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Predictors associated with symptoms of depression & anxiety during the COVID-19 among MENA immigrants in Houston, Texas

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Abstract

Very limited knowledge is available regarding the mental health of the immigrant population in the USA. We aim to assess the factors affecting the mental health of immigrants living in Houston from war-inflicted and stable countries of Middle Eastern and North African (MENA) origin during the pandemic. This cross-sectional study was conducted among the MENA immigrants using a validated survey of sociodemographic, general health, and COVID-19 questions. Multivariable logistic regression models assessed sociodemographic and clinical predictors of depression and anxiety. The outcome of interest was categorized as "moderate or severe" versus "minimal or mild" for depression and anxiety. Total of 94 participants completed the study, with the sample rate of "moderate or severe" symptoms of anxiety and depression being 29.78% and 64.89%, respectively. Multivariable regression analysis for depression showed that immigrants from war-inflicted countries of origin were less likely to report "moderate or severe" depression compared to immigrants from stable countries (OR = 0.082, 95% CI 0.012–0.551). Individuals with excellent overall health (OR = 0.074, 95% CI = 0.013–0.414) had a significantly lower likelihood of "moderate or severe" depression than those who reported fair/poor health. Non-smokers (OR = 0.068, 95% CI = 0.012–0.377) were less likely to report "moderate or severe" depression in comparison to those who engage in smoking behavior. Participants who responded to the question that they tried hard to avoid thoughts of COVID-19 were less likely to have symptoms of "moderate or severe" depression compared to participants who responded, "No" (OR = 0.110, 95% CI = 0.017–0.712). Those who have "excellent/good knowledge" (OR = 0.0146, 95% CI = 0.022–0.946) about the prevention of COVID-19 spread were less likely to have "moderate or severe" depression compared to those who had "average/poor/terrible". Multivariable regression analysis revealed smoking as a significant predictor of anxiety, with non-smokers demonstrating a lower likelihood of experiencing "moderate or severe" anxiety than smokers (OR = 0.21, 95% CI = 0.06–0.84). MENA immigrant communities in the USA have diverse immigration experiences, cultural backgrounds, and instability issues in their home countries, possibly elevating the risk of depression and anxiety during the COVID-19 crisis. Predictors identified should be considered by policymakers when developing targeted interventions to ensure the mental and social well-being of immigrant communities in the USA.

Keywords Middle Eastern and North African, Immigrants, Anxiety, Depression, COVID-19

Background

In the USA, the Middle Eastern and North African (MENA) immigrant population has increased by over 600,000 from 2000 to 2019, settling at about 1.2 million. This increase is potentially due to the war and instability in the Middle East. (Batalova 2023). As nearly 3% of foreign-born people in the USA, the

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MENA population represents a significant and growing population of immigrants that face unique obstacles (Batalova 2023). With immigrants escaping traumatic circumstances such as war and poverty, multiple stressors affect MENA immigrants. In one study conducted among MENA immigrants residing in Sweden, strong contributors to negative mental health outcomes were noted to be economic strain, alienation, and discrimination (Lindencrona et al. 2008). Another study published qualitative accounts of the struggles of adult MENA immigrants collected from community leaders and reported difficulties like social isolation and stigma around mental health struggles (Siddiq et al. 2023). These findings reflect a need for examining factors influencing negative mental health outcomes, guiding more specific solutions.

Houston is a diverse city commonly considered a cultural melting pot (Capps et al. 2015) with the fourth largest MENA population in the country with over 281,000 MENA Texas residents. Houston reportedly has 98,300 MENA and the largest population of MENA Texans reside in Harris and Fort Bend counties. However, MENA immigrants are not recognized in Houston or the USA as a distinct census category; instead, they are grouped under the white racial category (Awad et al. 2019). Due to the limitations in data recording, it is challenging to clearly understand how various circumstances, including health and economic status, impact the population in the MENA region (Awad et al. 2019). Despite the issue of not having a separate census category, one study reported that both MENA and non-MENA white population groups view MENA group, from their names to their physical and cultural characteristics, as separate from other whites in an experiment using fictitious immigrant profiles (Maghbouleh et al. 2022). There is limited research data in the area of health outcomes particularly mental health of MENA immigrants in the USA.

