The Effects of Body Image and Fear of Negative Evaluation on Social Anxiety:

A Study on Thai Undergraduates

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Senior Project Submitted in Partial Fulfillment of the Requirements

for the Degree of Bachelor of Science in Psychological Science

Faculty of Psychology

Chulalongkorn University

Academic Year 2015

Senior Project Title	NEGATIVE EVALUATION ON SOCIAL ANXIETY: A STUDY ON THAI UNDERGRADUATES
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5537558038, 5537585938 : BACHELOR OF SCIENCE

KEYWORDS: SOCIAL ANXIETY / FEAR OF NEGATIVE EVALUATION / BODY IMAGE

YADA PAWIJIT: WATCHARAPHON LIKHITSUWAN: THE EFFECTS OF BODY IMAGE AND FEAR OF NEGATIVE EVALUATION ON SOCIAL ANXIETY: A STUDY ON THAI UNDERGRADUATES, ADVISOR: JASON LUDINGTON, Ph.D., CO-ADVISOR: ASST. PROF. KULLAYA PISITSUNGKAGARN, Ph.D., 44 pp.

Abstract

This study aims to examine the effect of body image and fear of negative evaluation on social anxiety among undergraduates in Thailand. We hypothesized that body image dissatisfaction (BID) and fear of negative evaluation (FNE) will be positively correlated with social anxiety (SA), and that both variable will uniquely predict social anxiety. Eighty participants completed a 37-item questionnaire assessing the three constructs. The hypotheses were tested by examining correlations between the variables, and a standard multiple regression was conducted to determine unique predictors. Results revealed that BID and FNE are positively correlated with SA, and that only FNE uniquely predicts SA, implying that FNE mediates the effect between BID and SA. Implications and contributions to the literature are discussed.

Field of Study:	Psychological Science	Student's Signature
Academic Year:	2015	Student's Signature
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Co-advisor's Sig		

Acknowledgments

We would like to express our gratitude to all the people who helped support this senior project. A special thank you to Dr. Jason Ludington, and Asst. Prof. Dr. Kullaya Pisitsungkagarn who stood beside us and guided us with valuable comments. We would also like to acknowledge every participant who sacrificed a part of their time to complete our survey, and Mr. Karin Vilavorn who serves as the backbone of our psychology faculty. Additionally, we would like to thank the senior project committee members for giving us the opportunity to utilize our knowledge.

Lastly, we would like to thank friends and family members of Yada Pawijit and Watcharaphon Likhitsuwan. We cannot make it this far without their unconditional love and support.

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Chapter 1: Introduction

The Effects of Body Image and Fear of Negative Evaluation on Social Anxiety:

A Study on Thai Undergraduates

Modern influences are very specific about body image (Grabe, Ward, & Hyde, 2008). Advertisements (i.e. on public transport, billboards, online, TV etc.) generally use skinny models (Neff, 2008). Positive reference of normal weight, let alone overweight people are scarce (Neff, 2008). The danger of being constantly exposed to images of skinny actors/actresses/models is it gives a distorted perspective of what normal body shape should be (Grabe, Ward, & Hyde, 2008). Studies have shown that young women of today's society are being negatively influenced by the media (Grabe, Ward, & Hyde, 2008). The body image scrutiny is particularly prevalent in Asia (Wardle, Haase, & Steptoe, 2006). Studies have shown that there is a heavy reliance on weight loss products amongst women (Lowry et al., 2000), suggesting that a high number of women are insecure about their natural body.

A study on female's perception of body image found that increasing number of young girls are dissatisfied with their body and part-take in weight loss exercises (Smolak, 2004). Girls as young as grade 1 display extensive knowledge on weight loss techniques (e.g. knows certain weight loss programs by name, mentioned throwing-up, and plastic surgery); but a more concerning point is how they view these techniques to be necessary in order to look beautiful (Murnen, Smolak, Mills, & Good, 2003). Because the rate of body image dissatisfaction is on the rise, we would like to study the repercussions of negative body image.

In Thailand, people tend to be observant and critical about figures. It is common for people's greeting to revolve around theirs or others' figures (e.g. you got fatter, you look

skinnier, I'm so fat etc.). Despite these remarks appearing light, such comments usually have implied meanings attached (i.e. fatness is associated with being single and lonely, and skinny means attractive). If someone was overweight or not skinny, they are often made fun of; this reinforces the idea that being overweight is bad (Quinn & Crocker, 1999). Making fun of a female's figure is also done as a flirting/attention grabbing technique in Thailand (e.g. "fatty", "big legs", "flat-chested," etc.). Although flirters may think it's harmless and light, such comments do add up and can lead to insecurity (Quinn & Crocker, 1999). On the other hand, men are also pressured to have certain features (e.g. six-pack, biceps, be tall etc.) (Leit, Pope, & Gray, 2001), and failure to obtain such features can leave them dissatisfied with their body and/or negatively affect their self-esteem (Agliata, & Tantleff-Dunn, 2004).

The constant exposure to remarks on figures can make people unconfident with their body image (Grabe, Ward, & Hyde, 2008). Not feeling content about one's body can cause feelings of anxiousness when in public (Izgiç, Akyüz, Dogan, & Kugu, 2004). This is known as social anxiety. Social anxiety has several negative repercussions (which will be further explained below); thus, it is important to conduct a research and pay attention to whether body image contributes to social anxiety or not.

