RESEARCH ARTICLE

The post-pandemic era: will physical distancing be a perceived way of life? [version 1; peer review: 2 approved with reservations]

Soban Qadir Khan ¹, Jehan Al-Humaid², Faraz Ahmed Farooqi ¹,
Mohammed M. Gad³, Muhanad Al-Hareky², Faisal Al-Onaizan ⁴,
Fahad A. Al-Harbi³

¹Department of Dental Education, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

²Department of Preventive Dental Sciences, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

³Department of Substitutive Dental Sciences, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

⁴Department of Restorative Dental Sciences, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

V1 First published: 27 Oct 2021, 10:1090
<https://doi.org/10.12688/f1000research.52779.1>
 Latest published: 13 Jan 2022, 10:1090
<https://doi.org/10.12688/f1000research.52779.2>

Abstract

Background: This study aimed to determine whether people living in the Eastern Region of Saudi Arabia would prefer to continue the practice of physical distancing after the coronavirus disease 2019 (COVID-19) pandemic or to return to their previous way of life.

Methods: This cross-sectional study was conducted from August 2020 to October 2020 in the Eastern Region of Saudi Arabia. A pre-tested questionnaire was sent electronically through social media. Data on participants' demographics and their perspectives regarding post-pandemic physical distancing were collected. The calculated sample size was 1,066; however, the total number of responses included in the analysis was 989.

Results: The average age of the participants was 31.15±11.93 years. There were 435 men and 554 women in the study. Participants showed significantly high levels of disagreement with statements indicating that they were willing to use public transportation (61%), attend social gatherings (36%), and hug relatives or colleagues (40%) after the pandemic ($p<0.001$); however, 43% agreed that they would spend time with family or friends ($p<0.001$). The level of education was also found to be significantly related to the responses, and the level of disagreement increased as the level of education increased ($p<0.001$).

Conclusions: One-third of the study participants planned to continue engaging in physical distancing even after the current pandemic. This clearly indicates that our lives are not returning to how they were

Open Peer Review

Approval Status

	1	2
version 2		
(revision)		
13 Jan 2022		
version 1		
27 Oct 2021		

1. **Nazeer Khan**, Shifa Tameer-e-Millat
University, Karachi, Pakistan

Sana Mangrio, Shifa Tameer-e-Millat
University, Islamabad, Pakistan

Sajida Naseem, Shifa Tameer-e-Millat
University, Islamabad, Pakistan

2. **Dr. Shamta Sufia**, King Saud Bin Abdulaziz
University for Health Sciences, Riyadh, Saudi
Arabia

Any reports and responses or comments on the article can be found at the end of the article.

before the pandemic. However, it cannot be concluded whether or not this behavior will prevail in the long run. If so, it may greatly affect some businesses and perhaps some social norms and values as well.

Keywords

COVID-19, Post-pandemic, Lifestyle, physical distancing, Coronavirus, Saudi Arabia

This article is included in the **Sociology of Health** gateway.

This article is included in the **Emerging Diseases and Outbreaks** gateway.

This article is included in the **Coronavirus** collection.

Corresponding author: Soban Qadir Khan (sqkhan@iau.edu.sa)

Author roles: Khan SQ: Conceptualization, Data Curation, Writing – Original Draft Preparation; Al-Humaid J: Project Administration; Farooqi FA: Data Curation, Formal Analysis; Gad MM: Writing – Original Draft Preparation, Writing – Review & Editing; Al-Hareky M: Writing – Original Draft Preparation, Writing – Review & Editing; Al-Onaizan F: Writing – Review & Editing; Al-Harbi FA: Project Administration

Competing interests: No competing interests were disclosed.

Grant information: The author(s) declared that no grants were involved in supporting this work.

Copyright: © 2021 Khan SQ *et al.* This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

How to cite this article: Khan SQ, Al-Humaid J, Farooqi FA *et al.* **The post-pandemic era: will physical distancing be a perceived way of life?** [version 1; peer review: 2 approved with reservations] F1000Research 2021, 10:1090 <https://doi.org/10.12688/f1000research.52779.1>

First published: 27 Oct 2021, 10:1090 <https://doi.org/10.12688/f1000research.52779.1>

Introduction

The novel coronavirus (coronavirus disease 2019 [COVID-19]) belongs to the same family of viruses (coronaviruses) as the Middle East respiratory syndrome coronavirus (MERS-CoV) and severe acute respiratory syndrome coronavirus (SARS-CoV).^{1,2} Many respiratory viruses are believed to transmit over multiple routes, including droplets, aerosols, and fomites.⁴ Respiratory droplets moving from one person to another and contact with contaminated surfaces and objects are the primary sources of transmission.^{5,6} Presymptomatic transmission is the second type of transmission, in which the virus is transmitted from an infected person who has yet to develop symptoms to another person.⁷

