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Middle Easterners Immigrants: The Relationship between Depression, Positive Thinking, Personal and Social Resourcefulness

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Abstract

Middle Easterners are one of the most growing immigrant groups in the US. First generation Middle Eastern Immigrants (MEI) are facing multiple stressors from language barriers to alienation and culture shock, which can have numerous negative consequences on their physical and mental health. The purpose of this study is to test the mediating effects of positive thinking on the relationship between the two predictors generalized anxiety disorders and depressive cognitions and the two outcomes: personal and social resourcefulness. The results of this study showed that positive thinking has a negative correlation with depressive cognition and a positive correlation with personal and social resourcefulness. It also showed that positive thinking has mediating effects on personal resourcefulness. Despite the adversity that MEI face and endure, they have the potential to grow into stronger persons if they are provided with the resources and help needed to thrive.

Keywords: Depression; Immigrants; Middle Easterners; Positive Thinking; Resourcefulness

Introduction

Middle Easterners are one of the most growing immigrant groups in the US. There are approximately 3.7 million middle eastern immigrants living in the US; their number has more than doubled since the year 2000, where they were approximately 1.8 million [1]. Middle Easterners are relocated to the US for a variety of reasons including, but not limited to, better education, economy, and better quality of life. As Camarota pointed out "Middle Eastern countries have found it exceedingly difficult to provide gainful employment for the large number of young people reaching working-age each year. Thus, out-migration pressures over the next decade are likely to be at least as high as they were in the 1990s". Despite their fast-growing pace, research on Middle Eastern population in the US is very limited [1,2]. First generation middle eastern immigrants are facing multiple stressors from language barriers to alienation, social isolation, and culture shock, which can have numerous negative consequences on their physical and mental health and make them prone to depression [3,4]. Without a doubt, The coronavirus pandemic added to their suffering and impacted not only the physical but also the mental health of middle eastern immigrants [5,6]. In a recent study that measured the impact of the pandemic on middle eastern immigrants' mental health, one of the identified themes as a risk factor was "loneliness and isolation". One participant indicated that she went through a tough time during the pandemic when she had to isolate herself from family and friends during Ramadan season. Another participant indicated that attending funerals and other significant events over virtual platforms, was stressful as there was no personal contact in a much-needed times of grief and healing and that many more people were struggling with mental health and loneliness [5]. Anxiety and depression are on the rise among Middle Eastern immigrants, and it is vital to detect and treat early depressive thoughts that precede the development of clinical depression and suicide.

Resilience theory was used as a theoretical framework for this study. Resilience has been defined as "the process of coping with adversity, change, or opportunity in a manner that results in the identification, fortification, and enrichment of resilient qualities or protective factors." [7]. Although resilience definitions might vary across literature, they all share the characteristics of overcoming adversity, not only to survive but to grow into a healthier and a stronger person. Two critical conditions are vital for resilience to occur: (1) exposure to adversity, and (2) the achievement of positive adaptation despite the adversity [8]. Resilience is the interaction between risk and protective factors in face of challenging situations [9,10].

Risk factors are factors that can impact one's coping in a negative way, expose the person to stress, and can have negative physical and psychological consequences [11,12]. Protective factors can buffer the impact of risk factors and can impact health positively and promote resiliency [11,13]. Risk factors among first generation MEI including language barriers, loneliness, culture shock, and home sickness [2,14]. Migration also can impact social bonds of the Middle eastern immigrants and can lead to anxiety and clinical depression [14].

Positive thinking was conceptualized as a protective factor in this study. Positive thinking is a cognitive process that helps people stay optimistic and raises their ability to solve their problems more efficiently. Positive thinking involves having a general positive outlook on life and it has been vital in helping people to cope with adverse life situations and overcome their depression [9,15].

Resourcefulness are self-control skills that are vital in learning to cope with adverse life situations. Personal resourcefulness refers to self-help and social resourcefulness refers to seeking help from others when one is unable to manage life circumstances alone. Resourcefulness has been linked to better quality of life, less depressive symptoms, and an overall enhanced physical and psychological health [16,17]. Resourcefulness has been associated with a positive correlation with positive thinking, and a negative correlation with depressive symptoms [18,19,20].

