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## Courage: A Potential Mediator of the Relationship Between Personality and Social Anxiety

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**Abstract** Social anxiety is one of the most prevalent and chronic mental-health conditions in young adults. To date, no studies have been conducted about the relationships between the Big Five personality dimensions, courage, and social anxiety among Malaysian undergraduate students. Therefore, this study was designed to examine courage as a potential mediator of the association between the Big Five personality dimensions and social anxiety among Malaysian Undergraduates. In this study, 500 Malaysian undergraduate students (205 males and 295 females) completed a series of questionnaires. Structural equation modelling (AMOS-SEM) revealed that, of the Big Five, neuroticism and social anxiety were positively correlated. Extraversion, conscientiousness, openness to experience, and

agreeableness, as well as courage, were negatively correlated with social anxiety. Courage mediated the relationship between the Big Five personality dimensions and social anxiety. The main contribution of the present research is to show how the Big Five personality dimensions may contribute to social anxiety. The findings of this study also could be implicated for counselling practice for undergraduate students in Malaysia as a collectivist setting and other collectivist settings around the world.

**Keywords** Big Five personality dimensions · Courage · Social anxiety · Undergraduates

### Introduction

Social anxiety is a pervasive condition characterized by irrational thoughts and persistent fears towards social performance. A person with social anxiety, who is exposed to a social situation, may expect to be scrutinized or judged by others (Alonso et al., 2004). Those affected by social anxiety may fear acting in a way that is socially embarrassing or offensive (American Psychiatric Association, 2013). Prior studies have shown that social anxiety is not only maladaptive, but a prevalent mental-health problem among Malaysian undergraduates (Abdollahi & Talib, 2014, 2016; Abdollahi, 2019). Therefore, research related to social anxiety and other related factors play a significant role in understanding social anxiety in young adults. The aim of this study was to explore the mediating role of courage in the relationship between personality and social anxiety among Malaysian undergraduate students.

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## Relationships Between Personality and Social Anxiety

The Big Five facets of personality (Costa & McCrae, 1992) include neuroticism, extraversion, conscientiousness, openness to experience, and agreeableness. Neuroticism has been defined as an emotional maladjustment that is characterized by fear, low self-esteem, anger, shame, and guilt (Costa & McCrae, 1989). Conscientiousness has been defined as the ability to be organized and responsible enough to maintain continuing goals (Costa & McCrae, 1989). The trait of agreeableness pertains to the proneness to being trusting, pleasurable, cooperative, sympathetic, and emotionally supportive (Straud et al., 2015). Openness to experience refers to the willingness to experience different things; individuals who are more inclined towards openness to experience tend to be more invested in seeking novel solutions (Milfont & Sibley, 2012). Extraversion has been defined as the ability to be sociable, energetic, assertive, and positive (Milfont & Sibley, 2012).

Personality has been shown to have an important role in whether one experiences social anxiety (Abdollahi et al., 2016, 2019; Luciano et al., 2010). Previous studies have documented that extraversion is negatively associated with social anxiety (Costache et al., 2020; Kaplan et al., 2015; Kuntze et al., 2016; Levinson et al., 2011; Shi et al., 2015; Vreeke & Muris, 2012; Watson & Naragon-Gainey, 2014). People prone to extraversion tend to participate in high-stimulus environments and social activities that reduce the chances for the occurrence of social anxiety (Kaplan et al., 2015; Naragon-Gainey et al., 2009). In other studies, researchers have tried to explain the negative association between openness to experience and social anxiety (Watson & Naragon-Gainey, 2014). Similar to extraversion, openness to experience is documented as relating to behaviour that involves seeking challenges with different, exciting experiences, and sensations (García et al., 2005). Therefore, individuals prone to openness, experience social anxiety less frequently.