Thus, the objective of this pilot study was to examine the factors impacting mental health of MENA immigrants from war-inflicted and stable countries of origin during COVID-19 pandemic among a sample of MENA immigrants residing in the Houston area. Herein, we assessed depression and anxiety symptoms in a MENA sample and analyzed the association between these symptoms and various sociodemographic factors, general health indicators, as well as COVID-19 related factors (Kassel et al. 2003). Responses from immigrants from war-inflicted countries were compared to immigrants from more stable MENA countries to draw possible comparisons between immigrant experiences. Our pilot study results offer an overarching perspective into how such factors may influence the level of anxiety and depression in the population, and potentially inform and

tailor approaches in addressing mental health needs of the MENA population in the USA.

Methods

Study participants

This cross-sectional study used convenience sampling to collect survey data from a MENA immigrant population residing in the greater Houston, Texas, between July and August 2021. Collaborative efforts were made with a Multi-Cultural Center in a Houston suburb to identify MENA immigrant participants from war-inflicted and stable countries of origin. The survey was administered electronically through the REDCap platform, utilizing structured questionnaires. The survey was also disseminated using social media platforms.

Study questionnaire

The questionnaire was divided into five sections: sociodemographic, general health COVID-19, the 7-item Generalized Anxiety Disorder scale (GAD-7), and the 9-item Patient Health Questionnaire (PHQ-9) scale. The validated survey contained sociodemographic, general health, and COVID-19-related questions was created by Dr. Nadia Abuelezam (Abouhala et al. 2021; Allen et al. 2021). The outcome variables were classed as "moderate or severe" versus "minimal or mild" based on the total scores from the GAD-7 and PHQ-9 for symptoms of anxiety and depression severity, respectively. This study categorized individuals' anxiety or depression levels centered on a 4-point Likert scale (0 to 3), as per GAD-7 and PHQ-9 scoring methods. We considered participants who scored between 0 and 9 to have low anxiety or depression and classified those scoring between 10 and 21 as having high anxiety or depression. The PHQ-9 is a widely used instrument for self-reported depression comprising items that corresponding to DSM-IV diagnostic criteria for major depressive disorder for each item, and employs on a four-point Likert scale, values ranging from 0–3. Scores of each individuals' response then computed to calculate the overall score, which falls within the range of 0–27. Anxiety symptoms were estimated by using GAD-7; it consists of seven items and four-point Likert scale (0–3) (Nwoke et al. 2023). Similarly, the PHQ-9 score of all items was summed to calculate individuals' total scores, which range from 0–21. Overall, both scales provide standardized measures for anxiety and depression symptoms estimation based on participants' responses to specific items (Nwoke et al. 2023; Vrabel et al. 2023).

Statistical analysis

Using sample frequencies and percentages, categorical variables were presented. In contrast, Chi-square tests

were used to evaluate group differences in the level of anxiety/depression and the potential impact of COVID-19 on the mental health of MENA immigrants.

To examine the associations of symptoms of anxiety and depression with various demographic features, general health indicators, and COVID-19-related questions, two multivariable logistic regression analyses were conducted. The outcome variables in these models were "moderate or severe" versus "minimal or mild" based on the total scores from the GAD-7 and PHQ-9 for anxiety and depression severity, respectively. The independent variables incorporated in the models were gender, age, education, marital status, residency status, annual household income, religion, smoking status, alcohol consumption status, health insurance, general health perception, and comorbidities (hypertension, hypercholesterolemia, obesity, self-reported anxiety, and self-reported depression). The participants categories into immigrants from countries of war-inflicted origin such as Syria, Lebanon, Iraq, Libya, Palestine (Jerusalem, West bank) and immigrants from stable countries such as Jordan, Saudi Arabia, Oman, Kuwait, Egypt, Turkey, Mauritania, Morocco, Sudan, Tunisia, UAE. COVID-19-related variables were also included in the models. The statistical analyses were carried out using SAS version 9.4 (SAS Institute, Cary, NC, USA), with a pre-established significance threshold of 0.05.

Results

A total of 94 immigrants participated in the study, with the total occurrence of "moderate or severe" symptoms of anxiety and depression was 29.78% and 64.89%, correspondingly. Around half of the participants were males (51.06%) and are less than 30 years (57.45%). Chi-square analysis indicated significant differences between individuals with moderate or severe and minimal or mild symptoms of depression and anxiety in responses to questions related to demographics, COVID-19, and general health (Table 1, 2).

