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## Gender As Mediator in the Relationships between National Belongingness, Family Cohesion Adaptation, and Mental Resilience



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### النوع كمتغير معدل للعلاقة بين الانتماء للوطن والتماسك والتكيف الأسري والمرونة العقلية

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### Abstract

This study aimed to investigate the relationships between national belongingness and family cohesion and adaptation and mental resilience, and to test a moderating effect of gender. Participants were invited via Email, Facebook and WhatsApp to participate in the study. The cross-sectional sample in the study was made up of 1,716 participants (63.7% females), with a mean age of 29.2 years (SD=10.33 years). The questionnaire included three main scales: the Mental Flexibility Inventory scale, the Family Adaptation and Cohesion scale, and the National Belongingness scale – as well as the demographics. Independent t-tests were computed to examine gender differences. Path analyses were used to determine the associations between the variables and to test the moderation of gender. Results showed that females had greater mental resilience and family cohesion than males, and males reported greater family adaptation than females. In terms of associations, a sense of national belongingness was positively related to mental resilience, family cohesion predicted better resilience, and a moderating effect of gender was observed. The study recommended that interventions to increase family cohesion and adaptation, national belongingness, and mental resilience in people should be gender directed.

**Keywords:** Security Studies, Country belongingness, Family cohesion, Family adaptation, Mental resilience, Saudi adults.

### المستخلص

هدفت الدراسة إلى التحقق من العلاقات بين كل من الانتماء للوطن، والتماسك والتكيف الأسري، والمرونة العقلية، بالإضافة إلى فحص تأثير النوع كمتغير معدل لهذه العلاقات. وقد تمت دعوة المشاركين عبر البريد الإلكتروني والفيس بوك والواتس أب للمشاركة في الدراسة، وتكونت عينة الدراسة من عينة مقطعية من (1716) من السعوديين بمتوسط عمري 29.2 وانحراف معياري قدره 10.33 سنة، طُبّق عليهم ثلاثة مقاييس هي مقياس المرونة العقلية، ومقياس التكيف والتماسك الأسري، ومقياس الانتماء للوطن. وتم استخدام تحليل المسار للتعرف على العلاقات بين المتغيرات، وللتحقق من دور النوع كمتغير مُعدل للعلاقة بين المتغيرات.

وتوصلت النتائج إلى وجود فروق جوهرية بين الذكور والإناث لصالح الإناث في كل من المرونة العقلية والتماسك الأسري، في حين كانت الفروق لصالح الذكور في التكيف الأسري. كما توصلت إلى وجود علاقة ارتباطية موجبة بين الانتماء للوطن والمرونة العقلية، وتنبؤ التماسك الأسري بالمرونة العقلية، ووجد تأثير مُعتدل للنوع على العلاقات بين المتغيرات. وأوصت الدراسة بضرورة مراعاة النوع الاجتماعي في تدخلات تعزيز كل من التماسك والتكيف الأسري، والانتماء للوطن والمرونة العقلية.

**الكلمات المفتاحية:** الدراسات الأمنية، الانتماء للوطن، التماسك الأسري، التكيف الأسري، المرونة العقلية، السعوديون.

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## 1. Introduction

People encounter many challenges in everyday life. These challenges include illnesses, accidents, injuries, catastrophes, and unexpected events. Consider for example the current COVID-19 pandemic that is ravaging the world; it is threatening in many ways. Yet, there are individuals that recover and exhibit greater resilience, adapting to these various life challenges (Jones & Jetten, 2011). Among the factors that contribute to resilience, belongingness has received substantial attention in the literature (Jones & Jetten, 2011; Scarf et al., 2016), but few studies, if any, have been conducted on the Saudi population.

In his theory of hierarchy of needs, Maslow (1968) placed the needs of love and belongingness in the middle, between basic needs and needs for self-actualization. The attachment theory has emphasized the need to make and maintain relationships (Bowlby, 1969). A sense of belonging was also claimed essential for human experience and motivation (Baumeister & Leary, 1995). Even back in the stone age, belonging to a specific group was a strategy used for survival (Buss, 2012). It is practically impossible not to belong to a group, and in the modern world, we tend to be members of many different groups, and social identities are defined within these groups (Khayat, 2020). Yet, there is lack of empirical evidence on how national belongingness might be related to mental resilience of individuals.