Prior research has established that agreeableness is negatively associated with social anxiety (Glinski & Page, 2010). Since trust is the main characteristic of the agreeableness trait, there is a lower chance that individuals with high levels of agreeableness would have social anxiety because they tend to be more altruistic and less sceptical than other individuals (Glinski & Page, 2010). Another research study demonstrated that conscientiousness was negatively associated with social anxiety (Watson & Naragon-Gainey, 2014). They found that individuals of high conscientiousness were goal-driven and had a greater tendency to be guided by social norms, self-competence, and social discipline (Glinski & Page, 2010). Taken together, it seems that individuals high in agreeableness and

conscientiousness are buffered against social anxiety and, similarly, studies have shown that individuals high in trait neuroticism have a higher chance of experiencing social anxiety (Naragon-Gainey & Watson, 2011; Scott et al., 2017). It may be that these individuals are more likely to experience fear of negative evaluations under stressful situations and prefer solitary pursuits rather than social activities (Glinski & Page, 2010).

Most studies on the association between the Big Five personality dimensions and social anxiety have been conducted in the USA and European countries (Costache et al., 2020; Kaplan et al., 2015; Kuntze et al., 2016; Levinson et al., 2011; Vreeke & Muris, 2012; Watson & Naragon-Gainey, 2014), and no study to date has been conducted on the relationship between the Big Five personality dimensions and social anxiety in Malaysia. Cultural norms, values, and beliefs are thought to be significant differing factors between cultures. These factors may have significant influence on the formation and development of social anxiety disorder (Levinson et al., 2011).

Malaysia is located in Southeast Asia whose population may have different cultural norms, values, and beliefs from countries where studies have been conducted on the relationship between the Big Five personality dimensions and social anxiety (Costache et al., 2020; Kaplan et al., 2015; Kuntze et al., 2016; Levinson et al., 2011; Vreeke & Muris, 2012; Watson & Naragon-Gainey, 2014). Malaysia has a collectivist culture. Collectivist cultures may provide more conditions for social anxiety than individualistic cultures (Heinrichs et al., 2006). In Malaysia, as a collectivist culture, social harmony is more important and it is more likely that individuals follow the clear and extensive social norms to maintain social harmony.

Conversely, in individualistic cultures, social admiration is more important through success and achievement, and it is more likely that individuals follow the relaxed social norms. One of the concepts associated with social anxiety is the fear of embarrassment (Heinrichs et al., 2006). In Malaysia, as a collectivist country, there are specific rules for social behaviours and it is easy to detect deviant behaviours. Individuals who are living in collectivist culture are more concerned about their social behaviours, and if their behaviours deviate from social norms, they may be threatened with sanctions such as exclusion from the group. Thus, the consequences of breaking behavioural norms in collectivist cultures have negative effects, and it is likely individuals who are living in collectivist cultures exhibit more withdrawn and avoiding behaviours due to less experience of fear of embarrassment. One of the concepts that plays an important role in social anxiety and fear of embarrassment is courage. Therefore, this study aims to investigate the relationship between courage, the Big Five,

and social anxiety in the Malaysian context in order to contribute to the literature.

### Courage as a Mediator

The present research seeks to extend prior studies that have tested the direct relationship between the Big Five personality dimensions and social anxiety (Glinski & Page, 2010; Hewitt et al., 1998; Kashdan, 2002) exploring courage as a possible mediator. Psychological courage is defined as the cognitive process of defining risk, recognizing and detecting substitute behaviour, and preferring to act in spite of probable negative outcomes in an effort to acquire ‘good’ outcomes for oneself or others (O’Connor et al., 1985). This mediating role is underpinned by the assumption that courage provides security, steadiness, and confidence in individuals. Furthermore, these individuals are more likely to persist despite fear or social anxiety (Judge & Bono, 2001). Previous research has indicated that courageous individuals are more motivated to reach their goals and employ different problem-solving strategies to achieve their goals and are able to reduce their fear of facing obstacles (Ginevra et al., 2018). Moreover, research has established that courage enables individuals to effectively act during dangerous, frightening, and risky conditions (Magnano et al., 2017).

