COPING STRATEGIES, CAUSAL ATTRIBUTION AND SELF-ESTEEM IN RELATION TO MENTAL HEALTH: A CROSS-CULTURAL STUDY OF INDIAN AND IRANIAN STUDENTS

ABSTRACT

Thesis
Submitted for the award of the degree of

DOCTOR OF PHILOSOPHY
In
PSYCHOLOGY

By
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Under the supervision of
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ABSTRACT

The aim of the present study was to investigate the relationship of coping strategies, causal attributions, and self-esteem with mental health in Indian and Iranian students. Another major aim of the study was to investigate the differences in terms of coping strategies, causal attributions, self-esteem and mental health between Indian and Iranian students both (boys and girls). The sample of this study is comprised of 800 university students, 400 students from Iran (Sistan and Baluchistan University), and 400 students from India (Aligarh Muslim University). Coping Inventory for Stressful Situations (CISS) by Endler and Parker (1990), Attributional Style Questionnaire (ASQ) by Peterson et al (1982) Self-Esteem Inventory (SEI) by Coopersmith (1978) and General Health Questionnaire-28 (GHQ) by Goldberg and Hillier (1979) were administered on the subjects. Descriptive statistics, correlation, step-wise multiple regression and enter multiple linear regressions are used to evaluate the research hypotheses. Independent sample t-test, two way ANOVA test and post-hoc are used to evaluate the research questions. Significantly negative correlation was found between problem focused coping strategies and mental health (GHQ-total), significantly positive correlation was found between emotion focused coping strategies and mental health with 99% confidence but avoidance-focused coping strategies was not significantly correlated with mental health among students. Step-wise multiple regression analyses revealed that emotion-focused coping strategies was first, and problem-focused coping strategies was second important predictor of mental health, but avoidance-focused coping strategies was not a predictor of mental health. Significantly negative correlation was found between internal-external, stable-unstable and global-specific attributional style for positive events with mental health (GHQ-total) with 99% confidence among students. Step-wise multiple regression analyses revealed that stable-unstable and internal-external attributional style were the stronger predictors of
mental health for the total sample. However, global-specific attributional style was not a predictor of mental health among the students. Pearson correlation results revealed that internal-external, stable-unstable and global-specific attributional style for negative events were positively correlated to mental health (GHQ total) with 99% confidence among students. Step-wise multiple regression analyses revealed that global-specific and stable-unstable were the stronger predictors of mental health for the total sample. However internal-external attribution style was not found a significant predictor of mental health in the students. Significantly negative correlation was found between self-esteem and mental health (GHQ total) in total sample, with 99% confidence among students. Enter multiple linear regressions analyses revealed that self-esteem is the predictor of mental health in total sample.

Test of independence results revealed that, there is significant difference between Indian and Iranian students. Indian students have higher mean scores on coping strategies (problem focused, emotion focused & avoidance focused) than Iranian students. The attributional style for positive event test of independence results revealed that, there is significant difference between two groups. Indian students have higher mean scores on (internal-external & stable-unstable attributinal style ) than Iranian students. But there is no significant difference on (global-specific attributinal style) between the two groups. In case of attributinal style for negative event test of independence results also revealed that, there is significant difference between two groups as Iranian students have higher mean scores on internal-external attributional style than Indian student. But there is no significant difference in (stable-unstable & global-specific attributinal style) between the two groups. Test of independence results revealed that, there is significant difference between two groups i.e. Iranian students have higher mean scores on self-esteem than Indian students. The test of independence results also revealed that there was no significant difference between Iranian and Indian
students in mental health. Two way ANOVA revealed that, in problem focused, emotion focused and avoidance focused coping strategies, there was no statistically significant main effect for gender. Also, interaction effect of gender and country in problem focused and emotion focused coping strategies were not statistically significant, but in avoidance focused coping strategies, interaction effect was statistically significant. In attributinal style for positive events, two way ANOVA revealed that internal-external, stable-unstable and global-specific attributinal style, there were statistically significant main effect for gender also interaction effect of gender and country in internal-external and global-specific attributinal style were statistically significant. In attributinal style for negative events two way ANOVA revealed that in the internal-external, stable-unstable and global specific attributional style there were no statistically significant main effect for gender, also, interaction effect of gender and country in internal-external attributinal style was not statistically significant but interaction effect of stable-unstable, global-specific attributional style were statistically significant. Two way ANOVA revealed that in self-esteem there was statistically significant main effect for gender. Interaction effect of gender and country in self-esteem also was not statistically significant. In mental health, two way ANOVA revealed that there was not a statistically significant main effect for gender. Interaction effect of gender and country in mental health was also not statistically significant.

In a nutshell, it can be inferred from the present thesis that coping strategies causal attribution and self-esteem are related with the mental health of students and play an important role in its development. From this study it can also be concluded that mental health in students does not necessarily differ with respect to their residence (country) and gender.
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CERTIFICATE

This is to certify that Mr. Mahmoud Shirazi has carried out his research entitled “Coping strategies, Causal Attribution and Self-Esteem in Relation to Mental Health: A Cross-Cultural Study of Indian and Iranian Students” under my supervision.

It is further certified that his work is an original piece of work and fit for submission to the examiners for the award of PhD degree in psychology.

(Dr. Rahat Ali Khan)
Supervisor

Dated 3.1.2010
Dedicated to
My loving son
Amir Sadra
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Mahmoud Shirazi
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CHAPTER ONE
INTRODUCTION
1.1 INTRODUCTION

It is difficult to imagine a life without stress. Each of us has anecdotal evidence from our own lives that supports the idea that stress may be an essential part of life. Recent researches suggest this is true in the lives of college students as well. College students reported dealing with high levels of stress, and more stressors than ever before (The American Freshman National Norms, 2000; The American College Health Association, 2004). This is especially disturbing because increased stress can have a variety of negative effects on an individual’s physical and emotional well being (Matheny & McCarthy, 2000).

