

**Gender differences in coping styles
or just individual differences in the
stress appraisal process**

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Abstract

The purpose of this study was to examine gender differences in coping strategies and to see if any differences were due to the appraisal process. One hundred participants from a sample of convenience using the snowball effect were surveyed over the internet on survey monkey. An additional 22 participants came from the Dublin fire brigade. Perceived stress, optimism, problem based coping, emotional based coping and maladaptive coping were measured. Women reported significantly higher levels of perceived stress, higher levels of emotional based coping and maladaptive coping. Perceived stress was found to be a strong predictor of maladaptive coping strategies and men were found to have a stronger correlation between perceived stress and maladaptive coping.

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Introduction

Folkman & Lazarus (1984) said that stress was a transaction between the person and the environment. This transactional theory finds stress subjective and that people appraise each situation differently using what Folkman and Lazarus call primary and secondary appraisals. Primary appraisal is when a person identifies a stressor in the environment and deems it irrelevant, something positive or a threat. The person will then assess their psychological, physical and social resources in order to deal with the challenging or threatening stressor and this is the secondary appraisal. Lazarus and Folkman's model stresses that coping is dynamic in nature (Lazarus & Folkman, 1984). Specifically, coping is a transaction between the threat, the appraisal, and the response. Therefore, coping behaviours will change over time as these three factors interact and change. Cohen, S., Kamarck, T. and Merlino, R. (1983) developed the perceived stress scale to measure of the degree to which situations in a person's life are appraised as stressful. The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. Items were designed to find how unpredictable, uncontrollable, and overloaded respondents find their lives. The PSS does not constrain respondents to a specific list of life stressors, so using measures like the PSS can be a reliable way to compare situations involving stress to different groups that may differ in their experience of and exposure to life events. The transactional model of the cognitive response to stress emphasizes that the impact of stressful events is determined more by a person's perceptions of the stress than by objectively measured stress in the situation (Lazarus 1966).

After an appraisal, the individual will have to decide on the best way to cope with the stressor. Folkman and Lazarus (1986) identified problem-focused and emotion-focused coping as two general responses to stress. They describe problem focused coping as a proactive style that aims to deal directly with the source of stress, the person is active and physically does something constructive to counteract the environmental stressor. Emotion-focused coping involves a more psychological approach to dealing with stressors. These coping strategies are more about changing our attitude or how we feel about a particular stressor. Folkman and Lazarus (1986) said that emotion focused coping is used with a stressful situation that cannot be changed, such as a bereavement but adaptive emotion focused strategies will see the person trying to look on the positive side of things, positively reframing the situation accepting the problem and interpreting the problem in a positive light. They also actively seek social support from family and friends. However, Carver et al. (1989) argue that coping styles cannot be reduced to merely two categories, and they emphasize the importance of another coping style: disengagement. Rather than actively engaging in attempts to deal with a stressor, people may, for example, deny that they are experiencing stress or try to distract themselves from it. Maladaptive emotion based strategies may see the person be avoidant by not thinking about the event or they may be in denial. Examples are venting emotions, ruminating, avoidance, and wallowing in blame. This study will investigate three coping styles, problem focused, adaptive emotion focused and maladaptive emotion focused coping and aims to see if there are gender differences in coping styles or are the differences due to perceived stress and individual psychological resources of optimism.

1.1 Gender Differences in Coping Styles

Men and women are commonly thought to have different styles of coping and some older studies have indicated that men are more likely than women to use problem based coping strategies or engage in avoidance or denial. (Pearlin & Schooler, 1978; Stone & Neale, 1984; Veroff, Kulka, & Douvan, 1981). The stereotypical male is likely to confront a problem head-on and also they are assumed to be more likely to deny a problem exists. It is believed that women will use a more emotional response to problems and studies also show that women are more likely than men to cope with emotion-oriented behaviours and to seek social support (Billings & Moos, 1981; Folkman & Lazarus, 1980; Hamilton & Fagot 1988; Pearlin & Schooler, 1978; Stone & Neale, 1984).

Another theory of gender differences in coping focuses on support-seeking behaviour. Taylor and colleagues (Taylor et al., 2000) suggested that women looking for social support is to do with evolution. They suggest that the “fight-or-flight” response to a stressor, postulated by Cannon (1932) is more characteristic of men than women, as perhaps they were more likely to encounter a predator, whilst women are more likely to “tend-and-befriend” when faced with threat. The evidence for this theory comes from animal studies that have reported female animals demonstrating fewer stereotypical fear responses, such as fleeing, than male animals when subjected to an environmental threat (Klein, Popke, & Grunberg, 1998). This suggests that there is a biological basis for the sex differences in responses to stress.

Gender differences in the expression of emotion are larger among men and women who have stronger stereotypes about gender and emotion (Grossman & Wood, 1993), and the female gender role has been associated with the expression of emotion (Brody & Hall, 1993). These studies suggest that gender socialization may play a role in sex differences in emotional expression. Younger women see older women turning to others for help whilst men will see turning to others for help as a weakness. For example, a study (Derlega & Chaikin, 1976) found that women who confided in others and disclosed a personal problem were adjudged to be better well adjusted than the female who kept the problem to themselves. For men, those who shared the problem were adjudged to be less well adjusted than those who kept the problem to themselves. A meta-analytic review showed that women who self disclose are more popular and this is the opposite for men. (Collins & Miller, 1994). Women will find it easier than men to receive social support because there are more people in the social environment ready to listen to them (Eagly & Crowley, 1986). Society does inhibit men from seeking social support and sharing problems. The socialization hypothesis suggests that because of sex role expectations, men are socialized to use more active and instrumental coping behaviours, whereas women are socialized to use more passive and emotion-focused behaviours and to seek more social support (Ptacek, Smith & Zanas, 1992; Rosario, Shinn, Morch & Huckabee, 1988). Also this theory of gender socialization would argue that men might be more likely to cope with stress by denying the problem or avoiding it because men are socialized to conceal their emotions. Because men stereotypically are considered to be action oriented, direct, and assertive, they also might be more likely to engage in problem focused coping (Nolen-Hoeksema, 1987; Ptacek, Smith, & Dodge, 1994). The social norm seems to be for women to express their feelings and for men to conceal their feelings. (Greenglass, 2002). Not all research has, however, produced findings consistent with these stereotypical views. The situational hypothesis states that situations drive coping behaviours.

Rosario et al. (1988) referred to this as role constraint theory. For men and women in the same roles or experiencing the same Stressors, the socialization hypothesis leads to the prediction that gender differences in coping will be found (Ptacek et al., 1992) whereas the role constraint hypothesis leads to the prediction that such differences will be absent (Folkman & Lazarus, 1980; Hamilton & Fagot, 1988). With role constraint theory gender differences in coping behaviours are due less to underlying personality differences between men and women and more to do with the different roles that men and women assume in society and the different stressors men and women face. Role constraint theory would predict that when men and women confront similar stressors and have similar threat appraisals, they would cope similarly. In society today the vast majority of men and women go to college or enter the work place and experience the same types of work stress and everyday hassles. This might not have been the case twenty years ago.

College women reported greater use of emotion-focused coping strategies including expressing feelings, seeking emotional support, denial, acceptance, and positive reframing than college men (Eaton and Bradley 2008; Ptacek et al. 1994; Stanton et al. 2000). College men, however, reported greater use of some types of emotion focused strategies such as mental disengagement through the use of alcohol than college women (Kieffer et al. 2006). Furthermore, past research showed that college women who endorsed feminine values were more likely to use emotion-focused coping strategies (Blanchard-Fields et al. 1991; Dyson and Renk 2006). College women also reported greater use of social support than college men (Dwyer and Cummings 2001). Thus, greater use of emotion-focused strategies might be the result of college women's socialization, acceptance of traditional sex roles, and the tendency for women to "tend and befriend" (Dyson and Renk 2006; Zuckerman and Gagne 2003).

Unlike emotion-focused strategies, research has not found a clear pattern of sex differences in college students' use of problem-solving strategies to cope with stress (Dyson and Renk 2006; Pritchard and Wilson 2006). Some studies have found that, although women more often seek social support and use emotion-focused coping, no gender differences exist in the use of problem-focused or avoidant coping behaviours (Carver, Scheier, & Weintraub, 1989; Lengua & Stormshak, 2000). The above studies show that findings have been inconsistent regarding gender and coping strategies. The first part of this study aims to find if males will use significantly more problem and avoidance based coping strategies than females and to see if females will score higher than males in emotion focused coping strategies.

1.2 Affects of Optimism

Tamres (2002) Found that women used more coping strategies overall than men. Men used more problem based strategies relative to emotion based strategies whereas women were more likely to use emotion based strategies in preference to using problem-focused or avoidant strategies. Although past research demonstrates that coping strategy selection differs by gender, it does little to reveal the source of these differences. Are they the result of differential exposure to stressors or do they reflect gender differences in reactions to identical stressors? Tamres et al (2002) felt that for future studies in the area of coping strategies and gender differences, that it would be necessary to address the impact of stressor appraisal. Different psychological mediators such as optimism, internal locus of control, high self esteem and high self efficacy will all have an effect on the secondary appraisal process. How the individual rates their own ability to cope with the stressor will have an impact on what strategies are employed. Tamres (2002) found that in the majority of studies, women appraised the stressor as more severe than men. In no study did men appraise the stressor as

more severe. Tamres (2002) felt that future research should include assessments of perceived stress to see whether they explain gender differences in coping. Investigators also ought to measure neuroticism or negative affectivity as well as other personality traits to see if they account for sex differences in coping. Past studies have shown that individuals high in negative affectivity prefer avoidant coping behaviours (Bolger & Zuckerman, 1995; Bouchard, 2003). Negative affectivity has also been shown to correlate positively with the use of emotion-focused coping strategies and negatively with problem-focused coping (Cosway et al., 2000; Endler & Parker, 1990; McWilliams, Cox, & Enns, 2003). This kind of evidence led Tamres (2002) to conclude that gender differences in coping may be due to appraisal rather than to the preferred coping strategies. Thus, the apparent link between gender and coping choice may be spurious because both variables share an association with perceived stress. In this study the psychological resource of optimism will be measured and compared against different coping strategies and perceived stress. One of the aims of the study is to show that there should be a significant negative correlation between optimism and perceived stress.