It is widely established that some personality traits promote or hinder the development of particular strengths and virtues. For example, agreeableness promotes sympathy, conscientiousness promotes persistence, and openness to experience facilitates creativity. In addition, the erudition of this group of virtues develops the very same personality inclinations as people who innately possess them (Magnano et al., 2017). For instance, the tendencies of extraverted individuals are comorbid with courageous behaviour, which is likely to enable individuals to participate in social activities (Glinski & Page, 2010). Courage enables individuals to deal with problems, even under stressful situations (Magnano et al., 2017). Researchers have also found that individuals with high levels of openness to experience perceive a social activity as an opportunity to learn new experiences, rather than feeling threatened by it (Hannah et al., 2007; Magnano et al., 2017). Openness to experience, therefore, promotes courageous behaviour.

Several studies have reported that individuals who have higher traits of neuroticism have the tendency to be concerned, frightened, distressed, and agitated (Newby et al., 2017). Since these characteristics are in conflict with courageous behaviour, such individuals may be more prone to experience social anxiety. Research on social anxiety suggests that individuals high in trait conscientiousness are less likely to experience stress in social situations, through

the ability to positively evaluate stressful situations (Weidmann et al., 2016). These characteristics are similar to courageous behaviour that enables individuals to be involved in social activities. Many researchers have also suggested that agreeableness involves compassionate, cooperative, sincere, honest, and considerate characteristics (Glinski & Page, 2010). These studies show that individuals with high levels of agreeableness are not afraid of negative evaluations and they trust others, particularly in social settings (Glinski & Page, 2010). Therefore, characteristics of agreeableness can be associated with courage that would contribute to low levels of social anxiety.

### Aim of the Study

A clear understanding of the relationships between the Big Five personality dimensions and social anxiety and the mediating process between these variables could help to identify possible areas of prevention and intervention. Therefore, the aims of this study, in addition to examining the relationship between the Big Five personality dimensions and social anxiety, are to investigate the mediating role of courage in the relationship between the Big Five personality dimensions and social anxiety among Malaysian undergraduate students.

### Method

#### Participants

Of the 540 questionnaires distributed among undergraduates, 3.2% ( $n = 17$ ) of cases were excluded due to incompleteness, and 4.2% ( $n = 23$ ) of cases were identified as outliers and omitted. The Mahalanobis D2 was used to identify outliers and values greater than 4 were removed (Tabachnick & Fidell, 2012). After the initial elimination process, data from 500 undergraduate students (males = 41%,  $n = 205$ ,  $M_{age} = 20.38$ ,  $SD = 1.56$ ; females = 59%,  $n = 295$ ,  $M_{age} = 20.08$ ,  $SD = 1.87$ ) were obtained. The overall mean age for eligible participants was 20.18 years, and the standard deviation was 1.43 (age range = 17–24). Respondents classified themselves as freshmen year students (33%,  $n = 165$ ), sophomore year students (26%,  $n = 130$ ), junior year students (22%,  $n = 110$ ), and senior year students (19%,  $n = 95$ ). The majority of respondents were single (76%,  $n = 380$ ), 21% ( $n = 105$ ) of respondents were married, and 3% ( $n = 15$ ) were separated.

#### Procedure

Human ethics was approved by the Universiti Putra Malaysia and participant recruitment involved two main

stages. For the first stage, sixteen faculties of the Universiti Putra Malaysia were divided into three fields (science, social science, and technical) and one faculty was randomly selected from each field. Next, four classes were randomly selected from each faculty (according to the students' year grade).

Data collection was conducted between January and March 2016. Questionnaire packets comprised of consent forms and questionnaire booklets were distributed to participants during their regularly scheduled class periods. The participants were asked to sign the consent forms prior to answering the questionnaires. The time taken to complete the entire survey was around 40 min. A break was given after 20 min and the researchers provided catering facilities such as drinks, fruits and chocolates for the participants.

## Measures

*The NEO Five-Factor Inventory* (Costa & McCrae, 1989) has 60 items that measure the five personality dimensions of neuroticism, extraversion, conscientiousness, openness to experience, and agreeableness. A 5-point Likert scale (ranging from 0: strongly agree to 4: strongly disagree) was used for each item. Numerous studies have indicated an acceptable internal consistency for the NEO Five-Factor Inventory (Costa & McCrae, 1992).