The purpose of this study is to test the mediating effects of positive thinking on the relationship between the two predictors generalized anxiety disorders and depressive cognitions and the two outcomes: personal and social resourcefulness.

Methods

Design: This is a secondary analysis of a cross-sectional descriptive design [2].
Sample: The sample included one hundred first generation middle eastern immigrants aged 18 and older. No potential participants were excluded on the basis of gender or socioeconomic status.
Data Collection Procedure: The IRB-approved flyers were distributed at the religious affiliations (churches and mosques) with the contact information of the research assistants. Interested Participants filled out the questionnaires on an agreed upon time either before or after the religious services and they received a $15 gift cards to thank them for their time.

Variables and Measures

Generalized Anxiety Disorder (GAD-7) is a self-report questionnaire that can be used to screen and measure the severity of generalized anxiety disorder. It consists of seven items with responses on a 4-point Likert scale, ranging from 0 "not at all sure" to 4 "nearly everyday". The scale is reliable as indicated by a Cronbach's alpha of .92. Test-retest reliability was also supported by intraclass correlation of 0.83.

Depressive cognitions was measured by Depressive Cognition Scale (DCS). The scale consists of eight items on a six-point Likert scale range from 0 to 40 [21]. Reliability of the scale was indicated by Cronbach's alphas ranging from .75 to .87 [22,23]. Construct validity was indicated by correlations with measures of burden and resourcefulness, (rs = .40, -.65 respectively). Confirmatory factor analysis yielded a single factor that explained 48% of the variance [23]. Reliability and validity of the Arabic version DCS (A-DCS) was also supported by a Cronbachs alpha between .86 and .89 in First-Year Adolescent Egyptian Nursing Students and Egyptian older adults respectively [24,25]. Construct validity was also evidenced for the (A-DCS) as indicated by a strong correlation with a total score of the Alienation Scale scores in the expected direction (r = -.51, p < .01). Like the English version, the factor extraction produced only one factor that explained 49.95% of the variance in the items of the scale [24].

Resourcefulness was measured by the Resourcefulness Scale (28 items), which measures both personal resourcefulness (16 items) and social resourcefulness (12 items). The items are on a six- point Likert scale ranging from 0 = extremely- non descriptive to 5 = extremely descriptive. The scale is reliable as indicated by a Chronbach's alpha of .85. The substantial intercorrelations between the two factors (personal and social resourcefulness) further supported the scale's construct validity [26].

Positive thinking was measured by the 8-item Positive Thinking Skills Scale (PTSS) [27]. It consists of 8 positive thinking skills items with responses on a 4-point Likert scale, ranging from 0 = never to 3 = always. Scores may range from 0 to 24 with higher scores indicating more frequent use of positive thinking skills. The PTSS was found to be internally consistent (α = 0.90). Construct validity was supported by significant correlations with positive cognitions (r = 0.53), resourcefulness (r = 0.63), depression (r = −0.45), and general wellbeing (r = 0.40) in the expected directions [27].

Data Analysis

The data analysis was done using R [28]. The data analysis approach used was the Structural Equation Modeling (SEM), with the R package lavaan [29]. This framework reduces measurement error and allows a more precise measure estimates of the latent factor underlying the scale items [30,31]. As presented by Raykov [32], the SEM framework presents beneficial conditions to develop and test scales, such as evaluation of multidimensional structures, correlations between constructs, evaluation of multiple reliability measures, and correction for measurement error.

Since all the items of the different scales are answered in an ordered Likert scale, items were treated as ordered categorical instead of continuous, treating them as continuous would represent a misspecification of the model. The Categorical Confirmatory Factor Analysis (CFA) approach that analyze the data in function of the polychoric correlation between ordered items was used. This correlation assumes that there is an unobserved underlining variable that accounts for the ordered response [33]. For the CFA, data were analyzed with the Diagonal Weighted Least Square (DWLS) estimator, with mean and variance adjusted standard errors and chi-square statistic; this approach has shown to present reliable parameter estimates and model fit without the requirement of extremely large samples [33].