Optimism is a control belief involving thought processes associating positive thinking and maintaining a positive attitude to life events and situations (Scheier & Carver, 1985, 1992; Seligman, 1991). Therefore optimism should act as a positive mediator in the appraisal of stressful situations. Optimists have a general expectancy of positive results that is associated with greater success in attaining goals (Shepperd, Maroto, & Pbert, 1996), and optimism is viewed as a cornerstone for wellbeing across life domains (Peterson, 2000). Optimistic thinkers strategize differently than pessimists and prepare for the best outcome verses preparing for the worst. The role of expecting positive outcomes is associated with

greater mental and physical health (Scheier & Carver, 1985, 1988). Optimism is characterized by positive expectations of the future and has been linked to the process of coping with stress (Scheier et al. 2001). Carver and Scheier (2003) suggest that a person's level of optimism has a profound impact on their expectancies and therefore can serve as a useful predictor of behaviour. It is thought that optimism can play a protective role against negative health outcomes, because persons high in optimism are more likely to engage in efforts to manage a stressor (Carver & Gaines, 1987). Chang (1998) found that optimism serves as a moderator between stress and psychological well-being and also has a direct impact on psychological adjustment. Furthermore, optimists and pessimists differ in secondary appraisal of stressful situations, and individuals who are more optimistic report low levels of perceived stress (Chang et al. 2000; Baldwin et al. 2003; Robinson-Whelen et al. 1997). Due to these lower levels of perceived stress, optimists may be less likely to experience emotional exhaustion and physical symptoms related to burnout (Chang et al. 2000). Optimism also plays a role in the selection of coping strategies. Optimists are more likely to report using problem-focused coping, emotion-focused coping responses such as positive reinterpretation and seeking emotional support, and disengagement coping strategies such as acceptance and resignation (Scheier et al. 1986). They are less likely to use disengagement strategies such as denial and distancing (Hatchett and Park 2004; Brissette et al. 2002; Carver et al. 1989). Another aim of this study is to investigate the relationship between participants high in optimism and the use of adaptive coping strategies and to examine the relationship between perceived stress levels and coping strategies.

Carver et al. (1989) found that undergraduates who believed it was possible to change the stressful situation were more likely to engage in problem-focused coping strategies such

as active coping and planning. Optimism was a strong predictor of life satisfaction, positive affect, and adaptive coping strategies (emotional and instrumental support, and self distraction). Pessimism was a strong predictor of maladaptive coping strategies (denial, substance use, behavioural disengagement, and self-blame). Cohen, de Moor, & Amato, (2001) have shown that dispositional optimism may mitigate the experience of negative mood in patients dealing with cancer and have reported that coping skills (e.g., greater use of acceptance and less use of denial and behavioural disengagement) appear to mediate the relationship between optimism and negative mood in women with breast cancer (Carver et al., 1993; Epping et al., 1999). Among pregnant women, greater optimism did relate to more positive states of mind and was mediated by greater use of constructive thinking (Park, Moore, Turner, & Adler, 1997). In a study of women recovering from coronary bypass surgery, optimism was also associated with positive mood and a tendency to use more adaptive coping strategies (e.g., acceptance rather than escapism; King, Rowe, Kimble, & Zerwic, 1998). These findings suggest not only that optimism may predict more positive mood during adjustment to changes in medical status but also that it may facilitate the use of cognitive-behavioural responses that induce or maintain positive states of mind (e.g., happiness and contentment).

Brissette, Scheier & Carver (2002) studied first year college students in the first semester to find a relationship between optimism and the student's transition into new social networks. Because first year college students do not typically possess established social networks on campus when they arrive, they were appropriate for studying the development of social networks and social support. Moreover, because the first semester of college is typically stressful (Feldman & Newcomb, 1994), studying first semester college students

enabled Brissette, Scheier & Carver to assess whether differences in the development of social networks and social support might account for why greater optimism is associated with better adjustment to stressful life events. They found that optimists report more social support and extended these studies by demonstrating that greater optimism was associated with greater increases in social support during the first semester of college. Additional analyses indicated that the greater increases in perceived social support reported by students who were more optimistic were a reflection of changes in perceived support from on campus sources and were independent of changes in perceived social support from off-campus sources. This shows that optimistic students actively sought out social support to help cope with first semester stress. There are links between individuals' social networks and the coping strategies they use (Parkes, 1986; Thoits, 1986). For example, a more supportive social network would be better for using certain coping strategies, such as the seeking of emotional or informational support, than a less supportive social network. Alternatively, the strategies individuals use to cope with life stressors could influence the amount of support available from their social networks. For example, those who seek out social support as a means of coping may induce support from others, whereas those who make use of strategies such as avoidance and the venting of emotions may discourage others from providing support (Bolger, Foster, Vinokur, & Ng, 1996).

Taylor (1983) devised the cognitive adaptation theory when studying coping mechanisms among breast cancer patients. Previously it was thought that mentally healthy individuals had an accurate perception of themselves but Taylor found that this was not the case and that they may operate under three primary cognitive illusions. His theory holds that mentally healthy individuals who are well capable of dealing with stressful life events often have unrealistic positive self evaluations, have exaggerated perceptions of control and

exaggerated optimism. Individuals who have difficulty in coping with stressful events are more likely to process information in a more unbiased fashion. They have lower self esteem, less perceived control and lower optimism. Taylor found that the illusionary aspect was more intriguing rather than an essential part of his theory and many studies support his theory without the illusion factor. Individuals with higher self esteem, higher perceived control and higher levels of optimism have higher levels of mental health and cope more effectively with stressful situations (Armstrong- Stassen, 1994; Aspinwall & Taylor, 1992; Cozzarelli, 1993; Taylor et al., 1992). Aspinwall and Taylor (1992) found that there was a mediational relationship in which the cognitive adaptation variables (self esteem, perceived control and optimism without the ingredient of illusion) affect coping behaviours, which then affect mental health. Aspinwall and Taylor found this type of a mediating relationship in a study of 672 freshmen adapting to college. Aspinwall and Taylor demonstrated that lower levels of self-esteem, perceived control, and optimism predicted increased use of avoidant coping. Also avoidant coping, in turn, was associated with lower psychological health and high perceived control and greater optimism predicted greater use of active coping. Active coping, in turn, predicted higher psychological health (Aspinwall and Taylor 1992).

Optimism and hopefulness are two positive psychological resources. Optimism has long been thought to be associated with triumph over adversity, including recovery from illness and dealing with personal loss (Scheier et al., 1989). Previous studies of optimism have utilized the theoretical framework of Scheier and Carver, whose theory holds that people's actions are "greatly affected by their beliefs about the probable outcomes of these actions" (Scheier & Carver, 1987, p. 170). Optimists generally anticipate good outcomes, and their positive expectations are not limited to specific domains or situations. There exists a

rich literature on the positive effects of optimism on quality of life, recovery from illness, and physical health (Allison, Guichard, & Gilain, 2001; Carver et al., 1994; Scheier et al., 1989). Furthermore, research on the relationship between optimism and coping has shown that optimists cope differently than pessimists while recalling a stressful event from the past (Scheier, Weintraub, & Carver, 1986), managing a life transition by beginning law school (Seegerstrom, Taylor, Kemeny, & Fahey, 1998) or beginning college (Brissette, Scheier, & Carver, 2002), and dealing with the stress of being at risk for HIV/AIDS (Taylor et al., 1992). These studies have shown that optimism is an important predictor of adaptive coping. (Meighan E. Rogers et al 2005) found that active and avoidant coping (with loss) strategies are, respectively, predictive of optimism and hopelessness, even while taking into account other important bereavement related variables. Also that hopelessness was significantly associated with lower levels of social support and higher levels of depression.

1.3 Rational and Hypothesis

Different studies have shown how men and women have different styles of coping and some have indicated that men are more likely than women to use problem based coping strategies or engage in avoidance or denial, whilst women are more inclined to use emotional based strategies (Ptacek, Smith & Zanas, 1992; Rosario, Shinn, Morch & Huckabee, 1988). Some studies have found that men use more avoidance strategies than women as they would prefer to conceal or deny problems exist (Greenglass, 2002). College men reported greater use of some types of emotion focused strategies such as mental disengagement through the use of alcohol than college women (Kieffer et al. 2006). Some studies have found that, although women more often seek social support and use emotion-focused coping, no gender differences exist in the use of problem-focused or avoidant coping behaviours (Carver,

Scheier, & Weintraub, 1989; Lengua & Stormshak, 2000). This seems to go along with the socialization theory where men use more avoidance based strategies but is different with regard to the problem based coping as women were found to use an equal amount. There have been many theories used to explain these differences ranging from biological, socialization, situational and social reasons. The first parts of this study is concerned with differences in coping strategies between men and women and given the previous research on the subject the first and second hypothesis of the study are:

- 1. Males will use significantly more problem and avoidance focused coping strategies than females.**
- 2. Females will use significantly more emotion focused strategies than males.**

Previous research has shown to be inconclusive, so the first aim of this study is to assess the extent of the differences, if any at all.

The third, fourth and fifth hypothesis are to do with the impact of perceived stress and levels of optimism on the choice of coping strategy. Optimists and pessimists differ in secondary appraisal of stressful situations, and individuals who are more optimistic report low levels of perceived stress (Chang et al. 2000; Baldwin et al. 2003; Robinson-Whelen et al. 1997). This study shows how people with an optimistic outlook tend to see potential stressors as a challenge or an opportunity for self improvement rather than perceiving the situation as stressful. From this perspective, people with high levels of perceived stress may be less likely to see a situation as an opportunity for positive goal attainment, and more likely to see it in negative terms. Therefore high levels of perceived stress should be negatively correlated with optimism.