As interest in stress has increased, so has the literature around coping (Folkman & Moskowitz, 2004). Lazarus’s (1966) transactional theory of stress highlighted the interaction of the person and the demands, and the cognitive element involved in the appraisal process. This shifted the focus in the literature from the pathology of stress to the individual’s ability to cope with the stressor (Folkman & Moskowitz, 2004). Subsequently coping has been defined as the strategies that individuals use to manage the difference in demands (both internal and external) and the resources one has to meet those demands (Folkman & Lazarus, 1984; Matheny & McCarthy, 2000; Tennen, Affleck, Armeli, & Carney, 2000).

Like stress, coping is a multi-dimensional and contextual construct (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). Factors such as environmental demands, personal resources, appraised threat level, and meaning or emotional investment may have mediating or moderating effects on the coping process. In order to combat the various aspects of the stressor, individuals develop a variety of coping resources. While not everyone possesses or develops every resource, there is a relatively small pool of resources from which individuals typically draw. These resources are in place before
the individual encounters the stressor and are not as reactive as many of the identified coping responses (Carver, Scheier, & Weintraub, 1989; Lazarus & Folkman, 1984). During the appraisal process, the individual measures the perceived threat against their perceived store of resources with which to combat that threat. The level of stress is lower if the individual perceives they have more resources ready to mobilize in response to the threat. When the threat occurs, individuals will more successfully overcome the threat if they have more available coping resources on which to draw (Curlette, Aycock, Matheny, Pugh, & Taylor, 1992; Matheny et al., 1993).

On the other hand, when events occur in our lives, we attribute those events to a variety of causes. The concept of attributional style emerged from the reformulated learned helplessness theory (Abramson, Seligman, & Teasdale, 1978). It was hypothesized in the reformulation that individuals with certain patterns of causal attributions are at greater risk of depression than other individuals. Specifically, attributional style incorporates three axes: internal vs. external, global vs. specific, and stable vs. transient. For example, two hypothetical university students who fail the same examination. One explains her/his failure by saying “I’m just a poor student,” while the other says “that was a totally unfair exam.” The first student’s causal attribution is internal (I am a poor student), relatively stable (this status as poor student is likely considered chronic), and relatively global (she/he is not a bad test-taker or a bad math student, she/he considers herself/himself a bad student in general). The second student’s causal attribution, on the other hand, is external (the test and its writers, but not the student, were at fault), transient (she/he did not suggest future tests are likely to also be unfair), and specific (this test was unfair, rather than tests being unfair in general). Individuals whose causal attributions for negative events are characterized as internal (due to the individual), global (influences all situations in the individual’s life),
and stable (will always be present), are said to have a pessimistic or depressogenic attributional style.

The basic relationship between learned helplessness and attributional style is that individuals with pessimistic attributional styles often believe the causes of negative events to be global, stable, and internal in nature. Therefore, they are unlikely to try to change negative situations or their responses to them, given their belief that the causes of such negative situations cannot be affected (Abramson, Seligman, & Teasdale, 1978).

Pessimistic attributional style is a known precursor of depression (Peterson & Seligman, 1986). In the depression literature, attributional style is cited as a significant predictor of depressed mood following negative life events (Abramson, Seligman, & Teasdale, 1978). Studies focusing on concurrent diathesis-stress models have shown that depressive symptoms are related to the interaction between attributional style and frequency of recent negative life events (Robins & Block, 1989; Rothwell & Williams, 1983). When an individual makes a depressogenic attribution (one that is internal, stable, and global) for a negative life event, the result is depressed mood. Longitudinal studies have consistently shown that depressogenic attributional style predicts later depression over and above earlier depression (Zullow & Seligman, 1985).

Additionally it has been assumed that self-esteem is vital for success not only in the classroom but also for, life in general. Longitudinal studies, assessing self-esteem before and after various stressful life events have found that good self-esteem can act as a protective coping resource (Delongis, Folkman, & Lazarus, 1988; Egan and perry, 1998). High self-esteem has been correlated with academic success in high school (O'Malley & Bachman, 1979), although low self-esteem is far more influential in causing poor results in school than high self-esteem is in giving good results, with low
self-esteem being blamed for poor school achievement, adverse health outcomes and risk behavior (Crocker & Wolfe, 2001). People with high self-esteem tend to be more confident and happier than others (Martin, 2005) and better able to cope with stress (Zimmerman et al., 1997). Adolescents and youth with good self-esteem may adopt better strategies to cope with stress (Mullis and Chapman, 2000), and a positive view of the self has been accepted as an essential component of mental health.

1.2 Statement of the Problem

Mental ill health is on the rise in many countries in recent years, significantly so among our youth population. Among reasons offered to explain this are the changing circumstances, pressures and experiences young people undergo today. Mental health problems are an enormous burden on both society and individuals, with one in five Australian adults experiencing a mental disorder in a one-year period, and 45 percent experiencing a mental disorder during their lifetime (Australian Bureau of Statistics [ABS], 2009).

College students consistently report being stressed and overwhelmed with a variety of responsibilities. In 2004, 44% of surveyed college students reported they experienced high levels of stress (American College Health Association (ACHA), 2004). In 2000, 28% reported feeling overwhelmed, and 23% reported that this stress impacted their academic performance (The American Freshman National Norms (AFNN), 2000). College students report stress from dealing with new relationships and living arrangements, handling new responsibilities, performing well in classes, and everyday hassles (ACHA, 2004; AFNN, 2000). In addition, 60% reported it was necessary for them to work (ACHA, 2004), and 65% reported they were worried about their ability to finance their expenses (AFFN, 2000). Stress increases college students' risk of a variety of mental and physical illnesses including, anxiety, depression,
immune deficiency, headaches, heart and blood pressure problems, lowered energy, allergies, and strokes (Matheny & McCarthy, 2000).