The effectiveness of physical distancing is determined by individual behavior.⁸ The interventions most essential for control of pandemics necessarily disrupt social processes. Public measures were implemented in response to COVID-19; people were encouraged by authorities, media, and peers to voluntarily adopt “personal distancing” behaviors to reduce virus transmission (e.g., avoiding physical contact or close proximity with non-household members and reducing use of shared public spaces).⁹

Various guidelines have been issued to reduce the spread of the pandemic, including avoiding handshaking or any type of physical contact, avoiding social gatherings or visiting family or friends, wearing masks and gloves, closure of public venues, and tourism and travel restrictions.² Increasing handwashing, minimizing face touching, wearing masks in public, and physical distancing are the measures that have been adopted globally.¹ Because COVID-19 returns in waves, the psychological impacts of physical distancing will persist over time and may indeed become accentuated with repeated iterations of physical distancing. Given that physical distancing affects the types of activities in which one can engage and impacts how activities are carried out, it is likely that this accounts for some of the psychological impact.¹⁰

Nonverbal communication involves sending or receiving information without words. This form of communication is used across the globe; however, its usage varies from country to country. Cultures can be categorized as “high-context” or “low-context.” High-context cultures rely heavily on nonverbal communication, and low-context cultures rely little on nonverbal communication.¹¹ The present study population consisted of people living in Saudi Arabia, a Middle Eastern country, and Saudi society can be classified as a “high-context culture.” Saudi people rely heavily on nonverbal communication, such as kissing and hugging as a greeting or welcome and as a sign of respect.¹² In contrast, physical distancing measures can feel unnatural^{11,13}; however, regular practice of certain behaviors over a long period of time can make them automatic or habitual.¹⁴ In addition, people are becoming comfortable with limiting socialization and following precautionary measures due to the secondary reinforcement gained as a consequence.^{13,15} To the best of our knowledge, the literature has yet to consider the possible post-pandemic-era lifestyles and behaviors of the people living in the Eastern Region of Saudi Arabia. Therefore, this study aimed to determine whether people living in the Eastern Region of Saudi Arabia would prefer to continue the practice of physical distancing after the coronavirus disease pandemic or to return to their previous way of life.

Methods

This cross-sectional study was conducted in the Eastern Region of Saudi Arabia. The study was conducted from August 2020 to October of 2020. Institutional approval was obtained from the College of Dentistry, Imam Abdulrahman Bin Faisal University (approval number 202162).

The inclusion criteria were as follows: (1) aged between 18 and 70 years, and (2) residing in the Eastern Region of Saudi Arabia. The exclusion criterion was not being able to read and understand English or Arabic. To calculate the sample size, a simple random sampling technique was used, and the size of the sample was calculated using the online software **Raosoftware** (Seattle, Washington, USA). The response distribution was set at 50%, the margin of error was set at 3%, and the confidence interval was set at 95%. The calculated sample size was 1066.

The questionnaire for the study included questions related to demographics and physical distancing. Precautions and instructions related to physical distancing provided by the World Health Organization and United States Centers for Disease Control, and these precautions were used to develop the items of the questionnaire. Initially, the questionnaire was written in English and translated into Arabic. The English version of the questionnaire was translated into Arabic by an Arabic language expert who was also proficient in English. Then the Arabic version was translated back into English by another expert in both languages. After developing the questionnaire, a pilot study was performed to test the validity of the questionnaire, and the kappa statistic was 0.79.

In line with COVID-19 precautions, the questionnaire was administered electronically. **Questionpro** software (Dallas, TX, USA) was used for preparing the survey online. The questionnaire contained a total of 16 questions; however, questions regarding personal identification were not included to keep the responses anonymous. Responses for each item

were based on a 5-point Likert scale (1 = “Never,” 2 = “Seldom,” 3 = “Sometimes,” 4 = “Frequently,” 5 = “Always”). To simplify the analysis and presentation of results, the response categories (1 to 5) were grouped into three categories: disagree (after combining never and seldom), neutral (sometimes), and agree (after combining frequently and always). All authors of the study then sent the survey link to all their WhatsApp contacts. The authors also requested from their contacts to share the links further.