Human beings are social animals (Batson, 1990). Socializing is beneficial to both mental and physical health (Belsky, Steinberg, & Draper, 1991). It allows people to form bonds and feel a sense of belonging; and with that comes a sense of security (McMillan & Chavis, 1986). This helps put one's mind to rest and prevents one from feeling stressed, anxious, and lonely. The physical benefits of socializing are often overlooked, however, there are several benefits which are crucial to human's survival (Belsky, Steinberg, & Draper, 1991). First, it helps with finding a partner and reproducing. It requires social skills and courage to approach others. Usually individuals with better courting skills get a wider selection of mates; thus, a higher chance of finding a mate. On the other hand, those who are

shy and cannot approach the opposite gender may not be able to find a mate and pass on their genes despite being physically competent. Socially anxious individuals have trouble approaching and conversing with the opposite gender (Twentyman & McFall, 1975), consequently, they are less likely to form relationships and engage in sexual encounters (Schlenker & Leary, 1982).

Evolutionarily speaking, forming social bonds help enhance productivity (Fehr & Fischbacher, 2004). For example, whilst one person hunts, another can care for the offspring. The allocation of jobs that are tailored to one's skills are just an example of the many positive outcomes of socializing. Another example is the formation of cultures that help pass on skills learnt from previous generations. In addition, social groups help ensure the well-being of all its members (i.e. if one falls sick or grow too old, others will take care of them) (Fehr & Fischbacher, 2004). Thus, it is crucial for humans to be able to socialize.

Social interaction plays an important role in regulating one's emotion; it also helps foster their social skills (Bugental & Grusec, 1998). Social anxiety on a mild level causes one to feel uncomfortable in social situations and avoid it (Lucock & Salkovskis, 1988). In extreme cases, the presence of social situations can have extreme effects on one's physiological system (i.e. increased heart rate, dizziness etc.) and can cause one to behave in an abnormal way (Beidel, Turner, & Dancu, 1985). Without healthy social interactions, one can be left feeling lonely, depressed, and can have low self-esteem (Izgiç, Akyüz, Dogan, & Kugu, 2004). Thus, it is important to study social anxiety and get a better understanding on it.

Because socializing is crucial to human's mental and physical health, social anxiety should be given much attention as it prevents one from socializing effectively. Social anxiety is a pervasive disorder in society (Beidel, Turner, & Dancu, 1985), yet is often overlooked (Heimberg, Horner, Juster, Brown, & Schneier, 1999), especially in the East (Chang, 1997).

Social anxiety was first found in the West, but has existed in the East for quite some time. The reason for the late report of such disorder is because Easterners believe that physical needs (i.e. food, shelter, clothes etc.) overshadowed the emotional problems (Chang & Kim, 1973). Presently, social anxiety is becoming more recognized; however it has not been studied extensively in the East, or specifically in Thailand.

This study aims to examine the relationship of fear of negative evaluation and body image on social anxiety amongst Thai undergraduates because the age range of most Thai undergraduates are 18-22years. We chose to study this age group because based on Erikson's (1993) lifespan model of development, this age group should be experiencing identity issues regarding how they view their bodies, and how they fit in the society. Individuals in this age group are considered to be in their adolescence or early adulthood period. Individuals' ages 12-18 years may feel uncomfortable about their body as they undergo several physical changes (Erikson, 1993). This may contribute to negative body image, a factor we will be measuring. Furthermore, being accepted by others is very important amongst this age group, highlighting the importance of societal norms, and the issues social anxiety can cause. Ages 18-40 years is the period of intimacy vs. isolation crisis (Erikson, 1993). A person's livelihood relies on how well their relationship with others are. The quality of relationships during 18-22 years depends on many factors such as, social anxiety and negative body image (Schlenker & Leary, 1982; Cash, Theriault, & Annis, 2004). Thus, we expect to see a distinct relationship (if there is any) between the three factors amongst this age group.

Several studies have attempted to understand underlying mechanisms of social anxiety (Lucock & Salkovskis, 1988; Beidel, Turner, & Dancu, 1985). Although, it has been established that social anxiety is related to fear of negative evaluation, we would like measure the extent of this relationship in Thailand. Also, we would like to see whether body image contribute to social anxiety, too, and whether it does so independently of fear of negative

evaluation. Few have investigated these relationships in Thailand. This study aimed to examine social anxiety in relation to fear of negative evaluation and body image. We only sampled university students in order to control the influence of age on these relationships.

Social Anxiety

Life interference and impairment caused by social anxiety can be severe; however, social anxiety does not capture as much attention or funding as other clinical disorders because socially anxious individuals are commonly regarded as shy (Rapee & Spence, 2004). Recent reports show that the prevalence of social phobia has increased significantly (Izgiç, Akyüz, Dogan, & Kugu, 2004). The contributing factors of social anxiety discussed by Rapee and Spence (2004) include gender, age of onset, cultural issues, parent-child interaction, genetics, temperament, cognitive factors, life experiences, and comorbidity. The onset of social phobia is generally during adolescent years (Rapee, 1995); this is often moderated by parent-child interaction. Chang (1997) reported that those with social anxiety tend to have stricter and more conservative parents. Another factor that was discussed is genetics: there is evidence that genetics plays a modest but significant role in social anxiety (Rapee & Spencer, 2004). Those with socially anxious family members are at a higher risk of having social anxiety too (Rapee & Spencer, 2004). Finally, social anxiety is more frequently observed amongst female subjects (Rapee, & Spence, 2004).