- 3. Perceived stress and optimism will be significantly negatively correlated.**

Carver et al. (1989) found that undergraduates who believed it was possible to change the stressful situation were more likely to engage in problem-focused coping strategies such as active coping and planning. Optimism was a strong predictor of life satisfaction, positive effect, and adaptive coping strategies (emotional and instrumental support, and self distraction). When optimists interpret a situation as a challenge they will be more likely to actively do something about it rather than denying its existence or trying to distance themselves' from the problem. Optimists will try and gain some sort of control of a situation by adopting a problem focused coping style. Brissette, Scheier & Carver (2002) found that optimists report more social support. Additional analyses indicated that the greater increases in perceived social support reported by students who were more optimistic were a reflection of changes in perceived support from on campus sources and were independent of changes in perceived social support from off-campus sources. This shows that optimistic students actively sought out social support to help cope with first semester stress. And this leads to the fourth hypothesis.

4. There will be a significant positive correlation between participants scoring high in optimism and the use of problem focused and adaptive emotion focused coping styles.

Aspinwall and Taylor demonstrated that lower levels of self-esteem, perceived control, and optimism predicted increased use of avoidant coping. Those scoring high in perceived stress will be more likely to use avoidant maladaptive coping strategies because in the secondary appraisal process the individual will assess their psychological resources and abilities to deal with a stressor. If the person feels unable to deal with situation through psychological variables such as low self esteem, low self efficacy and low levels of optimism,

their perceived stress levels will rise and they may adopt some sort of avoidance or denial coping strategy.

5. There will be a significant positive correlation between participants scoring high on the perceived stress scale and the use of maladaptive emotion focused strategies.

The intention of the study is to highlight the role that psychological mediators such as optimism and the level of perceived stress play in the selection of a coping strategy.

Numerous previous studies have shown that males and females differ in their choice of coping strategy but how much of this is down purely to gender. Optimism has been shown in studies to have a real influence on people's behaviour and coping choices. The study hopes to find a clear reason for differences in coping styles, be it down to gender or psychological resources of optimism and perceived stress levels.

Method

Participants

The participants used in the study were taken from contacts in my email address book. I used convenience sampling with snowball sampling. The participants were a wide variety of ages and from many different occupations. This made the sample more diverse and more representative of the general population. The only criteria necessary to take part was that each individual was over the age of 18. Also 22 members of the Dublin fire brigade service took part in the study. The total number of participants was 122. There were 58 females and 64 males. This meant that the sample was fairly evenly divided which was good for analyzing gender differences.

Design

This study employed a prospective, quantitative cross-sectional questionnaires research design. This is a correlation study with unrelated samples. The first two hypothesis deal with gender differences in coping style. There are two groups male and female and they are the predictor variables and coping styles are the criterion variable. The second part of the study looks at the relationship of optimism and coping strategies, which are the predictor variables and perceived stress, the criterion variable.

Materials

Three questionnaires were used in the study, the Brief Cope Scale, The Perceived Stress Scale and The Life Orientated Test (Revised).

The brief cope scale.

This survey is designed to look at different coping styles used to combat stress. The COPE is a 28-item instrument that is designed to measure the different strategies that people use to cope with stress (Carver et al. 1989). Participants responded to each item on a scale of 1 to 4, with 1 being “I usually don’t do this at all” and 4 being “I usually do this a lot.” This study was concerned with problem focused coping, adaptive emotion focused coping and mal-adaptive emotion focused coping styles. Of the 28 items, a total of 12 questions were used. The first two questions dealt with problem focused coping and the third and fourth questions dealt with active planning. People scoring high on these questions will be behaviourally focused in stressful situations. There are four questions dealing with adaptive emotion focused coping, two will emphasize the use of social support and two questions dealt with the positive reframing of stressful situations. Lastly there were four questions on maladaptive emotion focused coping. Two questions dealt with avoidance and self distraction, whilst two other questions were concerned with the denial of stressful situations. Carver et al. (1989) provide support for the validity of the COPE subscales and report internal reliability coefficients ranging from .62 to .85.

The life orientation test (revised).

The Life Orientation Test-Revised (LOT-R) is a 6-item inventory that measures general optimism vs. pessimism (Scheier et al. 1994). Participants were asked to respond to items on a five-point scale indicating their agreement with statements ranging from “strongly disagree” to “strongly agree.” A sample item is, “In uncertain times, I usually expect the best.” Negatively worded items are reverse coded and scores equal the mean across all items. Higher scores indicate higher levels of optimism. There are 10 questions overall but questions

2, 5, 6 and 8 are just fillers and are not used in analyzing data. The LOT demonstrates moderate reliability, with a reported Cronbach's alpha reliability coefficient of .78, test-retest reliability ranging from .56 to .79 over 28 months, and a reported mean score of 25.1 (Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994).

Perceived stress.

Perceived Stress Scale (PSS) is a 10-item inventory designed to measure how stressful participants appraise situations in their lives to be (Cohen et al. 1983). Participants are asked to consider their thoughts and feelings over the last month and indicate how often they have thought or felt a certain way. The questions are of a general nature and hence are relatively free of content specific to any particular group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. Participants respond to each item on a scale of 0 to 4, with 0 meaning "never" and 4 meaning "very often." A sample item is, "In the last month, how often have you been angered because of things that happened outside your control?" PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. The higher the overall score the greater amount of perceived stress. The PSS has good internal consistency (a ranging from .84 to .86), temporal stability over 2 days ($r_{1/4} : .85$) and convergent validity (Cohen et al., 1983)

Procedure

Using the online survey tool 'Survey Monkey', participants received the three questionnaires through e-mail. They were asked to answer the questions as honestly as possible and on completion to resend the questionnaires to a collection folder in survey monkey. Also there were 22 paper questionnaires distributed to members of the Dublin fire brigade. All participants were only told that the study was concerned with stress and nothing about what exactly the focus of the study was in order to allow for any bias. There was a cover letter sent with each e-mail and paper questionnaire outlining ethics associated with the survey. Participants were required to be 18 years of age or older. Should any question cause anxiety, the participant should stop immediately. They were told that the survey was completely anonymous and that any data gathered would be stored on a secured password protected laptop computer. The full questionnaires and a copy of the cover sheet are in the appendix.

Results

Descriptive Statistics

122 Participants took part in the survey. 64 were male and 58 were female.

Table 1.1 *Descriptive Statistics of Psychological Measures*

	Variable	N	Mean	Std. Deviation
Both Sexes	Stress	118	22.17	7.14
	Optimism	120	15.39	5.75
	Mal_Cope	120	6.98	2.39
	Emo_Cope	121	8.94	2.85
	Act_Cope	120	10.55	3.54

Most notable in the descriptive statistics shown in Table 1.2 and 1.3 below was that there is a big difference in stress levels between men and women. Men scored 20.4 and women 24.2. Optimism levels are fairly similar with males having a mean score of 15.9 and females 14.9. The mean scores for both sexes using coping strategies, was also very similar but females scoring slightly higher than men in all three groups of coping strategies.

Table 1.2 *Descriptive Statistics of Male Psychological Measures*

	Variable	N	Mean	Std. Deviation
Males	Stress	64	20.4	6.5
	Optimism	63	15.9	5.7
	Mal_Cope	64	6.5	2.2
	Emo_Cope	63	8.3	2.6
	Act_Cope	63	10.5	3.8

Table 1.3 *Descriptive Statistics of Female Psychological Measures*

	Variable	N	Mean	Std. Deviation
Females	Stress	54	24.2	6.5
	Optimism	57	14.9	5.7
	Mal_Cope	56	7.5	2.2
	Emo_Cope	58	9.6	2.6
	Act_Cope	57	10.6	3.8

Inferential Statistics

1st hypothesis.

Two separate independent sample T-tests were carried out for the first hypothesis, which was Males will use significantly more active and maladaptive coping strategies than females.

Table 1.4 *Independent T-test for comparing Means of Active Coping in Males and Females*

Variables	Groups	Mean	SD	t	df	p
Active Coping	Men	10.5	3.8	-.44	118	.66
	Women	10.8	3.2			

Females (mean= 10.8, SD =3.2) were found to use more active coping than males (mean=10.5, SD=3.8). The 95% confidence limits, shows that the population mean difference of the variables lies somewhere between -1.56 and .99. An independent T-test found that there was no significant difference in the levels of active coping, ($t(118) = -4.37$, $p = .66$). Therefore the null hypothesis is accepted.

Table 1.5 *Independent T-test for comparing Means of Maladaptive Coping in Males and Females*

Variables	Groups	Mean	SD	t	df	p
Active Coping	Men	6.5	2.2	-2.43	109	.02
	Women	7.5	2.5			

Females (mean= 7.5, SD =2.5) were found to use more maladaptive coping than males (mean=6.5, SD=2.2). The 95% confidence limits, shows that the population mean difference of the variables lies somewhere between -1.91 and -.2. An independent T-test found that there was a significant difference in the levels of mal-adaptive coping between males and females, ($t(109) = -2.43, p = .02$). Females showed a higher level of mal-adaptive coping and therefore the null hypothesis is accepted.

However a Pearson correlation was run for both females and males between the variables of perceived stress and mal-adaptive coping. It showed that both males and females use more maladaptive coping under stress but in males there was a much stronger correlation.

For Men, the mean score for perceived stress was 20.4 SD (6.56) and for Mal-adaptive coping 6.48 SD (2.16). The Pearson correlation coefficient found a significantly strong positive correlation between perceived stress and maladaptive coping strategies. ($R(64) = .55, P < .01$). This is a strong correlation. See Graph 1.1 in the Appendix

For women, the mean score for perceived stress was 24.24 SD (7.3) and for Maladaptive coping 7.54 SD (2.52). The Pearson correlation coefficient found a significantly strong positive correlation between perceived stress and maladaptive coping strategies. ($R(54) = .4, P < .01$). This is a moderate correlation. See Graph 1.2 in the Appendix.

