

Gender Differences in Dispositional Attributes, Psychological Adjustments, and Appraisals  
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### Abstract

There is currently a significant amount of research being conducted to pinpoint differences between men and women and the way they think, emote, and experience life. While the current literature has uncovered significant differences between men and women in terms of their expectations, priorities, and characteristics, there has not been data yet that has discovered systematic differences in the underlying appraisals that comprise our emotional experiences. The purpose of this current study was to find systematic differences in emotional experience between men and women when participating in a math test. Then we examined if these differences in emotional response could be explained by appraisals, and further, see if these appraisals could be explained by differences in dispositional factors. The first substudy was an analysis of dispositional sex differences by aggregating surveys completed by university students throughout the past few decades with a variety of measures assessing personality factors and psychological outcomes. Looking at mean scores and correlations between personality factors and psychological outcomes, we discovered significant differences between the way men and women approach and react to various situations. Our second substudy consisted of a math test with manipulated levels of difficulty and assessments of appraisals and emotions whilst participating in the math study. Results from this substudy showed no significant differences in appraisal or emotional experiences. Therefore, we were able to highlight underlying dispositional factors and psychological outcomes that differed for men and women, but we did not find any differences in emotions and appraisals. A future direction is proposed to address this issue.

*Keywords:* gender, dispositional factors, psychological outcomes, appraisals, emotions

## INTRODUCTION

While we all experience emotions, the triggers for particular emotions, and to what extent they are experienced, will vary from person to person. Why is that? What in our brains tells us to feel one way or another after experiencing a certain event, and why does that differ from the person standing next to us, or the person on the other side of the conversation? This is where the Appraisal Theory comes in. This theory describes how different emotional responses are elicited by the *interpretation* of an event, but this topic will be explored in further detail later in this paper. The purpose of this paper is to examine if there is a way to systematically anticipate these appraisals based on the culture one is raised in -- looking at how gender can be considered a culture that affects the way we (and the other people of our same gender) appraise events.

Culture is defined as “the shared attitudes, values, beliefs, and customs of members of a social unit or organization” (Cartwright & Cooper, 2014, p. 56). Considering that definition, it is reasonable to believe that gender can be seen as a culture - there are certain expectations, norms, and attitudes that are distinct for men and distinct for women. Important gender differences have been observed and recorded since gender has become of popular interest in the 1970s, and this will also be explored throughout this paper (Kahn, 2009). We plan to look even further into the thought processes, motivations, and priorities of men and women and how these affect appraisals and emotions to investigate if there are systematic and consistent differences.

To begin examining this topic, we must take a closer look into 1) what appraisals are and how we can better understand what components go into forming them and 2) what significant differences in areas such as motivation, coping, and priorities have been found in pre-existing literature.

*Appraisal Theory*

Let us first take a closer look into what Appraisal Theory is and the current hypotheses about how it relates to gender. The Appraisal Theory is based on the idea that emotions are experienced as a function of the evaluations people make of the situation they are in (Smith & Lazarus, 1990). This allows for individual differences to be taken into account. Instead of saying there is one standard way to feel about an event, there is a step in between where the perspective in which a person sees the situation can vary. These evaluations are involved in deciding if the circumstances are relevant to a person's well-being. In particular, if there is an adaptational meaning (a representation of a particular harm or benefit), the emotions elicited will also serve as a signal to that person and the people around him/her to contend with the situation. For example, the elicitation of sadness, when a situation is incongruent with his/her well being, can signal that something is off to the person experiencing this adversity, and it can also signal to those nearby that something negative has happened so they can try to combat the issue.

When taking a closer look into what appraisals really are, there are two main questions of concern. First, what are the contents of the appraisal? And second, what are the specific questions asked when making an appraisal that will determine the emotions that will be elicited as a result of the appraisal? We will be looking at the Smith & Lazarus Model of Emotional Appraisal, which is based on six appraisal components. Two of these components involve primary appraisals gathering the significance of the event. These two components are 1) motivational relevance (how applicable this situation is in one's life), and 2) motivational congruence (if this situation consistent or inconsistent with one's goals).

The other four components are part of the secondary appraisal, which focuses on coping mechanisms. These four components include: 1) accountability (identifying who or what is

responsible for the situation (e.g., who is the source)), 2) problem-focused coping potential (how able a person is to take action in the current situation to make it better in line with one's goal), 3) emotion-focused coping potential (how well one can handle and adjust to the situation if one cannot make it consistent with one's goals), and 4) future expectancies (the expectations of how congruence may change over time) (Smith & Lazarus, 1990).

When examining how/when appraisals are formed, patterns of appraisals result in different emotions. For instance, anger is elicited by situations that are deemed motivationally relevant, motivationally incongruent, and others have accountability, whereas guilt is also characterized to motivational relevance and incongruence, but in this emotion, there is self-accountability (Smith & Lazarus, 1993). As a result, there is consistency between appraisals that link to specific emotions, and the question goes back to what situations elicit certain appraisals of a situation to begin with. In short, depending on the *patterns* of appraisal, men and women will experience certain emotions.

Findings such as these are encouraging that looking at gender, as a culture in itself, will also produce significant differences in appraisals. It is possible to relate why primary and secondary appraisal may affect men and women differently - based on the expectations men and women hold for themselves and reactions to various situations. For example, based on Appraisal Theory, Smith and Kirby (2009) looked at affiliative vs. achievement orientation tasks. Those with achievement orientation had a positive appraisal of situations that were goal-related, whereas affiliative-oriented people had a more positive appraisal of relationship-related events. This can be indicative of a difference between men and women -- which will be explored further in this paper -- but first, let us look into what underlying factors and gender-expectations may influence one's appraisals.

*Gender Differences in the Current Literature*

There are many expectations and characteristics that are believed to be masculine or feminine. Not only that, but an experiment conducted by Rosenkrantz et al. (1986) found that in general both American men and women seemed to view stereotypical male characteristics as more desirable than stereotypical female characteristics. Masculine traits included: aggressiveness, dominance, competitiveness, clear decision-making, ambition, and non-dependence. This can lead to different appraisals for men and women. First, with these expectations, men should have a higher sense of motivational relevance and congruence to challenging situations, as well as a perceived ability to cope in situations that call for such attributes. Women, on the other hand may feel they have less ability to cope and a stronger motivational incongruence when placed in these types of scenarios.

Expanding on Rosenkrantz et al.'s study (1968), there has also been previous research conducted to assess more broadly the situations that provide men vs. women the most confidence, and to better understand how men and women react to circumstances that turn out favorably or unfavorably. Brems and Johnson (1989) found that masculinity is positively related to problem-solving appraisals, confidence, and willingness to approach difficult problem-solving situations. This in itself can lead to appraisals based on gender because boys are predicted by others and expect themselves to be better problem solvers, while girls have lesser expectations. Additionally, when looking into the secondary appraisals, this clearly indicates that men would feel a greater sense of confidence and emphasis on problem-focused coping whereas women may experience more emotional-based coping.

Now looking more closely into the motivational congruence and the relevance, Josephs, Markus, & Tafarodi (1992) looked more deeply into situations that tended to elicit stronger

emotions for men and women. In general, men prioritized experiences that distinguished them as individuals above the rest. Men craved the feelings of dominance amongst their peers and were lifted by problem-solving abilities. Women, on the other hand, put a larger emphasis on being a part of the group by forming strong connections with others. This was an interesting finding because it appeared to indicate that men find individual achievement more important and women saw more collectivist orientation as an important factor in their lives, possibly indicating different appraisals when looking at various situations. In both motivational congruence and relevance as well as coping styles and future expectations, men will place more weight on setting oneself apart while women may have a greater emphasis on being in alignment with the societal norms and using social outlets as a coping mechanism.

Another interesting factor of the previously mentioned Brems and Johnson's study (1989) was it examined participants' reactions when facing a difficult situation. When facing adversity, men turn to denial while women turn to self-hatred. Further, women tended to report that good luck was responsible for situations that worked out in their favor. This can indicate that women have a lower self-efficacy because they believe that external factors are responsible for their good fortune instead of highlighting their internal skills and abilities. A similar, more recent study conducted by Haynes and Heilman (2013) also concluded that women were more likely than men to experience attributional rationalization. Attributional rationalization, a term coined by Haynes and Heilman, describes a situation when there is ambiguity about who is responsible for an outcome. Men are more likely to feel a stronger sense of control and have a stronger sense of confidence and use personal coping abilities. Women more often feel like the situation is out of their control. These, again, pinpoint systematically different coping styles and therefore different appraisals.

To summarize, the issue at hand here is identifying what the *sources* of these differences are. We are particularly interested in determining whether the observed variations can be understood as differences in the culture of men vs. the culture of women, which therefore may cause men and women to have different responses in a variety of situations.