In the past, self-report measures of social anxiety have had issues in identifying those with high social anxiety because their definition of social anxiety usually includes behaviors (Leary, 1983). This means that in order to be identified as someone with high social anxiety, that person must feel anxious and engage in anxious behaviors too (Leary, 1983). However, there are individuals who experience anxiety but do not act it out for various reasons. As noted in Snyder (1974), some people are capable of controlling their affective behavior; thus,

not displaying overt signs of inner distress. Other may appear anxious and avoid interactions even though they do not report feeling social anxiety more than others. Thus the relationship between social anxiety and the proceeding anxious behaviors is not strong (Leary, 1983). Therefore, a more commonly used definition of social anxiety, and the one we adopt in the current study is a subjective cognitive-affective experience that is often, but not necessarily, followed by non-social, avoidant behaviors. More specifically, social anxiety is "anxiety due to a concern of how one will be perceived by others" (Leary & Kowalski, 1995).

Lucock and Salkovskis (1988) stated that social anxiety is the result of inappropriate responses to social situations, leading to undesired outcomes and distress. Past research has characterized social anxiety by heightened physiological arousal when in social situations, fear of negative evaluation, negative appraisals, fewer positive thoughts, and avoidance of social interactions (Beidel, Turner, & Dancu, 1985).

Socially anxious people interpret interpersonal situations more negatively, more likely (i.e. positive social scenarios are also seen as less likely), and are likely to remember negative interpersonal experiences (O'Banion & Arkowitz, 1977; Lucock & Salkovskis, 1988). They also underestimate their social skills (Trower, 1981; Eldermann, 1985), and inhibit socially appropriate behaviors despite having such skills (Tower, 9181). Negative social evaluation is a major source of threat which leads to social anxiety (Lucock & Salkovskis, 1988). Such thoughts elicit certain physiological responses such as increased heart rate when in social situations.

Social anxiety can be labelled differently depending on the situation and the context. For example, social anxiety experienced during a date is known as date anxiety, and anxiety felt during a performance is called stage fright. Despite the different types of social anxiety, they all elicit the same response (Leary, 1983a).

According to Pinto & Phillips (2005), social anxiety and body dysmorphic disorder have not been studied together extensively. However, it is hypothesized that individuals who view themselves as less attractive have higher social anxiety (Leary & Kowalski, 1995). Archer and Cash (1985) also found negative body image was related to higher social introversion, and higher public consciousness (Theron, Nel, & Lubbe, 1991), both of which are related to social anxiety.

In a study examining the interpretation of ambiguous scenarios, those with body dysmorphic disorder reported events as threatening (Buhlmann et al., 2002); a response similar to those with social anxiety (Lucock & Salkovskis, 1988). Additionally, those with body dysmorphic disorder improved as social anxiety symptoms decreased (Pinto & Phillips, 2005). Pinto and Phillip's (2005) studied social anxiety amongst 81 patients with body dysmorphic disorder. Participants were administered the Social Avoidance and Distress Scale and body dysmorphic disorder symptomatology measures. Results were consistent with other research which found that those with negative body image had high levels of social anxiety (Izgiç, Akyüz, Dogan, & Kugu, 2004). Thus, there is reason to expect a relationship between social anxiety and body image.

A study on social phobia and it's relation to body image was conducted on University students from 22 countries (Izgiç, Akyüz, Dogan, & Kugu, 2004). Using randomized sampling, a total of 1003 university students were recruited. Participants were administered the Diagnostic-Interview-III-Revised Social Phobia Scale, the Rosenberg Self-Esteem Scale, and the Multidimensional Body-Self Relations Questionnaire. The data was analysed using Fisher's exact chi-square test. Results show that subjects who scored higher on social phobia scales had a more distorted body image. This may be due to the fact that those with social phobia have lower self-esteem; thus, they are more critical of themselves, including their body image. Another explanation is that low body-image scorers reflect the dissatisfaction of

their bodies onto their relationships; thus forming fewer social relationships. If one does not consider themselves lovable, it is hard to respect someone else who does consider one so. Consequently, exposure to fewer social events may further contribute to poor social skills. Furthermore, those with social phobia tend to focus more on negative events and attribute the causes of negative events to themselves. This critical mindset may in turn affect how they view their bodies. Additionally, the 'beauty is good bias' is commonly seen in society (i.e. attractive students are more popular with classmates and teachers); and this stereotype exists in most societies (Izgiç, Akyüz, Dogan, & Kugu, 2004). This bias contributes to lower self-esteem and higher social phobia amongst low body-image scorers.

Several studies have established the relationship between social anxiety and fear of negative evaluation. Watson and Friend (1969) constructed a measure for social anxiety and found FNE as a factor within social anxiety. As previously mentioned, high social anxiety subjects are more biased towards identifying ambiguous situations as negative; this effect was also found in identifying others' emotional expressions (Winton, Clark, & Edelmann, 1995). It was hypothesized that FNE will be a predictor for social anxiety; and the results show that higher FNE scores were associated with higher social anxiety (Faytout, Tignol, Swendsen, Grabot, Aouizerate, & Lepine, 2007).

Fear of Negative Evaluation

Fear of negative evaluation, as defined by Watson and Friend (1969), is "apprehension about others' evaluations, distress over their negative evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (p. 449). The original Fear of Negative Evaluation scale consists of 30 items, and was developed while constructing a test, or a battery of tests, to measure social-evaluative anxiety (Watson & Friend, 1969); the other test being the Social Avoidance and Distress scale

(SADS). This assumes that fear of negative evaluation is a sub-construct of, or at least highly correlation with, social anxiety.

