the South Asians ($P < 0.001$). Restaurant workers were the most likely (67.7%) to report a decrease in their income, while almost all (99.0%) city cleaners reported an increase or no change in their income ($P < 0.001$). Auto repair workers were more than 6 times as likely to report a decrease in their income than construction workers (reference group) (OR = 6.75, 95% CI: 4.33–10.53) (Table 4). Education status seemed to negatively correlate with change in income. At higher levels of education, the probability of receiving an income increase or for the income to remain constant decreased. This relationship was statistically significant ($P < 0.001$).

Discussion

The COVID-19 pandemic has greatly influenced the health, finances and everyday lives of many people. Migrant workers, a vulnerable population, were disproportionately affected given their disadvantage of living abroad and away from family support. Our study identified a number of interesting findings: vaccine awareness and acceptance among migrant workers in Saudi Arabia were 87% and 91% respectively; South Asians and poultry workers were more likely to accept the vaccine; older age predicted a COVID-19-related decrease in income for migrant workers; and auto repair

Table 4 Adjusted associations of a decrease in income among expatriate workers (n = 2403) in Al-Qassim Province, Saudi Arabia, 2021

Characteristic	Decrease in income		OR	95% CI	P
	No.	%			
Age (years)					
≤ 25	121	29.4	1.0 R		
≥ 56	372	27.4	2.23	0.99–5.03	0.050
41–55	128	22.2	1.09	0.73–1.62	0.660
26–40	19	35.9	0.90	0.64–1.25	0.530
Ethnicity					
Middle Eastern	525	55.2	1.0 R		
Other	24	45.3	0.30	0.16–0.56	< 0.0001
South Asian	91	6.5	0.05	0.04–0.07	< 0.0001
Education status					
No education	68	14.7	1.0 R		
Higher education (Bachelor's or Master's degree)	79	24.1	1.20	0.70–2.06	0.510
Secondary (grades 7–10)	347	30.0	1.09	0.76–1.56	0.640
Primary (grades 1–6)	146	44.1	0.96	0.64–1.42	0.820
Profession					
Construction worker	52	12.9	1.0 R		
Auto repair worker	169	42.8	6.75	4.33–10.53	< 0.0001
Restaurant worker	272	67.7	4.04	2.61–6.25	< 0.0001
Poultry worker	66	16.8	0.62	0.39–0.97	0.040
Farm worker	77	18.7	0.61	0.39–0.96	0.030
City cleaner	4	1.0	0.24	0.09–0.71	0.010
Self-rated health					
Excellent	316	35.6	1.0 R		
Good	86	25.6	1.20	0.82–1.75	0.350
Very good	197	19.3	0.93	0.70–1.23	0.620
Fair/poor/very poor	41	26.3	0.59	0.36–0.97	0.040

Predicted probability is of membership for "Decrease my income" value.
Estimates were obtained via multiple logistic regression.
OR = odds ratio.
CI = confidence interval.
R = reference group.

and restaurant workers were far more likely to report a COVID-19-related decrease in income.

The effects of the COVID-19 pandemic on migrant workers are especially important in the context of disease control. It is crucial to understand the way the pandemic has affected the incomes of this vulnerable population and their subsequent decision to receive the vaccine. Our study found that the overwhelming majority of migrant workers were aware of the vaccine (87%) and were willing to accept it once it was available (91%). This was considerably greater than the values reported for the general public in Saudi Arabia. In their 2020 report, Al-Mohaithef et al. showed that 67.7% of participants were interested in accepting the COVID-19 vaccine when it became available (*13*). This difference in the acceptance rate could be attributed to the 2021 vaccination mandate imposed in Saudi Arabia with the aim of controlling the pandemic – proof of vaccination was required to access public services (*14*).

Globally, the situation seems to be greatly influenced by the host country. For example, in a 2021 study that investigated COVID-19 vaccine hesitancy among temporary foreign workers from Bangladesh, the overall vaccine hesitancy was 25%, with significant variation by host country (*15*).