### *Current Limitations*

Regarding women's expectations and roles, this century has opened up an array of new opportunities, as gender equality has become a prominent social issue. Some of these cultural changes include: gains in the workplace, with women obtaining new positions and reaching more prestigious jobs, a trend towards equal pay for male and female workers, increased access to higher education, and the holding of more offices in the public eye (Inglehart & Norris, 2003). And further, women are breaking old-fashioned norms of being just "caring" and "tender," and have more freedom to be dominant and assertive – traditionally male roles and characteristics. With these changes, it is not unreasonable to believe that with these new opportunities, the goals and confidence in oneself to cope with a situation have shifted since the time of some of the older research we are examining.

Regarding men's expectations and roles, this century has opened men to feel and express emotions more openly. It is becoming less stigmatized for men to express their feelings and have more freedom to cry, grieve, emote joy, etc. – at least in American culture (Cornish, 1999). These cultural changes may affect how both men and women view the world, though there still is reason to believe there are systematic differences found between how men and women perceive the world and their place in it. With these changes, men are "allowed" to view the world differently. If emotions experienced are different, or experienced to a different degree, the



underlying appraisals must also be changing in order to generate these emotions. We will be addressing these concerns and limitations in our present study.

### *Present Study*

Gender needs to be viewed as a culture in itself and compared in terms of how norms and expectations have been engrained in both men and women in order to see if this is directly correlated to appraisals that are distinguished between female and male adolescents and adults. While prior studies, such as the research discussed previously, have found a correlation between self-role expectancies and how this affects people's beliefs and actions, there has been very limited research about how this relates to the underlying appraisal itself. We will also be conducting a thorough examination of a wide variety of dispositional traits of men and women to get a fresh set of data that may be more indicative of our current societal norms and expectations to address the limitations of the current literature.

What is important to note here is that we believe appraisals are consistent between everyone experiencing one emotion. As mentioned previously, it is the patterns of appraisal that determine what emotions you will experience. Therefore, the difference in emotional experiences and appraisals between men and women are not because emotions work *differently*, but because the underlying appraisals are different due to the differences in "culture" of masculinity and femininity, therefore eliciting different emotions.

In the present study, we are predicting to find significant results similar to those from the pre-existing literature, but continue to build upon our knowledge of gender's influence on emotions and appraisals. In terms of culture, we predict to find that men have higher expectations for themselves in terms of individual achievement, being seen as strong and dominant amongst his peers, and have higher self-esteem in themselves and their abilities, while

choosing problem-focused coping. Women, conversely, are predicted to have lower levels of confidence and self-esteem, and may choose more emotion-focused coping. The significance of uncovering systematic differences between men and women's appraisals and subsequent emotional experience is key to identifying what makes men and women alike and different. Actions are driven by thoughts and emotions, and if we can pinpoint the differences in what men and women find to be important and determine how they choose to cope with these situations, we can develop some insights that can help people in society work better together. From education, to work, to politics, we are living in an extremely social world, and the more we can understand, the better we can adjust accordingly to the people around us as well as have a better understanding of ourselves.

The present study will be evaluating if we can pinpoint different normative beliefs and dispositional traits that lead to systematically different appraisals of events. To do so, we must first understand these normative beliefs of men and women. Because of these different cultural ideals and norms, men hold some appraisal-relevant assumptions that women do not share, and vice versa. We will first look to assess systematic differences between personality traits and expectations for men and women. Then, look into how these traits affect psychological adjustments like anxiety, stress, depression, subjective happiness, and life satisfaction. We are looking at how the dispositional characteristics are associated with psychological adjustments, and if these relationships are different for men and women. For instance, we will be examining if the traits that predict happiness in women are the same ones that predict happiness in men and/or if there are differences between men and women in the traits that are related to good vs. poor psychological adjustments. Finally, we will compare these differences to the appraisals and emotions when facing a challenging math test. Math is often a topic of interest when it comes to

evaluating gender differences. This is due to the findings that men, in general, have a stronger sense of confidence in math and science related fields, whereas women, starting from adolescence on, have a weakened sense of confidence to do well mathematically (Catsambis, 1994). Many of these reasons stem from societal norms that men do the “harder” sciences that involve more analytical and problem-solving abilities, whilst women should focus on “softer” subjects and more socially focused domains.

### **SUBSTUDY I – ANALYSIS OF DISPOSITIONAL SEX DIFFERENCES**

#### **METHODS**

##### Participants

For the present substudy, our observations were aggregated from participants (N = 1437, 487 males, 950 females), who participated in one of 14 studies conducted at Vanderbilt University or the University of California Berkeley, through the Smith Appraisal Lab, since 1986 (Griner & Smith, 2000; Pecchinenda & Smith, 1996; Smith & Kirby, 2009; Smith et al., 1993; Smith & Lazarus 1993; Smith & Pope, 1982). In each study, participants completed a series of dispositional and adjustment measures. All measures of interest in the present substudy are described below. All studies included the Appraisal Style Questionnaire, as well as some additional measures, but the exact set of measures varied somewhat from study to study.

##### Materials

###### *Dispositional Attributes*

**Appraisal Style Questionnaire (ASQ):** The Appraisal Style Questionnaire (David et al., 2007) includes 12 vignettes of hypothetical scenarios: 6 positive and 6 negative, 6 with achievement orientations and 6 with affiliative orientation. For each situation, participants are instructed to imagine themselves in the situation and answer 7 questions to assess different appraisal

dimensions on a 9-point Likert scale. The seven appraisal components include: motivational relevance, motivational congruence, self-accountability, other-accountability, problem-focused coping, emotion-focused coping, and future expectancy. The appraisal style across the 12 vignettes is estimated for each appraisal component by averaging the component ratings for a particular participant across the 12 scenarios.

**COPE Inventory.** The COPE Inventory (Carver et al., 1989) assesses a broad range of coping responses. Participants reported how they would respond to difficult and stressful experiences. It is assessed on a 4-point Likert scale ranging from 1 – “I usually don’t do this at all” to 4 – “I usually do this a lot.” The inventory has 20 different subscales, which include: positive growth, active coping, planning, social support emotional, social support instrumental, focus, pray, acceptance, mental disengagement, vent, behavioral disengagement, denial, restraint, substance abuse, humor, self-blame, stoicism, catastrophizing, wishful thinking, and isolation. The subscales included in my results section were the subscales with significant findings.

**Life Orientation Test (LOT).** This survey (Scheier & Carver, 1985) assesses the individual differences in optimism vs. pessimism to gain insights into behavioral, affective, and health consequences of this variable. There are 8-items, four questions relate to optimism and the other four questions relate to pessimism. Each question is answered on a 5-point Likert scale with 0- “Strongly Disagree” and 4 - “Strongly Agree.” This measure has an alpha reliability of .86.

**Motivational Orientation.** This scale (Griner & Smith, 2000) has 33-items to assess motivational orientation with 3 subscales 1) performance orientation, 2) learning orientation, and 3) affiliative orientation. We were looking specifically at performance orientation and learning orientations. The internal consistencies are .90, and .87, respectively.

**NEO-Five Factor Inventory (NEO-FFI).** This measure (Costa & Macrae, 1985) looks at features of personality with 5 subscales. The 5 subscales are 1) openness to experience, including traits like being imaginative and insightful, 2) conscientiousness, including traits like being organized, prepared, and thorough, 3) extraversion, including traits like being talkative, assertive, and energetic, 4) agreeableness, including traits like being sympathetic, affectionate, and kind, 5) neuroticism, including traits like being moody, tense, or anxious. This 60-item measure is administered based on a series of questions with a 5-point Likert scale ranging from “Moderately Inaccurate” to “Very Accurate.” The alphas for each of the 5 subscales is .78, .88, .86, .82, and .89, respectively.

**Panas PA/NA.** The Positive Affect Negative Affect Schedule (Watson et al., 1988) measures two mood scales that show relationships between positive and negative affect with personality traits. Questions were asked how participants felt (both positive and negative emotions) in that moment, that day, in the past few days, the past week, the past few weeks, the past year, or in general. There are 20 items on a 5-point Likert scale, ranging from 1 – “Not at All” to 5 – “Extremely.” The internal consistency ranges between .86 to .90 for positive affect and .84 to .87 for negative affect.

**Perceived Competence Scale (PCS).** This measure (Smith et al., 1991) has 4 questions assessing confidence in individual success, confidence in social success, confidence that one’s ambitions will or will not work out as they have planned, and one’s ability to effectively interact with one’s environment. The questions are measured on a 4-point Likert scale, ranging from “Strongly Disagree” to “Strongly Agree.” The PCS has an internal consistency of 0.72

**Rosenberg Self-Esteem.** This is a uni-dimensional survey to measure of self-worth by measuring both positive and negative feelings about oneself (Rosenberg, 1965). With 10 items,

each question is answered using a 4-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree” relating to overall feelings of self-worth or self-acceptance. This scale has an internal reliability of .89.