College students from the cream of student population. Studies have shown that about 50% students in India suffer from health problems. 15% of the students suffer from mental disorders like depression, anxiety, hysteria, somatoform disorders, adjustment reactions, alcohol and drug abuse. In addition, many more students may have emotional problems related to their family and college life (Chandrashekar et al., 2007). Over 16000 school and college student in India committed suicide in the last three years (Nanda, 2008). 28.1% medical students at university Ardabil in Iran were likely to suffer from mental disorders (Dadkhah, Mohamadi & Mozafari, 2005). 45.5% of the students had mild to severe depression and there were a significant relationship between depression and academic achievement (p = 0.004). 75% of the successful students and 39.4% of the unsuccessful ones were suffered from mild to moderate depression (Najafipour & Yktatalab, 2009). Only 10.33% students had suicidal ideation. Suicidal thoughts were significantly more frequent in male students of Isfahan University of Technology as compared with all other students (p < 0.05). Suicidal thoughts were also significantly more frequent in students residing in this university’s dormitories than its native students and also than students residing in other two universities’ dormitories p < 0.05 (Mousavi et al., 2008).

Researchers found that coping strategies and its type, causal attribution and self-esteem influences mental health or mental disorders. Bouteyre, Maurel, and Bernaudl (2007) found that task-centered coping was negatively correlated with depression, whereas emotion-centered coping was positively correlated with depression. They also found avoidant coping to be unrelated to depression. In a cross-sectional study of 466 college students, Reardon and Williams (2007) found that pessimistic explanatory style
was associated with both anxiety and depressive symptoms, and suggest that this may reflect both helplessness (for anxiety symptoms) and hopelessness (for depressive symptoms).

Other study also found a parallel between the tripartite model and finding on explanatory style, with negative explanatory style failing to distinguish between depressed and anxious students, but low scores on positive explanatory style distinguishing depressed students from both normal and anxious students (Fresco, Alloy & Harrington, 2006).

Trzesniewski (2006) Found both cross-sectional and longitudinal relationships between self-esteem and mental health. Firstly, they found a cross-sectional relationship during adolescence, with low self-esteem participants twice as likely to meet criteria for a major depressive episode (using a diagnostic interview). Secondly, they found that participants with low self-esteem in adolescence were more likely to meet diagnostic criteria for both anxiety (1.6 times) and depression (1.26 times) in adulthood, even when controlling for adolescent depression.

1.3 Significance of the Study

Although many theoretical views have emphasized stress in adolescence and youth, but sociologists and anthropologists in their researches in different societies, have found that the period of adolescence and youth depends on socio-cultural conditions.

Turner and Helms (1990) found that in some societies adolescence and youth periods are free from stress and conflict. Some psychologists and psychiatrists also found out that conflicts exist in adolescence and youth, while some believe that it is an exaggeration and there is no mental disorders in this period. (Lewis, 1991; Powers, Hauser & Kilner 1989). Psychologists such as powers 1989 stated that current views
about adolescence and youth should not solely be based on theoretical formulations but should be based on empirical studies conducted on adolescence’ adjustment. Powers et al., (1989), taking into considerations these facts concluded that psychology is still on its way towards offering clear-cut views with regard to the health of the youth and adolescents. Whereas such an issue has been the focus of the present research.

1.4 Purpose of the Study

1. To investigate the relationship between coping strategies and mental health in Iranian and Indian students.
2. To investigate the relationship between causal attributions and mental health in Iranian and Indian students.
3. To investigate the relationship between self-esteem and mental health in Iranian and Indian students.
4. To investigate the differences in terms of coping strategies, causal attribution, self-esteem and mental health between Iranian and Indian students. (both, boys and girls)

1.5 Hypotheses

The hypotheses that this study intends to investigate are as follows.

1. Students who employ problem-focused coping strategies would have significantly better mental health than students who employ emotion-focused and avoidance-focused coping strategies.
2. Students who attribute positive events to internal, stable and global causes would have significantly better mental health than students who attribute positive events to external, unstable and specific causes.
3. Students who attribute negative events to external, unstable and specific causes would have significantly better mental health than students who attribute negative events to internal, stable and global causes.

4. Students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem.

1.6 Questions

1. Is there significant difference between the mean scores of coping strategies (Problem-Focused, Emotion-Focused, and Avoidance-Focused) betwixt Iranian and Indian students?

2. Is there significant difference between the mean scores of attributional positive events (Internal-External, Stable-Unstable, and Global-Specific) betwixt Iranian and Indian students?

3. Is there significant difference between the mean scores of attributional negative events (Internal-External, Stable-Unstable, and Global-Specific) betwixt Iranian and Indian students?

4. Is there significant difference between the mean scores of self-esteem betwixt Iranian and Indian students?

5. Is there significant difference between the mean scores of mental health betwixt Iranian and Indian students?

6. Is there significant difference between the mean scores of coping strategies (Problem-Focused, Emotion-Focused, and Avoidance-Focused) with consideration of country and gender, simultaneously?

7. Is there significant difference between the mean scores of attributional positive events (Internal-External, Stable-Unstable, and Global-Specific) with consideration of country and gender, simultaneously?
8. Is there significant difference between the mean scores of attributional negative events (Internal-External, Stable-Unstable, and Global-Specific) with consideration of country and gender, simultaneously?

9. Is there significant difference between the mean scores of self-esteem with consideration of country and gender, simultaneously?

10. Is there significant difference between the mean scores of mental health with consideration of country and gender, simultaneously?