The findings of the multivariable regression model for depression revealed significant association between several included factors and depression as shown in Table 3. Individuals who have a war-inflicted country of origin (OR=0.082, 95% CI=0.012–0.551) had a lesser possibility of experiencing "moderate or severe" symptoms of depression as compared to individuals who have a non-war-inflicted country of origin. Individuals who reported having "excellent/very good" overall health were at lesser risk of "moderate or severe" symptoms of depression compared to those who had "Good/fair/poor" overall health (OR=0.074, 95% CI=0.013–0.414). Moreover, Individuals who identified themselves as non-smoker had reduced chance of having "moderate or severe"

depression contrasted to those who smoke (OR=0.068, 95% CI=0.012–0.377).

Furthermore, participants who responded affirmatively to the question that they tried hard to avoid thoughts of COVID-19 were less likely to have symptoms of "moderate or severe" depression comparatively to participants who responded, "No" (OR=0.110, 95% CI=0.017–0.712). Similarly, participants who possessed "Excellent/Good knowledge" about the prevention of COVID-19 spread were at lower risk to experience symptoms of "moderate or severe" depression contrasted to those who had "Average/poor/terrible knowledge" (OR=0.146, 95% CI=0.022–0.925).

The multivariable logistic regression analysis revealed smoking as a significant predictor of anxiety, with non-smokers demonstrating a lower likelihood of experiencing "moderate or severe" anxiety than smokers (OR=0.21, 95% CI=0.06–0.84) Table 4.

Discussion

In this pilot study, several important observations were noted. First, significant univariate and multivariate correlations between tobacco smoking and experience of anxiety & depression among immigrants from war-inflicted countries of respondents were observed. However, it is unclear whether smoking led to anxiety & depression or anxiety & depression led to smoking among subjects due to the cross-sectional design of our study that cannot ascertain the temporal relationship. Relevant to this, previous literature suggests a possible link between early exposure to smoking and higher stress levels later in life, according to a meta-analysis performed by Kassel et al. (2003). Moreover, Kassel proposes a "bidirectional" model for the link between smoking and depression; that is, smoking may contribute to depression while depression also contribute to smoking habits (Kassel et al. 2003). Further research is needed to ascertain a causal relationship beyond the association found in our research; the bidirectional model may hold unique implications in the context of the MENA immigrant experience.

Respondents who migrated from war-torn countries may have fewer doubts about their decision to migrate to the USA, potentially contributing to lower levels of depression in this group. One study among Indian immigrants in Canada found that the discrepancy between prospects of life after immigration at the time of leaving versus the reality found constituted a statistically significant predictor of lower life satisfaction (Nwoke et al. 2023; Vohra and Adair 2000). This finding was observed for immigrants who consciously decided to move and those who did not have control over the decision (Nwoke et al. 2023).

Table 1 Baseline Demographic and Characteristics of Depression During Pandemic for Immigrant Population