Others have argued that social identities are made in the process of socialization and socialization first occurs in the family, because people are born and raised within a family context. They have also argued that family can still have an influence in adulthood (Cohen-Scali, 2003). Therefore, values and norms learned in the family are essential parts of national belongingness. For example, Khayat (2020) argued that respecting Saudi norms and values implies respecting family norms and values. These norms and values are

transmitted from one generation to another through family cohesion. For instance, people from families with increased family cohesion view their families as moral authorities (White, 2000). Family cohesion along with adaptation are indicators of family functioning, which defines belongingness and thereby confers norms and values to family members. Individuals might then derive resilience from cohesive families because of the bonds they are able to make and because of the quality time they spend together (Lehto, Lin, Chen, & Choi, 2012). Yet, few studies have investigated how perceived family cohesion and adaptation are related to mental resilience in a Saudi Arabian context, as each country has its own norms and values (Khayat, 2020).

These norms and values are gender-sensitive in many cultures. For instance, traditional values are somewhat unfavorable to women in some countries, including the Kingdom of Saudi Arabia (Khayat, 2020). For example, when considering some laws, women hold an unfavorable position in comparison to men (Vidyasagar & Rea, 2004). Moreover, The Global Gender Gap Report 2018 estimated that females represented only 12% in parliament and less than 17% in the workplace, despite the efforts made to reach gender equality since the last decade. This might place women in a position where their sense of belongingness to a country differs in one way or another from that of men. This is also true for their perceptions of family cohesion and adaptation, since country norms and values are inseparable from family values and norms (Vidyasagar & Rea, 2004). Thus, it is possible that the relationship between national belongingness, family cohesion and adaptation and resilience is moderated by gender and yet, no studies have addressed this in the context of Saudi Arabia. One study investigated how national belongingness was associated with needs satisfaction, as mediated by family cohesion among Saudi females (Khayat, 2020). However, they limited the sample to



women, which prevented them from making comparisons with men.

### **Problem statements**

1. Are there any gender differences in national belongingness, family cohesion and adaptation, and mental resilience among Saudi adults?
2. What is the relationship between national belongingness and mental resilience among Saudi adults?
3. What is the relationship between family cohesion and adaptation and mental resilience among Saudi adults?
4. Does gender moderate the relationships between national belongingness, family cohesion and adaptation and mental resilience among Saudi adults?

### **Importance of the study**

A sense of belonging can offer psychological resources that help buffer everyday stressors. Furthermore, family cohesion and adaptation strengthen the bonds between family members, which might increase mental resilience of family members. Moreover, females and males may perceive the availability of these resources very differently. It is therefore important to investigate gender differences in national belongingness, family cohesion and adaptation, and mental resilience indicators. It is also important to investigate how national belongingness and family cohesion and adaptation are related to mental resilience and how this is moderated by gender among Saudi people. In addition, there is lack of empirical studies that have addressed these differences and associations in Saudi Arabia.

### **Study objectives**

The objectives of the study were threefold: 1) To investigate gender differences in national belonging-

ness, family cohesion and adaptation, and mental resilience in Saudi Arabia, 2) To investigate the relationships between national belongingness and family cohesion and adaptation and mental resilience and 3) To investigate the moderation effect of gender in these relationships.

### **Study terminologies**

#### • National Belongingness

The field of psychology has long conceptualized belongingness as a fundamental drive for people's well-being. national belongingness, which is a national identity, is defined by Huddy and Khatib (2007) as the sense of attachment to a country, which is one of the social identities with shared values and beliefs.

National belongingness is defined procedurally as the degree to which the participant scores on the Belonging to Homeland Scale (El Keshky, in press).

#### • Family Cohesion and Adaptation

##### - **Family cohesion**

Family cohesion can be defined as the degree of togetherness and closeness between family members as well as the support that family members provide to one another (Moos & Moos, 1986).

##### - **Family adaptation**

Family adaptation refers to the ability of family systems to adapt and adjust to changes in the life cycle of the family (Franklin, Streeter, & Springer, 2001).

Family cohesion and adaptation are defined procedurally as the degree to which the participant scores on the Family Adaptation and Cohesion Scales (Olson, Portner, & Lavee, 1985).

#### Mental Resilience

Resilience can be defined as the ability to get back to normal psychological functioning after exposure to stressors (Johnston et al., 2015). Mental resilience can



also be defined as cognitive flexibility, which is the ability to take challenging situations as controllable, the ability to find several alternative reasons for life events and human behavior, and the ability to produce diverse alternative solutions to challenging situations (Shareh, Farmani, & Soltani, 2014).

Mental Resilience is defined procedurally as the degree to which the participant scores on the Cognitive Flexibility Inventory (Dennis & Vander Wal, 2010).