Reliability was evaluated with multiple indices, including the most common estimate of Cronbach's coefficient alpha. Some limitations of using α alone include underestimating or overestimating, which makes it a mis-estimator. This is due to how α approximates reliability in function of inter item correlation [32,34]. Due to the known limitations of α, we present two improved estimates of reliability. First, hierarchical ω [35] which is a conservative estimate; and second the Maximal Reliability (MR) coefficient. MR estimates the reliability of a scale assuming items have a different weight into it. MR is the maximal possible reliability for a linear combination of the scale items. MR involves the estimation of the Optimal Linear Combination (OLC), which are the weights for each item [32,36]. Lastly, these estimates of construct reliability are presented with their respective. MR, α, and ω, are estimated with the R package semTools [37].

Measurement Model

The theoretical factorial structure of the scales was assessed first using CFA. The model was evaluated with the multiple approximate fit indices Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and gamma-hat [30,31,38,39]. These fit indices look at the overall model fit, while the model might have local fit issues. To evaluate local fit, residual correlations and modification indices were used [30]. The model was modified in function of local fit when the change represented a meaningful improvement, and it can be deemed theoretically relevant. The theoretical structure is as follows, one factor for the Positive Thinking scale (PT), one factor for the Depressive Cognition scale (DC), one factor for the Generalized Anxiety Disorder scale (GAD), and two factors for the resourcefulness scale Personal (PR) and Social (SR). For a total of five correlated factors.

Mediation Model

The mediation model estimated the direct and indirect effects simultaneously in a comprehensive model. For the appropriate estimation of the indirect effects, Monte-Carlo simulation method was used as a resampling method [40,41,42]. The indirect, total, and difference between effects are tested by creating an empirical distribution of them based on the Monte-Carlo resamples, these empirical distributions are tested against the null hypothesis value of 0, the inferences are made in function of the 95% Confidence Intervals of the resamples. The model was estimated with 20000 Monte-Carlo samples, and the Confidence Intervals (CI) are presented to test the null hypothesis.

Once the factorial structure has been established, we are able to test the mediation relations between factors. This model includes two predictors (GAD and DC), one mediator (PT), and two outcomes (PR and SR). The indirect effects are defined as the product of the slopes of the predictors on the mediator (a parameters), and the slope from the mediator on each outcome (b parameters). The direct effect from each predictor is defined as the slope from the predictor on the outcome controlling for the mediator effect (c' parameters). Finally, the total effect of each predictor on each outcome is defined by the addition of the indirect effect and the direct effect.

Results

Measurement Model

The initial measurement CFA presented good overall fit in RMSEA but presented issues on CFI and gamma-hat ($\chi^2(1214)$ = 1591.661, RMSEA = 0.057 [90% CI = 0.049, 0.065], CFI = 0.878, gamma-hat = 0.867). Based on this, local fit modifications were considered and showed that some modifications would represent meaningful improvement in the model. Several resourcefulness items required to have a cross-loading with the Depressive Cognition factor (RS26, RS14, RS19, RS10, RS17), one personal resourcefulness item (RS13) presented the need to have a cross-loading with the social resourcefulness factor; indicating that these items measure unique characteristics of both factors, instead of uniquely measure one characteristic at a time. The final modification is the residual correlation between the items RS24 ↔ RS25, indicating that there are elements in common between these two items above and beyond what is related to the respective social resourcefulness factor (r = 0.644, p < 0.001).