Based on the results gathered from the measurement model for each measure, the convergent validity and construct reliability were evaluated. The evaluations of convergent validity and construct reliability were performed by calculating Average Variance Extracted (AVE) and Construct Reliability (CR). If the values of AVE and CR are greater than 0.50 and 0.70, respectively, the measures have convergent validity and construct reliability (Fornell & Larcker, 1981).

For this study, the values of AVE and CR of the scale were acceptable. The following results were obtained: neuroticism (AVE: 0.53, CR: 0.71); conscientiousness (AVE: 0.52, CR: 0.72); agreeableness (AVE: 0.63, CR: 0.81); openness to experience (AVE: 0.61, CR: 0.76); and extraversion (AVE: 0.51, CR: 0.71).

*The courage questionnaire* (Howard & Alipour, 2014) contains six items guided by the operational definition of persistence or perseverance despite the presence of fear. Each statement is rated on 7-point Likert scale from 1 (never) to 7 (always). Example items include "I will not face something I fear, even if avoiding it will have a negative outcome for me" and "Even if something scares me, I will not back down." Previous studies have shown an appropriate internal consistency for the courage measure (Ginevra et al., 2020; Magnano et al., 2017; Santisi et al., 2020). In the present study, the courage questionnaire

demonstrated acceptable convergent validity (AVE = 0.62) and construct reliability (CR = 0.76).

*The Liebowitz Social Anxiety Scale* (Heimberg et al., 1999) contains 24 items designed to measure fear. Prior to participants completing the questionnaire, they were informed that social interaction was not permitted for a week beforehand. The total scores for fear and avoidance ranged from 0 to 96, with each statement rated on 4-point Likert scales from 0 (none) to 3 (severe). Previous studies have reported a suitable internal consistency and convergent validity (Anari et al., 2009). In this study, the value of AVE was 0.69 and the value of CR was 0.76.

## Pilot Study

The reliability of each questionnaire was tested before the main study was conducted. In the pilot phase, the questionnaire was tested by 50 undergraduate students. All questionnaires demonstrated acceptable internal consistency, with Cronbach alpha coefficients as follows: Courage Questionnaire:  $\alpha = 0.80$ ; Liebowitz Social Anxiety Scale:  $\alpha = 0.79$ ; Neuroticism:  $\alpha = 0.78$ ; Conscientiousness:  $\alpha = 0.77$ ; Agreeableness:  $\alpha = 0.85$ ; Openness to experience:  $\alpha = 0.78$ ; and Extraversion  $\alpha = 0.70$ .

## Statistical Analysis

Structural Equation Modelling (SEM) with AMOS version 24 was used in order to test the relationship between the Big Five personality traits, courage, and social anxiety and to test the mediation effect of courage between the Big Five personality dimensions and social anxiety. The SEM was comprised of a two-step analysis. For the first analysis, model fit was determined using a set of fit indices proposed by Kline (2010). This particular set of indices consists of the Chi-square/degree of freedom ratio (CMIN/df), the comparative-fit index (CFI), the goodness-of-fit index (GFI), the Tucker–Lewis index (TLI), and the root-mean-squared error of approximation (RMSEA). The model is considered to have a good fit if the conditions of the indices are  $\geq 0.90$ , the root-mean-squared error of approximation (RMSEA) and Standardized Root Mean Square Residual are adequate if values are less than 0.08 (Kline, 2010). It is crucial to take note that Chi-square is highly sensitive to the sample size. For example, if the sample size is greater than 200, Chi-square can be a more accurate indicator of model fit over alternative descriptors (Byrne, 2010). As a result, the employment of Chi-square/degree of freedom ratio is recommended (Byrne, 2010).