### 1.1 Literature review

Although few studies have investigated the associations between national belongingness and mental resilience, some reported the benefits of a sense of belonging. A study investigated the benefits of neighborhood and national belongingness on the wved neighborhood and national belongingness were associated with increases in the subjective well-being of people. A sense of belonging was found to facilitate interactions between international and domestic students and increased their academic achievement (Glass & Westmont, 2014). The other way around was also reported. Academic achievement was positively associated with a sense of belonging to society, neighborhood and school (Cheung, Cheung, & Hue, 2017). A sense of belongingness can also mitigate negative outcomes. Among domestic and international college students, family and campus belongingness were negatively associated with suicidal ideation (Servaty-Seib, Lockman, Shemwell, & Reid Marks, 2016). This was also found in a sample of individuals with opiate dependence. Those individuals with an increased sense of belonging were less likely to be vulnerable to suicidal behavior (Conner, Britton, Sworts, & Joiner, 2007).

It seems that family cohesion and adaptation provides family members with a wide range of resources. Lin, Lo, Lui, & Wong, (2016) examined the links between family resilience and family crises. Their findings suggested that family cohesion was a key element

in the ability to handle family crises. In a sample of Chinese undergraduates, it was reported that family cohesion and adaptation was positively related to students resilience (Hou & Liang, 2018). This was also the same among married Chinese women where family cohesion and adaptation were associated with their subjective well-being, and this association was mediated by social support (Wu & Zheng, 2020). Among North Korean refugees in South Korea, it was reported that family cohesion was associated with fewer depressive symptoms, and this association was mediated by resilience (Nam, Kim, DeVlyder, & Song, 2016). Family cohesion and adaptability was also associated with resilience after traumatic experiences (Daniels & Bryan, 2021). However, in a sample of tennis players, family cohesion failed to predict mental toughness (Cowden, Meyer-Weitz, & Asante, 2016).

The following section presents the conceptual framework of this study, as illustrated in Figure 1. The figure graphically represents the relationship between family cohesion, family adaptability, and national belongingness and mental resilience. It is hypothesized that these relationships will be moderated by gender.

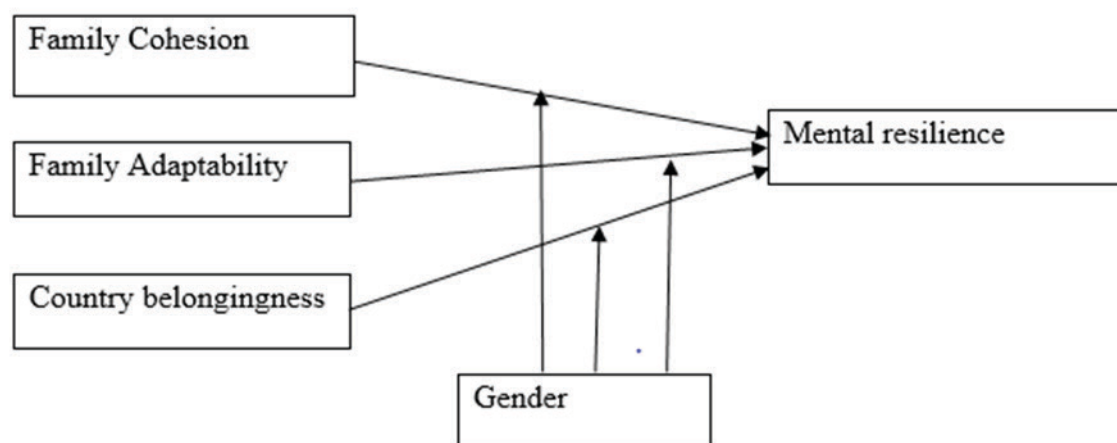
### Methods

This study is cross-sectional in nature.

### Participants

A total number of 1,716 participants were recruited. This sample was determined with convenience sampling methods (snowball sampling). Invited participants were asked to invite friends, family members, or followers on social media whom they knew had knowledge on the topic. They were informed about the design and the purpose of the study, and they provided consent. Ethical approval to conduct this research was provided by King Abdulaziz University in Saudi Arabia. Participation was voluntary and participants were allowed to withdraw from the study at any time.





**Figure 1.** Conceptual framework

The results of the descriptive statistics of the sample are summarized in Table 1.

Around 63% of the participants were females, 13.5% had less than high school education, 20% had completed high school, 53% college, and 13.5% postgraduate studies. Proportionally, 38% of participants were married, 11% were divorced, around 43% were single, and slightly over 7% were widows. About 25% were in the low-income category, 23.8% in the moderate-income category, about 21% in the middle-income category, and slightly over 29% were in the high-income category. Most of the participants were students (39.5%), 22% worked in the public sector, around 14% worked in the private sector, and 24.4% were unemployed.