Once these modifications were done, the model presented good overall and local fit measures ($\chi^2(1207) = 1409.257$, RMSEA = 0.042 [90% CI = 0.031, 0.051], CFI = 0.935, gamma-hat = 0.924). To test if the added parameters represent a meaningful overall improvement in the model, we did a nested model comparison ($\Delta\chi^2(7) = 122.2$, $p < .001$), which presented that the seven added parameters improved the overall model fit. (Table 1) presents the factor loadings for the measurement model; the null hypothesis of the factor loading being equal to 0 for one factor loading was rejected (item RS13 on personal resourcefulness). The factor loadings (absolute value) mean across items is 0.662, with a standard deviation of 0.162, with a range between 0.132 to 0994. Looking at the R^2; it ranges between 0.120 to 0.989, with mean of 0.506 and standard deviation of 0.179. This indicates that the items are representative of the underlying factors and the factors predict 50.6% of the variance in the items.

	Factor/item #	Estimate (SE)	p-value	95% CI	R^2
Positive Thinking					
	PT1	0.760 (0.053)	<.001	0.657, 0.864	0.578
	PT2	0.812 (0.058)	<.001	0.699, 0.925	0.659
	PT3	0.700 (0.059)	<.001	0.584, 0.817	0.491
	PT4	0.703 (0.054)	<.001	0.598, 0.808	0.494
	PT5	0.613 (0.070)	<.001	0.476, 0.750	0.376
	PT6	0.783 (0.045)	<.001	0.694, 0.871	0.612
	PT7	0.938 (0.030)	<.001	0.879, 0.997	0.88
	PT8	0.794 (0.049)	<.001	0.697, 0.891	0.631
Depressive Cognition					
	DCS1	0.745 (0.057)	<.001	0.633, 0.857	0.555
	DCS2	0.861 (0.048)	<.001	0.766, 0.955	0.741
	DCS3	0.714 (0.065)	<.001	0.586, 0.842	0.51
	DCS4	0.815 (0.050)	<.001	0.717, 0.912	0.664
	DCS5	0.867 (0.058)	<.001	0.753, 0.981	0.751
	DCS6	0.662 (0.068)	<.001	0.530, 0.795	0.439
	DCS7	0.966 (0.025)	<.001	0.916, 1.016	0.933
	DCS8	0.888 (0.033)	<.001	0.824, 0.953	0.789
	RS26	-0.556 (0.080)	<.001	-0.714, -0.399	
	RS14	-0.496 (0.076)	<.001	-0.644, -0.347	
	RS19	-0.404 (0.084)	<.001	-0.568, -0.240	
	RS10	-0.368 (0.068)	<.001	-0.500, -0.236	
	RS17	-0.462 (0.125)	<.001	-0.706, -0.217	
Generalized Anxiety Disorder					
	GAD1	0.749 (0.079)	<.001	0.594, 0.904	0.561
	GAD2	0.995 (0.049)	<.001	0.900, 1.090	0.989
	GAD3	0.756 (0.062)	<.001	0.634, 0.878	0.571
	GAD4	0.775 (0.084)	<.001	0.611, 0.940	0.601
	GAD5	0.641 (0.079)	<.001	0.486, 0.796	0.411
	GAD6	0.721 (0.067)	<.001	0.590, 0.851	0.519
	GAD7	0.779 (0.068)	<.001	0.645, 0.913	0.607
Social Resourcefulness					
	RS4	0.579 (0.075)	<.001	0.433, 0.726	0.336
	RS5	0.545 (0.070)	<.001	0.407, 0.682	0.297
	RS8	0.597 (0.080)	<.001	0.440, 0.755	0.357
	RS10	0.805 (0.054)	<.001	0.699, 0.910	0.671
	RS12	0.698 (0.061)	<.001	0.579, 0.818	0.488
	RS14	0.553 (0.074)	<.001	0.408, 0.698	0.448
	RS19	0.398 (0.088)	<.001	0.225, 0.571	0.261
	RS20	0.652 (0.065)	<.001	0.525, 0.780	0.426
	RS24	0.523 (0.075)	<.001	0.375, 0.671	0.274
	RS25	0.619 (0.064)	<.001	0.493, 0.746	0.384
	RS26	0.481 (0.070)	<.001	0.343, 0.619	0.439
	RS27	0.835 (0.057)	<.001	0.723, 0.948	0.698
	RS13	0.553 (0.080)	<.001	0.397, 0.709	
Personal Resourcefulness					
	RS1	0.617 (0.068)	<.001	0.485, 0.750	0.381
	RS2	0.347 (0.087)	<.001	0.177, 0.517	0.12
	RS3	0.597 (0.066)	<.001	0.468, 0.727	0.357
	RS6	0.771 (0.053)	<.001	0.668, 0.875	0.595
	RS7	0.732 (0.054)	<.001	0.625, 0.839	0.536
	RS9	0.722 (0.048)	<.001	0.627, 0.817	0.521
	RS11	0.642 (0.070)	<.001	0.505, 0.778	0.412
	RS13	0.132 (0.091)	0.149	-0.047, 0.311	0.416
	RS15	0.663 (0.070)	<.001	0.527, 0.799	0.439
	RS16	0.505 (0.081)	<.001	0.345, 0.664	0.255
	RS17	0.650 (0.105)	<.001	0.445, 0.855	0.256
	RS18	0.657 (0.065)	<.001	0.531, 0.784	0.432
	RS21	0.653 (0.056)	<.001	0.542, 0.763	0.426
	RS22	0.707 (0.055)	<.001	0.599, 0.814	0.499
	RS23	0.662 (0.061)	<.001	0.543, 0.781	0.439
	RS28	0.528 (0.080)	<.001	0.371, 0.684	0.278