2nd hypothesis.

The second hypothesis predicted that females would use significantly more emotion focused coping strategies than males. An independent T-test was carried out to test the hypothesis.

Table 1.7 *Independent T-test for comparing Means of Emotional based Coping in Males and Females*

Variables	Groups	Mean	SD	t	df	p
Active Coping	Men	6.5	2.2	-2.43	109	.02
	Women	7.5	2.5			

Females (mean= 9.6, SD =2.97) were found to use more emotional coping than males (mean=8.3, SD=2.59). The 95% confidence limits, shows that the population mean difference of the variables lies somewhere between -2.34 and -.33. An independent T-test found that there was a statistically significant difference in the levels of emotional coping between males and females, ($t(119) = -2.64, p = .01$). Females showed a higher level of emotion based coping and therefore the null hypothesis is rejected.

3rd hypothesis.

The third hypothesis predicted that there would be a significant negative correlation between the variables of optimism and perceived stress. A Pearson correlation was run to test the hypothesis.

The mean score for perceived stress was 22.17 SD (7.14) and optimism was 15.39 SD (5.75). A Pearson correlation coefficient found a weak correlation between perceived stress and optimism. ($R(115) = .286, P < .01$). There was no significant correlation found between the two variables.

A correlation was also run to examine the relationship between optimism and perceived stress in males and females separately.

Women had a mean score for perceived stress was 24.2 SD (7.30) and optimism was 14.87 SD (5.81). A Pearson correlation coefficient found a very strong positive correlation between perceived stress and optimism. ($R(57) = .72, P < .01$). See Graph 1.3 in the appendix.

Men had a mean score for perceived stress was 20.4 SD (7.36.560) and optimism was 15.86 SD (5.71). A Pearson correlation coefficient found a negative correlation between perceived stress and optimism. ($R(63) = .07, P < .01$). See Graph 1.4 in the Appendix.

A correlation was also run to examine the relationship between optimism and levels of social coping.

The mean score for social coping was 22.17 SD (7.14) and optimism was 4.1 SD (1.8). A Pearson correlation coefficient found a weak correlation between perceived stress and optimism. ($R(119) = .112, P < .225$). There was no significant correlation found between the two variables.

4th hypothesis.

The 4th hypothesis predicted that there would be a significant positive correlation between participants scoring high in optimism and the use of active coping and adaptive emotion based strategies. To test the hypothesis a Pearson correlation was run between optimism and active coping. Then a Pearson correlation between optimism and adaptive emotion based coping strategies.

The mean score for optimism was 15.39 SD (5.75) and for emotion focused coping 8.49 SD (2.85). The Pearson correlation coefficient found no significant relationship. ($R(119) = -.16, P < .01$). This is not a significant correlation.

The mean score for optimism was 15.39 SD (5.75) and for active coping 10.55 SD (3.55). The Pearson correlation coefficient found no significant relationship. ($R(119) = -.13, P < .01$). This is not a significant correlation.

A Pearson correlation test was run between Optimism and Maladaptive coping for females a moderately negative correlation was found. ($R(53) = -.4, P < .01$). There was an insignificant correlation found in males. See Graph 1.4 in the appendix.

5th hypothesis.

The 5th hypothesis predicted that there would be a significant positive correlation between participants scoring high in perceived stress and the use of maladaptive coping strategies. To test the hypothesis a Pearson correlation was run between perceived stress and maladaptive coping.

The mean score for Perceived Stress was 22.17 SD (7.14) and for Maladaptive focused coping 6.97 SD (2.38). A Pearson correlation coefficient found a strong positive correlation between perceived stress and maladaptive coping strategies. ($R(114) = .5, P < .01$).

A Pearson correlation was then run between Perceived Stress and Maladaptive coping for both males and females in the first hypothesis above and these correlations show that males have a stronger correlation between perceived stress and maladaptive coping strategies than females.

Multiple Regression was run to test whether optimism, gender, maladaptive coping, emotional based coping and active problem based coping were good predictors of stress. The results of the regression indicated that the predictors explained 35.5% of the variance ($R^2 = .35, DF(5, 107) = 13.33, p < .001$). It was found that maladaptive coping significantly predicted stress ($\beta = .43, p = .001, 95\% CI = .77 - 1.74$) and also active coping was to a lesser extent a predictor ($\beta = .34, p = .04, 95\% CI = .28 - 1.07$).

Table 1.8 *Multiple regression with perceived stress as criterion variable*

Model	t	Significance
Maladaptive Coping	.43	.001
Emotional Coping	-.22	.04
Active Coping	.34	.001
Optimism	.24	.004
Gender	.21	.01

Discussion

Summary

The aim of this study was to see if there are gender differences in coping styles or are the differences, if any, due to individual differences in the stress appraisal process. Optimism and perceived stress were the two variables measured to find differences in the appraisal process and three different coping strategies were measured. Women used more emotional based strategies and maladaptive avoidance based strategies but the active problem based strategies were almost identical. Men were found to be slightly more optimistic and women reported much higher levels of perceived stress.

The first hypothesis predicted that males would use more active coping strategies and avoidance based coping strategies than women. No significant difference was found in active coping and a significant difference in favour of females in maladaptive avoidance coping. This goes against some of the older more stereotypical studies, such as Pearlin & Schooler (1978) where males were found to be higher in both strategies, although other studies found no differences between males and females in problem focused coping (Holahan and Moos, 1985), some found higher levels of problem focused coping in women (Vitaliano et al., 1985). A Pearson correlation test did show a significant positive relationship between stress and maladaptive avoidance coping, which was moderate in females and strong in males. This correlation suggests that although females scored higher in maladaptive strategies in this study, males would use more avoidance strategies than females relative to stress levels. Kudielka & Kirschbaum (2005) found that men seem to respond to stress with greater reactivity of the hypothalamic-pituitary-adrenal axis than women, which may partly explain the observed sex differences. Several studies such as Kieffer et al (2006) found that college

men reported greater use of some types of avoidance such as mental disengagement through the use of alcohol than college women and the theory of gender socialization would argue that men might be more likely to cope with stress by denying the problem or avoiding. (Nolen-Hoeksema, 1987; Ptacek, Smith, & Dodge, 1994). Also Greenglass (2002) found that men use more avoidance strategies than women as they would prefer to conceal or deny problems exist.

The second hypothesis predicted correctly that females would use significantly more emotional based coping than males. This result matches with many previous studies cited in the introduction, such as Billings & Moos (1981), that women are more likely than men to cope with emotion-oriented behaviours and to seek social support and the study of Derlega & Chaikin, (1976) who found that women who confided in others and disclosed a personal problem were adjudged to be better well adjusted than the female who kept the problem to themselves. Blanchard-Fields et al. (1991); Dyson and Renk (2006) research showed that college women who endorsed feminine values were more likely to use emotion-focused coping strategies. Again this result and these studies support the theory of gender socialization whereby women not only have been socialized to express their feelings more openly than men but have more social opportunities to do so too (Eagly & Crowley, 1986).

The third hypothesis predicted a strong negative correlation between perceived stress and optimism but no significant correlation was found. Carver et al (2007) showed that optimism is related to less perceived stress in response to a variety of stressful life events and Segerstrom (2001) found that optimists are expected to see themselves and their social environment more favourably than pessimists because of their attentional bias for positive

stimuli which is their higher attention to positive aspects of situations. Studies such as Segerstroms' inspired the hypothesis that there would be a significant negative correlation between the two variables. There was a masking effect at group analysis level because when females and males were analysed separately a strong correlation was found between female optimism and perceived stress and no significant correlation in males. The strong correlation between optimism and perceived stress in females is unexplainable. However, males did have a higher score than females in optimism and a lower score in stress. Vollmann (2010) showed that optimism was related to lower stress and in his study, social support from the recipients' perspective, but not from the providers' perspective, partially mediated this relationship of optimism and social support. Vollmans' results suggest that optimists hold positive illusions about available support and that these illusions account at least partly for the stress buffering effect. So in an attempt to explain the un-interpretable result, a correlation was run between optimism and levels of social coping but again there was no significant correlation found.

No significant correlation was found for the fourth hypothesis which predicted that there would be significant positive correlation between optimism and active coping strategies and emotional coping strategies. Again previous studies mentioned in the introduction section led to the hypothesis that there would be a significant relationship between the two variables. Studies such as, Scheier et al (1986) found that optimists are more likely to report using problem-focused coping, emotion-focused coping responses such as positive reinterpretation and seeking emotional support, and disengagement coping strategies such as acceptance and resignation. Anderson Arnet (2008) found that individuals with the "Self-fulfilling" type of affective personality expressed not only the lowest levels of stress and work-related stress but also the highest levels on all five dimensions of coping as well as the total coping value.

Cohen, de Moor, & Amato, (2001) found pessimism was a strong predictor of maladaptive coping strategies (denial, substance use, behavioural disengagement, and self-blame). So a correlation was run between optimism and maladaptive coping strategies and significant moderately negative relationship was found in females.

The fifth hypothesis correctly predicted a significant strong correlation between perceived stress and maladaptive coping. A Pearson correlation was then run separately for males and females and it was found that males had a strong correlation between stress and maladaptive coping while females had a moderate correlation, as discussed in the first hypothesis. These results are similar to the findings of previous research like problem based coping would have a negative relationship to perceived stress and avoidance coping would have a positive relationship to perceived stress (Pearlin and Schooler, 1978).

A multiple regression was run to look at overall results, with stress as the criterion variable and optimism, gender, maladaptive coping, emotional coping and problem based coping as the independent variables. The most significant relationship found was between maladaptive coping and stress. Problem based coping was also a significant predictor of stress but to a lesser extent. This result suggests that perceived stress had the biggest influence in avoidance based coping and also problem based coping.