The Brief Fear of Negative Evaluation scale (B-FNE) was developed as a shorter version of the Fear of Negative Evaluation (FNE) scale and consists of 12 items (Leary, 1983b). The rationale behind this adaptation was that the new B-FNE scale should be easier to administer within a limited timeframe, and may prove to be more practical. Analysis found that the B-FNE scale and the original FNE scale have nearly identical psychometric properties (Leary, 1983b). A validation study on patients with social anxiety disorder also yield the following results using the B-FNE scale: (a) straight-forward items have stronger psychometric properties than reverse-scored items, (b) patients with social anxiety disorder got higher scores on the B-FNE, and (c) convergent validity analysis revealed that B-FNE is highly correlated with other social anxiety scales (Weeks et al., 2005). Further analysis revealed that lower psychometric properties in the reverse-scored items were correlated with academic background, with higher education background associated with higher psychometric properties, suggesting that reverse-scored items may be more difficult to comprehend. In another study using the B-FNE scale, the correlation between fear of negative evaluation and social anxiety was found to be statistically significant, and regression analysis revealed that fear of negative evaluation accounts for a significant portion of the variance in social anxiety (Kocovski & Endler, 2000). Additionally, fear of negative evaluation was also found to mediate between (a) self-esteem and social anxiety and (b) selfreinforcement and social anxiety. These studies are a few among many that support the strong positive association between fear of negative evaluation and social anxiety.

The recent emergence of a new variable, fear of positive evaluation, has been given increasing attention. The argument was that while fear of negative evaluation is a significant factor of social anxiety, fear of positive evaluation was also found to be positively and

significantly correlated with social anxiety (Weeks, Heimberg, & Rodebaugh, 2008). The study, using straight-forward items from the B-FNE, found that both fear of negative evaluation and fear of positive evaluation are *unique* predictors of social anxiety, and argues that both are separate, distinct factors. Another validation study of the fear of positive evaluation concludes that both fear of negative evaluation and fear of positive evaluation is part of a bigger construct, suggesting a new construct, *fear of evaluation in general* (Weeks & Howell, 2012). Despite these arguments, the novel constructs are not as well established and supported as fear of negative evaluation; therefore, fear of negative evaluation remains our chosen construct of interest.

Empirical evidence suggests that fear of negative evaluation stems from social interactions. A longitudinal study monitored adolescents from the age of 13 to 18, and found that lack of perceived social acceptance and emotional intensity of close peer interactions led to the development of fear of negative evaluation (Teachman & Allen, 2007); this strongly suggests that social interaction is crucial to the development of fear of negative evaluation. Another study found that self-focus thinking supports the maintenance of social anxiety in individuals with high fear of negative evaluation (Vassilopoulos & Watkins, 2009). Both the rationale and the results of these studies further imply that there is a strong association between fear of negative evaluation and social anxiety.

Fear of negative evaluation was found to affect cognitive processes. A study found that individuals who scored highly on the FNE scale displayed a bias towards identifying a face as negative when the emotion of the face is neutral or hard to discriminate (Winton, Clark, & Edelmann, 1995). Participants with high fear of negative evaluation was also found to initially attend to emotional faces more often, especially happy female faces, then avoided emotional faces in the following 1-1.5 seconds (Wieser, Pauli, Weyers, Alpers, & Mühlberger, 2009); this supports an existing theory on fear of negative evaluation called "the

hypervigilance-avoidance hypothesis", which states that individuals who have either a fear of negative evaluation or social anxiety will initially fixate on emotional individuals, then avert their attention away after. Another study found slightly contradictory results: Participants with high fear of negative evaluation display longer engagements towards emotional faces and have problems disengaging, disagreeing with the hypervigilance-avoidance hypothesis (Rossignol, Campanella, Bissot, & Philippot, 2013). It is notable that these two studies are measuring different psychological domains: Wieser et al. (2009) measured eye movements (behavioral) of the participants whereas Rossignol et al. (2013) measured event-related potentials (cognitive). Nevertheless, both results showed that individuals with high fear of negative evaluation display attentional bias towards emotional faces compared to neutral faces. It is also notable that all of these studies used the FNE scale, further supporting the stance that the FNE (and the BFNE) scale is the most widely used and accepted scale to measure fear of negative evaluation. Additionally, patients with social phobia in a clinical study were given the FNE scale to complete before and after treatment, and found that fear of negative evaluation is associated with higher anxiety at 6 months follow-up (Faytout et al., 2007).

Overall, there is overwhelming evidence to suggest that fear of negative evaluation is strongly associated with social anxiety. Fear of negative evaluation does not only predict social anxiety, but may also cause both behavioral and cognitive changes that may maintain social anxiety. Therefore, it is important to further expand the knowledge regarding the relationship between fear of negative evaluation and social anxiety. Our study will examine one other variable—body image—and its interaction with the two variables within a new population—Thai undergraduates.

Body Image

There has been increasing attention given to body image in recent decades. Body image deals with one's perception and attitude towards one's body (Cash, 2004). There is overwhelming empirical evidence that points to the media being a significant influence behind body image and eating disorders (Thompson & Heinberg, 1999; Derenne & Beresin, 2006). With the increasing involvement of media in daily life, it is crucial to understand its effects on the human mind, hence the increasing attention.