The data were collected in Excel and later transferred to and coded in SPSS version 23 (IBM Corp., Armonk, NY, USA) for analysis. Frequency distributions and bar diagrams were constructed for descriptive analysis and presentation of the data. Normality of the data was tested first using the Shapiro-Wilk test, and the results were nonsignificant, indicating that the data were normally distributed. Hence, parametric tests were used for inferential analysis. A one-sample chi-square test was used to analyze the significance of the proportion of responses for each question. A chi-square test was used to compare participants’ demographics with their responses to questions related to physical distancing. The level of significance was set at $P < 0.05$.

Ethical approval

Ethical approval for the research was obtained from the Research Unit of College of Dentistry, Imam Abdulrahman Bin Faisal University. The ethical approval letter number was EA:202162.

Consent

A summary of the study was presented at the start of the survey along with a consent statement. Consent was implied by the submission of the completed anonymous survey. Written consent was not appropriate, given the anonymous nature of the survey. Participants had to click on the “Next” button to proceed with the questions, which were all on the participants’ plans with regard to physical distancing behavior after the COVID-19 pandemic.

Results

The current study included 989 participants who completed and submitted the survey. A total of 1,350 individuals started the survey, and 989 completed it, resulting in a response rate of 73.5%. The mean age of the participants was 31.15 ± 11.93 years, with a range of 20 to 61 years. The majority of the participants were Saudi (705 [70%] Saudi participants and 284 [30%] non-Saudi participants). There were 435 (44%) men and 554 women (56%). Most of the participants were undergraduate students 474 (48.1%), followed by graduated 217 (22%), postgraduates 143 (15%) and 150 (15%) were undertaking qualifications at high school level. Overall, 677 (68%) lived with an average of 4 to 6 adults and 2 children.

Figure 1 shows the responses to the post-COVID-19 survey of the entire study population. The percentage of disagreement was highest for the item on using public transportation with strangers, and the difference between disagree and agree was statistically significant (87% vs. 13%) ($P < 0.001$). Similarly, the percentage of disagreement was significantly higher for the items on attending gatherings of close family/friends/other relatives (72% vs. 28%) ($P < 0.001$) and greeting family, friends, and colleagues with a hug (71% vs. 29%) ($P < 0.001$). The highest percentage of agreement among all items was observed for spending time with family or friends (43%), which was significantly high ($P < 0.001$).

Greetings involving physical contact (shaking hands and hugging)

This section of the questionnaire evaluated participants’ sense of safety in engaging in handshaking and hugging when greeting others after the pandemic (Table 1). Non-Saudi residents were significantly higher in terms of disagreement with the items on handshaking ($P < 0.0001$) and hugging family or friends during greetings ($P < 0.001$). Women were less likely to disagree with the items on greeting by hugging than men (36% vs. 45%, $P < 0.012$). The level of education was found to be significantly associated with participants’ responses ($P < 0.0001$). There was no significant variation in responses between the size of family with handshaking, but the participants with 1-3 individuals in the home were significantly more likely to disagree with the item on hugging family or friends ($P < 0.003$).

Social activities (spending time with friends/family, hosting/attending gatherings, shopping)

Table 2 presents the participants’ responses with regard to their sense of safety in engaging in social activities after the pandemic. Saudi nationals were significantly more likely to agree with the items on spending time with family or friends (49% vs. 27%, $P < 0.001$), attending family gatherings (33% vs. 16%), hosting gatherings (43% vs. 15%, $P < 0.001$) and going for picnics or to shopping malls (48% vs. 25%, $P < 0.001$). Gender was not found to be associated with agreement with the items on engaging in social activities; however, women were significantly more fearful regarding attending public gatherings ($P < 0.002$). Level of education was found to be significantly associated with agreement with the items on spending time with family or friends, attending or hosting gatherings, and going out for self-enjoyment ($P < 0.0001$).

Figure 1. Participant perspectives regarding post-coronavirus disease 2019 (COVID-19) physical distancing behavior.

Table 1. Participant demographic characteristics and sense of safety in engaging in physical greetings after COVID-19.