Perceived stress plays a major role in the appraisal process because each potentially stressful situation is subjective, what may be stressful for one individual may not be stressful for another individual. An important statistic in the study was that females scored a lot higher in perceived stress than males and because of the strong correlation between perceived stress

and the maladaptive coping styles and problem focused coping style this will mean that there will be gender differences in coping. The study did find that males have a stronger correlation between maladaptive coping styles and perceived stress than females but they did not report as much perceived stress. Women were also found to use more coping strategies overall than men and significantly more emotion based coping which verifies numerous studies in the introduction like Ptacek, Smith & Zanas (1992) found that women are socialized to use more passive and emotion-focused behaviours and to seek more social support. In the introduction it was mentioned that Tamres (2002) felt that future research should include assessments of perceived stress to see whether they explain gender differences in coping. In this study, it has been shown that females reported higher levels of perceived stress, which in turn was strongly correlated with maladaptive strategies and to a lesser extent problem based strategies. So, perceived stress has an effect on the appraisal process which will influence the type of coping strategy selected.

For men and women in the same roles or experiencing the same stressors, the socialization hypothesis leads to the prediction that gender differences in coping will be found (Ptacek et al., 1992) whereas the role constraint hypothesis leads to the prediction that such differences will be absent (Folkman & Lazarus, 1980; Felsten, 1998; Hamilton & Fagot, 1988). The findings of this study would contradict the role constraint hypothesis as females have shown to experience more perceived stress. Calvete et al (2011) found that females scored higher on the perceived severity of the experienced stressors in their study. This finding is consistent with previous studies suggesting that girls may experience more stress in response to negative events than boys do (Hankin & Abramson, 2001), as well as with findings reported by Seiffge-Krenke (1995), who found that females do not experience

quantitatively more stress than males but perceive the same stressors as up to four times more stressful and challenging than males do. Also, Tamres (2002) found that in the majority of studies, women appraised the stressor as more severe than men and in no study did men appraise the stressor as more severe. Despite this there is still a stronger correlation between maladaptive based coping and perceived stress in men than women.

Further Research

The purpose of this study was to see if individual differences in coping styles were the result of gender or the result of individual differences in the appraisal process. The evidence from this study suggests that the different levels in perceived stress are responsible for differences in gender coping styles. Maybe before examining differences in coping styles, future researchers should look at why there are differences in perceived stress levels which in turn are strongly correlated with different coping strategies. Using a larger sample, perceived stress could be measured and compared against other psychological resources such as self efficacy, self esteem, hardiness and locus of control. Males and females with similar levels of these psychological resources could be compared against their levels of perceived stress. This should provide more conclusive evidence one way or the other if females report higher levels of perceived stress. Future studies should examine to what extent differences in perceived stress are due to socialization processes or to evolutionary factors, as this might provide more information on ways to lower stress levels. Evolutionary theory would suggest that women seem to naturally seek out more stressors in the environment because they have been historically the main carers and responsible for nurturing children. Further investigation into the stronger correlation between perceived stress in males and maladaptive avoidant strategies is necessary but also to compare the strength of the correlation across different

cohort age groups. This could indicate whether this correlation is on the rise or decline. This strong correlation does concur with previous studies and across different cultures.

Also, a lot of previous studies show that women rate specific stressors to be more stressful than males (eg: Tamres (2002) found that in the majority of studies, women appraised the stressor as more severe than men). So future research could look at the specific relationship of perceived stress and coping strategies and compare them between males and females. The findings of this study show that men use more maladaptive coping relative to perceived stress and it seems the correlations in this study suggest that women would be more pro-active using adaptive coping styles than males with the same levels of perceived stress.

Limitations of the Study

The results of the study should be considered in light of several limitations. As with all survey data, self-report has inherent limitations, however the surveys used were previously published and possess valid psychometric properties. The use of self-report may be the most appropriate approach in a study that examines almost exclusively internal processes such as perceived stress, optimism and coping strategies. The study used correlations and therefore causation cannot be determined. The sample size was small (123 participants) and I cannot be certain that it was a good sample of the general population because it was gathered using the snowball effect. However it was a well balanced sample with 52.5% males and 47.5% females which was excellent representation since gender was the main variable being tested. There were no age restrictions, other than each participant being over the age of eighteen. This study did not take into account age but it might be useful for future researchers to examine different cohorts for comparison purposes. It was necessary for a participant to have a computer which might have excluded some sections of the population from taking part.

Optimism did not prove to be a big factor in the prediction of coping strategies or have a negative correlation with perceived stress but perhaps over a larger sample similar results to previous studies might have been obtained regarding the value of optimism in coping choice. The study also could have included another psychological variable that acts as a moderator in the stress appraisal process such as self esteem, self efficacy, hardiness and locus of control. I used twelve questions from the brief cope scale, four questions to measure each of the three coping styles. For positive problem based coping, two questions from active coping and active planning were used but maybe the two questions from the 'use of instrumental support' section would have provided more information about the participants. Emotion focused coping was measured using the two questions from the 'use of social support' and two from the 'positive reframing' sections. Again more detail could have been sought from the participants if this was supplemented with the two questions from the 'Humour' section. Maladaptive based strategies were measured using two questions from 'self distraction' and two from 'denial' section. Adding two more questions from the 'self blame' section on the Brief Cope scale would have given a richer data set. Perhaps participants might have more opportunity to identify with the questions.

Conclusion

The results of this study are consistent with previous research cited in the introduction. Women use more emotion focused strategies, maladaptive strategies and similar amounts of problem focused strategies to men. Unfortunately no significant correlations were found regarding optimism, coping strategies and perceived stress. There are gender differences in coping strategies and they are caused by differences in the appraisal process. This study has shown that women report higher levels of perceived stress than men and this

in turn is responsible for the different amounts of coping but this study has shown that males and females react differently to levels of perceived stress. It was thought that optimism levels might shed some light as to the reason why females have higher levels of perceived stress but perhaps in future studies other moderators of the appraisal process like self efficacy can be measured against perceived stress levels.

The main implication coming from this study would be that organisations involved with stress management courses, recognise that there are differences in the appraisal process between males and females and incorporate this into their stress management programmes.

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Appendix A

To all Participants,

I am a psychology student in Dublin Business School and the following questionnaires are part of a final year study. I am very grateful to everybody who will take the time to answer the following three questionnaires. All that is required, is for each participant to be 18 years or older and to answer each question with honesty. The questionnaires are standard and should not cause any anxiety but if they should, participants should stop immediately.

The study is totally anonymous and any data will be stored on a password protected laptop computer. If anybody has any concerns or would like to know more about the study, I can be contacted at [REDACTED]

Yours Sincerely

Andy Carpenter

Please tick a box to indicate gender

MALE

FEMALE

The Brief Cope Scale (12 questions concerning the Study)

These items deal with ways you've been coping with the stress in your life . There are many ways to try to deal with problems. These items ask what you've been doing in general to cope with stressful events. Obviously, different people deal with things in different ways, but think about what you usually do when you are under a lot of stress. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I haven't been doing this at all

2 = I've been doing this a little bit

3 = I've been doing this a medium amount

4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things.

2. I've been concentrating my efforts on doing something about the situation I'm in.

3. I've been saying to myself "this isn't real."

5. I've been getting emotional support from others.

7. I've been taking action to try to make the situation better.

—

8. I've been refusing to believe that it has happened.

—

12. I've been trying to see it in a different light, to make it seem more positive.

—

14. I've been trying to come up with a strategy about what to do.

—

15. I've been getting comfort and understanding from someone.

—

17. I've been looking for something good in what is happening.

—

19. I've been doing something to think about it less, such as going to movies,

—

watching TV, reading, daydreaming, sleeping, or shopping.

—

25. I've been thinking hard about what steps to take.

—

Scoring

The Brief COPE scale yields a number of subscale scores covering how much the person uses various coping methods. To calculate the total for each subscale add together the scores from the items listed below for the appropriate subscale. The higher the total the greater the use of that coping method. (note that the scale does not yield an overall total but instead rates how much the person uses the different coping strategies).

Subscale	Items
Self-distraction	1 + 19
Active coping	2 + 7
Denial	3 + 8
Substance use	4 + 11
Use of emotional support	5 + 15
Use of instrumental support	10 + 23
Behavioural disengagement	6 + 16
Venting	9 + 21
Positive reframing	12 + 17
Planning	14 + 25
Humour	18 + 28
Acceptance	20 + 24
Religion	22 + 27
Self-blame	13 + 26

Reference

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100.

0 = never

1 = almost never

2 = sometimes

3 = fairly often

4 = very often

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The Perceived Stress Scale

1	In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2	In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3	In the last month, how often have you felt nervous and stressed?	0	1	2	3	4
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5	In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6	In the last month, how often have you found that you could not cope with all the things you had to do?	0	1	2	3	4
7	In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8	In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9	In the last month, how often have you been angered because of things that happened that were outside of your control?	0	1	2	3	4

10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4
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Scoring

Reverse the scores for the positively worded items (4, 5, 7 & 8) eg 0=4, 1=3, 2=2,3=1,4=0.

Add the reversed scores together with the original scores for the remaining items (1, 2, 3, 6, 9 & 10).

The higher the overall total score the greater the amount of perceived stress the person is experiencing.