## 2. Measures

The questionnaire consisted of 3 main scales and demographics. The main scales included:

Cognitive Flexibility Inventory (CFI-20) (Dennis & Vander Wal, 2010) to measure mental resilience, Family Adaptation and Cohesion Scales (FACES III) (Olson, Portner, & Lavee, 1985), and the Belonging to Homeland Scale (El Keshky, in press).

- 1- Cognitive Flexibility Inventory (CFI-20): The CFI-20 is a self-reported instrument of 20 items that measure cognitive flexibility. The item re-

sponses range on a Likert scale from 1 (strongly disagree) to 7 (strongly agree). The scoring is done by reversing some negatively stated items. There are two subscales of this scale: the Alternatives subscale and Control subscale (Dennis & Vander Wal, 2010), but a total score can be obtained by summing the values. High values indicate greater cognitive flexibility. This instrument can be used in a clinical and non-clinical setting. The instrument measures the ability to take challenging situations as manageable, the ability to find several alternative reasons for life events and human behavior, and the ability to produce diverse alternative solutions to challenging situations. The scale has demonstrated good validity and reliability (Dennis & Vander Wal, 2010). In this study, the internal consistency reliability for this scale according to Cronbach alpha was .78.

- 2- Family Adaptation and Cohesion Scales (FACES III) is a 20-item scale that describes the cohesion and adaptability of the family. Participants indicated the extent to which they agreed with each item on a 5-Likert scale where high values indicate high agreement. The item responses range between 1 (almost never) and 5 (almost



**Table 1** - Demographic characteristics of the sample

Variables	n	%	Mean (SD) of Resilience	Mean (SD) of Family Cohesion	Mean (SD) of Family Adaptation	Mean (SD) of National Belongingness
<b>Gender</b>						
Male	622	36.3	88.8(14.7)	35.6(7.26)	33.5(6.8)	141(21.1)
Female	1094	63.7	96.5(14.8)	36.7(7.71)	31.9(7.2)	142.3(16.4)
<b>Education</b>						
Less than high school	230	13.5	84.2(13.4)	38.7(7.4)	36.1(7.2)	146.4(17.5)
High school	334	20	88.6(14.5)	34.3(8.4)	33.1(8.2)	135.3(24.7)
College	210	53	97.8(14.0)	37.2(7.5)	34(6.8)	145.3(17.6)
Masters/PhD	232	13.5	95.8(16.2)	36.6(7.1)	31.2(6.4)	142.8(14.6)
<b>Marital Status</b>						
Divorced	188	11	87.8(13.3)	35.5(7.3)	34.1(7.1)	143.05(20.9)
Married	653	38	96.3(15.1)	37.7(6.4)	33(6.1)	143.07(15.7)
Single	743	43.3	94.8(15.3)	35.6(8.5)	31.2(7.9)	141.6(19.6)
Widowed	132	7.7	83.1(10.9)	34.2(6.1)	34.7(5.9)	135.7(17.5)
<b>Employment status</b>						
Public sector	376	22	94.2(16.1)	37.8(7.3)	34.2(6.6)	145.2(17.3)
Unemployed	420	24.4	93.2(14.2)	36.1(7.9)	32.4(7.7)	139.6(20.4)
Private sector	242	14.1	85.2(12.0)	35.2(6.6)	33.9(6.4)	140.2(17.7)
Student	678	39.5	96.9(15.2)	35.9(7.6)	31.1(6.9)	141.9(17.3)
<b>Income</b>						
Less than 5000 RS	436	25.4	88.1(15.0)	34.1(8.1)	32.7(8)	138.2(21.9)
5000RS-10000 RS	408	23.8	95.3(13.6)	36(7.7)	31.1(7.1)	141.7(16.9)
10000 RS-15000 RS	362	21.1	95.0(14.8)	37.4(6.4)	33.2(6.2)	145(15.5)

Mean (SD) of Resilience = Mean and standard deviation of resilience per category

always). There are two subscales: Family Cohesion and Family Adaptability. The Family Cohesion total score is computed by summing the values of the 10 odd items and the Family Adaptability total score is made by summing the values of the 10 even items. High values indicate greater family cohesion and adaptability. The scale has demonstrated sufficient reliabil-

ity (Steinhausen & Metzke, 2004). The internal consistency for this scale was .87

3- The Belonging to Homeland Scale (El Keshky, in press) is a 40-item scale that measures the sense of belonging to Saudi Arabia. Participants had to rate each statement on a 5-Likert scale from 1 (strongly disagree) to 5 (strongly agree). The scale has one dimension, and the total



**Table 2-** Mean and standard deviation of study variables

Variables	n	Mean	SD	Minimum	Maximum
Age	1,716	29.2	10.33	13	73
Mental resilience	1,716	93.7	15.2	20	140
National belongingness	1,716	141.9	18.3	40	200
Family adaptation	1,716	32.5	7.16	10	50
Family cohesion	1,716	36.3	7.57	10	50

SD = Standard Deviation

score is made by adding the values of the items. High values indicate a greater sense of belonging to the country. The scale has been validated in Saudi Arabia (Khayat, 2020). The internal consistency for this scale in this study was .94.