The migrant worker's occupation also seems to influence the decision to accept the vaccine. A previous report identified a significant correlation between occupation and acceptance of the COVID-19 vaccine (*16*). In our study, we found that poultry workers were by far the most likely group to accept the vaccine. This could be for a variety of reasons. For example, workers in this field were disproportionately affected by the avian influenza that spread through Saudi Arabia more than a decade previously (*17*). Alternatively, due to the nature of the meat-processing business in general, and the poultry industry in particular, close contact with animal products could spark fear and thus contribute to the high acceptance rates.

Earlier during the COVID-19 pandemic, researchers and clinicians identified age as a risk factor for COVID-19 severity: in a 2021 report, Romero Starke et al. aimed to quantify the isolated effect of age on hospitalization, admission to the intensive care unit, mechanical ventilation and death among patients with COVID-19 (*18*). They found that the risk of in-hospital and case mortality increased by 5.7% and 7.4% respectively per year of age. Our data shows a similar trend. We found that individuals aged 56 years and older were more than twice as likely to experience a drop in their income than workers aged ≤ 25 years. This could be because older individuals decided to take time off to protect themselves or they had an infection severe enough to adversely affect their income.

To mitigate the effects of the pandemic, the Saudi Arabian government instituted a compulsory curfew for all residents. Curfews of up to 24 hours were implemented across the country (*19*). Many businesses and industries were affected by this, most notably the fossil fuel industry. Petrol (motor fuel) prices dropped to record lows during the pandemic due to the low demand as people were under curfew and not driving (*20*). Our data provided an in-depth look at the effects of the curfew on businesses. We found that auto repair workers experienced a significant drop in their income. People were driving less, so the demand for car repairs also decreased.

This study had numerous advantages. It had a considerable sample size, with 2403 migrant workers participating from 3 major cities in Al-Qassim Province. Our research assistants and translators conducted the interviews in the native languages of most participants to ensure that they understood each question. Furthermore, the interviews were conducted face-to-face, rather than online, so the interviewers could clarify and interpret any question on the questionnaire.

Our study had a few limitations. We employed convenience sampling, therefore, generalizing the findings should be done with caution. A causal relationship cannot be determined due to the cross-sectional nature of the study. The survey was conducted during working hours; the desire to get back to work may have influenced the accuracy of responses for some workers.

In conclusion, this study is one of the few conducted in the Middle East to assess attitudes towards the COVID-19 vaccine among migrant workers and the effect of the pandemic on their income. We suggest further research on the impact of COVID-19 on the migrant population in the Gulf region as all countries in the region have similar living conditions. Our findings in this study could help policymakers develop strategies to provide relief for migrant workers during the ongoing, or any future, pandemic.

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Acceptation du vaccin contre la COVID-19 et perturbation des revenus induite par la COVID-19 parmi les travailleurs migrants en Arabie saoudite

Résumé

Contexte : Il n'y a pas eu d'évaluation de l'acceptation du vaccin contre la COVID-19 ni des changements de revenus chez les travailleurs migrants pendant la pandémie en Arabie saoudite.

Objectifs : Évaluer les liens entre la volonté de se faire vacciner contre la COVID-19 et une baisse des revenus durant la pandémie chez les travailleurs migrants en Arabie saoudite.

Méthodes : Un questionnaire électronique a été administré à 2403 travailleurs migrants du Moyen-Orient et d'Asie du Sud employés dans les secteurs de l'agriculture, de la réparation automobile, de la construction, de la restauration, dans des municipalités et des exploitations avicoles dans la province d'Al-Qassim, en Arabie saoudite. Les entretiens ont été menés dans les langues maternelles des travailleurs en 2021. Le test du khi carré a été utilisé pour évaluer les associations et la régression logistique multiple a été employée pour générer les odds ratios. L'analyse des données a été réalisée à l'aide du logiciel SPSS version 27.