Variable	Minimal or mild N = 66 (70.22%)	Moderate or severe N = 28 (29.78%)	Total (%) N = 94 (100%)	p value
Gender				
Male	31 (46.97)	17 (60.71)	48 (51.06)	0.22
Female	35 (53.03)	11 (39.29)	46 (48.94)	
Age (Years)				
< 30 years	37 (56.06)	17 (60.71)	54 (57.45)	0.67
≥ 30 years	29 (43.94)	11 (39.29)	40 (42.55)	
Immigrant Countries				0.03*
Immigrants from countries of war-inflicted countries	37 (56.06)	9 (32.14)	46 (48.94)	
Immigrants from stable countries	29 (43.94)	19 (67.86)	48 (51.06)	
Living Status				0.06
Own	46 (69.70)	14 (50.00)	60 (63.83)	
Rent, No payment or cash rent	20 (30.30)	14 (50.00)	34 (36.17)	
Annual Household Income				0.01*
< \$65,000	28 (42.42)	20 (71.43)	48 (51.06)	
≥ \$65,000	38 (57.58)	8 (28.57)	46 (48.94)	
Overall Health				0.0006**
Excellent/Very Good	52 (78.79)	12 (42.86)	64 (68.09)	
Good/Fair/Poor	14 (21.21)	16 (57.14)	30 (31.91)	
Self-Reported Depression				0.07
Yes	10 (15.38)	8 (32.00)	18 (20.00)	
No	55 (84.62)	17 (68.00)	72 (80.00)	
Smoke				0.0006**
Yes	14 (21.21)	16 (57.14)	30 (31.91)	
No	52 (78.79)	12 (42.86)	64 (68.09)	
Drink Alcohol				0.14
Yes	14 (21.21)	10 (35.71)	24 (25.53)	
No	52 (78.79)	18 (64.29)	70 (74.47)	
Nightmares about COVID-19	Have you had nightmares about it or thought about it when you did not want to?			
Yes	20 (30.30)	12 (42.86)	32 (34.04)	0.24
No	46 (69.70)	16 (57.14)	62 (65.96)	
Tried hard not to think about COVID-19	Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?			
Yes	20 (30.30)	10 (35.71)	30 (31.91)	0.60
No	46 (69.70)	18 (64.29)	64 (68.09)	
Difficulty doing social activities	Because of a physical, mental, or emotional condition, do you have difficulty participating in social activities such as visiting friends, attending clubs and meetings, or attending parties?			
No Difficulty	45 (69.23)	10 (35.71)	55 (59.14)	0.002*
Some Difficulty/A lot of Difficulty/ Cannot do at all	20 (30.77)	18 (64.29)	38 (40.86)	
Infected with COVID-19				0.64
Yes, tested and the result was positive	13 (20.63)	7 (25.00)	20 (21.98)	
No, tested and the result was negative	50 (79.37)	21 (75.00)	71 (78.02)	
Knowledge prevents COVID-19 Spread				0.01*
Excellent/Good	55 (85.94)	18 (64.29)	73 (79.35)	
Average/Poor/Terrible	9 (14.06)	10 (35.71)	19 (20.65)	
COVID-19 vaccination				0.20
Yes	9 (14.06)	7 (25.00)	16 (17.39)	
No	55 (85.94)	21 (75.00)	76 (82.61)	

*Significant p values *p < 0.05; **p < 0.001

Table 2 Baseline Demographic and Characteristics of Anxiety During Pandemic for Immigrant -Population

Variable	Minimal or mild N = 33 (35.11%)	Moderate or severe N = 61 (64.89%)	Total (%) N = 94 (100%)	p value
Gender				
Male	15 (45.45)	33 (54.10)	48 (51.06)	0.42
Female	18 (54.55)	28 (45.90)	46 (48.94)	
Age (Years)				
< 30 years	16 (48.48)	38 (62.30)	54 (57.45)	0.19
≥ 30 years	17 (51.52)	23 (37.70)	40 (42.55)	
Immigrant Countries				
Immigrants from countries of war-inflicted countries	19 (57.58)	27 (44.26)	46 (48.94)	0.21
Immigrants from stable countries	14 (42.42)	34 (55.74)	48 (51.06)	
Living Status				
Own	23 (69.70)	37 (60.66)	60 (63.83)	0.38
Rent, No payment or cash rent	10 (30.30)	24 (39.34)	34 (36.17)	
Annual Household Income				
< \$65,000	12 (36.36)	31 (50.82)	43 (45.74)	0.17
≥ \$65,000	21 (63.64)	30 (49.18)	51 (54.26)	
Overall Health				
Excellent/Very Good	28 (84.85)	36 (59.02)	64 (68.09)	0.01*
Good/Fair/Poor	5 (15.15)	25 (40.98)	30 (31.91)	
Self-Reported Anxiety				
Yes	5 (15.63)	17 (30.91)	22 (25.29)	0.11
No	27 (84.38)	38 (69.09)	65 (74.71)	
Smoke				
Yes	29 (87.88)	35 (57.38)	64 (68.09)	0.002*
No	4 (12.12)	26 (42.62)	30 (31.91)	
Drink Alcohol				
Yes	26 (78.79)	44 (72.13)	70 (74.47)	0.47
No	7 (21.21)	17 (27.87)	24 (25.53)	
Nightmares about COVID-19	That you had nightmares about it or thought about it when you did not want to?			
Yes	6 (18.18)	26 (42.62)	32 (34.04)	0.01*
No	27 (81.82)	35 (57.38)	62 (65.96)	
Tried hard not to think about COVID-19	That you tried hard not to think about it, or went out of your way to avoid situations that reminded you of it?			
Yes	5 (15.15)	25 (40.98)	30 (31.91)	0.01*
No	28 (84.85)	36 (59.02)	64 (68.09)	
Difficulty doing social activities	Because of a physical, mental, or emotional condition, do you have difficulty participating in social activities such as visiting friends, attending clubs and meetings, or going to parties?			
No Difficulty	27 (81.82)	28 (45.90)	55 (58.51)	0.0007**
Some Difficulty/A lot of Difficulty/ Cannot do at all	6 (18.18)	33 (54.10)	39 (41.49)	
Infected with COVID-19				
Yes, tested and the result was positive	7 (21.21)	13 (22.41)	20 (21.98)	0.89
No, tested and the result was negative	26 (78.79)	45 (77.59)	71 (78.02)	
Knowledge prevents COVID-19 Spread				
Excellent/Good	29 (87.88)	44 (74.58)	73 (79.35)	0.13
Average/Poor/Terrible	4 (12.12)	15 (25.42)	19 (20.65)	
COVID-19 vaccination				
Yes	1 (3.03)	15 (25.42)	16 (17.39)	0.006*
No	32 (96.97)	44 (74.58)	76 (82.61)	