Body image has been extensively studied amongst females; this reinforces the idea that body image is only relevant to females. Nevertheless, body image and its consequences are relevant to both men and women of all ages (Grogan, 2007). Body image is not a stable trait, it varies with different situations (e.g. exposure to media images and messages). Several studies have attributed the major cause of body image issues to media exposure (Yamamiya et al., 2005; Groesz, Levine, & Murnen, 2002; Halliwell & Dittmar, 2004; Halliwell & Dittmar, 2004; Halliwell & Dittmar, 2004). A study in United States found that 94% of females in the media are thinner than the average American woman. These media figures usually portray a happy lifestyle

The majority of participants in Smolak's (2004) study reported feeling unhappy about their bodies; these participants are children and adolescents. From their study, it would appear most children and adolescents feel some level of body image dissatisfaction.

Participants in the study stated that their main concern is not being accepted by others. They explain that the major cause of not being accepted is not having the ideal body. This shows that the norm in the society is a significant contributor of body image dissatisfaction.

Over the past two decades, there is an increase in unhealthy food consumption, and a decrease in physical exercises, leading to an increase in obesity (Wardle, Haase, & Steptoe, 2006). The unhealthy eating habit may be due to the fact that there is an abundance of

unhealthy food available in the market, and they are constantly being advertised. This, and the reduction of exercise, has caused an increase in BMI (i.e. people are getting fatter)

(Wardle, Haase, & Steptoe, 2006). Consequently, people who have gained weight becomes more dissatisfied with their bodies. In summary, the dissatisfaction on one's body is the result of one's body not matching with social ideals. Ideal body image is usually dictated by the media; and whilst most advertisement characters' bodies represent a small percentage of the population, people still idealize such body shapes because of the positive messages implied. Failure to obtain such body shape (due to genetics, poor diet, and lack of physical exercise) leads to eating disorders (Polivy & Herman, 2002), depression, stress, and symptoms similar to social anxiety (i.e. FNE) (Murray, Byrne, & Rieger, 2011).

A meta-analysis also found that thinness as an ideal body image is related to female body image dissatisfaction (Grabe, Ward, & Hyde, 2008). A study of body image among males also found that exposure to either muscular or slender body images leads to higher body dissatisfaction, and the magnitudes of change between the two groups are insignificantly different from each other (Galioto & Crowther, 2013).

Empirical evidence suggests that weight may play a significant role in the development of body dissatisfaction. A study compared currently overweight, formerly overweight, and never overweight women in terms of body satisfaction and psychosocial functioning, and found that both current and formerly overweight women display lower body dissatisfaction, higher levels of binge-eating, and lower self-esteem. Correlational analysis revealed that currently overweight women's poor body image and psychosocial functioning is linked to stigmatizing experiences throughout life (Annis, Cash, & Hrabosky, 2003). This suggests that actual weight is linked to body satisfaction level. But does *perceived* weight affect body satisfaction level? Another study found that perceived overweight is higher among female than male university students from 22 countries. Interestingly, Asians were

more likely to engage in losing weight behaviors than participants from other countries (Wardle, Haase, & Steptoe, 2006). Perceived overweight suggests that participants are not satisfied with their current weight, implying body dissatisfaction.

A negative body image, including body dissatisfaction, does lead to negative effects. In the interpersonal domain, higher body dissatisfaction has been linked to less secure general attachments and anxious romantic attachments (Cash, Theriault, & Annis, 2004). In the clinical domain, negative body image was found to be a strong predictor of eating disorders (Derenne & Beresin, 2006). A separate study found that internalization of societal pressures regarding prevailing standards of attractive seems to moderate this association (Thompson & Heinberg, 1999). Another study found that social anxiety, assessed using the Social Avoidance and Distress scale (SADS) is significantly correlated with body dysmorphic disorder (BDD), suggesting that body image may also play a role in social anxiety (Pinto & Phillips, 2005). Additionally, people with social phobia possess a more distorted body image than people without social phobia (Izgic, Akyuz, Dogan, & Nesim, 2004).

Objective

Our study aims to assess the three constructs of interest in order to examine the effects of fear of negative evaluation, body image, and the interaction between the two variables on social anxiety among undergraduates in Thailand. Theoretically, this study may help identify factors that could predict social anxiety and fill the cultural gap in the literature regarding the three constructs of interest.

Operational Definition

Social Anxiety. A subjective cognitive-affective experience that is often, but not necessarily, followed by non-social, avoidant behaviors. More specifically, social anxiety is

"anxiety due to a concern of how one will be perceived by others" (Leary & Kowalski, 1995). This will be measured using the Interaction Anxiousness Scale (IAS) by Leary (1983a), where higher scores indicate higher social anxiety.

Fear of Negative Evaluation. Apprehension about others' evaluations, distress over their negative evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively (Watson & Friend, 1969, p. 449). This will be measured using the B-FNE scale by Leary (1983b) where higher scores indicate higher fear of negative evaluation.

Body Image. One's perception and attitude towards one's body (Cash, 2004). This will be measured using the Body shape Questionnaire (BSQ-8C) by Evans and Dolan (1993). Higher scores indicate higher body image dissatisfaction.

Hypotheses

- 1) There will be a significant positive correlation between Fear of Negative Evaluation and Social Anxiety.
- 2) There will be a significant positive correlation between Body Image Dissatisfaction and Social Anxiety.
- 3) Fear of Negative Evaluation and Body Image Dissatisfaction will both uniquely predict Social Anxiety.