**Table 1** Correlations between study variables, means, SDs, and actual ranges

Variables	1	2	3	4	5	6	7
(1) Social anxiety	1	.56**	– .48**	– .47**	– .53**	– .57**	– .68**
(2) Neuroticism		1	– .38**	– .32**	– .39**	– .36*	– .42**
(3) Conscientiousness			1	.42**	.31**	.41**	.38**
(4) Agreeableness				1	.41**	.47**	.41**
(5) Openness to Experience					1	.57**	.55**
(6) Extraversion						1	.63**
(7) Courage							1
<i>M</i>	78	19.62	27.13	23.27	31.43	29.87	20.58
<i>SD</i>	16.21	3.14	5.77	4.52	5.36	4.68	5.14
Actual range	10–126	0–42	9–55	10–58	10–60	10–60	6–38

\*\* $p < .001$ 

## Results

### Descriptive Statistic

A bivariate correlation analysis was conducted to explore the relationships among variables (see Table 1). Social anxiety was positively correlated with neuroticism ( $r = 0.561$ ,  $p < 0.001$ ) and negatively correlated with conscientiousness ( $r = -0.481$ ,  $p < 0.001$ ), agreeableness ( $r = -0.471$ ,  $p < 0.001$ ), openness to experience ( $r = -0.531$ ,  $p < 0.001$ ), extraversion ( $r = -0.572$ ,  $p < 0.001$ ), and courage ( $r = -0.684$ ,  $p < 0.001$ ).

### Measurement Model

The measurement model was comprised of courage, neuroticism, conscientiousness, agreeableness, openness to experience, extraversion, and social anxiety as latent variables. The results revealed that the measurement model fit adequately: CMIN/DF = 3.13,  $p < 0.01$ , CFI = 0.98, GFI = 0.97, TLI = 0.98, SRMR = 0.08, RMSEA = 0.07 (90% CI: 0.04–0.09).

### Structural Model

The outcome of examining the SEM revealed that the model met the recommended requirements of fit (CMIN/DF = 3.45,  $p < 0.01$ , CFI = 0.97, GFI = 0.96, TLI = 0.978, SRMR = 0.08, RMSEA = 0.075 [90% CI: 0.04–0.09]). As shown in Fig. 1, neuroticism ( $\beta = 0.25$ ,  $p < 0.01$ ) significantly and positively predicted social anxiety. Conscientiousness ( $\beta = -0.13$ ,  $p < 0.01$ ), agreeableness ( $\beta = -0.10$ ,  $p < 0.01$ ), openness to experience ( $\beta = -0.10$ ,  $p < 0.01$ ), extraversion ( $\beta = -0.11$ ,  $p < 0.01$ ), and courage ( $\beta = -0.37$ ,  $p < 0.01$ )