		I would feel normal/safe shaking hands with my family, friends, and colleagues			I would feel normal/safe greeting my family, friends, and colleagues with a hug		
		Disagree n(%)	Neutral n(%)	Agree N(%)	Disagree n(%)	Neutral n(%)	Agree n(%)
Nationality	Saudi	185(26.4)	242(34.5)	274(39.1)	244(35)	216(31)	240(34)
	Non-Saudi	125(44.6)	86(30.7)	69(24.6)*	146(52)	90(32)	43(15)*
Gender	Men	147(34)	129(30)	159(37)	194(45)	119(27)	122(28)
	Women	167(30)	200(36)	187(34)	198(36)	191(35)	163(30)*
Education	Postgraduate	56(39)	43(30)	44(31)	66(46)	42(30)	34(24)
	Graduate	96(44)	72(33)	49(23)	109(50)	70(32)	38(18)
	Undergraduate	121(26)	170(36)	182(38)	168(36)	155(33)	149(32)
	High school or less	39(26)	44(29)	67(45)*	48(32)	43(29)	59(39)*
Family size	1-3	108(35)	103(33)	98(32)	140(46)	92(30)	75(24)
	4-6	103(28)	131(36)	135(37)	129(35)	123(33)	117(32)
	7-9	54(29)	58(32)	72(39)	66(36)	50(27)	68(37)
	Above 10	49(39)	37(29)	41(32)	57(45)	45(35)	25(20)*

*Statistically significant at $P < 0.05$.

Families with 4 to 6 people were significantly more likely to agree with the items on engaging in social activities like spending time with friends or family and attending parties ($P = 0.001$, 0.002 and 0.033 , respectively).

Essential/routine activities (transportation, hospital checkups, prayers)

Nationality had a significant statistical association with agreement with the items on routine activities, such as using public transportation ($P = 0.05$), attending places of prayer ($P = 0.017$), and visiting the hospital for checkups or appointments ($P = 0.0001$) (Table 3). Men were more likely to agree with the item on congregational prayers in religious venues ($P = 0.0001$). Participants with higher education were less likely to agree with the items on using public transportation ($P = 0.013$), visiting hospitals or healthcare places for regular checkups, and attending congregational prayer in masjids, churches, or temples ($P = 0.005$). It was also found that family size was not statistically associated with any of these essential/routine activities (Table 3).

Discussion

After the outbreak of the current pandemic, physical distancing was proposed and implemented as a primary method of reducing its spread. Recommended physical distancing measures can be divided into three categories: (1) avoid contact with others (e.g., handshakes and hugs), (2) avoid using or visiting publicly shared places, and (3) avoid participating in religious and non-religious gatherings. Studies evaluating the changes in lifestyle due to restrictions imposed as precautionary measures have been conducted across the globe.^{16,17} However, the present study was conducted to evaluate the perceived post-pandemic lifestyle.

In the analysis of the questions related to physical distancing behaviors, it was observed that significantly high percentages of respondents either disagreed with or were neutral about discontinuing the practice of physical distancing. With regard to public transportation, only 13% agreed that they would use public transportation even after the pandemic. This cautious behavior will have a significant impact on the transportation industry. The industry must develop strategies to reduce this impact and plan well for the post-pandemic era. Hao *et al.*, for example, have proposed a disaster management framework and post-pandemic agenda for the hotel industry.¹⁸ In the present study, over 70% of participants also showed their disagreement or neutrality when asked about attending gatherings of family and friends, or hugging them. The nature of these three questions (using public transportation, attending gatherings, and giving and receiving hugs) are relevant to many aspects of life after COVID-19; people will be in closed environments and will have more contact with one another. Similarly, as aerosols are known to be the primary method of spreading the virus, people will avoid hugging others.¹⁹ Another notable aspect of the study findings was that about one-third of the respondents were unsure about practicing physical distancing after COVID-19. Hence, if they decide later on to stop physical distancing, then the percentage of people who agree will become significantly higher compared with those who disagree (almost 70% vs 30%), or if they keep practicing then the outcome will be the reverse.

Participants who were Saudi citizens showed more resilient behavior than non-Saudis, and it was found that there was a significantly higher percentage of Saudi citizens who reported wanting to return to their normal ways of life. For almost all questions being asked, the percentage of individuals who wanted to behave as they did before the pandemic was higher among Saudis compared with non-Saudis. These findings may be due to high context non-verbal communication among Arabs¹²; the other groups of study participants were mostly non-Arabs. Hence, a significant difference in perspectives was observed.

The purpose of vaccines is to boost the human immune system in order for the body to better fight viruses. This is also true for COVID-19 vaccines.²⁰ Hence, the fear of getting infected or having any COVID-19 positive individual within 2 meters will remain even after the pandemic ends.²¹ In contrast, the minimum distances that have been maintained between an infected person and a potential host are disputable and are far from being established based on scientific evidence.²² In our study, those who were more educated indicated that they were more likely to continue practicing physical distancing after the pandemic. It may be that educated people are more aware of the virus and its effects even after vaccination or the end of the pandemic.