Research framework

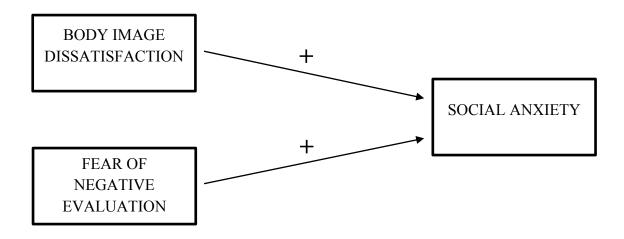


Figure 1. A model of the research framework according to the hypotheses.

Chapter 2: Methodology

Method

Participants

A total of 80 Thai undergraduate students (25 males, 55 females) between the age of 18 and 25 (M = 21.01, SD = 1.37) enrolled in Chulalongkorn University participated in the study on a voluntary basis.

Materials and Measures

A 37-item online questionnaire hosted on Google Drive was used to measure demographic information and three constructs of interest: age, gender, Fear of Negative Evaluation (FNE; independent variable, predictor), Body Image Dissatisfaction (BID; overall body shape; independent variable, predictor), and Social Anxiety (SA; dependent variable, criterion).

Fear of Negative Evaluation. The B-FNE scale (Leary, 1983b) was used to measure FNE and consisted of 12 items: 8 straight-forward and 4 reverse-scored items. It was administered using a 5-point likert scale, from 1 as *not at all a characteristic* of me to 5 as *extremely characteristic of me*. Higher scores indicate higher fear of negative evaluation (see Appendix A for more information). Reliability analysis has revealed a high degree of internal consistency indicated by a high Cronbach's alpha, $\alpha = .81$ in Leary's (1983b) study, and .85 in ours.

Body Image. A short version of the Body Shape Questionnaire (BSQ-8C) was used to measure BID and consists of 8 items (Evans & Dolan, 1993). It was administered using a 6-point likert scale, from 1 as *never* to 5 as *always*. Higher scores indicate higher body image dissatisfaction (see Appendix B for more information). Reliability analysis revealed a high

degree of internal consistency indicated by a high Cronbach's alpha, α = .92 in Evans and Dolan's (1993) study, and .90 in ours.

Social Anxiety. The Interaction Anxiousness Scale (IAS) was used to measure SA and consists of 15 items: 11 straight-forward and 4 reverse-scored items (Leary, 1983a). It was administered using a 5-point likert scale, from 1 as *not at all a characteristic* of me to 5 as *extremely characteristic of me*. Higher scores indicate higher social anxiety (see Appendix C for more information). Reliability analysis revealed a high degree of internal consistency indicated by a high Cronbach's alpha, $\alpha = .89$ in Leary's (1983a) study, and .83 in ours.

Procedure

Data Collection. Participants were mainly international program students or students who have a high level of English comprehension. This is known because decent understanding of English is a requirement for students studying in international programs. Selecting English literate participants allowed the use of scales in their original language, thus preventing change in validity caused by translation (i.e. loss/change of meanings). 96.25% of the sample is Thai; and 98.75% of the sample lived their lives in Thailand and hence represent a population shaped by Thai culture and society. There were two participants who are not Thai; however, their data was not excluded because they have grown up in Thailand their whole lives, were shaped by Thai culture like the rest of the sample. Participants were either contacted in person (e.g. physically, phone calls, friend referral) or through online social media (e.g. Facebook, Line, Whatsapp). Those who were contacted in person were given paper copies of the questionnaire, whilst those who were contacted through media were given an online questionnaire to complete via Google Forms.

Statistical Analysis. Data was coded into SPSS, a program that specializes in statistical analysis. For gender, male was coded as 1 and female is coded as -1. Internal

consistency was analyzed to examine the reliability of each scale. Standard multiple regression was conducted with FNE and BID as predictors and SA as the criterion, as well as Pearson's correlations between all three variables to address our hypotheses and as a preliminary check for intercorrelations and possible collinearity.

Chapter 3: Results

Results

Correlations

Hypothesis 1. Social Anxiety (M = 2.92, SD = 0.63) was significantly correlated with Fear of Negative Evaluation (M = 3.01, SD = 0.71), r = .591, p < .01.

Hypothesis 2. Social Anxiety (M = 2.92, SD = 0.63) was significantly correlated with Body Image Dissatisfaction (M = 3.03, SD = 1.12), r = .220, p < .05.

Additional Findings. Results also revealed a significant positive correlation between the predictors (r = .492, p < .01) (see Table 1 for further statistical information).

Table 1

Means, Standard Deviations, and Zero-order Correlations of and between the Variables

Variables	M (SD)	BID	FNE	Social Anxiety	
BID	3.03 (1.12)	-			
FNE	3.01 (0.72)	.492**	-		
Social Anxiety	2.92 (0.65)	.220*	.591**	-	

^{*} *p* < .05, ** *p* < .01

Analysis of Regression

Hypothesis 3. FNE and BID were entered as predictors and SA as the criterion in a multiple linear regression. According to the model, Fear of Negative Evaluation is statistically significant as an individual predictor ($\beta = .636$, p < .001) and Body Image Dissatisfaction is statistically insignificant as an individual predictor ($\beta = -.092$, p = .382).