1.7 Variables

1.7.1 Coping Strategies

Coping is defined as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal resources of the person” (Lazarus & Folkman, 1984, p. 141). Folkman and Lazarus (1985) refer coping as active attempts to resolve stressful situations and are partially perceived as a two-stage process of appraisal. Primary appraisal takes place when an environmental event is assessed for any potential threat and secondary appraisal is the individual’s assessment of the resources at his/her disposal to manage the threat. Threat is reduced when the perceived resource increases, and often coping is more effective.

According to Lazarus, individuals develop coping styles that can maximise or minimise problems. Coping styles are defined as characteristic ways of challenging and dealing with stressful situations (Folkman & Lazarus, 1985). The most common styles are problem or problem-focused, emotion-focused, and avoidance-focused (Endler & Parker, 1990b).

1.7.1.1 Problem or Task-Focused Coping Strategies

This type of coping strategy involves an active approach that attempts to deal directly with the problem. People employing this strategy attempt to deal with the cause
of their problem, by way of looking into the problem and finding out more about it (Billings & Moos, 1981), learning new skills to manage the problem and rearranging their lives around the problem (Folkman, 1984).

1.7.1.2 Emotion-Focused Coping Strategies

Emotion-focused coping occurs when there is a belief that nothing can be done to change a harmful, threatening, or challenging condition. It is an active attempt to alter the cognitive and emotional reactions, without directly influencing the external reality (Endler & Parker, 1990; Folkman, 1984). Emotion-focused coping strategies refer to efforts “directed at regulating emotional response to the problem” (Lazarus & Folkman, 1984, p. 150).

These strategies can also involve for example, releasing pent-up emotions, distracting one-self, managing hostile feelings, meditating, using systematic relaxation methods (Folkman, 1984).

The problem with emotion-based coping skills is that they reduce the symptoms of stress or difficulty without addressing the source of the stress/difficulty. Examples of emotion-based coping strategies are discussing the problem or difficulty with a friend, drinking alcohol, or sleeping. Emotion-based coping can have the desired effect of making someone feel better about a problem, but will not solve it in the end. Nevertheless, emotion-based coping can be helpful in reducing stress to a manageable level, enabling action-based coping, or when the source of stress can not be addressed directly (Folkman, 1984).

1.7.1.3 Avoidance-Focused Coping Strategies

This involves escaping from or ignoring the problem. Appraisal/avoidance-focused strategies occur when the person alters their thinking processes, for instance: using denial or distancing oneself from the problem. Altering thought processes can be
achieved by altering goals and values, such as by seeing the humour in a situation (Folkman, 1984).

1.7.2 Causal Attribution

The study of attribution theory is a large area of research grounded primarily in the field of psychology (Fiske & Taylor, 2008). The philosopher Hume (1938, 1960) wrote that the way humans think about causation is the cement of how the universe is understood. Causation enters all levels of cognitive processing, from perception to abstract reasoning, and is used for the understanding of all kinds of phenomena, from complex human behaviors to the interaction between billiard balls. Social psychologists such as Heider (1958); Kelley (1967); and Weiner (1979) were interested in the causal attributions individuals make in various situations and sought to understand individual differences in these perceptions. Heider, for example, believed that individuals wished to develop a coherent and logical world and thus, attributed causality and meaning to most events. Kelley noted that individuals generally believed that the world is predictable and controllable and found that most humans analyzed failures more intensely than successes. Similarly, Weiner (1986), in a review of the experimental attribution literature, found that the search for and importance of causality was most marked in failure situations, especially if they were unexpected. Weiner is considered to be one of the most important precursors of modern appraisal theory (Schorr, 2001) "...primarily concerned with causation and agency, focusing on a somewhat more limited domain of emotions, but sharing general agreement with other theorists in that domain" (Ellsworth & Scherer, 2003, pp. 573). Weiner (1986) developed a comprehensive model to explain how attribution and emotions are related in an achievement context. In essence, emotions are instigated following a positive or negative event, usually an achievement-related success or failure, and then cognitions of increasing complexity enter the emotion process to further refine and differentiate
the experience. More specifically, an individual will first evaluate the outcome of an event as either positive or negative. If the event is negative, unexpected, and/or important, then causal search and more differentiated emotions are likely, and these attributions are evaluated according to three major dimensions: 1). internal (to self) versus external (to others); 2). Controllable versus uncontrollable outcomes and 3). Stable (due to the person) versus unstable (due to the situations). Finally, specific emotions will be reported based upon the individual’s causal attribution analysis of the achievement event, predictions that have been empirically tested and verified in numerous studies (Forsterling, 2001).

1.7.3 Self-Esteem

Self-esteem is an essential research topic in the psychology. Self-esteem is a positive or negative attitude towards one’s self. High self-esteem implies a feeling that one is “good enough”. The individual simply feels that he/she is a person of worth; he/she respects him/herself for what he/she is. Self-esteem evolves in relation to the environment (Backman & Hentinen 2001). Strandmark (2006) considers that self-esteem implies an assessment of self-worth, which depends on how the surrounding culture values the individual’s characteristic qualities and how well someone's behavior matches her/his standards of worthiness. According to Andersson and Stevens (1993) study, the early experiences with one’s parents have already had an impact on the self-esteem of elderly people. Self-esteem plays an important role in the life satisfaction of elderly people and it is related to psychological well-being, and usefulness and competence have an important influence on well-being (Benyamini et al., 2004; Chao et al., 2006). People who have relatively high self-regard tend to be better students, are bothered by less anxiety, are less depressed, display better physical health, and enjoy better social relationships (Gilberts, 1983). Learning a new skill, such as computer technology, that is associated with youth and the future can enhance one’s self-regard or self-esteem (Farris, Bates, Resnick, & Stabler, 1994). High self-esteem is considered
important because it is associated with higher levels of psychological health and functioning, and low levels of self-esteem are undesirable because it is associated with lower levels of psychological health and functioning (Glaus, 1999).