The present study had some limitations. First, it was conducted on a large scale, and data were only collected from the Eastern Region of Saudi Arabia. Hence, the study's findings cannot be generalized to the entire population of the country. Second, this study did not include the religion of the participants, which could be an important factor. Religious factors could have an impact on post-pandemic physical distancing behaviors. Similarly, nationality was just noted as Saudi or non-Saudi, and future studies should examine the specific nationalities of the participants. This would facilitate the analysis and country-wise or region-wise comparison of the data. Finally, the data collection process was completed before the development of the vaccine, after getting vaccinated people may feel safer and their responses may be different.

Table 2. Participant demographic characteristics and their sense of safety in participating in social activities after coronavirus disease 2019 (COVID-19).

	I would feel normal/safe hanging out with family/friends			I would feel normal/safe attending gatherings of family/friends/other relatives			I would feel safe hosting a friends/family gathering at my home			I would be fearful to attend public gatherings like housewarming parties			I would prefer to entertain myself by going to picnic spots/shopping malls/dining out		
	Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)
Nationality															
Saudi	121(17)	234(33)	344(49)	216(31)	256(37)	229(33)	141(20)	261(37)	299(43)	214(31)	222(32)	265(38)	132(19)	232(33)	337(48)
Non-Saudi	98(35)	106(38)	76(27)*	139(50)	96(34)	45(16)*	120(43)	120(43)	41(15)*	96(34)	83(30)	101(36)	112(40)	97(35)	71(25)*
Gender															
Men	105(24)	152(35)	176(41)	173(40)	149(34)	113(26)	125(29)	168(39)	143(33)	164(38)	118(27)	153(35)	124(28)	145(33)	167(38)
Women	116(21)	193(35)	245(44)	186(34)	206(37)	162(29)	138(25)	216(39)	200(36)	147(27)	191(34)	216(39)*	123(22)	187(34)	243(44)
Education															
Postgraduate	37(26)	60(42)	46(32)	65(45)	53(37)	25(17)	48(34)	65(45)	30(21)	41(29)	37(26)	65(45)	50(35)	45(31)	48(34)
Graduate	71(33)	78(36)	68(31)	107(49)	70(32)	40(18)	86(40)	84(39)	47(22)	74(34)	66(30)	77(35)	71(33)	70(32)	75(35)
Undergraduate	85(18)	157(33)	229(49)	148(31)	182(38)	143(30)	95(20)	186(39)	193(41)	132(28)	154(33)	187(40)	91(19)	170(36)	213(45)
High school or less	28(19)	48(32)	74(49)*	39(26)	48(32)	63(42)*	34(23)	48(32)	68(45)*	60(40)	51(34)	39(26)*	34(23)	44(29)	72(48)*
Family size															
1-3	80(26)	118(38)	110(36)	131(42)	104(34)	74(24)	93(30)	130(42)	86(28)	96(31)	98(32)	115(37)	88(28)	101(33)	120(39)
4-6	65(18)	125(34)	179(49)	110(30)	153(41)	106(29)	81(22)	143(39)	146(39)	115(31)	126(34)	128(35)	81(22)	123(33)	165(45)
7-9	42(23)	55(30)	87(47)	60(33)	61(33)	63(34)	41(22)	68(37)	75(41)	56(30)	56(30)	72(39)	35(19)	67(36)	82(45)
Above 10	34(27)	47(37)	45(36)*	58(46)	37(29)	32(25)*	48(38)	43(34)	36(28)*	44(35)	29(23)	54(43)	43(34)	41(32)	43(34)

Table 3. Participants' demographic characteristics and sense of safety in carrying out essential/routine activities after coronavirus disease 2019 (COVID-19).

		I would feel normal/safe using public transportation with strangers around			I would feel normal/safe attending my regular appointments at hospitals/healthcare centers			I would feel normal/safe attending my congregational prayer at the masjid/church/temple		
		Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)
Nationality	Saudi	407(58)	191(27)	103(15)	172(25)	261(37)	268(38)	181(26)	237(34)	283(40)
	Non-Saudi	193(69)	61(22)	26(9)*	102(36)	112(40)	67(24)*	98(35)	84(30)	99(35)*
Gender	Men	270(62)	109(25)	56(13)	120(28)	163(37)	153(35)	102(23)	121(28)	213(49)
	Women	336(61)	145(26)	73(13)	159(29)	213(38)	182(33)	180(32)	202(36)	172(31)*
Education	Postgraduate	99(69)	24(17)	20(14)	47(33)	60(42)	36(25)	39(27)	48(34)	56(39)
	Graduate	147(68)	52(24)	18(8)	75(35)	81(37)	61(28)	86(40)	59(27)	72(33)
	Undergraduate	270(57)	139(29)	64(14)	117(25)	187(39)	170(36)	114(24)	169(36)	191(40)
	High school or less	87(58)	38(25)	25(17)*	39(26)	47(31)	64(43)*	42(28)	47(31)	61(41)*
Family size	1-3	196(63)	75(24)	38(12)	96(31)	126(41)	87(28)	88(28)	112(36)	109(35)
	4-6	218(59)	101(27)	50(14)	103(28)	140(38)	127(34)	100(27)	127(34)	143(39)
	7-9	108(59)	50(27)	26(14)	43(23)	68(37)	73(40)	48(26)	49(27)	87(47)
	Above 10	84(66)	28(22)	15(12)	37(29)	42(33)	48(38)	46(36)	35(28)	46(36)