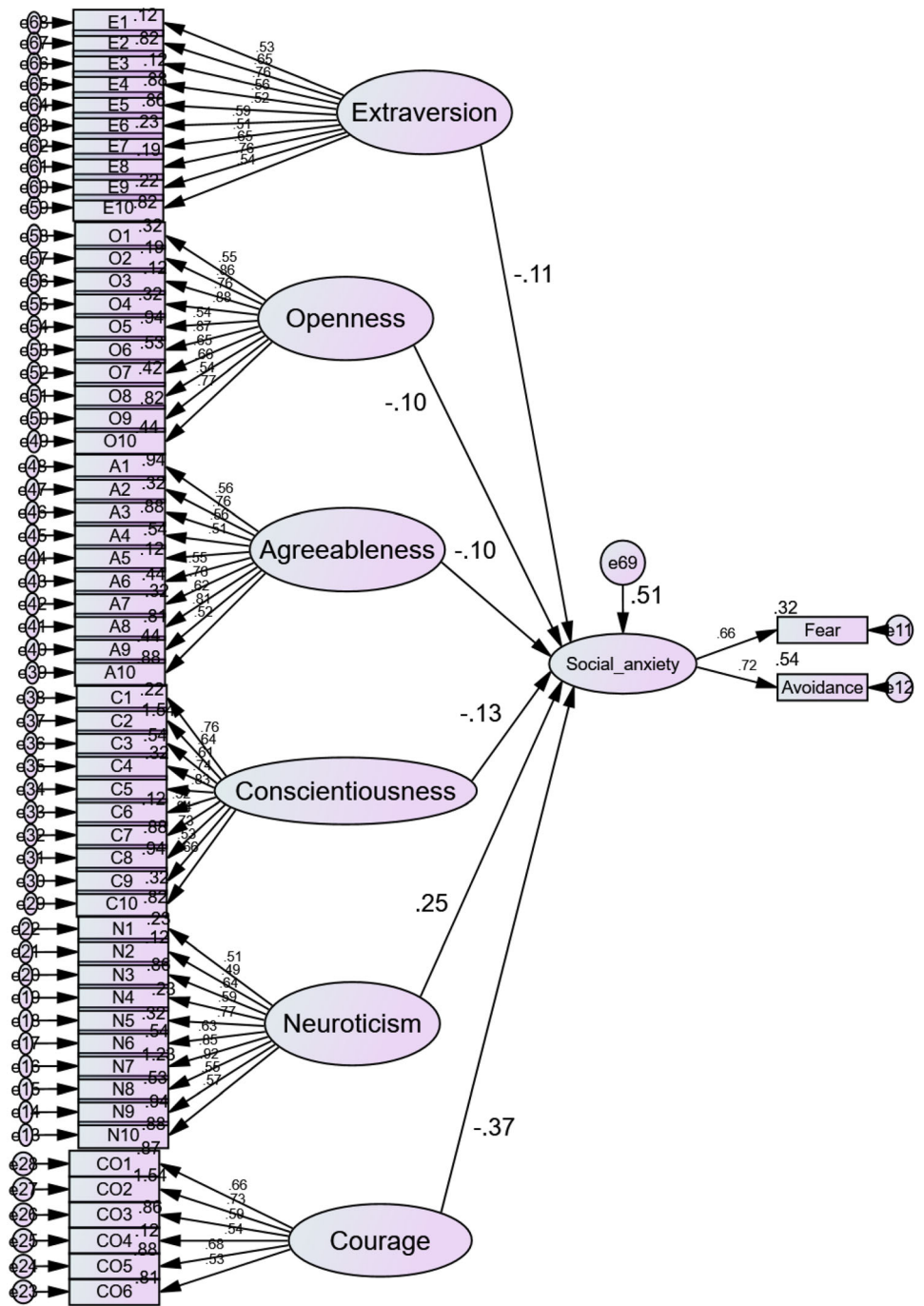
significantly and negatively predicted social anxiety. Also, the results showed that exogenous variables explained 51% of the variance in social anxiety.

### Mediation Test of Courage

Hair et al. (2006) suggested that the mediating effect stems from the third variable that appears in the relationship between the exogenous and endogenous variables. A bootstrapping approach was employed for testing the mediation effect (Hayes, 2013), and the bias-correlated confidence interval (CI) was set at 95%. According to Hayes (2013), when zero is outside of the lower and upper bound of the CI, it can be concluded that there is an indirect effect between the exogenous variable and the endogenous variable.

As presented in Fig. 2, the result of the direct model demonstrated the significant relationships between social anxiety and neuroticism ( $\beta = 0.30$ , 95% CI 0.15–0.44), conscientiousness ( $\beta = -0.16$ , 95% CI – 0.28 to – 0.07), agreeableness ( $\beta = -0.12$ , 95% CI – 0.24 to – 0.09), openness to experience ( $\beta = -0.17$ , 95% CI – 0.27 to – 0.08), and extraversion ( $\beta = -0.23$ , 95% CI – 0.36 to – 0.18). However, when courage was included as a mediating variable in the model, the size of the standard regression weights in the relationships between social anxiety and neuroticism ( $\beta = 0.25$ , 95% CI 0.11–0.36), conscientiousness ( $\beta = -0.13$ , 95% CI – 0.25 to – 0.09), agreeableness ( $\beta = -0.10$ , 95% CI – 0.18 to – 0.09), openness to experience ( $\beta = -0.09$ , 95% CI – 0.19 to – 0.05), and extraversion ( $\beta = -0.08$ , 95% CI – 0.18 to – 0.06) were reduced (but still significant). Therefore, the research supports the indirect relationship between the Big Five personality dimensions and social anxiety via courage.