References: COHEN, S., KAMARCK, T. and MERMELSTEIN, R. (1983). 'A global measure of perceived stress', *Journal of Health and Social Behavior*, 24, 385-96

LOT-R

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot

B = I agree a little

C = I neither agree nor disagree

D = I DISagree a little

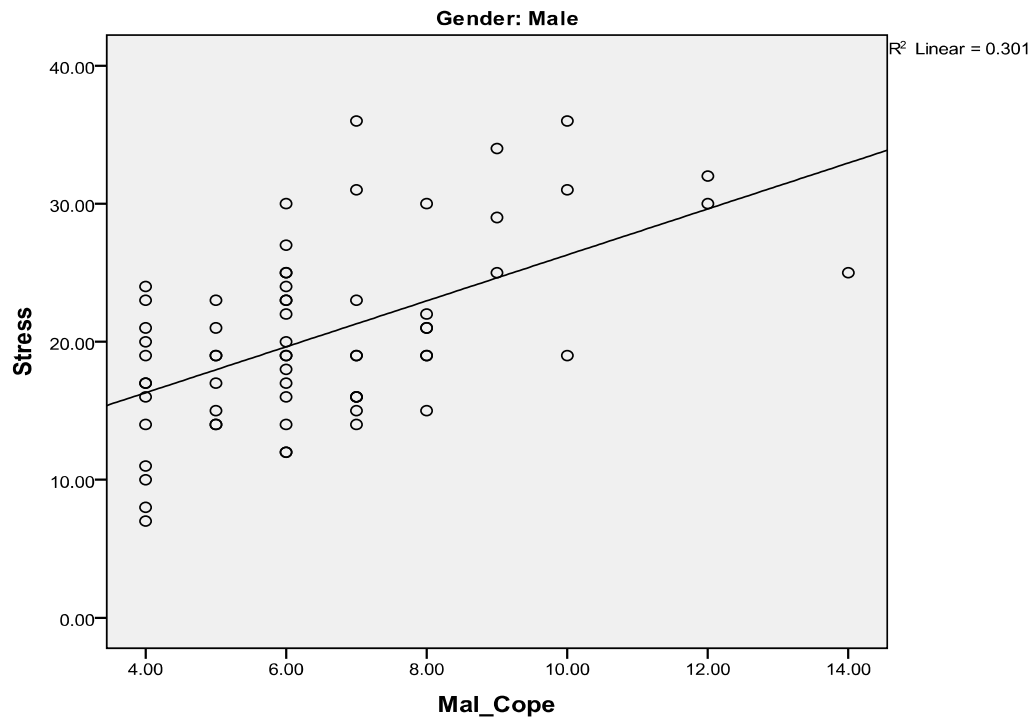
E = I DISagree a lot

1. In uncertain times, I usually expect the best.
- [2. It's easy for me to relax.]
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
- [5. I enjoy my friends a lot.]
- [6. It's important for me to keep busy.]
7. I hardly ever expect things to go my way.
- [8. I don't get upset too easily.]
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

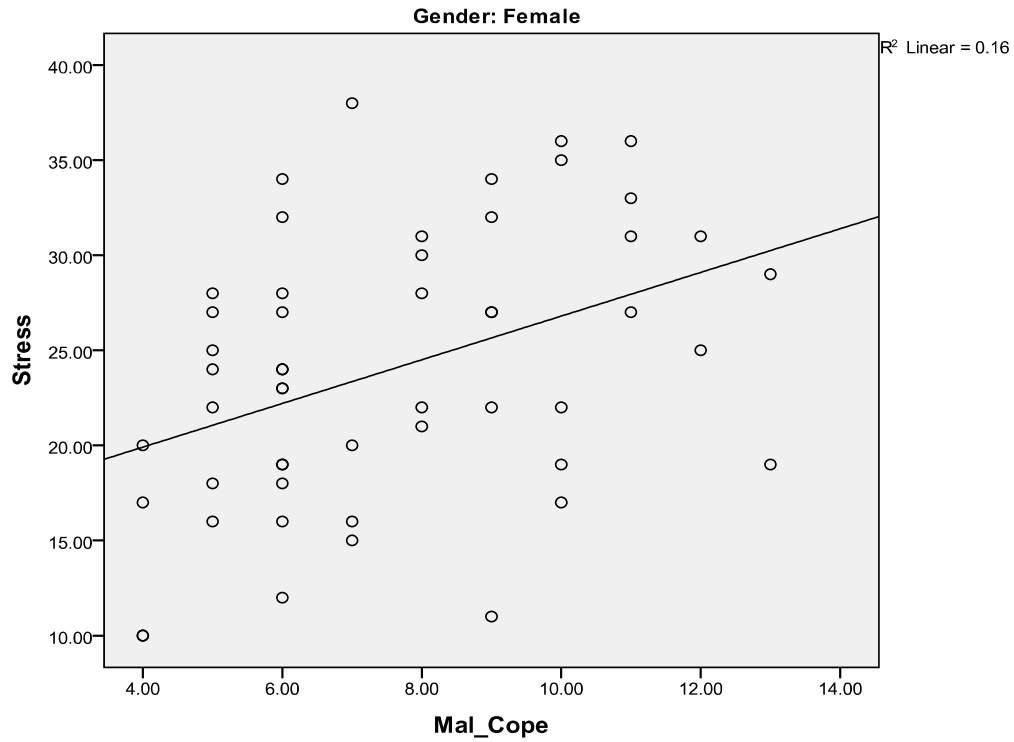
Note:

Items 2, 5, 6, and 8 are fillers. Responses to "scored" items are to be coded so that high values imply optimism. Researchers who are interested in testing the potential difference between affirmation of optimism and disaffirmation of pessimism should compute separate subtotals of the relevant items.

Appendix B:

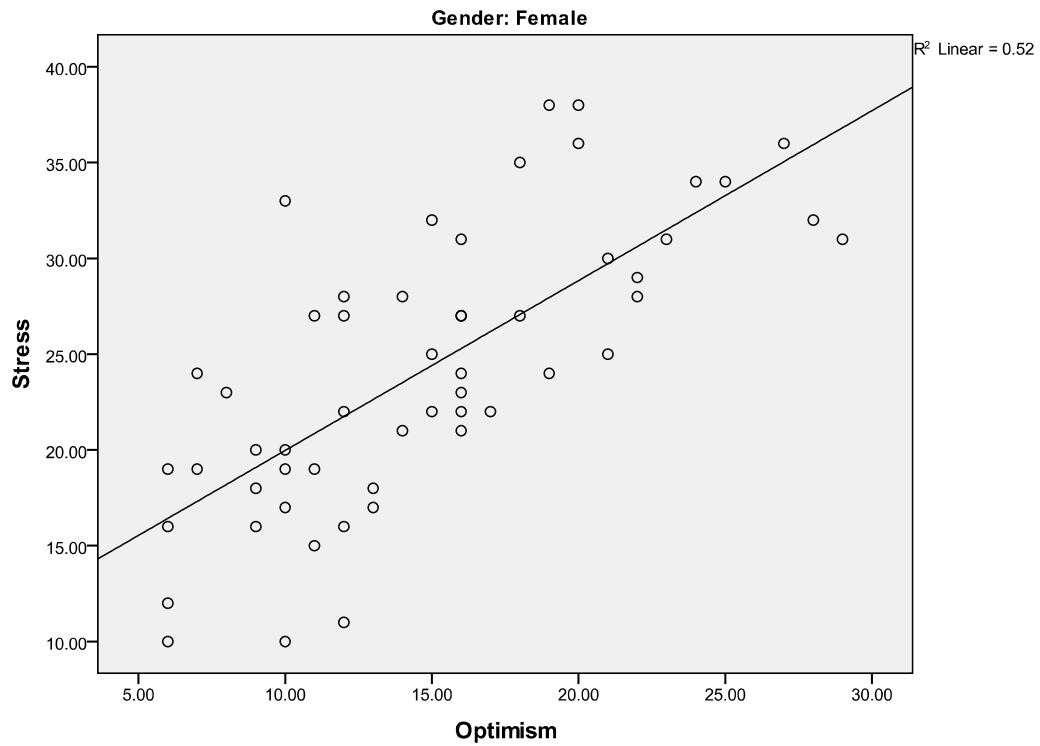


Graph1.1



Graph 1.2

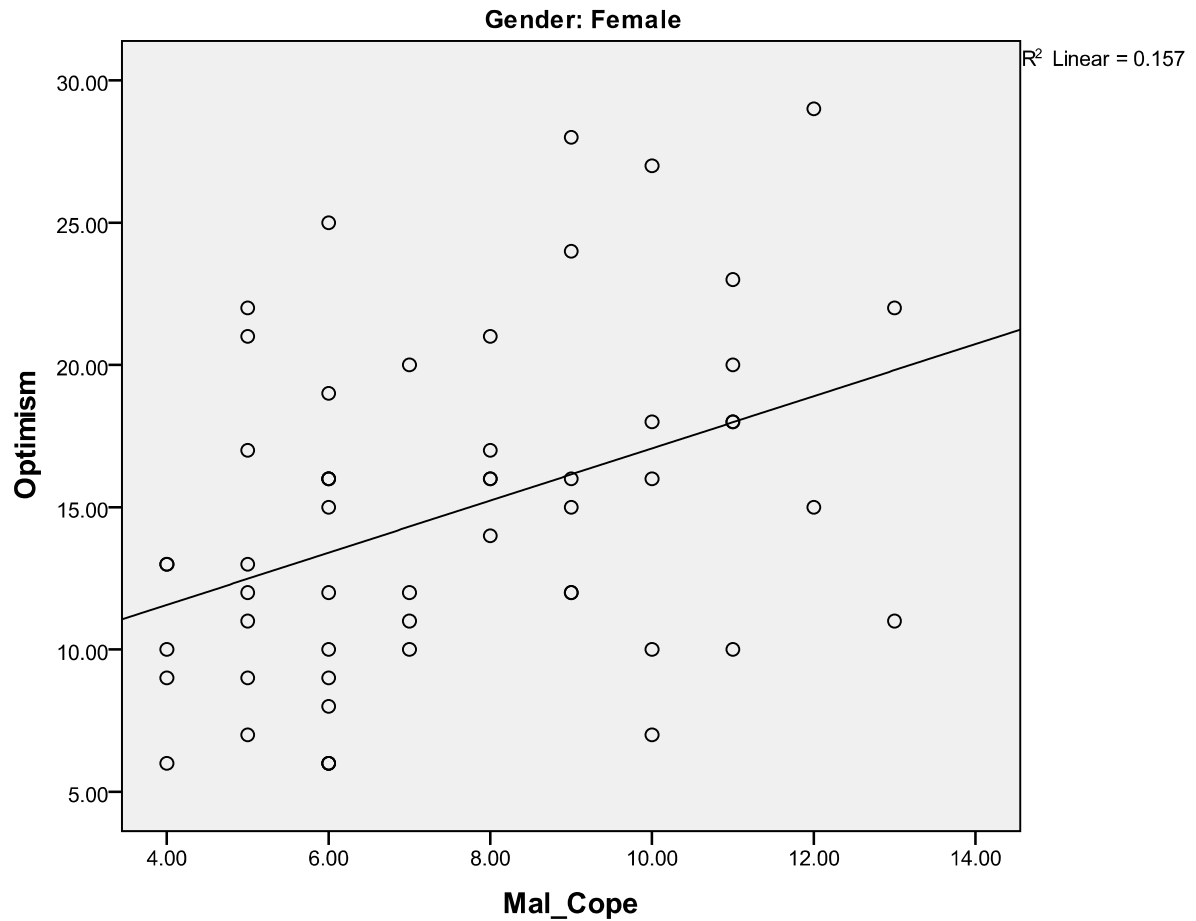
While the second Independent T-test shows that women use more maladaptive coping than men, the scatterplots in graph 1.1 and graph 1.2 demonstrate that men have a strong correlation between perceived stress and mal-adaptive coping strategies while there is a moderate correlation for females between perceived stress and maladaptive coping strategies.