### Procedure

A link to the questionnaire was sent via email, Facebook, Telegram, and WhatsApp platforms to participants who had agreed to take part in the study. The completed survey was returned and the data was checked for missing values. The clean dataset was then used in the data analysis phase.

### Data Analysis

The descriptive statistics were first analyzed to explore the data and to provide summary statistics. The next step consisted of computing t-tests of the main variables by gender to observe gender differences. The last step was to test the moderation role of gender in the relationship between family cohesion and adaptation, national belongingness and mental resilience. The moderation analysis was computed using Amos software, version 26. The indirect method was preferred using a chi-square difference test between an unconstrained model and constrained model in which parameters of the model are allowed to be equal across the groups.

### 3. Results

#### Mean and standard deviation of study variables:

The participants had an average age of 29.2 (SD = 10.3). The mean score was 93.7 (SD = 15.2) for mental resilience, 141.9 (SD = 18.3) for national belongingness, 32.5 (SD = 7.16) for family adaptation, and 36.3 (SD = 7.5) for family cohesion.

Gender differences in national belongingness, family cohesion and adaptation, and mental resilience:

To examine gender differences among the main variables, a set of the independent t-tests was performed and the results are summarized in Table 3.

The mean resilience was significantly greater for females ( $M = 96.5$ ,  $n = 1,094$ ) than for males ( $M = 88.5$ ,  $n = 622$ ),  $t(1,716) = 10.4$ ,  $p < 0.001$ . There were no gender differences in national belongingness means. Females had a significantly higher mean of family cohesion ( $M = 36.6$ ,  $n = 1,094$ ) than males ( $M = 35.6$ ,  $n = 622$ ),  $t(1,716) = 2.96$ ,  $p = 0.003$ . On the other hand, females had a significantly lower mean of family adaptation ( $M = 31.9$ ,  $n = 1,094$ ) than males ( $M = 33.5$ ,  $n = 622$ ),  $t(1,716) = -4.42$ ,  $p = 0.000$ .

The Relationships between National Belongingness, Family Cohesion and Adaptation, and Mental Resilience: A Moderation Effect of Gender:

First, Pearson correlation coefficients (Table, 4) between the study variables were analyzed. Family cohesion was positively correlated with mental resilience

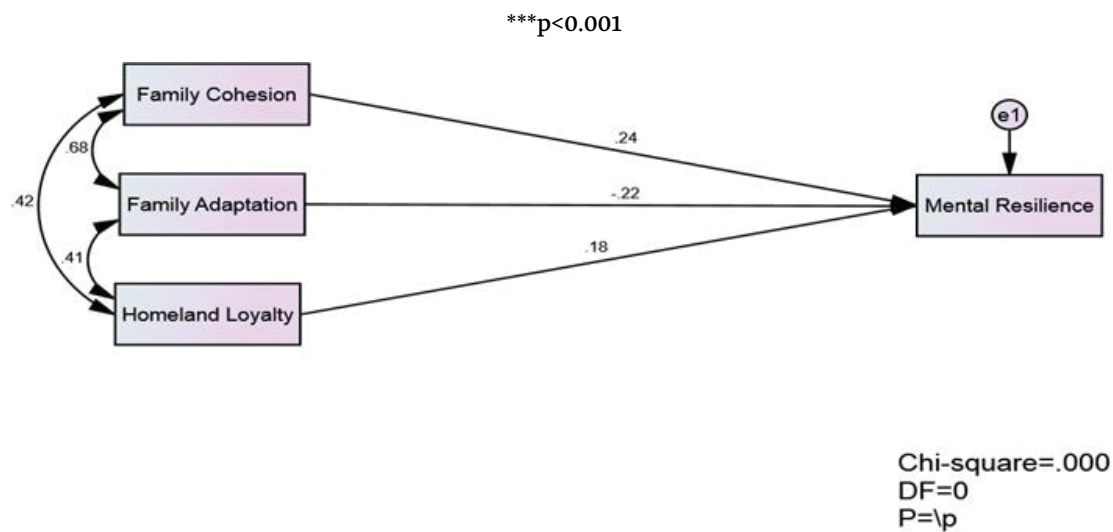


**Table 3-** Independent t-tests based on gender

Variables	Female (n = 1,094)	Male (n = 622)	t	p-value
Mental resilience	96.5 ( 14.8 )	88.8 ( 14.7)	10.4	< 0.001
National belongingness	142.3 16.4)	141.0 (21.1)	1.39	0.16
Family cohesion	36.6 (7.71)	35.6 (7.26 )	2.96	0.003
Family adaptation	31.9 (7.2)	33.5 (6.8)	-4.42	0.000