**Social Network, Availability, and Quality.** The availability of external resources was assessed with three measures. The first is a four-item scale (Dean & Line, 1977), which measures perceived quality of emotional support. It has an average internal consistency of .85. The second scale (Strogatz, 1983) uses 3 items to assess the availability of instrumental support. It has an average internal consistency of .73. The third scale, with 3 items, was taken from the Social Health Scale (Donald et al., 1978) to assess the extensiveness of social network. It has an average internal consistency of .76.

#### *Psychological Adjustments*

**Composite Score CESD.** This measure (Radloff, 1977) looks at the symptoms of depression from nine different categories, as defined by the American Psychiatric Association Diagnostic and Statistical Manual. These symptoms include: sadness, loss of interest, sleep, appetite, concentration, guilt, tired, movement, and suicidal ideation. There are 20 items that gauge how often subjects experience these symptoms between “Not at All or Less than One Day” to “Nearly Every Day for Two Weeks.” The internal consistency ranges from .85 to .90 across studies.

**Perceived Stress Scale.** The Perceived Stress Scale (Cohen et al., 1983) is a measure with 14 items and measure the degree to which situations in one’s life are appraised as stressful over the past month “In the past month, how often have you felt ...?”. Items are crafted to detect how unpredictable, uncontrollable, and overloaded respondents feel in their lives. The Perceived Stress Scale has demonstrated an internal reliability of .88.

**The Satisfaction with Life Scale (SWL Scale):** This is a general measure of cognitive judgment of life satisfaction (Diener et al, 1985). There are 5-items using a 7-point Likert scale from 1 – “Strongly Disagree” to 7 – “Strongly Agree.” This scale has high stability, internal consistency, and correlates highly with alternate measures of life satisfaction. This scale has an internal reliability of .83.

**Subjective Happiness Scale.** This scale (Lyubomirsky & Lepper, 1999) has 4 questions regarding one’s sense of happiness and perceived happiness relative to those around them. It is assessed on a 7-point Likert scale. The internal consistency ranges from .79 to .94.

**State Trait Anxiety Inventory (STAI).** This 20-question survey assesses feelings of anxiety and other related symptoms of anxiety. This measure (Spielberger & Reheiser, 2009) looks at two types of anxiety, state anxiety (S-Anxiety) and trait anxiety (T-Anxiety). State Anxiety measures the feelings of anxiety and unpleasantness elicited by a variety of situations, demands, or threats. Trait Anxiety is characterized by anxiety-proneness, assessed through frequencies of anxiety states in the past and future probabilities. It is administered on a 4-point Likert scale with 1 – “Almost Always” and 4 – “Almost Never.” This scale has a median alpha of .90.

#### Overview on Analyses

First, we analyzed the mean scores for participants on each measure and compared the scores between men and women. We then conducted Pearson correlation tests to see the correlations for men and women between the personality factors and psychological adjustments. After conducting preliminary correlations for men and women, respectively, we wanted to compare the correlations between the genders and used a two-tailed significance of  $p < 0.05$ . We then used a Fisher r-to-z transformation to assess the significant difference between the correlation coefficients between men and women. By doing so, we assessed the value of

correlations and used the two-tailed significance of  $p < 0.05$  as our threshold. These correlations can show a relationship between these dispositional factors, underlying assumptions, and priorities of men and women to the psychological outcomes, and if these relationships are the same or different between men and women.

### Research Hypotheses

To restate our hypothesis, we are predicting men to have higher expectations for themselves in terms of individual achievement, including higher levels of confidence and belief that they can solve any task that comes their way. Women, however, are expected to fit into the social norms and have a greater emphasis on social congruence, but a lower level of confidence and self-esteem. These personality traits will lead women to often have stronger negative psychological outcomes (anxiety, depression, and stress) whereas men will have weakened negative psychological outcomes. We predict women will, however, have stronger positive psychological outcomes (subjective happiness and life satisfaction) to positive social factors, whereas men will have more positive psychological outcomes for individual based traits.

## **RESULTS**

### Mean Similarities/Differences in Dispositional Attributes and Psychological Outcomes

After looking at significant mean differences, there were many findings about appraisal styles, coping mechanisms, and other personality traits that were common between men and women, but there were also a number of dispositional variables that were reliably different.

		Mean	SD	Two-Tailed Significance
Appraisal style of problem-focused coping	Women	6.2610	0.97137	.096
	Men	6.35222	0.96949	
Appraisal style of self-accountability	Women	6.2939	0.74021	.231
	Men	6.2314	0.77396	
Appraisal style of future expectancy	Women	6.0646	1.03008	.716
	Men	6.0435	1.02338	



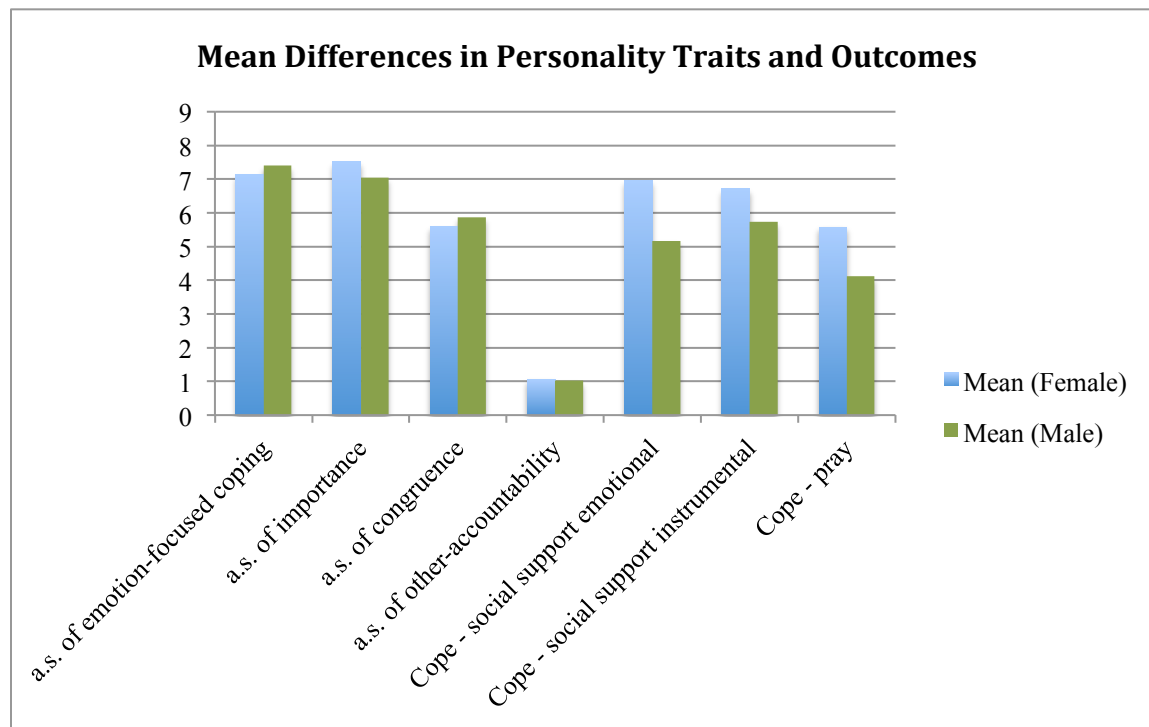
Cope - positive growth	Women	6.6190	1.55989	.415
	Men	6.4910	1.33656	
Cope - active coping	Women	6.6064	1.53397	.092
	Men	6.3393	1.46165	
Cope - plan	Women	6.7939	1.57162	.497
	Men	6.6851	1.43802	
Cope - focus	Women	4.8675	1.34215	.192
	Men	5.0638	1.27198	
Cope - acceptance	Women	6.1140	1.53106	.649
	Men	6.0431	1.37292	
Cope - behavioral disengagement	Women	2.8069	1.10000	.763
	Men	2.7694	1.21902	
Cope - denial	Women	2.5564	1.23603	.258
	Men	2.4139	1.10058	
Cope - restraint	Women	4.8406	1.37334	.888
	Men	4.8632	1.41595	
Cope - stoicism	Women	4.8613	1.80599	.082
	Men	5.2040	1.43048	
Cope - isolation	Women	3.7762	1.89586	.528
	Men	4.6417	1.70918	
FFI - neuroticism	Women	4.2695	1.65992	.093
	Men	4.5237	1.18166	
FFI - extraversion	Women	5.9362	1.43864	.898
	Men	5.9526	0.95589	
LOT	Women	6.28116	1.373728	.369
	Men	6.18383	1.228914	
Rosenberg Self-Esteem	Women	7.1877	1.41104	.093
	Men	7.3961	1.14543	
Perceived competence	Women	7.0190	1.17756	.448
	Men	6.9509	1.04572	
Panas PA	Women	6.6865	1.09205	.508
	Men	6.5719	0.93446	
Panas NA	Women	3.3014	1.07695	.160
	Men	3.5426	0.94662	
Performance orientation	Women	5.9814	1.28671	.356
	Men	5.8285	1.28598	
Learning orientation	Women	6.3677	0.88198	.614
	Men	6.3096	0.90971	
Quality of emotional support	Women	5.7006	1.80854	.249
	Men	6.0319	1.55568	
Life satisfaction	Women	6.5371	1.47208	.954
	Men	6.5260	1.44703	
CESD Score	Women	13.12	9.882	.674
	Men	12.73	8.958	

*Table 1.* This table lists the mean differences that were no significantly different for men and women, consider  $p < 0.05$  as our threshold.