The model's R-square value showed that 35.5% of variance in Social Anxiety is explained by all predictors, F(2, 77) = 21.21, p < .001. Of this, 30.7% of variance in Social Anxiety is uniquely attributed to Fear of Negative Evaluation, 0.6% to Body Image Dissatisfaction, and 4.2% to shared variance after factoring out the other two variables (as indicated by semi-partial correlation values). See Table 2 for further information.

Table 2
Summary of Multiple Regression Analysis on the Variables

Variables	В	SE (B)	β	p	r^{a}
BID	052	0.06	092	.382	080
FNE	.567	0.09	.636	.000	.554

Note. $R^2 = .355$.

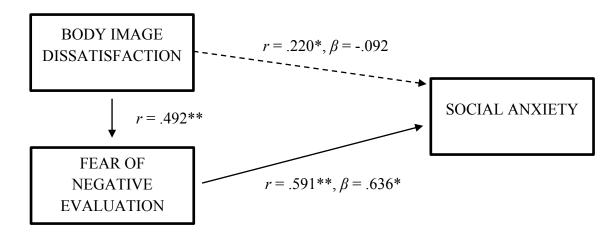
^aThe values represent semi-partial correlations.

Chapter 4: Discussion

Discussion

The aim of the study is to examine the effects of fear of negative evaluation, body image, and the interaction between the two constructs on social anxiety among Thai undergraduates. Our first hypothesis is supported by a significant correlation found between Fear of Negative Evaluation and Social Anxiety. Our second hypothesis is also supported by a significant correlation between Body Image Dissatisfaction and Social Anxiety. Analysis of regression of the two-predictor model partially supports our third hypothesis: Fear of Negative Evaluation is a significant unique predictor of Social Anxiety but Body Image Dissatisfaction is not.

Additional analysis revealed that there is a mediation effect. According to Baron and Kenny (1986), three criteria must be met to conclude a mediation effect. First, the independent variable must be a significant predictor of the dependent variable, and Body Image Dissatisfaction is found to be highly correlated with Social Anxiety (hypothesis 2). Second, the independent variable must be a significant predictor of the mediator, and Body Image Dissatisfaction is found to be highly correlated with Fear of Negative Evaluation (additional findings). Third, the mediator must be a significant predictor of the dependent variable while controlling for the independent variable, and Fear of Negative Evaluation is found to be a *unique* significant predictor of Social Anxiety (partial support for hypothesis 3). Our results fit perfectly with these criteria given that Body Image Dissatisfaction is the independent variable, Fear of Negative Evaluation is the mediator, and Social Anxiety is the dependent variable. Therefore, it is conclusive that Fear of Negative Evaluation mediates the relationship between Body Image Dissatisfaction and Social Anxiety (see Figure 1 and Figure 2).



* *p* < .05, ** *p* < .01

Figure 2. A model of the research framework according to the results.

Our results concerning the relationship between fear of negative evaluation and social anxiety reflects the literature. Weeks et al. (2005) found that the B-FNE is highly correlated with various other social anxiety scales, and our results further supports that by revealing a significant correlation between the B-FNE and the IAS. Similarly, Kocovski and Endler (2000) conducted an analysis of regression and revealed a significant portion of the variance in social anxiety explained by fear of negative evaluation, as we also have.

Pinto and Phillips (2005) reported that there have not been many studies that have considered body image and social anxiety. They conducted a study examining social anxiety amongst 81 patients with body dysmorphic disorder. Participants were administered the Social Avoidance and Distress Scale and body dysmorphic disorder symptomatology measures. Nevertheless, they reported that those with body dysmorphic disorder improved when social anxiety decreased, although their results do not show a causal direction. Another study by Izgiç, Akyüz, Dogan, and Kugu, (2004) recruited 1003 university students using randomized sampling. Participants were administered the Diagnostic-Interview-III-Revised Social Phobia Scale, the Rosenberg Self-Esteem Scale, and the Multidimensional Body-Self

Relations Questionnaire. The data was analysed using Fisher's exact chi-square test. Results showed that those who scored higher on social phobia scales had a more distorted body image. Based on previous literature, a correlation between social anxiety and body image was expected, and this correlation was seen our results. One explanation for this link is socially anxious individuals tend to have lower self-esteem, thus, they are more critical about their body. Also, those with negative body image may carry the dissatisfaction of their bodies into their relationships, thus forming fewer social relationships.

Although several studies have found correlations between body image and social anxiety (Pinto & Phillips, 2005; Izgiç, Akyüz, Dogan, & Kugu, 2004), the relationship is not as well established as the one between social anxiety and FNE. Thus, the relationship between body image and social anxiety is not expected to be as high as the relationship FNE and social anxiety. This was seen in our results: those with higher FNE score were more likely to be socially anxious than those with negative body image.

Implications

Theoretical Implication. According to the literature, both fear of negative evaluation and body image contributes to social anxiety. Our study does not only replicate results from previous studies but also extends beyond the literature by examining the effects of the interaction between fear of negative evaluation and body image on social anxiety. Fear of negative evaluation is found to be highly correlated with social anxiety and mediates the effects between body image and social anxiety. This is a novel contribution to the literature, and implies that fear of negative evaluation may be a mediator for other factors that are associated with social anxiety.

Novel Population. Our study has never been done on undergraduates in Thailand before; this fills the gap in the literature where information was missing. There was one study in the literature that examines body image among Thai undergraduates (Wardle, Haase, & Steptoe, 2006) but there was none that examine both fear of negative evaluation and body image within this population.