1.7.4 Mental Health

Contrary to much public perception, mental health is not merely the absence of mental illness; it is more complex and can be defined as “The emotional and spiritual resilience which allows us to enjoy life and to survive pain, disappointment and sadness. It is a positive sense of well-being and an underlying belief in our own and others’ dignity and worth” (Mental Health Foundation, 2005).

A mental health problem can be perceived as a ‘disturbance in functioning’ in a variety of areas, such as behaviour, mood, relationships, or development. Children and adolescents are said to have a mental health disorder when a difficulty or problem they are experiencing is particularly severe or endures over a considerable amount of time, or when many of these difficulties are experienced simultaneously (Mental Health Foundation, 2005).

Good mental health enables children, adolescents and youth to develop in all different aspects: emotionally, intellectually, creatively and even on a spiritual level. They can learn to develop personal relationships, to empathise with others, to resolve problems, to have strength in the face of adversity, to persevere in challenging circumstances, and learn from such situations (Maughan, 2005). According to the WHO’s definition of mental health: “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001, p. 1).
CHAPTER TWO

LITERATURE REVIEW
LITERATURE REVIEW

2.1 Coping

2.1.1 Definition

Coping is an ongoing strategies used in particularly stressful situations and they focus on the multidimensionality of coping (Folkman, et al., 1986; Lazarus & Folkman, 1984; Schiff, El-Bassel, Engstrom, & Gilbert, 2002). Lazarus and Folkman (1984) define coping as "the person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources" (p. 141). In their view, coping is "process oriented," contextually influenced by personal situation," and "a person's efforts to manage demand without a priori assumption about what constitutes good or bad coping" (Folkman, et al., 1986, p. 993). Coping is also conceptualized as a multidimensional process, which includes cognitive and behavioral efforts (Ptacek, Pierce, & Ptacek, 2002). Although there are a variety of ways of coping, such as confrontive coping, distancing, seeking social support, accepting responsibility, avoidance, and religious coping (Fox, Blanton, & Morris, 1999; Lazarus & Folkman, 1984; Vitaliano, Russo, Carr, Mauro, & Becker, 1985), researchers tend to dichotomize these coping strategies as active vs. passive, or emotion-focused vs. problem-focused, especially when they examine the impact of coping on psychological health. For example, Lazarus and Folkman (1984) divide coping into two dimensions: emotion-focused coping, which "regulates stressful emotions," and problem-focused coping, which "modifies the circumstance creating the harm, threat, or challenge" (p. 150). Billings and Moos (1985) group different coping strategies into three categories: active behavioral coping, which "reflects behavioral attempts to directly deal with the problem," active cognitive
coping, which “indicates attempts to manage one’s appraisal of the stressfulness of the
event,” and avoidance coping, which “includes avoidance, denial and tension
reduction” (p. 140). Similar to Billings and Moos’ distinction, Suls and Fletcher (1985)
classify coping as approach coping, which refers to “strategies that focus on the source
of stress and reaction on it,” and avoidant coping, which is “strategies that place the
focus away from both the sources of stress and reaction to it” (p. 250). Finn (1985)
categorizes “observable, behavioral efforts” as active strategies and “unobservable,
cognitive or emotional efforts” as passive strategies (Yoshihama, 2002, p. 430). Kemp,
et al. (1995) classify coping as engagement, which refers to problem-focused behaviors,
versus disengagement, which includes problem avoidance, self-criticism, and social
withdrawal.

2.1.2 Dimensions of Coping

The most widely used dimensions of coping are problem versus emotion-
focussed coping (Compas, Malcarne & Fondacaro, 1988), approach versus avoidance
coping and primary versus secondary control coping (Compas, et al., 2001; Ebata &
Moos, 1994). Although these models of coping do have some similarities and overlap
in the categorization of specific coping responses; they are conceptually distinct (Ebata
& Moos, 1994).

The problem versus emotion focused model organizes coping responses in terms
of their hypothesized function (Ebata & Moos, 1994). Problem focused coping
responses can be seen as attempts to modify a stressor. Emotion-focused coping
responses can be seen as attempts to manage or regulate emotional states that may
accompany or result from a stressor. Ebata and Moos (1994) consider problem focused
coping strategies to be approach-oriented. However, they also view approach coping to
be broader because it may also include coping responses that function to regulate affect. For example, although focusing on the potential benefits of a problem might be considered as emotion-focused because it is used to feel better about a situation, it may also be considered as an approach-method because it is an active attempt to deal cognitively with the situation by exploring different aspects of the stressor. On the other hand, trying to forget about a situation or denying a problem, would be considered an avoidance strategy. Compas, Orosan and Grant (1993) further explain the difference between problem-focused and emotion-focused strategies. They describe emotion-focused strategies as efforts to manage or reduce distress. These strategies involve problem avoidance through ignoring the issue, withdrawal, or expressing negative feelings. Problem-focused coping strategies (e.g., obtaining instrumental as well as social support, and creating cognitive plans to address the issue), involve making decisions and planning solutions that manage or remedy the problem. The approach-avoidance model organizes coping responses in terms of their focus or whether they are directed toward or away from the stressor. Approach-oriented strategies include cognitive efforts to understand and alter ways of thinking about the stressor and behavioral attempts at resolving the stressor by dealing directly with it or its consequences. Avoidance strategies include cognitive attempts to deny or minimize the stressor and behavioral attempts to withdraw from or avoid the stressor, to relieve tensions by expressing emotions and to seek alternative sources of pleasure (Compas et al., 2001). The primary versus secondary control dimension of coping refers to the orientation of an individual to either enhance a sense of personal control over the environment and his/her reactions (personal control) or to adapt to the environment (secondary control) Primary control coping attempts are directed towards influencing objective events or conditions (e.g., problem solving) or directly regulating ones
emotions. Secondary control coping attempts involve efforts in adapting to the environment and typically may include acceptance or cognitive restructuring (Compas, et al., 2001).