*Significant p values *p < 0.05; **p < 0.001

Table 3 Association of Depression with Sociodemographic Characteristics, General Health, and COVID-19 for Immigrant Population

Variable	OR (95% CI)	p value
Gender		
Male	0.26 (0.04–1.44)	0.12
Female	1	–
Age		
< 30 years	2.61 (0.58–11.69)	0.21
≥ 30 years	1	–
Immigrant Countries		
Immigrants from countries of war-inflicted countries	0.08 (0.01–0.55)	0.01*
Immigrants from stable countries	1	–
Living Status		
Own	1.68 (0.34–8.38)	0.52
Rent, No payment or cash rent	1	–
Annual Household Income		
< 65,000	0.20 (0.02–1.61)	0.13
≥ 65,000	1	–
Overall Health		
Excellent, Very Good	0.07 (0.01–0.41)	0.003*
Good, Fair, Poor	1	–
Self-Reported Depression		
Yes	2.26 (0.37–13.73)	0.37
No	1	–
Smoke		
Yes	1	–
No	0.07 (0.01–0.38)	0.002*
Alcohol		
Yes	1	–
No	0.51 (0.10–2.64)	0.42
Nightmare about COVID-19		
Yes	1.12 (0.27–4.63)	0.87
No	1	–
Tried Hard not to think about COVID-19		
Yes	0.11 (0.02–0.71)	0.02*
No	1	–
Difficulty doing social activities		
No Difficulty	0.15 (0.01–0.75)	0.08
Some Difficulty/A lot of Difficulty/Cannot Do at all	1	–
Infected with COVID-19		
Yes, tested and the result was positive;	0.39 (0.05–3.26)	0.38
No, tested and the result was negative	1	–
Knowledge prevents COVID-19 Spread		
Excellent/Good	0.15 (0.02–0.95)	0.04*
Average/Poor/Terrible	1	–
COVID-19 Vaccination		
Yes	3.07 (0.51–18.43)	0.21
No	1	–

* $p < 0.05$; ** $p < 0.001$. Note. OR: Odd Ratio; CI: Confidence Interval

Table 4 Association of Anxiety with Sociodemographic Characteristics, General Health, and COVID-19 for Immigrant Population

Variable	OR (95% CI)	p value
Gender		
Male	0.97 (0.32–2.88)	0.95
Female	1	–
Age		
< 30 years	2.56 (0.76–8.63)	0.12
≥ 30 years	1	–
Immigrant Countries		
Immigrants from countries of war-inflicted countries	0.45 (0.14–1.42)	0.17
Immigrants from stable countries	1	–
Living Status		
Own	0.84 (0.26–2.77)	0.77
Rent, No payment or cash rent	1	–
Annual Household Income		
< 65,000	0.39 (0.08–1.77)	0.22
≥ 65,000	1	–
Overall Health		
Excellent, Very Good	0.28 (0.07–1.07)	0.06
Good, Fair, Poor	1	–
Smoke		
Yes	1	0.02*
No	0.22 (0.05–0.84)	
Alcohol		
Yes	1	–
No	1.30 (0.34–4.97)	0.70
Nightmare about COVID-19		
Yes	2.68 (0.77–9.35)	0.12
No	1	–
Difficulty doing social activities		
No Difficulty	0.22 (0.05–1.02)	0.05
Some Difficulty/A lot of Difficulty/Cannot Do at all	1	–
Infected with COVID-19		
Yes, tested and the result was positive	1.08 (0.23–5.02)	0.92
No, tested and the result was negative	1	–
Knowledge prevents COVID-19 spread		
Excellent/Good	0.47 (0.10–2.28)	0.35
Average/Poor/Terrible	1	–