Practical Implication. The mediation effect of fear of negative evaluation on the relationship between body image dissatisfaction and social anxiety may be very beneficial to the treatment of patients with severe social anxiety that stems from a poor body image, including anorexia and bulimia. The results of our study suggests that treating social anxiety by focusing on fear of negative evaluation may be more effective than focusing on poor body image for two reasons: (a) body image dissatisfaction does not lead to social anxiety in the absence of fear of negative evaluation and (b) fear of negative evaluation is a very strong predictor of social anxiety. In other words, our results have implications that may improve treatment of social anxiety that is associated with body image.

Limitations

The materials used in this study were in English; this limited the number of participants that we could recruit because it is difficult to find Thai undergraduates who are English literate. Amongst those who completed the survey, some mentioned that certain words were too difficult for them to understand. This means that some questions were not fully understood by the participants which may have negatively affected the validity of their scores. Additionally, our results are drawn from participants within a very specific age range, therefore limiting the scope of which these findings can be generalized.

Future Research

The results of our study suggests that because fear of negative evaluation is a very strong predictor of social anxiety, it is possible that fear of negative evaluation mediates the relationship between many other constructs and social anxiety. Future research can focus on identifying these mediated constructs to both further understand the interaction between various constructs that affect social anxiety and increase treatment effectiveness which would be extremely beneficial considering the increasing rates of social anxiety (Izgiç, Akyüz, Dogan, & Kugu, 2004). Furthermore, our study is conducted in a novel population in terms of culture, so future research can expand within this population and examine other demographic factors such as age.

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Appendix A

Brief Fear of Negative Evaluation Scale (Leary, 1983b)

Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale:

1 = Not at all characteristic of me				
2 = Slightly characteristic of me				
$3 = \underline{\text{Moderately}}$ characteristic of me				
$4 = \underline{\text{Very}}$ characteristic of me				
$5 = \underline{\text{Extremely}}$ characteristic of me				
1. I worry about what other people will think of me even when I know it doesn't make any difference.				
2. I am unconcerned even if I know people are forming an unfavorable impression of me.				
3. I am frequently afraid of other people noticing my shortcomings.				
4. I rarely worry about what kind of impression I am making on someone.				
5. I am afraid others will not approve of me.				
6. I am afraid that people will find fault with me.				
7. Other people's opinions of me do not bother me.				
8. When I am talking to someone, I worry about what they may be thinking about me.				
9. I am usually worried about what kind of impression I make.				
10. If I know someone is judging me, it has little effect on me.				
11. Sometimes I think I am too concerned with what other people think of me.				
12. I often worry that I will say or do the wrong things.				

Appendix B

Body Shape Questionnaire – Shortened Version (Evans & Dolan, 1993)

We should like to know how you have been feeling about your appearance over the **PAST FOUR**WEEKS. Please read each question and circle the appropriate number to the right. Please answer all the questions.

OVER THE PAST FOUR WEEKS:

	The state of the s	Ne	ver					
		1	Rar	ely				
		1	1	Son	netin	nes		
		1	1	1	Oft	en		
		Ì	1	1	1	Vei	ry often	
		Î	Ť	i	1	1	Alway	S
		İ	i	i	ı İ	- Î		
1.	Have you been afraid that you might become fat (or fatter)?	i	2	3	4	5	6	
2.	Has feeling full (e.g. after eating a large meal) made you feel fat?	1	2	3	4	5	6	
3.	Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?	1	2	3	4	5	6	
4.	Have you imagined cutting off fleshy areas of your body?	1	2	3	4	5	6	
5.	Have you felt excessively large and rounded?	1	2	3	4	5	6	
6.	Have you thought that you are in the shape you are because you lack self-control?	1	2	3	4	5	6	
7.	Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?	1	2	3	4	5	6	
8.	Have you been particularly self-conscious about your shape when in the company of other people?	1	2	3	4	5	6	

Appendix C

Interaction Anxiousness Scale (Leary, 1983a)

Indicate how characteristic each of the following statements is of you according to the following scale:

1 = Not at all characteristic of me

2 = Slightly characteristic of me
$3 = \underline{\text{Moderately}}$ characteristic of me
$4 = \underline{\text{Very}}$ characteristic of me
$5 = \underline{\text{Extremely}}$ characteristic of me
1. I often feel nervous even in casual get-togethers.
2. I usually feel uncomfortable when I'm in a group of people I don't know.
3. I am usually at ease when speaking to a member of the other sex.
4. I get nervous when I must talk to a teacher or a boss.
5. Parties often make me feel anxious and uncomfortable.
6. I am probably less shy in social interactions than most people.
7. I sometimes feel tense when talking to people of my own sex if I don't know them very well.
8. I would be nervous if I was being interviewed for a job.
9. I wish I had more confidence in social situations.
10. I seldom feel anxious in social situations.
11. In general, I am a shy person.
12. I often feel nervous when talking to an attractive member of the opposite sex.
13. I often feel nervous when calling someone I don't know very well on the telephone.
14. I get nervous when I speak to someone in a position of authority.
15. I usually feel relaxed around other people, even people who are quite different from me.

Bibliography

Yada Pawijit

Yada Pawijit realized her interest for psychology during the final years in high school. She joined JIPP because the courses' structure allows her to experience both Thai and Australian culture. Whilst in Australia, Yada found a new career path, marketing. After doing some research, she found several overlaps between psychology and marketing. One of her aim in completing senior project is to research information that may help her in her future career. After graduating, Yada plans to work in an international cooperation where she can utilize and develop her multi-cultural background.

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