**Table 4 -** Pearson correlation coefficients between study variables

	Mental resilience	National belongingness	Family cohesion	Family adaptation
Mental resilience	1			
National belongingness	0.20***	1		
Family cohesion	0.22***	0.43***	1	
Family adaptation	-.03	0.36***	0.63***	1



**Figure 2-** SEM general sample

( $r = 0.22, p < 0.001$ ), national belongingness ( $r = 0.43, p < 0.001$ ), and family adaptability ( $r = 0.63, p < 0.001$ ). Family adaptability was positively correlated with national belongingness ( $r = 0.36, p < 0.001$ ) but not with mental resilience (Table, 5).

To investigate the relationships between the variables, path analyses were conducted. The results are summarized in table 6 for the general sample and for female and male samples.

National belongingness was positively related

to mental resilience ( $\beta = 0.16, p < 0.001$ ). Surprisingly, family adaptation was negatively associated with mental resilience ( $\beta = -0.30, p < 0.001$ ). As expected, family cohesion predicted better mental resilience ( $\beta = 0.33, p < 0.001$ ).

To test the moderation role of gender, an unconstrained model and a constrained model were compared and the results indicated a chi square difference of 9.39, which was significant at  $p < 0.05$  level. This showed that the relationships between family cohe-





**Table 5** - Chi square difference test of

	DF	CMIN(Chi-Square)	P-Value	NFI	IFI	RMSEA	CFI
Unconstrained models	0.0	0.000	0.000	1	1	0	1
Constrained models	3	9.399	0.024	0.994	0.994	0.035	0.996
Difference	3	9.399	0.024	0.006	0.006	0.035	0.004

**Table 6** - Path analysis results

Sample	Path Direct	Unstandardized coefficients	Standardized coefficients	P	
General	Family cohesion	0.354	0.335	0.000	
	Family adaptation	Mental Resilience	-0.328	-0.303	0.000
	National belongingness	0.245	0.166	0.000	
Male	Family cohesion	0.401	0.395	0.000	
	Family adaptation	Mental Resilience	-0.345	-0.322	0.000
	National belongingness	0.177	0.127	0.002	
Female	Family cohesion	0.234	0.244	0.000	
	Family adaptation	Mental Resilience	-0.226	-0.222	0.000
	National belongingness	0.331	0.184	0.000	

sion, family adaptation, national belongingness, and mental resilience were different across the groups. To examine which category strengthens or weakens the relationships, regression coefficients need to be compared across the groups.

The relationship between family cohesion and mental resilience was stronger in males ( $\beta = 0.39$ ,  $p < 0.001$ ) than in females ( $\beta = 0.24$ ,  $p < 0.001$ ). The relationship between family adaptation and mental resilience was stronger in males ( $\beta = -0.32$ ,  $p < 0.001$ ) than in females ( $\beta = -0.22$ ,  $p < 0.001$ ). Finally, the relationship between national belongingness and mental resilience was stronger in females ( $\beta = 0.18$ ,  $p < 0.001$ ) than it was in males ( $\beta = 0.12$ ,  $p < 0.01$ ). It can be concluded that male gender had a greater influence on the family cohesion and adaptation to mental resilience relation-

ship and the female gender had a greater influence on the national belongingness to mental resilience relationship (Table, 6).

#### 4. Discussion

Psychological evidence has shown that mental resilience is extremely important in human life when dealing with everyday stressors. There has been scarce empirical evidence of the contributions of a sense of belonging to a country and family cohesion and adaptation to mental resilience in Saudi Arabia. Moreover, Saudi Arabia being among the countries with less gender equality (The Global Gender Gap Report, 2018), it is interesting to investigate how the said contributions might be different for males and females. For this