As displayed in Table 1, there were many similar findings between men and women.

These included many appraisal styles, including: problem-focused coping and self-accountability. When looking at coping mechanism, there were no significant differences in positive growth, active coping, planning, focus, acceptance, behavioral disengagement, denial, restraint, stoicism, and isolation. On the FFI scale, neuroticism and extraversion were not significantly different between men and women. Finally, there were many other personality traits that were not significantly different, which includes: the LOT, Rosenberg Self-Esteem, Panas PA and NA, performance and learning orientation, and quality of emotional support. For psychological adjustment means, subjective happiness, life satisfaction, and CESD score were all very similar.

Despite these similarities, there were also many differences observed between the mean scores reported by men and women. These differences are shown in Figure 1.



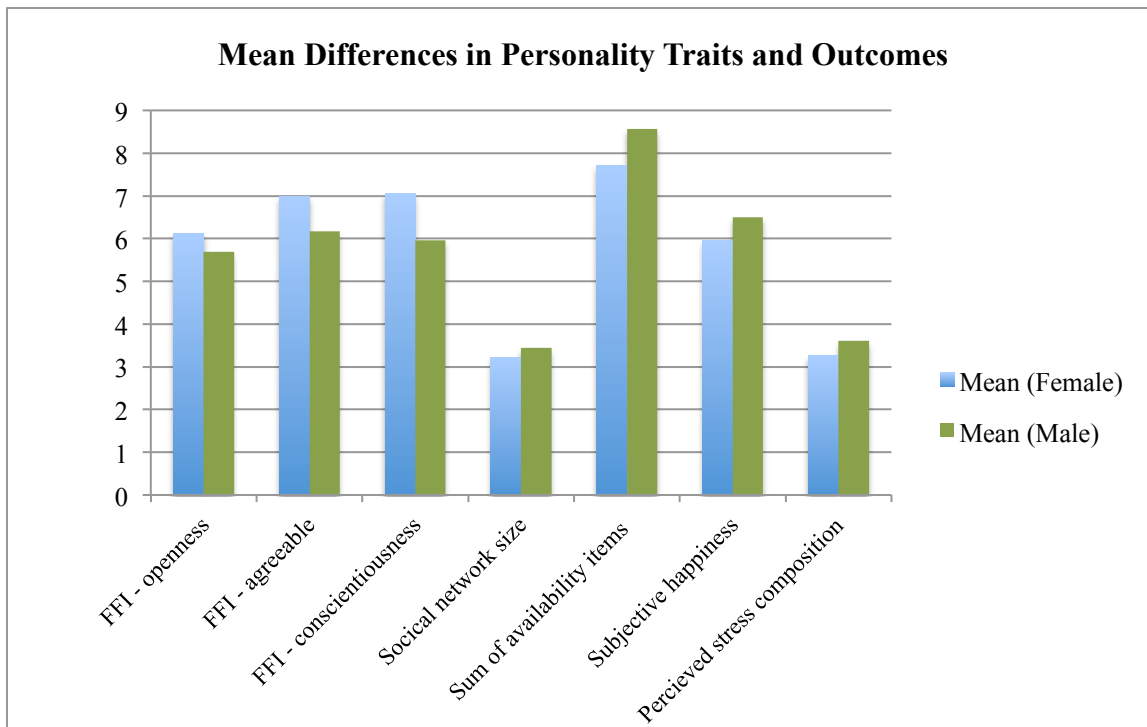
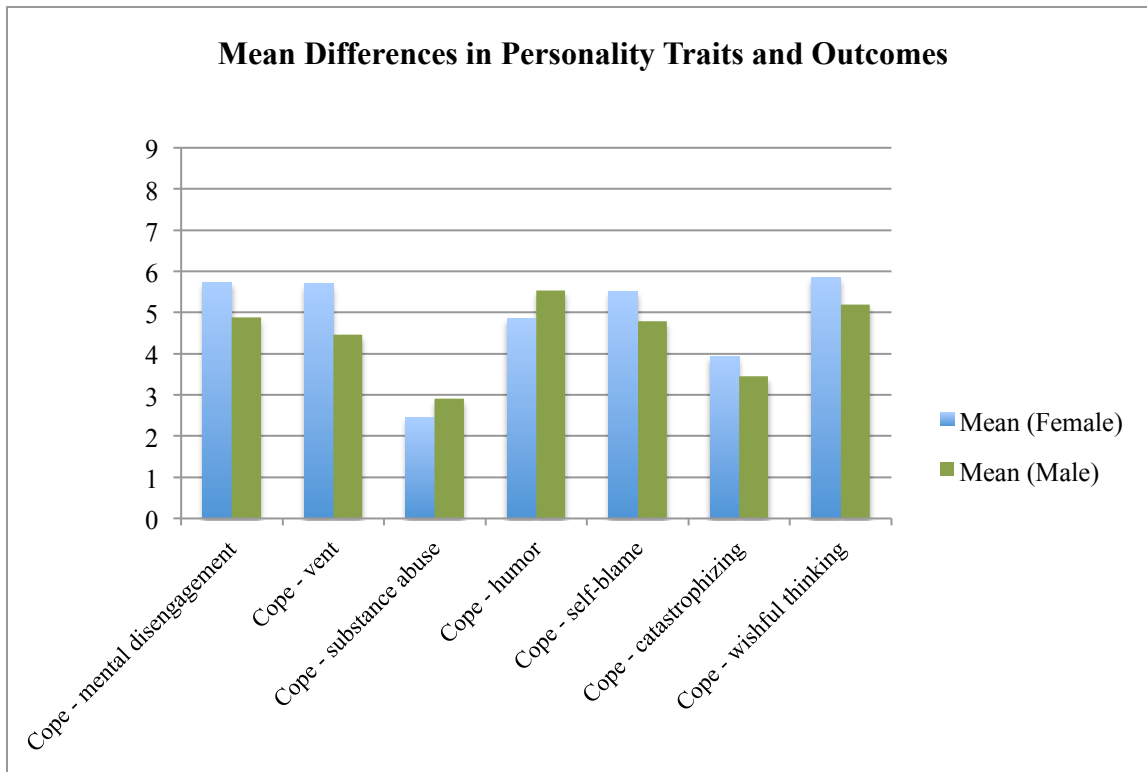


Figure 1. Mean Scores for dispositional attributes and psychological adjustments. Measures not depicted are: appraisal style of problem-focused coping, appraisal style of self-accountability, appraisal style of future expectancy, cope measures (positive growth, active coping, plan, focus, acceptance, behavioral disengagement, denial, restraint, stoicism, isolation), FFI (neuroticism,

extraversion), LOT, Rosenberg Self-Esteem, perceived competence, Panas positive affect, Panas negative affect, performing orientation, and learning orientation because there were no significant differences in mean scores between men and women.

First, when it comes to appraisal style, men reported having higher levels of emotion-focused coping and congruence amongst situations. Women had higher scores on the importance and relevance of situations and higher reports of other-accountability scores. Looking at coping mechanisms, men reported higher scores for: substance abuse and humor. Women had higher coping scores for: social support emotional and instrumental, praying, mental disengagement, vent, self-blame, catastrophizing, and wishful thinking. Looking at the FFI scale, women reported higher marks for openness, agreeableness, and conscientiousness.

In terms of psychological adjustments, men reported higher scores for availability of social network (along with social network size), subjective happiness, and perceived stress, while women had higher reports for anxiety level.

#### Correlations for Men and Women

First, we did basic Pearson correlations for each personality trait to the psychological outcomes described in the measures section. With these correlations, we are looking to see if the dispositional traits are associated with psychological adjustments, and if these relationships are similar or different between men and women.