The overall impression from the study findings was that practicing physical activities and adopting a normal lifestyle after the pandemic will vary due to cultural and social norms and values. Societies that more commonly use non-verbal communication methods will be more likely to stop practicing physical distancing; however, education level was found to be negatively associated, and hence more educated people perhaps adopt physical distancing even after this pandemic.

Therefore, it can be concluded that fear-related factors will not be eliminated soon after this pandemic. However, engagement in physical activities and the carrying out of normal life after this pandemic will vary due to cultural and social norms and values. It was also observed that people will be either hesitant or avoid closed environments and public transportation, and this will affect some businesses, especially the public transportation sector. Furthermore, it was found that a significantly higher proportion of more educated individuals compared with others will practice physical distancing after the pandemic. Future studies are recommended to evaluate the change in perception of post-pandemic physical distancing after the development of vaccines. In addition, if this perceived lifestyle remains for a long period, it will affect social life, and will have significant consequences on the culture and society.

Data availability

Underlying data

Harvard Dataverse: Post-Pandemic era: will physical distancing be a perceived way of lifestyle? <https://doi.org/10.7910/DVN/IGSGU3>.²³

The project contains the following underlying data:

- Final Data Edited.tab (The data file containing the complete data, which includes demographic variables and responses related to physical distancing behavior).

Extended data

Harvard Dataverse: Post-Pandemic era: will physical distancing be a perceived way of lifestyle? <https://doi.org/10.7910/DVN/IGSGU3>.²³

This project contains the following extended data:

- QuestionPro-Survey-7657352-PDF-Export-05-19-2021-T043556.pdf (Questionnaire used for data collection in this study in both English and Arabic).

Data are available under the terms of the [Creative Commons Zero “No rights reserved” data waiver](#) (CC0 1.0 Public domain dedication).

References

1. Wei WE, Li Z, Chiew CJ, *et al.*: **Presymptomatic transmission of SARS-CoV-2 — Singapore, January 23–March 16, 2020.** *MMWR Morb Mortal Wkly Rep.* 1 April 2020; **69**(14): 411–415.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
2. Kimball A, Hatfield KM, Arons M, *et al.*: **Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility — King County, Washington, March 2020.** *MMWR Morb Mortal Wkly Rep.* 3 April 2020; **69**(13): 377–381.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
3. CDC: Coronavirus Disease (COVID-19), Situation Summary. [Accessed 14 April 2020].
[Reference Source](#)
4. Wang J, Du G: **COVID-19 may transmit through aerosol.** *Ir J Med Sci.* 2020 24 March; **189**(4): 1143–1144.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
5. Liu J, Liao X, Qian S, *et al.*: **Community transmission of severe acute respiratory syndrome coronavirus 2, Shenzhen, China, 2020.** *Emerg Infect Dis.* 2020; **26**(6): 1320–1323.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
6. Burke RM, Midgley CM, Dratch A, *et al.*: **Active monitoring of persons exposed to patients with confirmed COVID-19 — United States, January–February 2020.** *MMWR Morb Mortal Wkly Rep.* 2020; **69**(9): 245–246.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
7. Pan X, Chen D, Xia Y, *et al.*: **Asymptomatic cases in a family cluster with SARS-CoV-2 infection.** *Lancet Infect Dis.* 2020; **20**(4): 410–411.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
8. Guo Y, Qin W, Wang Z, *et al.*: **Factors influencing social distancing to prevent the community spread of COVID-19 among Chinese adults.** *Prev Med.* 2021 February; **143**: 106385.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
9. Tull MT, Edmonds KA, Scamaldo KM, *et al.*: **Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life.** *Psychiatry Res.* 2020; **289**: 113098.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
10. Cohen DB, Luck M, Hormozaki A, *et al.*: **Increased meaningful activity while social distancing dampens affectivity; mere busyness heightens it: Implications for well-being during COVID-19.** *PLOS ONE.* 2020; **15**(12): e0244631.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
11. Bernstein R: 7 Cultural Differences in Nonverbal Communication. Point Park University Online.
[Reference Source](#)