Broad dimensions of coping are considered to be composed of specific subtypes of coping. Examples of these subtypes or categories of coping are: ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being humorous, avoiding problems and relaxing. Research involving the measurement of coping usually consists of items that reflect these categories of coping (Compas, et al., 2001; Patterson & McCubbin, 1981).

2.1.3 Theoretical Models of Coping

2.1.3.1 Transactional Model of Stress and Coping

The transactional theory of stress and coping developed by Richard Lazarus was first discussed in detail in the book, Psychological Stress and the Coping Process, published in 1966. The theory was further modified in the publication, Stress, Appraisal, and Coping, by Richard Lazarus and Susan Folkman, published in 1984. This cognitive theory, based on phenomenological assumptions, has become the basis for current thinking on the relationship between stress and coping. A simplistic description of Lazarus' (1966) and Lazarus and Folkman's (1984) transactional model of psychological stress and coping follows as an introduction to the key aspects of the model (see Figure 1 below). The current study is focused on the appraisal of threat and challenge only (not harm/loss or benefit), therefore the model described here includes only the first two constructs. At the core of the transactional model is the interaction between person factors (characteristics of the individual including past experiences,
personality traits, internal resources, etc.) and situational factors (external resources, social cues and mores, physical context, etc.). Agents of harm (external or internal events that cause stress) are appraised (via a process known as primary appraisal) as threatening or challenging, resulting in an affect of anxiety. Following this, or in concert with this, the agent of harm is located and appraised through secondary appraisal processes which determine whether and what type of action will be taken. Secondary appraisal can result in either reappraisal (a decision that the harmful agent is actually not a threat – this can be a form of defensive coping) or a decision on a coping response. Reappraisal is indicated in Figure 1 by a dotted line which represents a pathway that may or may not occur. The coping action tendency (including affective and behavioral dimensions) chosen is dependent on the situation to be addressed, the context within which that situation is to be addressed, the resources available (both internal and external), and the predispositions of the individual as to preferred ways of coping with stress. Coping responses can broadly include actively taking steps to lessen the threat or remove the agent of harm, or disengaging either mentally or behaviourally in an attempt to ignore the harm agent or regulate the emotional aspects of the stress response. Coping responses for challenge can include taking steps to address the challenge. Coping responses can only be judged with regard to the efficacy of their outcomes when knowledge of the particular goals and motives of the individual involved and the situational factors are considered.
The model is not linear and is composed of feedback loops also summarised broadly in Figure 1. Lazarus (1966) emphasises this continuous flow: When we analyse a single psychological sequence, from stimulus through appraisal to reaction, we are arbitrarily stopping the continuous flow of psychological events in order to study the variables that make up a limited segment of this flow. But we must remember that the flow continues in spite of the restrictive units or sequences we choose to examine for the sake of convenience. If a reaction is appraised as a threat stimulus, a whole new psychological sequence leading to further reaction will ensue, and so on. (p. 75) Lazarus and Folkman (1984), discuss the positivist argument that “individual
differences occur because human environments are always different, and therefore, individual differences are not necessarily due to person characteristics” (p. 23). The positivist approach assumes objectivity and rationality on behalf of the individual, implying that two people in the exact same situation will react in the exact same way. This has not been found to be the case (Carver, et al., 1989; Epstein, 1992; Fleishman, 1984; Folkman & Lazarus, 1980; Nakamura & Orth, 2005) for discussions of the range of factors (personal and situational) that can impact on coping action tendency selection in any one individual. Lazarus’s (1966) transactional model explains these findings by arguing that human environments are always different because of the differing appraisals brought to bear on them through individual differences.

2.1.3.2 Stages of Coping

As an individual addresses a threatening stimulus, changes in their approach over time have often been viewed as a series of stages of coping (Lazarus & Folkman, 1984). Research has suggested that for certain types of situation, for example, coping with exam pressures, different stages of the process (before, during, and after) require different coping responses (Folkman & Lazarus, 1985). However, if we take the view of Lazarus (1966) and Lazarus and Folkman (1984) individual and situational differences should mediate this, with movement through stages varying by individual and by situation. Further, it is possible that for some individuals some stages may be missed, or stages may occur in different orders altogether (Lazarus & Folkman, 1984). Silver and Wortman (1980) have shown that stage models are an inadequate explanation for emotional reactions in coping with a crisis, as there is great response variability between individuals. It should also be noted that if there is at least some similarity in the types of stages individuals go through over time, then there is an element of generality to coping approaches as well as elements of individual variation.
Further, stages of coping could also represent a multitude of coping processes that are made up of the first instance of appraisal and coping, followed by feedback, reappraisal, further threat appraisals, coping processes, and so on (Lazarus & Folkman, 1984).

2.1.3.3 The Hierarchical Model

The ego psychology approach is derived from Freud’s structural model of the mind. That includes the functions of the id, ego, and the superego (Becker, Jimmerson, & Trail, 1982). The id is theorised to be an unconscious structure responsible for instinctual responses (Becker, et al., 1982). The ego allows for a subjective reality of the mind and the reality of the external world, constructions which are developed through perception, memory, learning, and thinking (Becker, et al., 1982). The superego develops as a part of the ego from the values and ideals imposed primarily during childhood which have been enforced through reward and punishment techniques (Becker, et al., 1982). Essentially, Freud’s model of the mind states that undifferentiated energy is released from the id, which is then channeled into appropriate responses to threat by the ego, tempered by the superego (Becker, et al., 1982).