Table 1: Factor loadings for the measurement model.

(Table 2) presents the correlation between factors; we reject the null hypothesis of the correlation being equal to 0 for all except one of them (GAD ↔ SR). PT has a negative relation with DC and a positive correlation with SR and PR. DC has a negative relation with SR and PR. GAD has a negative relation with all the other factor except the DC. SR and PR have a positive relation.

	PT	DC	GAD	SR	PR
PT	1				
DC	-0.523*	1			
GAD	-0.522*	0.447*	1		
SR	0.274*	-0.190*	-0.154	1	
PR	0.684*	-0.633*	-0.518*	0.634*	1
			* p < .05		

Table 2: Factor correlations for the measurement modeling.

Reliability estimates (Table 3) shows that the factors present high reliability estimates. With ω ranging from 0.877 to 0.896, and MR ranging from 0.896 to 0.981, indicating the items are good representation for the underlying factors. Overall, the measurement model indicates that it is a plausible data generating model for the data.

	PT	DC	GAD	SR	PR
α	0.914	0.891	0.909	0.874	0.898
ω	0.892	0.896	0.892	0.877	0.885
MR	0.913	0.981	0.896	0.892	0.921

Table 3: Reliability measures.

Mediation Model

As we have established the measurement model is a good representation of the data, the mediation model was tested as a possible representation of the relations between factors. A mediation partition the regression effect between direct and indirect effects, in this model we have 2 predictors (GAD and DC), one mediator (PT), and two outcomes (SR and PR). (Table 4) presents the mediation model results, for the direct effects we reject the null hypothesis os the regression being equal to 0 for the relation from predictors to mediator (GAD → PT and DC → PT), which predict 37.7% (R^2 = 0.377) of the variance in PT. Also reject the null for the relation of positive thinking and depressive cognition of personal resourcefulness (PT → PR and DC → PR). We fail to reject the null hypothesis for all the relations to social resourcefulness.

Direct effects	label	b (SE)	95% CI	β
GAD → PT	a1	-0.456 (0.127)	-0.705, -0.208	-0.36
DC → PT	a2	-0.458 (0.149)	-0.750, -0.166	-0.362
PT → SR	b1	0.198 (0.112)	-0.022, 0.418	0.241
PT → PR	b2	0.529 (0.130)	0.274, 0.783	0.431
GAD → SR	c1'	-0.0001 (0.122)	-0.239, 0.239	-0.0001
GAD → PR	c2'	-0.215 (0.144)	-0.497, 0.067	-0.139
DC → PR	c3'	-0.538 (0.157)	-0.846, -0.230	-0.346
DC → SR	c4'	-0.066 (0.140)	-0.341, 0.209	-0.064
Indirect effects				
GAD → PT → SR	a1*b1	-0.090 (0.058)	-0.225, 0.009	-0.087
GAD → PT → PR	a1*b2	-0.241 (0.096)	-0.459, -0.079	-0.155
DC → PT → SR	a2*b1	-0.091 (0.058)	-0.224, 0.009	-0.087
DC → PT → PR	a2*b2	-0.242 (0.086)	-0.426, -0.083	-0.156
Total effects				
GAD → SR	a1*b1+c1'	-0.090 (0.120)	-0.328, 0.144	-0.087
GAD → PR	a1*b2+c2'	-0.457 (0.132)	-0.719, -0.197	-0.294
DC → SR	a2*b1+c4'	-0.157 (0.127)	-0.402, 0.103	-0.151
DC → PR	a2*b2+c3'	-0.780 (0.165)	-1.099, -0.452	-0.502