12. UK Essays. The Communication Style In Middle East Cultural Studies Essay [Internet]. November 2018. [Accessed 22 February 2021].
[Reference Source](#)
13. Păun C: **The rationality of a social animal.** *Manag Dyn Knowl Econ.* 2016; **4**(1): 125–140.
14. Miller KJ, Shenhav A, Ludvig EA: **Habits without values.** *Psychol Rev.* 2019 March; **126**(2): 292–311.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
15. Di Renzo L, Gualtieri P, Pivari F, *et al.*: **Eating habits and lifestyle changes during COVID-19 lockdown: an Italian survey.** *J Transl Med.* 2020; **18**(1): 1.e5.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
16. Pellegrino G, Beigi DM, Angelelli C, *et al.*: **COVID-19 and systemic sclerosis: Analysis of lifestyle changes during the SARS-CoV-2 pandemic in an Italian single-center cohort.** *Clin Rheumatol.* 2021; **40**(4): 1393–75.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
17. Kumari A, Ranjan P, Vikram NK, *et al.*: **A short questionnaire to assess changes in lifestyle-related behaviour during COVID 19 pandemic.** *Diabetes Metab Syndr.* 2020; **14**(6): 1697–1701.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
18. Hao F, Xiao Q, Chon K: **COVID-19 and China's hotel industry: Impacts, a disaster management framework, and post-pandemic agenda.** *Int J Hosp Manag.* 2020; **90**: 102636.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
19. Morawska L, Cao J: **Airborne transmission of SARS-CoV-2: The world should face the reality.** *Environ Int.* 2020; **139**: 105730.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
20. O'Neill LAJ, Netea MG: **BCG-induced trained immunity: Can it offer protection against COVID-19?** *Nat Rev Immunol.* 2020; **20**(6): 335–337.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
21. Batty M: **The coronavirus crisis: What will the post-pandemic city look like?** *Urban Analytics and city Science.* 2020; **47**(4): 547–552.
[Publisher Full Text](#)
22. Jayaweera M, Perera H, Gunawardana B, *et al.*: **Transmission of COVID-19 virus by droplets and aerosols: A critical review on the unresolved dichotomy.** *Environ Res.* 2020; **188**: 109819.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
23. Qadir S: **Post-Pandemic era: will physical distancing be a perceived way of lifestyle?** *Harvard Dataverse, V3, UNF:6:f6S17sRUDesaBrghOw+3g== [fileUNF].* 2021.
[Publisher Full Text](#)

Open Peer Review

Current Peer Review Status: ? ?

Version 1

Reviewer Report 09 December 2021

<https://doi.org/10.5256/f1000research.56099.r99540>

© 2021 Sufia D. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Dr. Shamta Sufia

College of Public Health and Health Informatics, King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

The concept of identifying the opinions of people regarding physical distancing post-pandemic is interesting. However, for example in the Introduction some changes in the sequence of ideas can improve the flow e.g. the guidelines for avoiding infections (paragraph 3) can be presented before the effectiveness of social distancing can be addressed (paragraph 2) only after this taking up of recurrent waves of Covid infection seems logical. The transition to non verbal communication is quite abrupt and need reconsideration.

Methods

- On how many subjects was the questionnaire pilot tested and where was the questionnaire pilot tested?
- Were any changes made to the questionnaire?
- Did the sample cover responses from all sections of the society since personal contacts were used through social media.

Results

- For a non native English speaker the narrative becomes a little confusing as to what is meant by agreement/dis-agreement to the statements. A simple explanation for the reader would be more appropriate.

Discussion

- Using simple terms as individuals feeling of sense of security or otherwise would make reading less confusing.
- Discussing the limitation of the study the authors need to state the large sample size as a strength of the study, However, limiting it to one geographical region is a limitation. They also fail to identify religious factors that could have acted unfavorably on the study.

Some of the closing statements in the discussion are repetitive and hence can be rephrased.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: dental public health

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 16 Dec 2021

soban khan, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

Comment 1: *The concept of identifying the opinions of people regarding physical distancing post-pandemic is interesting. However, for example in the Introduction some changes in the sequence of ideas can improve the flow e.g. the guidelines for avoiding infections (paragraph 3) can be presented before the effectiveness of social distancing can be addressed (paragraph 2) only after this taking up of recurrent waves of Covid infection seems logical. The transition to non verbal communication is quite abrupt and need reconsideration.*

Reply: Revised as suggested.