		Subjective Happiness	Life Satisfaction	Sum of Stai	CESD Score	Perceived Stress
Appraisal style of emotion focused coping	Women	<b>r= .218</b> p < .01	<b>r= .379</b> p < .001	<b>r= -.533</b> p < .001	<b>r= -.433</b> p < .001	<b>r= -.296</b> p < .001
	Men	<b>r= .377</b> p < .05	r= .107 ns	<b>r= -.355</b> p < .05	<b>r= -.334</b> p < .001	<b>r= -.390</b> p < .001
Cope - positive growth	Women	<b>r= .287</b> p < .001	<b>r= .359</b> p < .001	<b>r= -.379</b> p < .01	<b>r= -.326</b> p < .001	<b>r= -.370</b> p < .001
	Men	<b>r= .414</b> p < .05	r= .230 ns	<b>r= -.424</b> p < .01	<b>r= -.382</b> p < .01	<b>r= -.474</b> p < .01
Cope - active coping	Women	r= .119 ns	<b>r= .426</b> p < .001	<b>r= -.456</b> p < .001	<b>r= -.427</b> p < .001	<b>r= -.514</b> p < .001

	Men	r= .348 ns	r= <b>.237</b> p < .05	r= -.292 ns	r= -.266 ns	r= <b>-.500</b> p < .001
Cope - plan	Women	r= .168 p < .05	r= <b>.322</b> p < .001	r= <b>-.356</b> p < .01	r= <b>-.305</b> p < .001	r= <b>-.439</b> p < .001
	Men	r= .343 ns	r= .184 ns	r= <b>-.318</b> p < .05	r= -.175 ns	r= <b>-.442</b> p < .01
Cope - acceptance	Women	r= .100 ns	r= <b>.317</b> p < .001	r= <b>-.261</b> p < .05	r= <b>-.301</b> p < .001	r= <b>-.464</b> p < .001
	Men	r= .338 ns	r= <b>.302</b> p < .05	r= <b>-.403</b> p < .01	r= -.222 ns	r= <b>-.382</b> p < .01
Cope - behavioral disengagement	Women	r= <b>-.318</b> p < .001	r= <b>-.340</b> p < .001	r= <b>.570</b> p < .001	r= <b>.404</b> p < .001	r= <b>.328</b> p < .001
	Men	r= <b>-.406</b> p < .05	r= -.136 ns	r= <b>.334</b> p < .05	r= <b>.341</b> p < .05	r= <b>.504</b> p < .001
Cope - denial	Women	r= -.139 ns	r= <b>-.261</b> p < .001	r= <b>.428</b> p < .001	r= <b>.404</b> p < .001	r= <b>.328</b> p < .001
	Men	r= -.358 ns	r= -.188 ns	r= <b>.473</b> p < .01	r= <b>.362</b> p < .05	r= <b>.448</b> p < .01
Cope - self-blame	Women	r= <b>-.262</b> p < .001	r= <b>-.396</b> p < .001	r= <b>.614</b> p < .001	r= <b>.559</b> p < .001	r= <b>.470</b> p < .001
	Men	r= -.258 ns	r= <b>-.301</b> p < .05	r= <b>.447</b> p < .01	r= <b>.462</b> p < .01	r= <b>.427</b> p < .01
Cope - catastrophizing	Women	r= <b>-.593</b> p < .001	r= <b>-.514</b> p < .001	r= <b>.800</b> p < .001	r= <b>.687</b> p < .001	r= <b>.671</b> p < .001
	Men	r= <b>-.554</b> p < .01	r= <b>-.293</b> p < .05	r= <b>.773</b> p < .001	r= <b>.593</b> p < .001	r= <b>.661</b> p < .001
Cope - wishful thinking	Women	r= <b>-.260</b> p < .01	r= <b>-.322</b> p < .001	r= <b>.495</b> p < .001	r= <b>.409</b> p < .001	r= <b>.449</b> p < .001
	Men	r= -.271 ns	r= .011 ns	r= <b>.530</b> p < .001	r= <b>.410</b> p < .01	r= <b>.405</b> p < .01
Cope - isolation	Women	r= <b>-.481</b> p < .001	r= <b>-.279</b> p < .01	r= <b>.558</b> p < .001	r= <b>.541</b> p < .001	r= <b>.363</b> p < .01
	Men	r= -.289 ns	r= -.067 ns	r= <b>.470</b> p < .01	r= .256 ns	r= .256 ns
FFI - neuroticism	Women	r= <b>-.366</b> p < .001	r= <b>-.572</b> p < .001	r= <b>.901</b> p < .001	r= <b>.715</b> p < .001	r= <b>.684</b> p < .001
	Men	r= <b>-.753</b> p < .001	r= <b>-.406</b> p < .001	r= <b>.769</b> p < .001	r= <b>.452</b> p < .01	r= <b>.495</b> p < .001
FFI - extraversion	Women	r= <b>.275</b> p < .001	r= <b>.320</b> p < .001	r= <b>-.622</b> p < .001	r= <b>-.328</b> p < .001	r= -.162 p < .05
	Men	r= <b>.445</b> p < .05	r= <b>.304</b> p < .01	r= <b>-.427</b> p < .01	r= -.115 ns	r= -.080 ns
FFI - openness	Women	r= -.034 ns	r= .213 ns	r= -.108 ns	r= -.175 p < .05	r= <b>-.328</b> p < .001
	Men	r= -.262 ns	r= <b>-.223</b> p < .01	r= .062 ns	r= -.107 ns	r= -.270 ns

FFI - agreeableness	Women	<b>r= .274</b> p < .001	<b>r= .266</b> p < .001	<b>r= -.304</b> p < .01	<b>r= -.380</b> p < .001	<b>r= -.356</b> p < .001
	Men	<b>r= .549</b> p < .01	<b>r= .280</b> p < .05	<b>r= -.564</b> p < .001	<b>r= -.388</b> p < .01	<b>r= -.369</b> p < .05
FFI - conscientiousness	Women	r= .146 ns	<b>r= .396</b> p < .001	<b>r= -.281</b> p < .05	<b>r= -.380</b> p < .001	<b>r= -.518</b> p < .001
	Men	r= .005 ns	r= .068 ns	<b>r= -.504</b> p < .001	<b>r= -.388</b> p < .01	<b>r= -.369</b> p < .05
LOT	Women	<b>r= .495</b> p < .001	<b>r= .608</b> p < .001	<b>r= -.799</b> p < .001	<b>r= -.661</b> p < .001	<b>r= -.597</b> p < .001
	Men	<b>r= .874</b> p < .001	<b>r= .601</b> p < .001	<b>r= -.568</b> p < .001	<b>r= -.587</b> p < .001	<b>r= -.468</b> p < .001
Rosenberg Self Esteem	Women	<b>r= .471</b> p < .001	<b>r= .706</b> p < .001	<b>r= -.810</b> p < .001	<b>r= -.680</b> p < .001	<b>r= -.479</b> p < .001
	Men	<b>r= .896</b> p < .001	<b>r= .601</b> p < .001	<b>r= -.647</b> p < .001	<b>r= -.587</b> p < .001	<b>r= -.468</b> p < .001
Perceived competence	Women	<b>r= .280</b> p < .001	<b>r= .671</b> p < .001	<b>r= -.640</b> p < .001	<b>r= -.515</b> p < .001	<b>r= -.532</b> p < .001
	Men	<b>r= .697</b> p < .001	<b>r= .384</b> p < .01	<b>r= -.450</b> p < .01	<b>r= -.477</b> p < .001	<b>r= -.493</b> p < .001
Panas PA	Women	<b>r= .443</b> p < .001	<b>r= .472</b> p < .001	<b>r= -.452</b> p < .001	<b>r= -.397</b> p < .001	<b>r= -.439</b> p < .001
	Men	n/a	r= .091 ns	<b>r= -.387</b> p < .01	r= -.224 ns	<b>r= -.459</b> p < .01
Quality of emotional social support	Women	r= .179 ns	<b>r= .418</b> p < .001	<b>r= -.611</b> p < .001	<b>r= -.511</b> p < .001	<b>r= -.407</b> p < .001
	Men	n/a	<b>r= .345</b> p < .05	<b>r= -.592</b> p < .001	<b>r= -.515</b> p < .001	<b>r= -.416</b> p < .001

*Table 2.* This table depicts significant correlations that were similar for both men and women. Bolded scores represent significant correlation. Not depicted are: appraisal styles of problem focused coping, appraisal style of importance/relevance, appraisal style of congruence, appraisal style of self-accountability, appraisal style of other accountability, appraisal style of future expectancy, , coping mechanisms (social support emotional, social support instrumental, focus, pray, mental disengagement, vent, restraint, substance abuse, humor, stoicism, isolation), Panas negative affect, performance orientation, learning orientation, social network size, and sum of availability items because no significant correlation was found for both men and women.

There were a substantial amount of similar significant correlations between personality factors and associated psychological outcomes for men and women alike. First, of particular interest, there were many coping mechanisms that were associated with increased anxiety, depression, and stress. These coping mechanisms included: catastrophizing, denial, isolation, self-blame, wishful thinking, and behavioral disengagement. More specifically, catastrophizing,

denial, isolation, self-blame, and wishful thinking were correlated to stronger levels of anxiety. Catastrophizing, self-blame, wishful thinking, and behavioral disengagement are correlated with increased perceived stress. Catastrophizing, self-blame, and wishful thinking were all associated with higher scores on the CESD scale. Conversely, there were also 5 specific coping mechanisms that were correlated with a lessened sense of anxiety, depression, and stress. These included: planning, positive growth, active coping, acceptance, and emotional focused coping. Positive growth and emotional focused coping were correlated with decreased perceived anxiety. More specifically, planning, positive growth, active coping, and acceptance were correlated with lessened stress levels. Positive growth and coping were correlated with lower CESD scores.