Coping strategies in ego psychology models are generally conceived as dispositional approaches based on the developmental level of the individual concerned, rather than a complex cognitive appraisal process influenced by person and situational variables (Lazarus & Folkman, 1984). Ego hierarchies imply an objective reality whereby certain types of strategies such as denial can be considered immature and even maladaptive. However, as Lazarus and Folkman point out, it is difficult to define the objective reality upon which scales of coping strategy efficacy can be adequately based,
and coping strategies should not be viewed as inherently adaptive or maladaptive or indeed, positive or negative.

2.1.3.4 Scale Approaches

Early scale theories of stress and coping differentiated between lower level coping strategies which were considered to be unconscious defensive behaviours and higher level strategies, considered to be conscious, flexible, active, and realistic coping strategies (Vaillant, 1977). Lazarus (1966) supports aspects of this view with the claim that animals at the higher levels of the phylogenetic scale will be increasingly dependent on learning and stimuli cues that signify meanings about potential consequences to the animal in question, whereas as we descend this scale, behaviour becomes more dependent on instinctive mechanisms and the direct physical impact of stress stimuli. Further, as we move down this scale, psychological stress reactions are less evident than physiological stress reactions (Lazarus, 1966). Moreover, Lazarus (1966) claims that as we go up the phylogenetic scale, stress reactions become more varied.

However, it has been suggested that in situations of extreme stress, individuals that are phylogenetically at the higher end of the scale may revert in a sense to the characteristics of the lower end of the scale, responding with less variability and a decrease in cognitive efficiency (Lazarus, 1966).

2.1.3.5 One-Dimensional and Two-Dimensional Construct

Two of the most commonly known one-dimensional bipolar constructs that have been used to describe coping approaches are sensitisation-repression and monitoring-blunting (Krohne, 1996). A third related but two-dimensional construct is vigilance-cognitive avoidance (Krohne, 1993, 1996). The first two models do not claim to cover the entire spectrum of coping behaviours but instead categorise coping behaviour along
a continuum between two fundamental coping dimensions (Krohne, 1996). Vigilance-cognitive avoidance differs in that people are theorised to fall somewhere along a continuum of vigilance, as well as along a continuum of cognitive avoidance (i.e. they are two separate constructs). All three, in the author’s opinion, are generally similar in the meaning of their theoretical dimensions.

Vigilance is an orientation towards the threat “characterised by intensified intake and processing of threatening information”, whereas cognitive avoidance is the process of distracting or removing attention from the threat (Krohne, 1993, p. 21). Krohne (1993, 1996) argues that those who are prone to vigilance are consistently monitoring for threat information in their environments as a means to reduce or prevent uncertainty. Cognitive-avoiders, on the other hand, cope by avoiding stimuli or thoughts that induce arousal (Krohne, 1993). When individuals tend toward high vigilance and high cognitive-avoidance, Krohne (1993, p. 28) calls this group “anxious”, although he notes that not everyone showing this pattern will necessarily be anxious. Tolerance to ambiguity and tolerance to emotional arousal are influencing factors on vigilance and cognitive-avoidance (Krohne, 1993, 1996). The more vigilant a person is, the more intolerant they are theorised to be with regard to uncertainty and emotional arousal, with the opposite theorised for the cognitive-avoidance group (Krohne, 1993, 1996). This could be due to those who are more vigilant being more aware of their environments and, therefore, the cues they do not understand, as well as a heightened awareness of the affects they are experiencing. Further, individuals who choose to cognitively avoid stressful stimuli may not be aware of ambiguity in their environment nor consciously attend to their affective state to the same degree. Those individuals that show a high intolerance of both uncertainty and emotional arousal will likely show a fluctuating coping pattern where individuals are unable to wait to see if a
strategy has been effective in reducing the threat, as use of one dimension's strategies results in unacceptable levels of intolerance to the other dimension and vice versa (Krohne, 1996). Finally, those individuals that show high tolerance of both uncertainty and arousal should be able to use flexible coping strategies when addressing threat as well as maintaining use of a strategy for long enough to deem its effectiveness (Krohne, 1993, 1996). However, a low sensitivity to uncertainty and emotional arousal could also indicate a lack of coping resources in general (Krohne, 1996), particularly when paired with an avoidant coping style.

In line with the views of the current author, Krohne (1993) advocates a social learning interpretation for explaining the development of particular coping modes (styles). Similarly, the monitoring-blunting continuum has at one end individuals who engage in monitoring coping behaviours (for example, seeking information about the stressor and its potential impact) in response to a threat, and at the other, individuals who engage in blunting behaviours (such as distraction, denial, or reinterpretation) to address threat (Krohne, 1996). The use of monitoring or blunting strategies is moderated by the controllability of the stressor in question (Krohne, 1996). Blunting strategies are theorised to be adaptive in the instance of uncontrollable events, whereas monitoring strategies are considered most adaptive where stressors are controllable (Krohne, 1996).

2.1.3.6 Drive Reinforcement Model

The drive reinforcement model regards stress as a form of disequilibrium within an animal system which in turn produces strain (Lazarus & Folkman, 1984). Driven to maintain balance or homeostasis, an individual or animal must adapt in some way to the stressor (an external or internal stimulus causing the stress or tension). The idea of drive was not just applied to physical or environmental stimuli, but was also used to
explain behaviours designed to result in social goals such as affiliation and achievement. The drive reinforcement model follows a stimulus-response approach and does not explain how a stimulus in the environment or internally within an individual results in a particular set of observable behaviours. In further development of these models, the transactional model holds that: (1) no strategy should be viewed as positive or negative - the efficacy of a coping strategy can only be determined by the effect it has on the threat encountered by the individual (both internally & externally), and the effects it has in the long-term; and, in contrast to these models, (2) the coping strategy needs to be judged in terms of the context it is in (both with regard to the individual and their social and physical environment) (Lazarus & Folkman, 1984).