**Fig. 1** Structural model for the social anxiety in undergraduate students. All pathways were significant with  $p < 0.01$



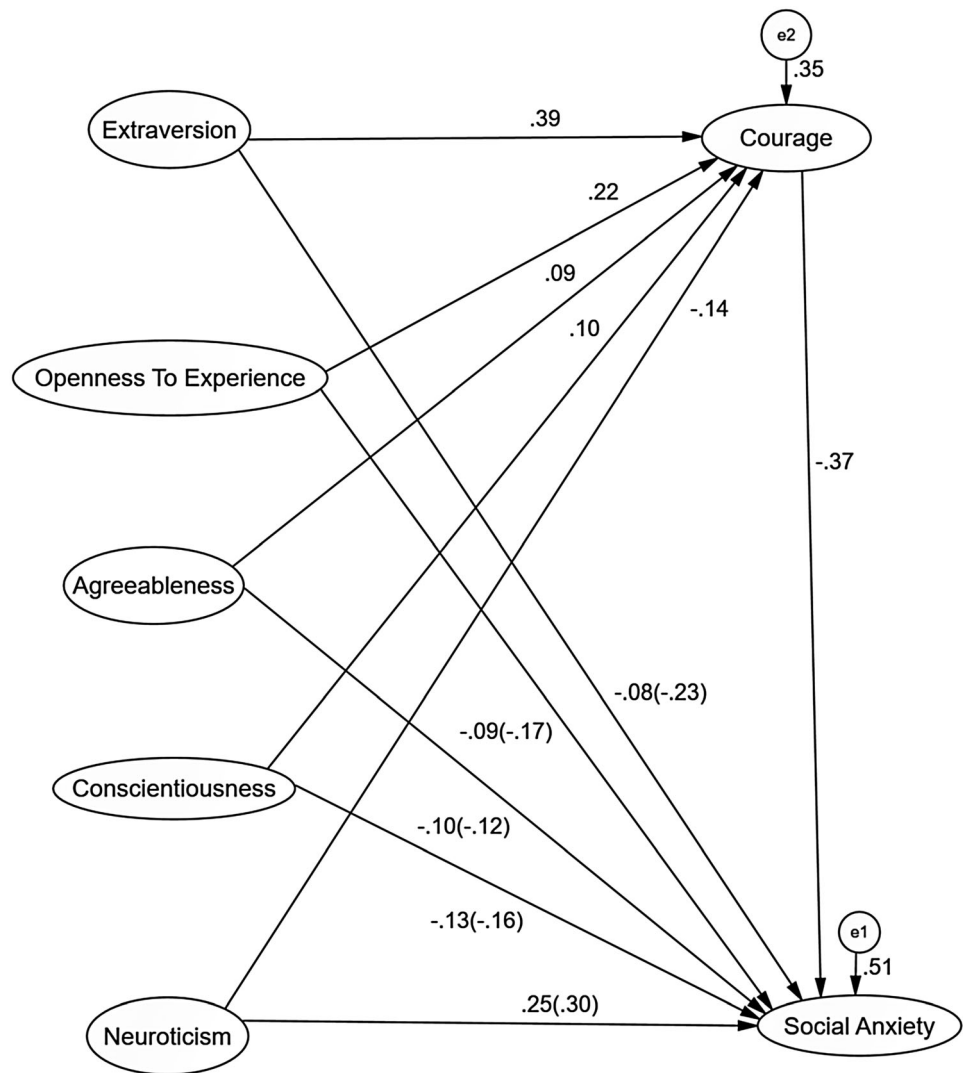
**Discussion**

The results from the structural model revealed that neuroticism positively related to social anxiety. The findings also showed that extraversion, agreeableness, conscientiousness, openness to experience and courage negatively related to social anxiety. Mediation analysis showed that courage played a mediating role in the relationships between neuroticism, agreeableness, openness to experience, and extraversion with social anxiety.

Individuals high in trait neuroticism tend to experience feelings of anxiousness and worry in social situations. For instance, they worry about expressing their true self to others and can feel embarrassed when participating in activities in front of others (Newby et al., 2017). Therefore, individuals from this group do not have an ability to cope with these emotions and are more likely to experience social anxiety (Glinski & Page, 2010).