Graph 1.3

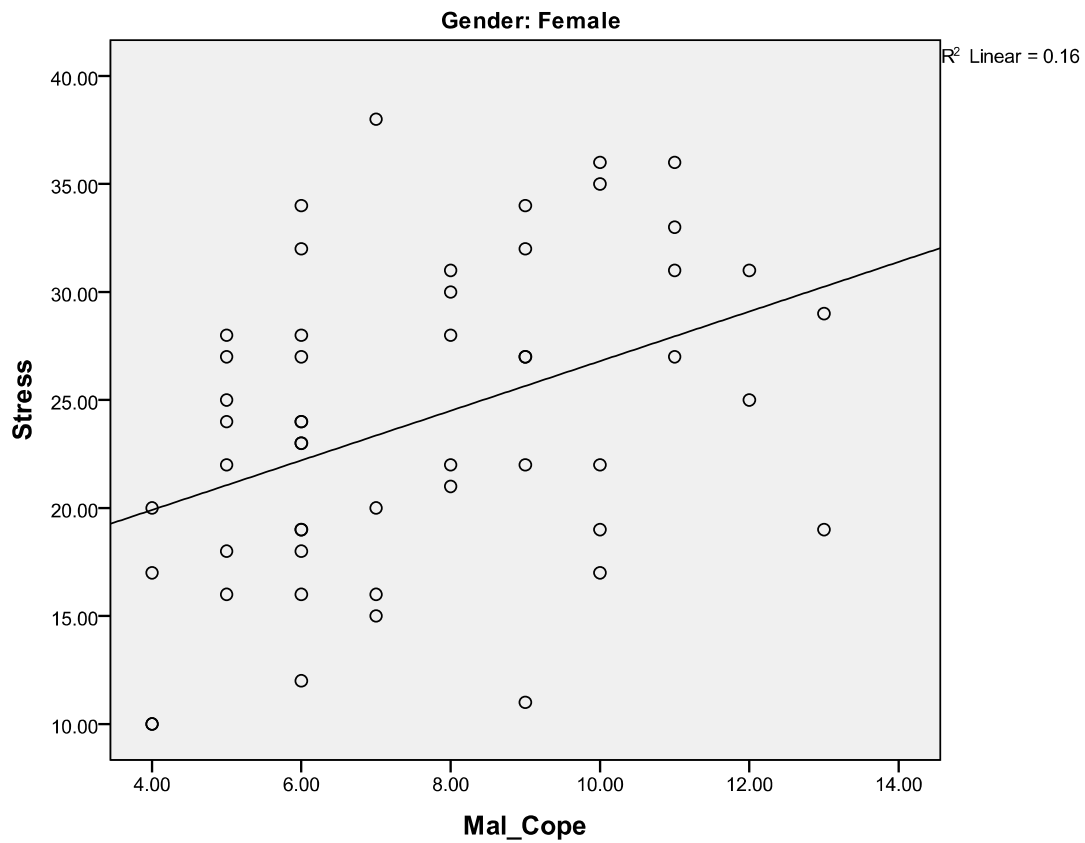
Graph 1.3 illustrates the strength of the correlation for women between the variables of optimism and stress.

Graph 1.4 shows a Pearson correlation test was run between Optimism and Maladaptive coping for females a moderately negative correlation was found. ($R(53) = -.4$, $P < .01$). There was an insignificant correlation found in males.



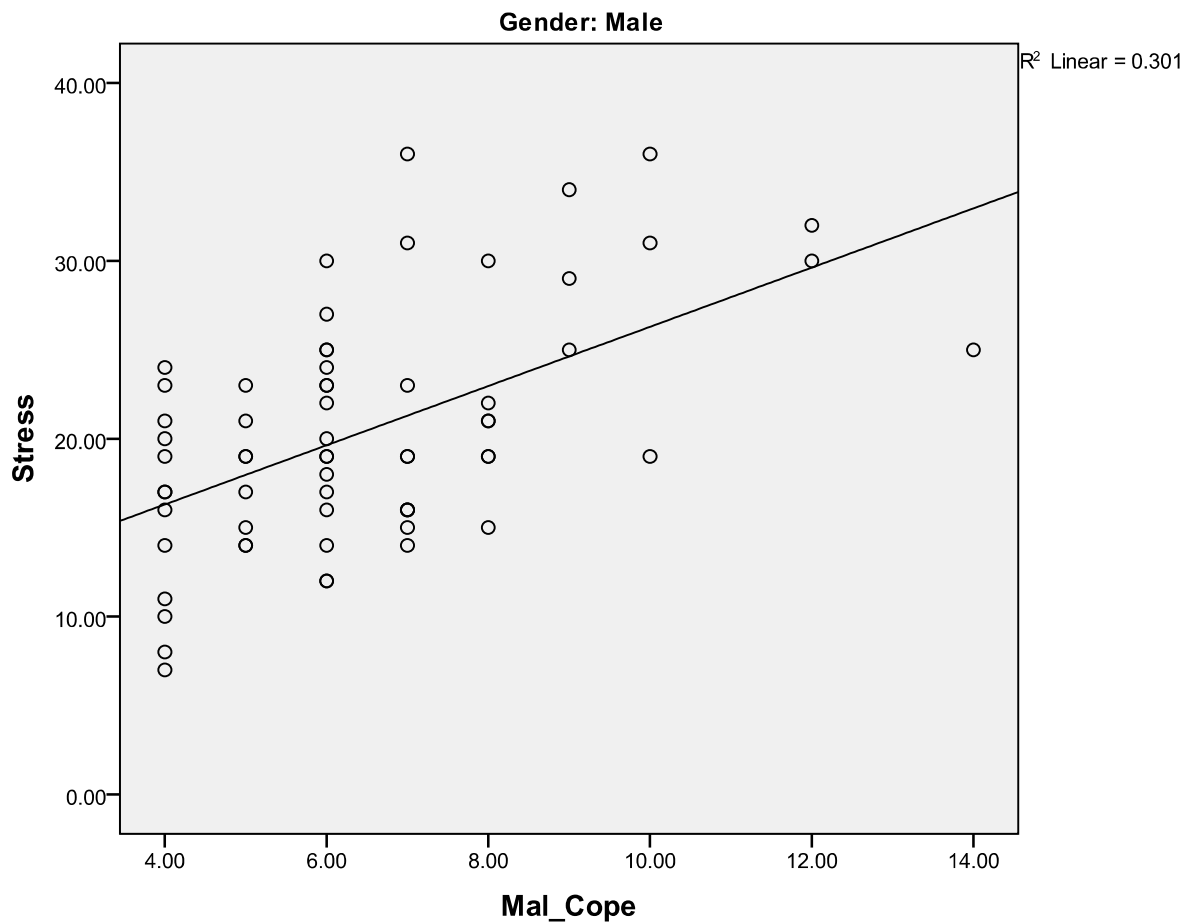
Graph 1.4

For Females, the mean score for Perceived Stress was 24.24 SD (7.3) and for Maladaptive focused coping 7.5 SD (2.5). A Pearson correlation coefficient found a moderate positive correlation between perceived stress and maladaptive coping strategies. ($R(50) = .4$, $P < .01$).