In addition to coping mechanisms, there were also personality factors that had significant correlations to levels of anxiety, depression, and stress. Panas PA, quality of emotional support, LOT, and Rosenberg were correlated with lessened reports of perceived stress and anxiety. Perceived competence, quality of emotional support, LOT, and Rosenberg decreased the CESD score.

Looking at the Five Factor Inventory, agreeable and extraversion were correlated with less perceived anxiety. Conscientiousness and agreeableness were associated with less perceived stress. Increased levels of conscientiousness and agreeableness were correlated with lower CESD scores. Unlike conscientiousness, agreeableness, and extraversion, conscientiousness, neuroticism showed the opposite trends. More neuroticism is correlated to higher anxiety and CESD scores, but less neuroticism is correlated with greater life satisfaction. The only other personalities with strong correlations with life satisfaction were perceived competence, and the Rosenberg scale.

There were no measures correlated with subjective happiness that were significantly strong for both men and women.

#### Significant Differences in Correlation

We conducted a Fisher z-to-t correlations analysis to find significant correlational differences between men and women. The purpose of this analysis is to find significant differences in the correlations between the personality traits and psychological outcomes for men and women.

		Subjective Happiness	Life Satisfaction	Sum of Stai	CESD Score	Perceived Stress
Appraisal style of problem focused coping	Women	<b>r= .212</b> p < .01	<b>r= .373</b> p < .001	<b>r= -.450</b> p < .001	<b>r= -.282</b> p < .001	<i>r= -.074</i> ns
	Men	<b>r= .463</b> p < .05	<i>r= .151</i> ns	<b>r= -.309</b> p < .05	<b>r= -.365</b> p < .001	<b>r= -.334</b> p < .001
	Difference	<i>z= -.134</i> ns	<i>z= 1.76</i> ns	<i>z= -.84</i> ns	<i>z= .91</i> ns	<i>z= 2.66</i> p < .01
Appraisal style of emotion focused coping	Women	<b>r= .218</b> p < .01	<b>r= .379</b> p < .001	<b>r= -.533</b> p < .001	<b>r= -.433</b> p < .001	<b>r= -.296</b> p < .001
	Men	<b>r= .377</b> p < .05	<i>r= .107</i> ns	<b>r= -.355</b> p < .05	<b>r= -.334</b> p < .001	<b>r= -.390</b> p < .001
	Difference	<i>z= .82</i> ns	<i>z= -.215</i> p < .05	<i>z= 1.14</i> ns	<i>z= 1.14</i> ns	<i>z= -1.04</i> ns
Appraisal style of importance/relevance	Women	<i>r= .047</i> ns	<i>r= -.082</i> ns	<i>r= .094</i> ns	<i>r= .093</i> ns	<b>r= .245</b> p < .001
	Men	<i>r= -.089</i> ns	<i>r= -.004</i> ns	<i>r= .058</i> ns	<i>r= -.023</i> ns	<i>r= -.005</i> ns
	Difference	<i>z= .64</i> ns	<i>z= -.58</i> ns	<i>z= .19</i> ns	<i>z= 1.14</i> ns	<i>z= 2.48</i> p < .05
Appraisal style of congruence	Women	<i>r= .040</i> ns	<i>r= -.059</i> ns	<i>r= -.105</i> ns	<i>r= .090</i> ns	<b>r= .344</b> p < .001
	Men	<i>r= .074</i> ns	<i>r= .157</i> ns	<i>r= -.160</i> ns	<i>r= .049</i> ns	<i>r= .140</i> ns
	Difference	<i>z= .16</i> ns	<i>z= 1.6</i> ns	<i>z= .29</i> ns	<i>z= .41</i> ns	<i>z= 2.12</i> p < .05
Appraisal style of other-accountability	Women	<i>r= -.055</i> ns	<i>r= .022</i> ns	<i>r= .102</i> ns	<i>r= .100</i> ns	<i>r= -.075</i> ns
	Men	<i>r= .147</i> ns	<i>r= .193</i> ns	<b>r= .210</b> ns	<b>r= .315</b> p < .05	<b>r= .406</b> p < .01
	Difference	<i>z= .81</i> ns	<i>z= 1.15</i> ns	<i>z= .57</i> ns	<i>z= 1.15</i> ns	<i>z= 2.59</i> p < .01



Cope - social support instrumental	Women	$r = .141$ <u>ns</u>	$r = .307$ $p < .001$	$r = -.312$ $p < .01$	$r = -.216$ $p < .001$	$r = -.280$ $p < .001$
	Men	$r = .102$ <u>ns</u>	$r = .041$ <u>ns</u>	$r = -.012$ <u>ns</u>	$r = -.039$ <u>ns</u>	$r = -.239$ <u>ns</u>
	Difference	$z = .18$ <u>ns</u>	$z = 2.01$ $p < .05$	$z = 1.59$ <u>ns</u>	$z = 1.36$ <u>ns</u>	$z = 0.26$ <u>ns</u>
Cope - mental disengagement	Women	$r = -.140$ <u>ns</u>	$r = -.006$ <u>ns</u>	$r = .073$ <u>ns</u>	$r = .046$ <u>ns</u>	$r = -.122$ <u>ns</u>
	Men	$r = .077$ <u>ns</u>	$r = -.088$ <u>ns</u>	$r = .486$ $p < .01$	$r = .358$ $p < .05$	$r = .497$ $p < .001$
	Difference	$z = 1.0$ <u>ns</u>	$z = .6$ <u>ns</u>	$z = 2.34$ $p < .05$	$z = 1.96$ <u>ns</u>	$z = 3.94$ $p < .001$
Cope - vent	Women	$r = -.170$ $p < .05$	$r = -.028$ <u>ns</u>	$r = .107$ <u>ns</u>	$r = .114$ <u>ns</u>	$r = .142$ <u>ns</u>
	Men	$r = -.381$ <u>ns</u>	$r = -.185$ <u>ns</u>	$r = .470$ $p < .01$	$r = .277$ <u>ns</u>	$r = .229$ <u>ns</u>
	Difference	$z = 1.04$ <u>ns</u>	$z = 1.16$ <u>ns</u>	$z = 2.06$ $p < .05$	$z = 1.02$ <u>ns</u>	$z = .53$ <u>ns</u>
Cope - substance abuse	Women	$r = -.132$ <u>ns</u>	$r = -.123$ <u>ns</u>	$r = .176$ <u>ns</u>	$r = .149$ $p < .05$	$r = -.029$ <u>ns</u>
	Men	$r = -.261$ <u>ns</u>	$r = -.301$ $p < .05$	$r = .447$ $p < .01$	$r = .462$ $p < .01$	$r = .427$ $p < .01$
	Difference	$z = 0.61$ <u>ns</u>	$z = 1.36$ <u>ns</u>	$z = 1.55$ <u>ns</u>	$z = 2.09$ $p < .05$	$z = 2.87$ $p < .01$
Cope - wishful thinking	Women	$r = -.260$ $p < .01$	$r = -.322$ $p < .001$	$r = .495$ $p < .001$	$r = .409$ $p < .001$	$r = .449$ $p < .001$
	Men	$r = -.271$ <u>ns</u>	$r = .011$ <u>ns</u>	$r = .530$ $p < .001$	$r = .410$ $p < .01$	$r = .405$ $p < .01$
	Difference	$z = .05$ <u>ns</u>	$z = 2.28$ $p < .05$	$z = .24$ <u>ns</u>	$z = .01$ <u>ns</u>	$z = .28$ <u>ns</u>
FFI - neuroticism	Women	$r = -.366$ $p < .001$	$r = -.572$ $p < .001$	$r = .901$ $p < .001$	$r = .715$ $p < .001$	$r = .684$ $p < .001$
	Men	$r = -.753$ $p < .001$	$r = -.406$ $p < .001$	$r = .769$ $p < .001$	$r = .452$ $p < .01$	$r = .495$ $p < .001$
	Difference	$z = 2.84$ $p < .01$	$z = 1.63$ <u>ns</u>	$z = 2.35$ $p < .05$	$z = 2.45$ $p < .05$	$z = 1.74$ <u>ns</u>
FFI - openness	Women	$r = -.034$ <u>ns</u>	$r = .213$ <u>ns</u>	$r = -.108$ <u>ns</u>	$r = -.175$ $p < .05$	$r = -.328$ $p < .001$
	Men	$r = -.262$ <u>ns</u>	$r = -.223$ $p < .01$	$r = .062$ <u>ns</u>	$r = -.107$ <u>ns</u>	$r = -.270$ <u>ns</u>
	Difference	$z = 1.12$ <u>ns</u>	$z = 3.28$ $p < .01$	$z = 0.87$ <u>ns</u>	$z = 0.42$ <u>ns</u>	$z = 0.38$ <u>ns</u>
FFI - conscientiousness	Women	$r = .146$ <u>ns</u>	$r = .396$ $p < .001$	$r = -.281$ $p < .05$	$r = -.380$ $p < .001$	$r = -.518$ $p < .001$
	Men	$r = .005$ <u>ns</u>	$r = .068$ <u>ns</u>	$r = -.504$ $p < .001$	$r = -.388$ $p < .01$	$r = -.369$ $p < .05$