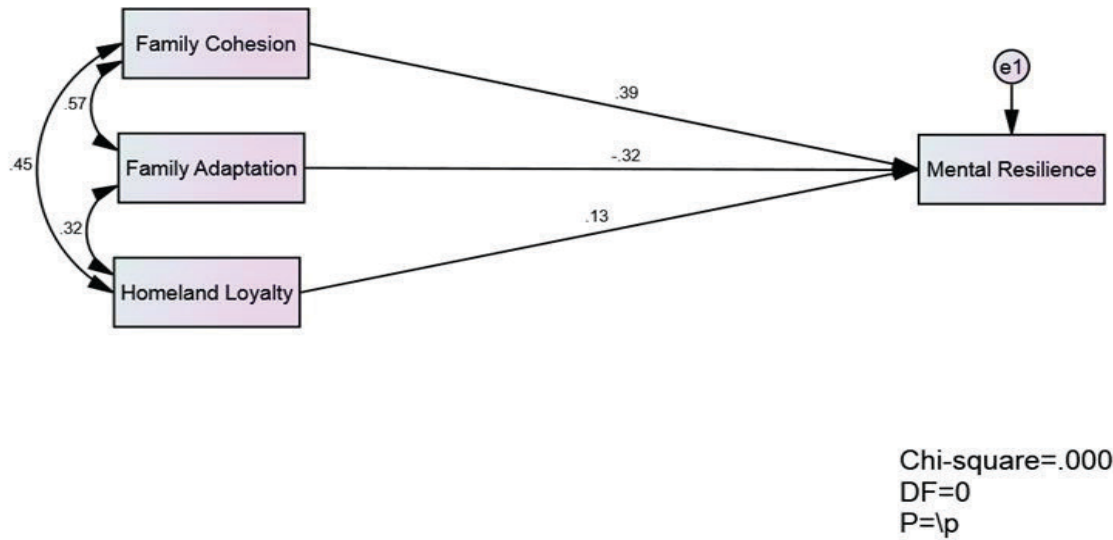


Fig 3- SEM male sample

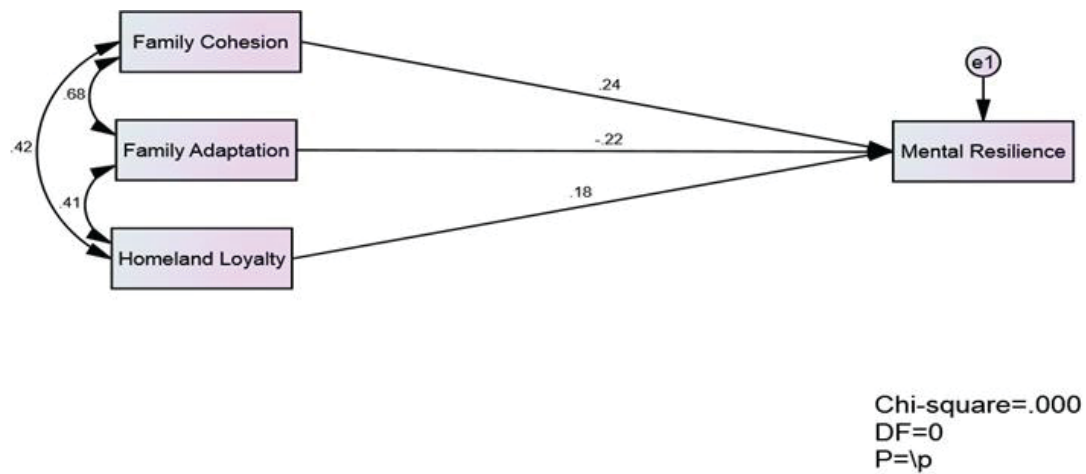


Fig 4 - SEM female sample

purpose, the present study aimed to examine the relationships between national belongingness, family cohesion and adaptation, and mental resilience in Saudi adults, thereby examining the moderating effect of gender. The main findings revealed that females had significantly higher levels of mental resilience and family cohesion than males, but males had higher levels of family adaptation than females. Moreover, national belongingness was positively associated with mental resilience. To our surprise, family adaptation

was negatively related to mental resilience, but as we could assume, family cohesion predicted better resilience among Saudi adults. Finally, gender moderated the relationships between national belongingness, family cohesion and adaptation and mental resilience.

The positive association found between national belongingness and resilience is unsurprising. A sense of belonging has been found predictive of many positive outcomes, including resilience. Jones and Jetten (2011) found that belonging to multiple groups



presents many psychological resources that shape resilience. A sense of belonging reflects an individual's involvement in a system, being valued in that system, and being an integral part of that system (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992), which provides psychological resources. For instance, national belongingness was found to mitigate post-traumatic stress after a terrorist attack (Dekel & Nuttman-shwartz, 2009). In a sample of college students, a sense of belonging was related to both psychological and social functioning (Hagerty, Williams, Coyne, & Early, 1996). A sense of belonging to Saudi Arabia was to be found associated with the satisfaction of needs through family cohesion (Khayat, 2020). The theory of hierarchy of needs (Maslow, 1968) can also help understand this positive association. The feeling of belonging to somewhere is a human motivation drive (Maslow, 1968).