Consistent with previous studies (Costa & McCrae, 1992; Wismeijer & van Assen, 2008), individuals high in

**Fig. 2** Indirect model, in which the beta coefficients for the direct mode's paths are in parentheses. All pathways were significant with  $p < 0.01$



extraversion are extremely sociable, talkative, gregariousness, cheerful, warm, and assertive (Costa & McCrae, 1992). These individuals prefer to participate in social activities and feel energized by social interactions (Bienvenu et al., 2007). Therefore, they are less likely to experience social anxiety. Research has supported that individuals scoring high in the category of openness to experience are more likely to seek and understand a novelty, being more open to experience new things (Bienvenu et al., 2004).

Costa and McCrae (1992) explained that some traits of agreeableness (e.g. empathetic and altruistic behaviours) have a similar impact as the traits of extraversion. One possible explanation for the negative relationship between agreeableness and social anxiety is that individuals with high traits of agreeableness tend to be sympathetic. Furthermore, they have the desire to help others and therefore usually comply with other individuals (Glinski & Page, 2010). Therefore, individuals who score high in the trait of

agreeableness are more likely to be involved in social activities and are less likely to experience social anxiety.

The findings of this study are in line with previous findings reported by Naragon-Gainey et al. (2009), which demonstrated that individuals scoring high in conscientiousness possessed a high level of willpower to do tasks in social situations, good emotional control in social exchanges, and a strong ability to evaluate stressful situations. Overall, individuals from this group are less likely to experience social anxiety.

The findings of the study showed that courageous behaviours enable undergraduate students to perform adaptive behaviours and positive responses to overcome their fears and constructively challenge their perceived obstacles. Therefore, such individuals are more likely to engage in constructive interactions with others and achieve their goals, rather than withdrawing from social communications. Courage enables individuals to act out of worry about the presence of fear, pursue their goals despite



external or internal opposition, remain comfortable during stressful situations, and possess a positive energy that can enhance their skills during social activities (Cheng & Huang, 2017; Magnano et al., 2017; Peterson & Park, 2004). According to the indirect model, courage plays a significant role in social anxiety, as well as in facing one's psychological challenges. Specifically, a major finding of this study was that courage enables individuals with any personality type to assess situations as being challenging or controllable. Therefore, they can engage in social activities instead of withdrawing from them.

The identification of the mediating role of courage provides an explanation for personality characteristics that may influence social anxiety. The key finding from the results indicates that courage may have an impact on reducing social anxiety.

## Limitations and Conclusions

During the process of interpreting the findings, some limitations should be noted. First, the risk of social desirability bias can be created through the usage of self-report measures that describe social anxiety, courage, and personality traits. To reduce the risk of socially desirable responses, future studies should consider a mixed method approach. Second, due to the fact that participants were all Malaysian undergraduate students, the findings of the study are naturally limited. Thus, the lack of generalizability to other populations is a limitation. In future studies, surveys should be performed on different age groups and in different cultural contexts. The data from this study were collected in 2016, and there was no COVID-19 pandemic at that time. Due to the changes in social conditions with respect to COVID-19 pandemic, it may be necessary to repeat this research on the COVID-19 pandemic condition and compare the results.

## Implications for Practice

The findings of this study could be useful for counsellors and psychologists in university settings in Malaysia. Understanding the role of personality traits and courage are important practice considerations when working with social anxiety in undergraduate students. For example, psychologists and counsellors could assist undergraduate students with high levels of social anxiety to enhance their courageous traits in order to have a positive perception of their interactions with others. The findings of this study may be applied for individuals who are living in the countries with a collectivist culture.

This study found that courage is a mediator between personality traits and social anxiety in a large group of

Malaysian undergraduate students. This finding expands the literature on social anxiety by highlighting the mediating role of courage.

**Funding** Not applicable.

## Declarations

**Conflict of interest** The authors declare that there is no conflict of interest.

**Consent to Participate** Participants were signed the consent forms prior to answering the questionnaires.

**Consent for Publication** Participants were informed about the publication of the study, and their written consent was taken from them.

**Ethical Approval** Ethical approval was gained from Universiti Putra Malaysia (UPM/HE2016/5).

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