	Difference	$z = 0.68$ ns	$z = 2.6$ $p < .01$	$z = 1.36$ ns	$z = 0.66$ ns	$z = 1.34$ ns
LOT	Women	<i><math>r = .495</math></i> $p < .001$	<b><math>r = .608</math></b> $p < .001$	<i><math>r = -.799</math></i> $p < .001$	<b><math>r = -.661</math></b> $p < .001$	<b><math>r = -.597</math></b> $p < .001$
	Men	<i><math>r = .874</math></i> $p < .001$	<b><math>r = .601</math></b> $p < .001$	<i><math>r = -.568</math></i> $p < .001$	<b><math>r = -.587</math></b> $p < .001$	<b><math>r = -.468</math></b> $p < .001$
	Difference	$z = 3.7$ $p < .001$	$z = 0.37$ ns	$z = 2.28$ $p < .05$	$z = 1.44$ ns	$z = 0.37$ ns
Perceived competence	Women	<b><math>r = .280</math></b> $p < .001$	<i><math>r = .671</math></i> $p < .001$	<b><math>r = -.640</math></b> $p < .001$	<b><math>r = -.515</math></b> $p < .001$	<b><math>r = -.532</math></b> $p < .001$
	Men	<b><math>r = .697</math></b> $p < .001$	<i><math>r = .384</math></i> $p < .01$	<b><math>r = -.450</math></b> $p < .01$	<b><math>r = -.477</math></b> $p < .001$	<b><math>r = -.493</math></b> $p < .001$
	Difference	$z = 2.73$ $p < .01$	$z = 3.02$ $p < .01$	$z = 1.4$ ns	$z = 0.5$ ns	$z = 0.52$ ns
Panas PA	Women	<b><math>r = .443</math></b> $p < .001$	<i><math>r = .472</math></i> $p < .001$	<b><math>r = -.452</math></b> $p < .001$	<b><math>r = -.397</math></b> $p < .001$	<b><math>r = -.439</math></b> $p < .001$
	Men	n/a	<i><math>r = .091</math></i> ns	<b><math>r = -.387</math></b> $p < .01$	$r = -.224$ ns	<b><math>r = -.459</math></b> $p < .01$
	Difference	n/a	$z = 2.52$ $p < .05$	$z = 0.4$ ns	$z = 1.15$ ns	$z = 0.13$ ns
Social network size	Women	n/a	<i><math>r = .413</math></i> $p < .001$	<b><math>r = -.445</math></b> $p < .001$	<b><math>r = -.457</math></b> $p < .001$	<b><math>r = -.344</math></b> $p < .001$
	Men	n/a	<i><math>r = -.079</math></i> ns	$r = -.198$ ns	$r = -.202$ ns	$r = -.135$ ns
	Difference	n/a	$z = 2.65$ $p < .01$	$z = 1.42$ ns	$z = 1.48$ ns	$z = 1.14$ ns

*Table 3.* Significant differential correlations between men and women. Bolded scores represent significant correlations. Italicized correlations indicate a significant difference between men and women. Not depicted are: appraisal style of self accountability, appraisal style of future expectancy, coping mechanisms (positive growth, active coping, plan, social support emotional, focus, pray, acceptance, behavioral disengagement, denial, restraint, humor, self-blame, stoicism, catastrophizing, isolation), FFI measures (extraversion, agreeableness), Rosenberg Self-Esteem, Panas negative affect, performance orientation, learning orientation, social network size, sum of availability of items, and quality of emotional support because no significant correlational differences were found.

### *Confidence*

For the first aspect of confidence, we found differing results for men and women related to the amounts of stress related to the importance and relevance of an event. Women had strong positive correlations with the appraisal style of importance/relevance and perceived stress, whereas men had no significant correlation. Women had stronger positive correlations with the

appraisal style of congruence and perceived stress, whereas men had a weaker positive correlation.

The second aspect of confidence with significant findings related to feelings of anxiety. Women and men experiencing FFI neuroticism were correlated with increased anxiety, but women's scores were significantly more strongly correlated than men. Additionally, FFI neuroticism had a greater correlation with CESD scores than men.

The third aspect relates to how confidence can affect psychological outcomes. The appraisal style of emotional focused coping (one's ability in themselves to believe they can handle obstacles that come in their way) was positively correlated with increased life satisfaction for women, but not for men. Perceived competence was also positively correlated with increased life satisfaction, again more for woman than for men. Additionally, having increased openness on the FFI scale was correlated with increased life satisfaction for women, but negatively correlated for men. Finally, higher LOT scores were negatively correlated with anxiety levels, but this correlation was much stronger for women than for men.

### *Coping Mechanisms*

While many similarities in coping mechanisms were found and previously addressed, there also were significant differences in how coping mechanisms were associated with participants' psychological outcomes. Men have a significant positive correlation between using mental disengagement, substance abuse, and other accountability with perceived stress. Women do not have any significant correlation. Mental disengagement and substance abuse have stronger positive correlations with higher CESD scores for men, but mental disengagement and have no correlation with women. Mental disengagement also is positively correlated with higher levels of anxiety for men, but no significant correlation for women.

### *Social Coping*

As a subset of general coping, there were some specific findings relating to how men and women cope in terms of their reliance on others. Women have a positive correlation with reported life satisfaction using the social support instrument as a coping mechanism, whereas there is no significant correlation for men. On the other hand, using venting as a coping mechanism has a stronger correlation with feelings of anxiety for men than it is for women.

## **SUBSTUDY II – SEX DIFFERENCES IN APPRAISAL AND EMOTION IN A MATH CONTEXT**

### **METHODS**

#### Participants:

77 Vanderbilt University undergraduates (35 males, 42 females) were selected from a paid participant pool. Before partaking in the study, subjects had previously completed a variety of screening and personality measures. Additionally, all selected participants had taken at least one calculus course in high school or college, meaning they had the prerequisite knowledge. They also submitted their mSAT score and a self-reported confidence regarding their math abilities, which resulted in a 3 (mSAT: high vs. medium vs. low) x 2 (confidence: high vs. low) x 2 (condition: easy vs. hard) design.

#### Materials

*Appraisals and emotions:* Using a 9-point Likert scale, participants responded to a single item asking how difficult the subject found that problem to be. These assessments were conducted for problem 1 and every problem starting after problem 5. Our study specifically is looking at the answers regarding questions 5, 6, and 7. Slightly modified versions of Smith and Lazarus's

instruments (1993) and the instrument used by Smith et al. (1993) was selected to assess the appraisals and emotions subjects experienced during the math exam.

Procedure:

Participants were greeted by a female experimenter, and first signed an informed consent form. Subjects were informed that they were going to partake in a study about problems solving, and they would be solving a series of math word problems on the computer. After working with the experimenter on 3 trivial practice questions, subjects were told they would have one hour to complete 20 math questions. The experimenter also told subjects that Vanderbilt students, on average, get 80% correct (16 out of 20), and that they would receive a \$3 cash bonus if they solved at least 16 problems. The experimenter then left the room.

For the remainder of the study, all questions, instructions, and self-report measures were administered through the subject's computers. Subjects were randomly selected into two groups. The first five problems, for both groups, were identical and intended to be fairly easy. The easy condition group's sixth and seventh questions were also fairly easy, while the difficult condition group had a much harder sixth and an extremely hard seventh question. Researchers stopped participants by problem 10.

Some participants took the questionnaire immediately after completing all of the math questions, while other participants came back to the lab between 2-7 days after completing the initial test to complete the appraisal and questionnaire surveys for problems 1 and problems 6-10. As a reminder of their experience, participants watched a videotape of them completing each problem in the initial math test. There were no systematic differences between those who rated immediately after the math test and those who came back on a later date. After completing the questionnaires, participants were debriefed, and all participants received the \$3 cash bonus.

To analyze any sex differences, we looked at the three emotion and appraisal reports at problem 5 (the last easy problem), problem 6 (the first difficult problem) and problem 7 (the very difficult problem). We ran a regression model, controlling for question 5, to isolate the action to the difficult problem. We also controlled for whether the person was in the really difficult problem or the control problem, which was substantially less difficult than the other condition. We used sex as a predictor. In attempts to explain any sex differences, we entered each subject's mSAT score to control for actual math ability.

### Research Hypotheses

First, we were looked for different emotional reactions to the math task in men vs. women in terms of the emotions noted above (challenge/determination, resignation, and anxiety). Then, assuming such relationships are observed, we planned on testing whether the differences in emotional response could be accounted for by theory consistent differences in appraisals. Additionally, we would examine which of these dispositional variables, beyond sex, could predict the observed differences in appraisal and emotion.