The findings of this study concerning family cohesion and adaptation are somewhat mixed. Increased family cohesion was associated with increased resilience. However, family adaptation was negatively related to resilience. It is possible that the relationship between family adaptation and mental resilience may not be linear. Anyway, the mechanisms underlying this negative association have to be addressed by future research. The positive association of family cohesion with resilience corroborates previous studies. With a sample of cerebral trauma patients, it was found that family cohesion and adaptation predicted resilience (Hui-fang & Xiu-li, 2015). Increased family cohesion was also found to be associated with reduced child-related stress (Warfield, Krauss, Marty Wyn-gaarden Hauser-Cram, Upshur, & Shonkoff, 1999). Family cohesion and adaptation were also associated with subjective well-being, through social support and positive coping strategies (Wu & Zheng, 2020). In another study, family rituals were associated with quality of life through family cohesion (Santos, Cres-

po, Canavarro, & Kazak, 2015). Family cohesion reflects the bonds that exist between family members, the time they spend together, which not only increases family functioning but also strengthens family tradition and values that young children will carry on into the future (Lee, Graefe, & Burns, 2008). For instance, a study investigated how time spent together on vacation was related to family cohesion and functioning and concluded that family members forge bonds when on vacation which enhances family cohesion and well-being (Lehto et al., 2012). The family system theory posits that cohesive families are made of individuals that are in inter-connected systems with one goal and that work together in a dynamic atmosphere (White & Klein, 2002), which is beneficial for family members.

Gender moderated the relationship between national belongingness and mental resilience, but not in the direction we would expect; the relationship was stronger in females than in males. For increased belongingness, females had increased mental resilience compared to males. In a country where culture is somewhat unfavorable to females (Khayat, 2020), it would be expected that males would be more resilient than females for each increased belongingness. But this is probably because females had already exhibited increased resilience than males. On the other hand, gender moderated the association of family cohesion and adaptation and resilience in a way that for increased family cohesion and adaptation, females were less resilient than males. In other words, the relationship of family cohesion and adaptation to mental resilience was stronger in males compared to females.

The mechanisms underlying these findings are to be found in the cultural gender differences. For instance, there is a great influence of social norms and conservative religious beliefs on the lives of Saudi women (Mobaraki & Söderfeldt, 2010). For example, before applying for a job, education, issuing of a pass-



port, or travel, the laws of Saudi Arabia require women to have an agreement of a male relative (Vidyasagar & Rea, 2004). Moreover, the high rates of obesity among Saudi women are attributable to the fact that it is not socially acceptable for women to exercise in public places (Al-Nozha et al., 2005). Therefore, it is well conceivable that the relationships of national belongingness and family cohesion and adaptation were different for females and males. Females exhibited more resilience and family cohesion than males, it is possible that Vision 2030 with its reforms to empower women in Saudi Arabia (Topal, 2019) may have started yielding positive effects. Vision 2030 is promising in many ways for women, especially for women's inclusiveness in the labor force (Naseem & Dhruva, 2017).

### Conclusion

This study revealed a positive association between national belongingness, family cohesion and mental resilience, and a negative association between family adaptation and mental resilience. It also revealed a moderating effect of gender on the relationships of national belongingness, family cohesion and adaptation to mental resilience. Increasing a sense of national belongingness, family cohesion and adaptation in people might yield resilience benefits. This highlights the importance of family in people's lives. Achieving gender equity might contribute to the enhancement of mental resilience, as there were gender differences found in the impacts of a sense of belonging to a country and family cohesion and adaptation on mental resilience.

### Recommendations

This study was cross-sectional, which limits the authors from inferring causation and direction. It is important for future studies to use longitudinal designs. Another limitation was that the study used convenience sampling methods, which are not ideal for

the generalizability of the findings. Future research should use random sampling methods. Moreover, the study relied on subjective measures. Objective measures might bring further insights. For policy makers, interventions to enhance family cohesion and adaptation, national belongingness, and mental resilience should be gender mindful and gender directed. Finally, the fact that females reported increased resilience and family cohesion compared to males is interesting in the context of Saudi Arabia. Future research should investigate this issue in depth. Specifically, future research should follow the implementation of Vision 2030 in Saudi Arabia and address the impact it is having on the lives of Saudi women. Given the potentiality of these reforms for women, the results of such studies might result in many interesting implications.

### Declaration of competing interest

None.

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