Depression Fallout from the Pandemic in a sample of Middle Eastern and North African (MENA) Community in Houston Texas, USA

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BACKGROUND

- The COVID-19 pandemic has the potential to increase the risk of depression in a multitude of communities.
- Middle Eastern and North African (MENA) community in the United States face additional stressors including immigration, acculturation, language barrier and political discrimination.
- The MENA community is a historically understudied and underserved population in the United States (US), due to their federal categorization as "white" on the United States Census and other standardized surveys.
- Consequently, health data specific to the MENA American community is limited due to the lack of a racial identifier to distinguish them from population studies.
- About 98,300 MENA residents reside in the Houston area (Houston Chronicle), with the majority residing in the Harris and Fort Bend counties.
- The prevalence of depression and other adverse mental health disorders in MENA Americans is unclear, and even more so during the COVID-19 pandemic.

OBJECTIVE

- The objective of this study was to assess depression, and their predictors during the COVID-19 pandemic specifically among the MENA community of Houston, Texas.

METHODS

- **Study design:** A cross-sectional study using online survey conducted both in Arabic and English between July 2021 and August 2021
- **Sample Identification:** Distributed an anonymous digital bilingual (English and Arabic) survey to the MENA community via the Houston-based 501(C)(3) non-profit organization Multi Cultural Center (MCC), Webster, TX

METHODS

Inclusion criteria:
- Adults aged 18 and older
- Self reported country of origin from 18 Middle Eastern and North African region.
- Currently residing in Houston area

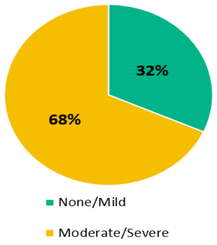
Exclusion criteria:
- MENA individuals <18
- Non-members of the MENA group
- MENA members living outside of the Houston

Data Collection
- Participants demographic data, general health perception and COVID-19 related questions

Outcome measurement
- Depression status evaluated by self-administrated 9-item Patient Health Questionnaire (PHQ-9)
- Total scores range from 0 to 27 scale

Statistical Analysis
- Descriptive statistics
- Multivariable logistic regression model:
  - Outcome: "none/mild" versus "moderate/severe" depression
  - A cutoff (score ≥ 10) "moderate/severe" depression
- SAS version 9.4 (SAS Institute, Cary, NC)

Figure 1. Percent distribution of severity of depression



Frequency (%)
- Total Sample: 368 (100%)
- Moderate/Severe: 117 (31.79%)
- None/Mild: 251 (68.20%)

RESULTS

Table 1. Baseline characteristics of study participants

Variable	None/ Mild	Moderate/Severe	Total(%)	P-value
Gender				
Male	167 (66.53)	76 (64.96)	243 (66.03)	0.76
Female	84 (33.47)	41 (35.04)	125 (33.97)	
Age (Years)				
18-25	68 (27.09)	19 (16.24)	87 (23.64)	0.06
26-39	160 (63.75)	88 (75.21)	248 (67.39)	
≥40	23 (9.16)	10 (8.55)	33 (8.97)	
Education				
High school or less	37 (14.74)	13 (11.11)	50 (13.59)	0.58
Some college or associate degree	64 (25.50)	37 (31.62)	101 (27.45)	
College degree	123 (49)	55 (47.01)	178 (48.37)	
Graduate degree	27 (10.76)	12 (10.26)	39 (10.60)	
Marital Status				
Married/living with a partner	182 (72.51)	90 (76.92)	272 (73.91)	0.37
Never married/Divorced/Separated/Other	69 (27.49)	27 (23.08)	96 (26.09)	
Living Status				
Own	182 (72.51)	71 (60.68)	253 (68.75)	0.02*
Rent	69 (27.49)	46 (39.32)	115 (31.25)	
Income				
>$45,000	106 (42.23)	47 (40.17)	153 (41.58)	0.26
$45,000 to >$65,000	60 (23.90)	37 (31.62)	97 (26.36)	
≤$65,000	85 (33.86)	33 (28.21)	118 (32.07)	
Religion				
Christian	95 (37.85)	31 (26.50)	126 (34.24)	0.06
Muslim	129 (51.39)	67 (57.26)	196 (53.26)	
Jewish/Hindu/Buddhist /Atheist/Other	27 (10.76)	19 (16.24)	46 (12.50)	

* Statistically significant difference

Table 2. Multivariate logistic regression model

Variables	Moderate/Severe vs None/Mild Depression	
	OR (95% CI)	P-Value
Self-reported depression		
Yes	3.41 (1.32-8.25)	0.01*
No	Reference	
Tried hard not to think about COVID		
Yes	5.17 (2.02-13.18)	<0.001*
No	Reference	
Difficulty doing errands		
No Difficulty	0.09 (0.02-0.48)	0.004*
Some difficulty	0.22 (0.07-0.66)	0.007*
A lot of difficulty/cannot do at all	Reference	
Knowledge prevent COVID spread		
Excellent/good knowledge	0.36 (0.14-0.92)	0.03*
Average/poor/terrible	Reference	
Avoiding COVID infection		
Extremely easy, somewhat easy	0.63 (0.18-2.14)	0.46
Neither Easy nor difficult	4.20 (1.10-15.59)	0.03*
Somewhat difficult/extremely difficult	Reference	

* Statistically significant difference
- Demographic, General health and other Covid-19 related variables were not significant.

CONCLUSIONS

- This study identified predictors of depression in a sample of MENA immigrants residing in the Houston area.
- Prevalence of depression in communities can adversely impact COVID-19 prevention strategies, such as vaccination uptake, which can pose as a significant precursor to community spread.
- Findings of this study suggest incorporating more targeted, culturally appropriate and language tailored educational and public health initiatives in Houston for outreach in the MENA community during the COVID pandemic.

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