* $p < 0.05$; ** $p < 0.001$. Note. OR: Odd Ratio; CI: Confidence Interval

In our study, it is possible that the urgency of leaving native homelands among immigrants from countries afflicted by war removes this conscious choice. Future research should evaluate whether, for MENA immigrants from less war-stricken countries where the decision to leave home countries may not be due to immediate danger, concerns beyond safety like proximity to family, discrimination, and connection to local culture affect mental health differently. Our study suggests that depression is significantly lower among immigrants from countries mildly affected from war and/or political instability,

but more research is needed to ascertain the direct cause of this difference.

In relation to this study, our previous research evaluated the perception of COVID-19-related knowledge amongst MENA people in Houston, and it was found that the 18–25 years age group reported having excellent or good knowledge of COVID-19 prevention than those 40 years and older (Zamil et al. 2022). This study showed that lower levels of anxiety were observed in those who tried not to think about COVID-19 but also in those with higher perceived knowledge. These two answers may

seem to conflict; however, future research could evaluate whether thoughts of COVID-19 that induce anxiety are based on facts about the illness, misinformation, or fear about developing an illness. This study showed no significant multivariate differences between age groups for anxiety or depression; future research could focus on examining if the relationship between negative mental health outcomes and perceived COVID-19 knowledge changes depending on age, as our previous study showed significant differences in perceived knowledge between some age groups (Zamil et al. 2022).

Although some of the characteristics examined did not display statistically significant differences with anxiety or depression, a small sample size might have influenced power to detect existing differences. Previous research has reported an association between sociodemographic factors, such as gender, and higher rates of anxiety among immigrants (Rees and Fisher 2020). The association between smoking and anxiety stresses a potential predictor for targeted culturally tailored tobacco cessation interventions and further research in this area (Table 4).

Limitations

Some limitations of this study need to be in consideration while interpreting the findings such as the cross-sectional study design as well as a relatively small sample size which may have influenced the power to detect statistical significance. The convenience sample from Houston also limits the generalizability of the study findings. Despite these limitations, these results provide valuable preliminary findings into the factors associated with anxiety and depression among the population. Future studies with larger sample sizes and stronger designs must validate these findings and provide a more comprehensive understanding of anxiety among immigrant populations.

Conclusions

Overall, the findings of this study highlighted the factors across three dimensions such as sociodemographic characteristics, general health, and COVID-19. These factors, including smoking status, country of origin, COVID-19-related factors as well as perceived health, were identified as most associated with mental health among a MENA sample group in Houston. This study offers a premise for future studies to incorporate culturally sensitive intervention among MENA immigrant community considering their unique stresses and obstacles. We hope these results will guide future attempts to address these mental health issues among immigrant population.

Abbreviations

MENA Middle Eastern and North African
GAD-7 Generalized Anxiety Disorder

PHQ-9 Patient Health Questionnaire

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Author contributions

JZ planned and write the article, BF & SY did the analysis, FA looked at the administrative aspects for data collection, SA make the revisions, and SS supervised and reviewed the article. All authors have read and approved the manuscript.

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Availability of data and materials

Data are comprised within the article.

Declarations

Ethics approval and consent to participate

The informed consent was acquired from all subjects contained in the study.

Institutional review board statement

All communication forms and survey questionnaires used in this research were approved by the Institutional Review Board (IRB, #STUDY00003078) Committee for the Protection of Human Subjects, University of Houston (UH), Houston, TX, USA. This research was conducted as per the instructions of the Declaration of United States and authorized by the Institutional Review Board (or Ethics Committee) of University of Houston (STUDY00003078, 7 July 2021).

Consent for publication

Not applicable.

Competing interests

No competing interests.

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