Résultats : Les travailleurs d'Asie du Sud étaient 2,30 fois [intervalle de confiance (IC) à 95 % : 1,60-3,32] plus susceptibles d'accepter le vaccin contre la COVID-19 que ceux du Moyen-Orient (groupe de référence). Les travailleurs des secteurs de la restauration, de l'agriculture et de l'aviculture étaient respectivement 2,36 (IC à 95 % : 1,41-3,95), 2,13 (IC à 95 % : 1,29-3,51) et 14,56 fois (IC à 95 % : 5,64-37,59) plus susceptibles d'accepter le vaccin que les travailleurs du secteur de la construction (groupe de référence). Les travailleurs plus âgés (56 ans ou plus, groupe de référence 25 ans ou moins) étaient 2,23 fois (IC à 95 % : 0,99-5,03) plus susceptibles de subir une réduction de revenu que les travailleurs de la construction. Pour les travailleurs des secteurs de la réparation automobile et de la restauration, ce chiffre était de 6,75 fois (IC à 95 % : 4,33-10,53) et de 4,04 fois (IC à 95 % : 2,61-6,25) respectivement.

Conclusions : Les travailleurs d'Asie du Sud étaient plus susceptibles d'accepter le vaccin contre la COVID-19 et avaient une moins grande probabilité de connaître une baisse de revenu que ceux du Moyen-Orient.

تقبُّل لقاح كوفيد19- واضطراب الدخل الناجم عن كوفيد19- في أوساط العمال المهاجرين في المملكة العربية السعودية

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الخلاصة

الخلفية: لم يُقيَّم تقبُّل لقاح كوفيد-19 ولا التغييرات في الدخل في أوساط العمال المهاجرين خلال الجائحة.

الأهداف: هدفت هذه الدراسة إلى تقييم الارتباط بين الرغبة في أخذ لقاح كوفيد-19 وانخفاض الدخل خلال الجائحة في أوساط العمال المهاجرين في المملكة العربية السعودية.

طرق البحث: أُجريَ استبيان إلكتروني لاستجواب 2403 من العمال المهاجرين من الشرق الأوسط وجنوب آسيا الذين يعملون في مجالات الزراعة وإصلاح السيارات والبناء والخدمات الغذائية (المطاعم) والبلديات ومزارع الدواجن في منطقة القصيم بالمملكة العربية السعودية. وأُجريت المقابلات باللغات الأصلية للعمال في عام 2021. واستُخدم اختبار مربع كاي لتقييم الارتباطات، واستُخدم الانحدار اللوجستي المتعدد لتوليد نسبة الأرجحية. وحُللت البيانات باستخدام الإصدار 27 من برنامج SPSS.

النتائج: زاد احتمال تقبُّل العمال من جنوب آسيا للقاح كوفيد-19 بمقدار 2.30 مرة [فاصل الثقة 95٪: 1.60–3.32] عن العمال من الشرق الأوسط (المجموعة المرجعية). وزاد احتمال تقبُّل عمال المطاعم والزراعة والدواجن، على التوالي، بمقدار 2.36 مرة (فاصل الثقة 95٪: 1.41–3.95)، و2.13 مرة (فاصل الثقة 95٪: 1.29–3.51) و14.56 مرة (فاصل الثقة 95٪: 5.64–37.59) من عمال البناء (المجموعة المرجعية). وزاد احتمال التعرض لانخفاض الدخل لدى العمال الأكبر سنًّا (≤ 56 عامًا، المجموعة المرجعية ≥ 25 عامًا) بمقدار 2.23 مرة (فاصل الثقة 95٪: 0.99–5.03)، ولدى عمال إصلاح السيارات بمقدار 6.75 مرات (فاصل الثقة 95٪: 4.33–10.53)، ولدى عمال المطاعم بمقدار 4.04 مرات (فاصل الثقة 95٪: 2.61–6.25) عن عمال البناء.

الاستنتاجات: كان العمال القادمون من جنوب آسيا أكثر ميلًا لتقبُّل لقاح كوفيد-19 وأقل عرضة لانخفاض الدخل من العمال القادمين من الشرق الأوسط.

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