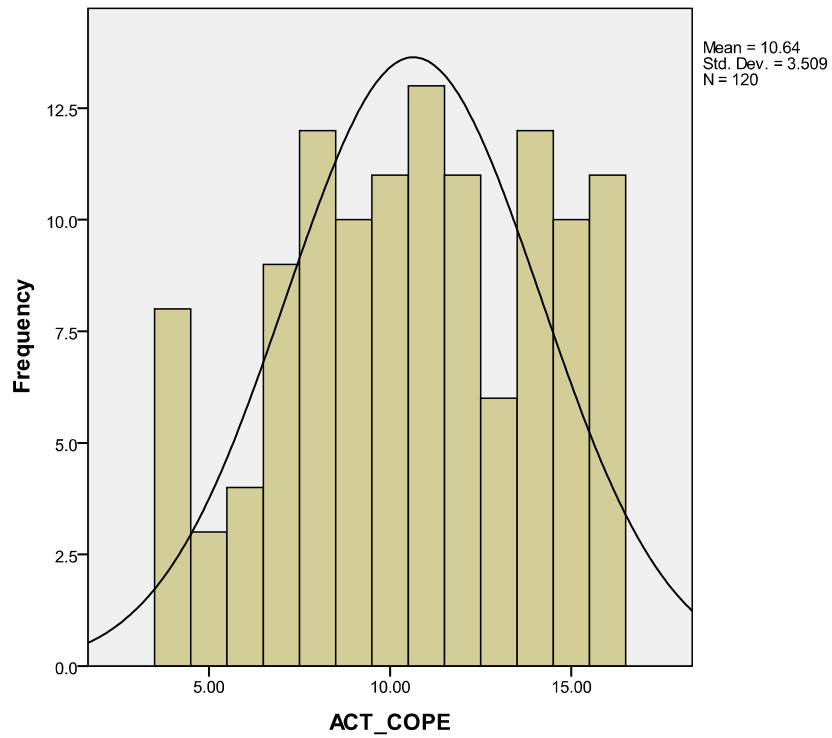
Graph 1.5

For Males, the mean score for Perceived Stress was 20.43 SD (6.55) and for Maladaptive focused coping 6.48 SD (2.16). A Pearson correlation coefficient found a moderate positive correlation between perceived stress and maladaptive coping strategies. ($R(62) = .55, P < .01$).

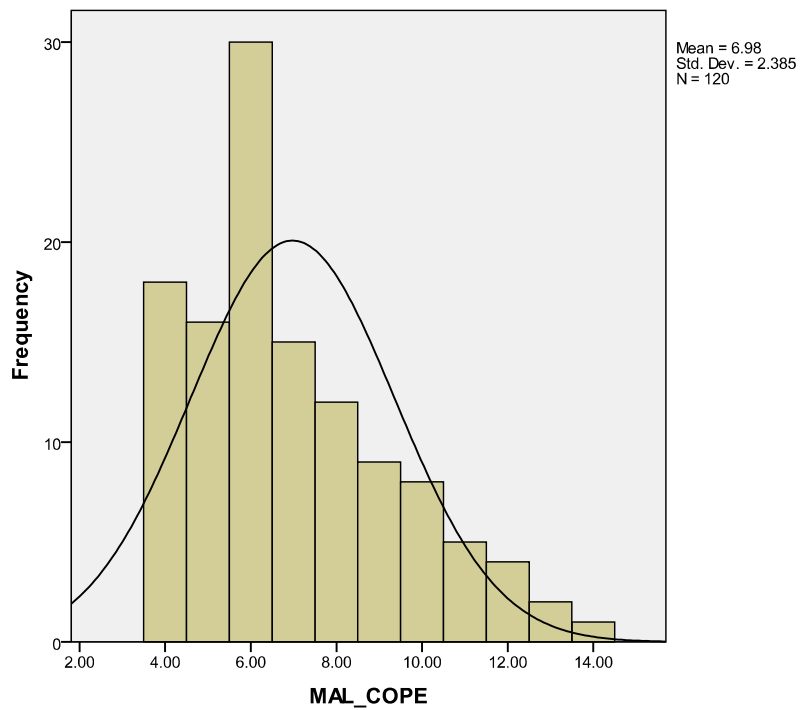


Graph 1.6

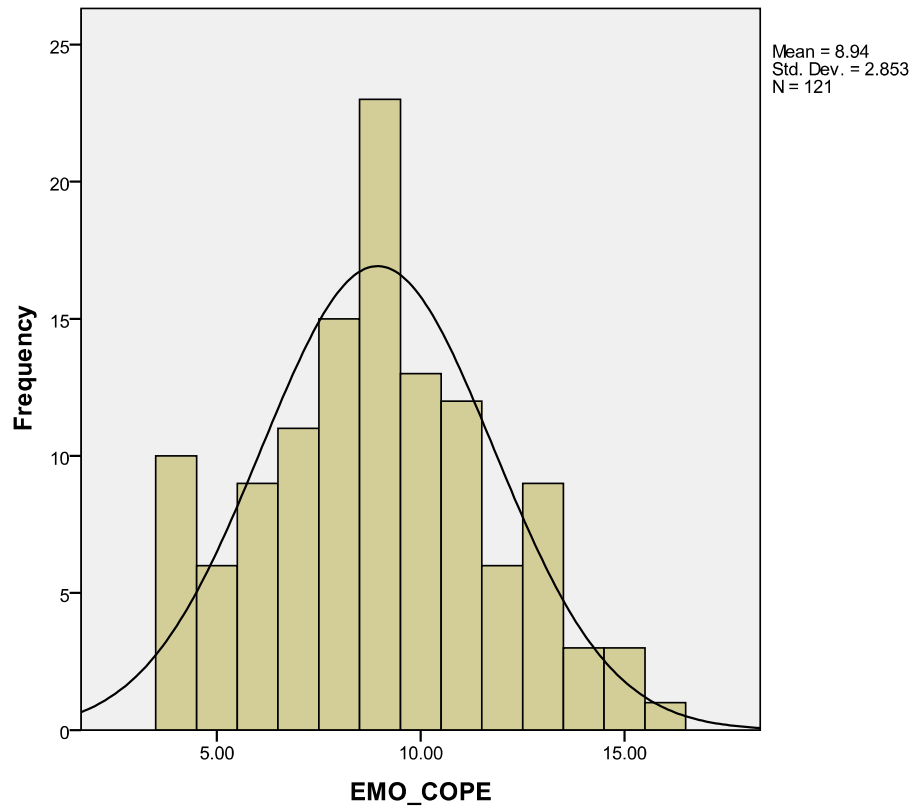
Histograms Illustrating Normal Curves for the Variables



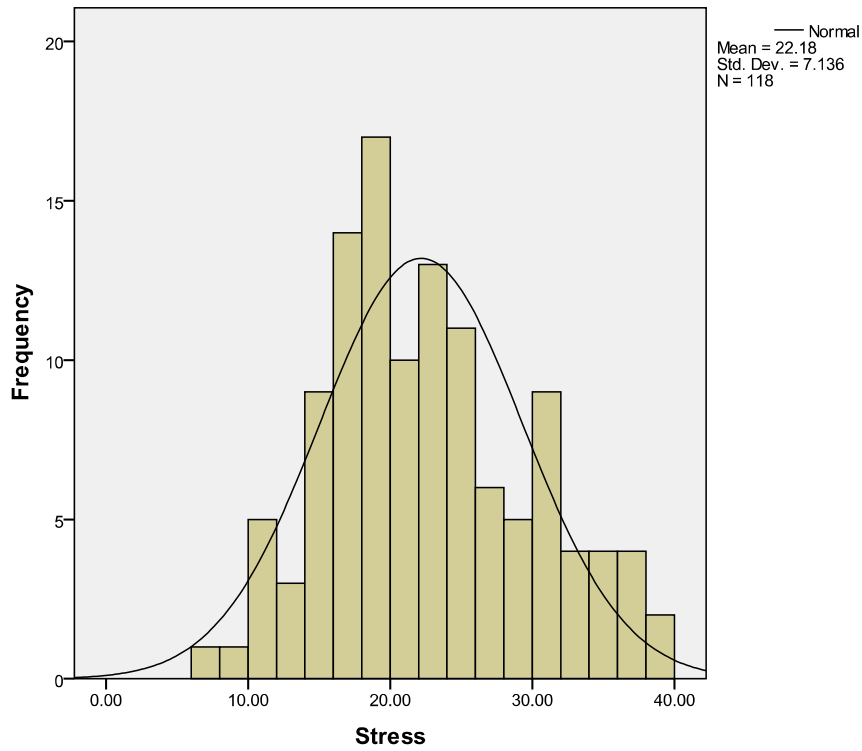
Graph 1.7



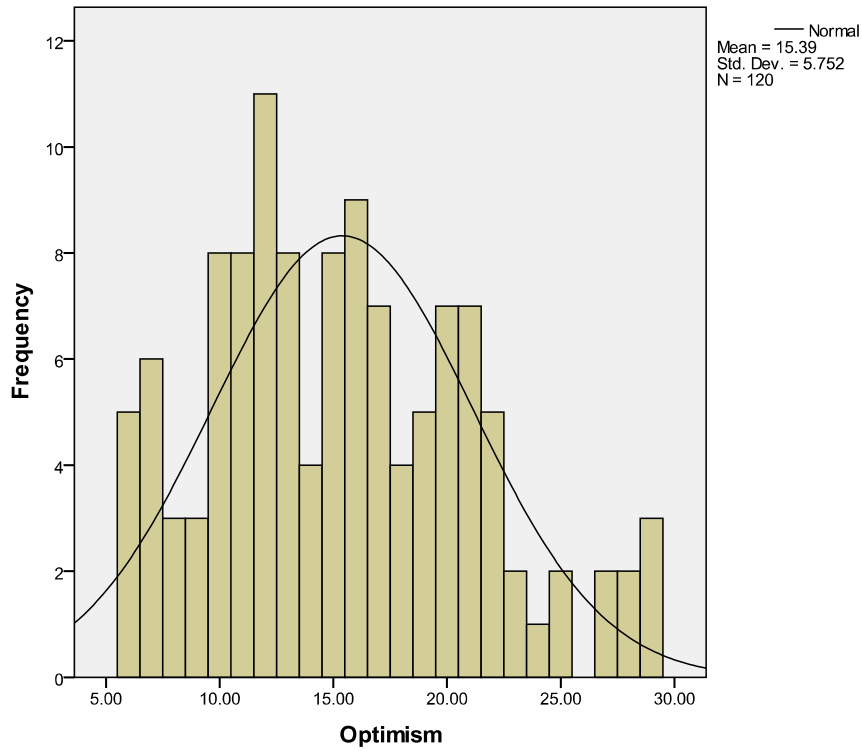
Graph 1.8



Graph 1.9



Graph 1.10



Graph 1.11