### Results

One of our main areas of interest was looking at appraisals and emotions following a math task. After running the regression models, controlling for the difficulty of the test and mSAT score, we looked for sex differences both in terms of emotions for challenge/determination, resignation, and anxiety for problems 6 and 7 controlling for 5. We then looked at problem 5 using the same regression model. No reliable sex effects were observed for any of these emotions. In the absence of any different emotional responses to the task, we were unable to account for such difference through either appraisal or dispositional variables.

## DISCUSSION

This study examined the personality traits and psychological outcomes to see if we could pinpoint any normative differences resulting from the “masculine culture” or “feminine culture,” that result in systematic in emotional appraisal and experiences. While we were unable to find any systematic differences emotional experiences in response to the math-oriented problem-solving task, where we expected to observe differences, we were able to add to the literature regarding differences in how women and men cope and what factors contribute to increasing positive psychological adjustments or decreasing negative psychological adjustments and vice versa.

To start, let us look at the most basic personality factors that may expose the most underlying aspects of “culture.” Looking at the mean differences in dispositional values themselves, it is interesting that women report higher levels of appraisal styles of importance/relevance, yet men report higher scores for congruence (meaning that the situation is in line with what they want). This indicates that women feel more situations are important to them, but not as many of these are in line with their goals. Additionally, men reported having more emotion-focused coping ability meaning they had self-confidence that they could handle the issue on their own. Women, while not a direct comparison, used more other-accountability when appraising situations, implying that they often do not feel that same sense of control. Moving to coping mechanisms when facing adversity, men scored higher on only two measures: substance abuse and humor. These findings will also be discussed when looking at correlational differences. Women, on the other hand, reported higher scores for many different mechanisms, including social support, praying, venting which all indicate using others as an outlet. Women also scored higher on self-blame, catastrophizing, and wishful thinking, which often leads to a

downward spiral of making them problem seem worse and worse. Finally, women reported having higher levels of agreeableness, openness, and conscientiousness on the FFI Scale.

After looking just at mean differences in scores, there were many relationships between personality factors and outcomes that were quite interesting. The similarities in personality factors such as the measures on the FFI scale, Panas PA/NA, LOT, Rosenberg, and perceived competence are relatively straightforward and in congruence to the current literatures and cultural norms. Being more agreeable and extroverted (FFI scale) was important for men and women alike, indicating a social orientation that is expected for women (Josephs et al., 1992), but held more weight with men than we originally anticipated because Josephs et al.'s study showed a much greater relationship with men and individual-based satisfaction. Other traits such as LOT, Rosenberg Self-Esteem, Panas PA, and perceived competence had negative correlations with indicators of problems with psychological adjustments such as stress, anxiety, and depression, which is reasonable considering these traits all relate to a positive outlook and belief in one's ability to tackle obstacles.

Looking at the correlations that are similar for both men and women, there are not too many things we found to be surprising or outside of our expectations of how humans, in general, think and believe. From how personality traits affect one's perception on life, to the way they approach a situation, to how they cope with adversity, there are similarities and differences between men and women. When it comes to how men and women approach a situation, their outlooks vary greatly. What the data seem to relate back to is confidence. As Brems and Johnson (1989) found, men have much more confidence and belief in themselves to be able to tackle any goal. While our data did not support or contradict Brems and Johnson's findings, what we did find is that when women are confident, it is correlated with a much stronger sense of satisfaction.



Emotion focused coping and perceived competence are correlated with life satisfaction (much larger than men), LOT is related to a strong negative correlation with anxiety. What these findings may suggest is that the norm in the “masculine culture” is to be confident of their abilities, but for women that is not quite the case. Therefore, when women *do* feel confident in themselves, they really take off, whereas men may feel as they normally *should*. This result is promising because if we can adjust the “feminine culture” to provide and encourage more opportunities for women to feel confident, they can begin to overcome stress and anxiety and begin to blossom.

Women, however, with higher levels of neuroticism have stronger positive correlations with anxiety and depression than men. This relates back to the lower sense of ability to face a problem (Rosenkrantz et al., 1968) in the “feminine culture” to panic and feel more debilitating when they lose confidence. Men, we believe, have a weaker correlation because their levels of anxiety can be partially counteracted to their high levels of self-confidence.

Not only can anxiety really debilitate women’s performance, women experience strong levels of pressure in terms of how strongly they see the situation being congruent or important and relevant, this has a much stronger negative correlation with perceived stress levels, whereas men have no such significant relationship. What is most curious about this finding is that congruence is often related to decreased perceived stress, because the appraisal style of congruence is usually a way to see things as relatively positive, coinciding with one’s goals and motivations. Perhaps the positive correlation reflects an attitude of looking on the bright side of a situation. This could indicate a pattern in the “feminine culture” of choosing to view something as more positive because the task seems too overwhelming, and they can better cope if they use their emotional-focused coping skills to reframe the difficult situation.

Coping mechanisms such as denial, catastrophizing, and wishful thinking all relate to pushing the issue away from oneself and choosing to see it in a different light. It is not surprising actions such as these are correlated with negative emotions like stress, anxiety, and depression for men and women. On a similar note, self-blame and isolation coping mechanisms – feeling all the pressure on you and being on your own to deal with an issue - is also understandable for why it might be correlated with negative psychological adjustments. On the opposite hand, acceptance, active coping, planning, positive growth all have components of proactivity and mental adjustment to deal with the situation at hand, therefore, leading to lessened feelings of anxiety, stress, and depression. Rosenkrantz et al. (1968) found that women have a lesser ability to cope than men, but our results seem to indicate that women have many strategies, often times very similar to men's, that are used to deal with adversity.

Differences in coping mechanisms, however, highlight interesting differences between men and women. Mental disengagement and substance abuse were both highly correlated with negative psychological adjustments, whereas there was no correlation for women. Additionally, the appraisal style of other accountability was positively correlated with perceived stress for men, but not for women. What this indicates is that although men and women both use somewhat unhealthy coping mechanisms such as denial or wishful thinking, men's disengagement is of a particular severity that you do not see with women. The implications of this result may show a pattern in "masculine culture" that because they do have a greater confidence in their abilities, in situations where they cannot find a solution, they choose to distance themselves from it so it does not reflect on them personally. When looking at why women do not report a similar correlation, this may reflect the "feminine culture's" lack of such confidence that may trip up the men. Therefore, these findings somewhat contradict Haynes and Heilman's (2013) findings that men

more often use personal coping mechanisms and women feel like situations are more so out of their control.

### *Limitations & Future Direction*

The correlation study had a few limitations that may have had an effect on the results. The correlation analysis was comprised of scores of students from elite universities. This might skew the differences in the dispositional attributes and how they relate to adjustment in our samples. This is an important factor to consider when trying to replicate the findings, it may be better instead to pull from a more representative sample of the community. By diversifying the samples, we can get a better holistic perspective of both “masculine culture” and “feminine culture” that does not have the limitations of a certain education level.

Turning now to the math study, there are many reasons and limitations we believe that may have contributed to the lack of significant differences in appraisals and emotional experiences between men and women. Part of the reason behind the lack of differences is what is often coined “the Vanderbilt Effect,” which describes the phenomenon of pulling your subjects from a specific pool of very well-educated and academically strong undergraduate students. Therefore, what might be observed from a larger pool of subjects (from differing backgrounds and education levels) there may be more observable differences between men and women purely based on the fact our sample is not representative of a greater population. Further, screening applicants for both competence in math (a mental mindset that can direct a subject to feel more of a challenge than a sense of resignation) and mSAT score (purely looking at their abilities to solve math problems in the first place) could have even exacerbated the “Vanderbilt Effect,” making the pool more homogenous than one may find in a truly random sample. This could be representative of the changes observed in our data analysis, showing that women have a stronger

orientation towards emotional-focused coping, which contradicts previous research, and may be addressing the timeline gap discussed in the introduction.

The math study may also have been too limited to be able to get at the gender differences we were pulling for. It was a very specific task and very specific manipulation. The task was not too difficult to show any mental disengagement coping from the male participants, but was also not too much of a challenge to show any extreme levels of anxiety and a lack of confidence for women. Perhaps the stakes were not high enough, or the questions did not differ so significantly in the condition groups to warrant any significant change in appraisals. For example, we know in our research as well as pre-existing literature such as Josephs et al. (1992), women might opt for socially oriented coping and emotional outlets, which could not be captured here.

Looking ahead to future research in regards to capturing gender differences in real-life appraisals, we do still believe systematic can be observed. In our research, we have discovered differences in motivational congruence, motivational relevance, and coping mechanisms that are the main factors that comprise an appraisal. Using the new findings highlighting differences in the mentality in coming into a new situation and the coping mechanisms used, we can use that to better tailor variables both in how we introduce a task but also in how we manipulate the task itself between subjects. Additionally, adding in other aspects, such as a social element, if that looks like having a group math test, group math test with confederates, or even just having the experimenter in the room, there are many manipulations that may elicit stronger gender differences in the future.

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