Comment 2: *On how many subjects was the questionnaire pilot tested and where was the questionnaire pilot tested?*

Reply: Revised and added in third para of method section.

Comment 3: *Were any changes made to the questionnaire?*

Reply: Not required because of having acceptable value kappa statistics.

Comment 4: *Did the sample cover responses from all sections of the society since personal contacts were used through social media.*

Reply: Added in the study limitations in the revised version.

Comment 5: *For a non native English speaker the narrative becomes a little confusing as to what is meant by agreement/dis-agreement to the statements. A simple explanation for the reader would be more appropriate.*

Reply: It is mentioned in the method that original questionnaire had 5-point Likert scale (1 = "Never," 2 = "Seldom," 3 = "Sometimes," 4 = "Frequently," 5 = "Always"). For the simplicity of the analysis and results presentation we merged them into 3 categories which was also mentioned in the fourth para of method section.

Comment 6: *Using simple terms as individuals feeling of sense of security or otherwise would make reading less confusing.*

Reply: Discussion has been revised.

Comment 7: *Discussing the limitation of the study the authors need to state the large sample size as a strength of the study, However, limiting it to one geographical region is a limitation. They also fail to identify religious factors that could have acted unfavorably on the study.*

Reply: Study limitations has been revised.

Comment 8: *Some of the closing statements in the discussion are repetitive and hence can be rephrased.*

Reply: Conclusion has been revised.

Competing Interests: No competing interests were disclosed.

Reviewer Report 17 November 2021

<https://doi.org/10.5256/f1000research.56099.r98081>

© 2021 Khan N et al. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Sana Mangrio

Shifa College of Medicine, Shifa Tameer-e-Millat University, Islamabad, Pakistan

Nazeer Khan

Director of Office of Research, Innovation and Commercialization, Shifa Tameer-e-Millat University, Karachi, Pakistan

Sajida Naseem

Shifa College of Medicine, Shifa Tameer-e-Millat University, Islamabad, Pakistan

Is the work clearly and accurately presented and does it cite the current literature?

The article overall is written well, using appropriate study design and cites current literature, but some changes are required regarding methodology and conclusion.

Are sufficient details of methods and analysis provided to allow replication by others?

The sample size details are not mentioned in detail, how the sample 1066 was obtained, which prevalence was used in the Raosoft. What was the total population from which the representative sample was taken?

Simple random sampling technique and sampling frame not mentioned in detail about how the technique was employed.

The data collection does not align with the sampling technique. The sampling technique mentioned is Simple Random but data collection procedure states that a link was sent to WhatsApp contacts of the authors, which implies it is a convenient sampling method.

Are the conclusions drawn adequately supported by the results?

The conclusion in the abstract states that since 1/3 of participants planned to continue physical distance, it indicates that life will not be the same after the pandemic. The 1/3 result mentioned here is not the correct ratio to draw such conclusions.

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Partly

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

No

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.

Author Response 16 Dec 2021

soban khan, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

Comment 1: *The sample size details are not mentioned in detail, how the sample 1066 was obtained, which prevalence was used in the Raosoft. What was the total population from which the representative sample was taken?*

Reply: It was not a prevalence study (like caries, diabetes, heart disease, etc) hence prevalence could not be obtained from literature. This study was conducted on general population and none of the specific group of the population was targeted hence for these kinds of scenarios 50% is generally used (which was used and mentioned). Secondly, regarding the total population of the Eastern region, we have added the text and reference in the method section.

Comment 2: *Simple random sampling technique and sampling frame not mentioned in detail about how the technique was employed.*

Reply: Revised and sample frame is mentioned now in the revised version

Comment 3: *The data collection does not align with the sampling technique. The sampling technique mentioned is Simple Random but data collection procedure states that a link was sent to WhatsApp contacts of the authors, which implies it is a convenient sampling method.*

Reply: Some revisions have been made in the respective parts.

Comment 4: *The conclusion in the abstract states that since 1/3 of participants planned to continue physical distance, it indicates that life will not be the same after the pandemic. The 1/3 result mentioned here is not the correct ratio to draw such conclusions.*

Reply: Revised in the new version.

Competing Interests: No competing interests were disclosed.

The benefits of publishing with F1000Research:

- Your article is published within days, with no editorial bias
- You can publish traditional articles, null/negative results, case reports, data notes and more
- The peer review process is transparent and collaborative
- Your article is indexed in PubMed after passing peer review
- Dedicated customer support at every stage

For pre-submission enquiries, contact research@f1000.com

F1000Research