Table 4: Mediation model effects.

In the case of the indirect effects, we reject the null hypothesis for the indirect effects of the predictors (GAD and DC) on Personal resourcefulness through the mediator of positive thinking. We fail to reject the indirect effects on social resourcefulness. This is reflected in the same way for the total effects, as we reject the null hypothesis of the relation from predictors to personal resourcefulness and fail to reject it for social resourcefulness. The mediation model explains 7.8% (R^2 = 0.078) of the variance in social resourcefulness and explains 58.6% (R^2 = 0.586) for personal resourcefulness.

As GAD increases PT decreases, and as PT increases PR increases as well. While for DC, as it increases PT decreases, and as PT increases PR increases. As GAD increase 1 unit, PR decreases 0.457 units (total effect), of which 0.241 of the decrease effects is through PT. As DC increases by 1 unit, PR decreases by 0.780 units (total effect), of which 0.242 of the effect is through PT.

Discussion

To date, this is the first study that measured the mediating effects of positive thinking on the relationship between the two predictors generalized anxiety disorders and depressive cognitions and the two outcomes personal and social resourcefulness among Middle Eastern immigrants. The results show that the factors predict 50.6% of the variance in the scale items.

The results of this study showed that positive thinking has a negative correlation with the depressive cognition scale and a positive correlation with personal and social resourcefulness. The results of this study are similar, in part with the previous studies that showed that depression has a negative correlation with positive thinking, personal, and social resourcefulness in a sample of 109 caregivers of persons with autism spectrum disorder [18]. Also, the current results are consistent with the results of a previous study that showed that resourcefulness correlated negatively with both depressive symptoms and self-harm behaviors in adolescents [19]. Also, the results are similar to previous results that showed that depressive symptoms correlated negatively with greater subjective support and higher resourcefulness in grandchildren [43].

The results of the current study also indicated that depression has an effect on personal resourcefulness through positive thinking; indicating that positive thinking has mediating effects on personal resourcefulness. The results are in accordance with previous research that showed positive thinking has mediating effects on personal resourcefulness in caregivers of persons with ASD [18]. Also, similar to the previous research results that showed that positive cognitions has mediating effects on resourcefulness among caregivers of persons of persons with dementia and among caregivers of persons with serious mental illness respectively [44,45].

The study has some limitations. First, the use of convenience sample of middle eastern immigrants limits the generalizability of the study findings across all MEI. Second, this is a secondary analysis of a cross sectional parent study which did not allow the researchers to assess positive thinking and resourcefulness variables overtime. Although the study has limitations, implications of practice can be deducted. The results of this study indicated that MEI could benefit from a positive thinking training intervention that has the potential to positively impact their personal and social resourcefulness and decrease their levels of depression. The positive thinking training intervention can help participant to interrupt pessimistic thoughts and to reframe the situation positively [27,46]. Future longitudinal study might be needed to see the impact of the intervention overtime. The results showed as depressive cognition and generalized anxiety decreases, positive thinking and personal resourcefulness increase. In summary, resilience is the interaction between risk and protective factors in face of adversity. Despite the adversity that MEI face and endure during the pandemic, they have the potential to grow into stronger persons if we provided them with the resources and help needed to thrive.

Acknowledgement

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