2.1.4 Coping Strategies and Mental Health

Over the last few decades, there has been a substantial amount of research in the area of coping strategies and its relation to mental health. As mentioned previously, there are various types of coping strategies, such as problem or problem-focused coping, emotion-focused coping, and appraisal or avoidant-focused coping.

A number of studies have found emotion-focused coping to be positively correlated to poor mental health. One such study was conducted by Solomon, Avitzur and Mikulincer (1990), who found emotion-focused coping to be related to the presence of psychiatric symptoms in soldiers who had been involved in a war. Another was carried out by Roy-Byrne et al. (1992) who found that emotion-base coping was study related to increased subjective distress in people with panic and major depressive disorder.

Mosley et al. (1994) found that coping plays a significant role in the fight against depression in medical students. In this study, coping efforts were classified as
engagement strategies, and were found to be negatively associated with symptoms of depression. On the contrary, coping effort classified as disengagement strategies were positively associated with symptoms of depression. Although no coping strategy is believed to be adaptative or maladaptative independently, engagement strategies are more likely than disengagement strategies to alter stressful situations and may be linked with more adaptative outcomes. Further research by Aspinwall and Taylor (1992) illustrated that students who employed avoidant coping were expected to be less successful at adjustment to college, while those who employed active coping were more likely to be more successful in adjustment.

A study by Stewart et al. (1997) found that individuals who used avoidant coping strategies had higher rates of depression and anxiety, whereas those who used active coping and positive reinterpretation had a decrease in depression and anxiety. In their study on daily hassles and depressive symptoms among first year psychology students in a French university, Bouteyre, Maurel, and Bernaudl (2007) found that task-centered coping was negatively correlated with depression, whereas emotion-centered coping was positively correlated with depression. They also found avoidant coping to be unrelated to depression.

Many studies indicate that active or problem-focused coping strategies are more effective than other strategies. For example, Mitchell and Hodson (1983) found that in a sample of 60 battered women, women who used more active coping responses and fewer avoidant responses reported less depression. Similarly, in a group of 80 battered women recruited through shelters, Clements and Sawhney (2000) found that an increase in problem-focused coping was related to decreased levels of hopelessness. In a sample of 71 adult psychiatric inpatients, Josepho and Plutchik (1994) found that people who used less adaptive coping skills showed more suicidal behaviors. Bjorck et
al. (2001) addressed that in a sample of 228 college students, adaptive coping behaviors, which include problem solving, seeking social support, and positive reappraisal, predicted less distress, while maladaptive coping strategies, which encompasses self-control, accepting responsibility, and escape-avoidance, predicted greater distress. In the study using randomly selected community sample of 291, Aldwin and Revenson (1987) reported that engagement coping strategy was related to positive mental health, while disengagement coping was related to poor mental health.

Compared to positive impact of problem-focused or active coping, the relationships between emotion-focused or passive coping and psychological outcomes are more consistently supported by previous studies (DeGenova et al., 2001; Kalsow et al., 1998; Kemp et al., 1995; Penley, Tomaka, & Wiebe, 2002). For example, in one study using a sample of 87 HIV-infected individuals, DeGenova et al. (2001) reported that those who used more emotion-focused coping exhibited more depression; however, problem-focused coping was not related to the symptoms. In the study of 179 battered women recruited through shelters and the community, Kemp et al. (1995) found that disengagement coping strategies were a predictor of PTSD symptoms, whereas engagement coping was not. In a study of 285 college students, Kalsow et al. (1998) found that active coping strategies did not protect abused women from engaging in suicidal behavior. Penley et al.’s (2002) meta-analysis of 34 studies dealing with the relationship between coping and mental health reported that although previous studies demonstrated a significant overall association between coping and psychological outcomes in general, a stronger relationship was found in the emotion-focused coping strategies than in problem-focused coping. The effectiveness of a certain type of coping may depend on whether the stressor faced is controllable or incontrollable (Dressler, 1985; Forsythe & Compas, 1987; Littrell & Beck, 2001). Forsythe and Compas (1987)
argue that for controllable stressors, active or problem-focused coping may be helpful, while for uncontrollable stressors, active coping mechanism may be less effective. In a study of a sample of 285 residents of a Black community in the rural area, Dressler (1985) found that African-American males with active coping had more psychological symptoms that those with less active coping; the author argues that active coping may not be effective under high levels of economic stress. However, Littrell and Beck (2001) reported that in a sample of 90 African American homeless, people who engaged more in problem-focused coping exhibited fewer depression symptoms than do those using emotion-focused coping at all levels of uncontrolled stressor. When researchers consider various coping mechanisms instead of dichotomizing them, the results display a more complex pattern. Penley et al.’s (2002) meta-analysis reported that although previous studies (e.g., Bjorck, et al., 2001; Finn, 1985; Yoshihama, 2002) considered confrontive coping and seeking social support as active coping strategies, which is assumed to give benefits to psychological outcomes, confrontive coping itself was related to negative mental health outcomes, and the relationship between seeking social support and mental health outcomes was weak across studies. However, Penley et al. (2002) found that another type of active coping strategy, problem-focused coping, was strongly related to positive mental health outcomes across studies. Burt and Katz (1987) reported that in a sample of 113 rape victims recruited through rape-crisis centers, avoidance, anxiousness, and self-destructive coping strategies were associated with greater symptomatology, whereas expressive and cognitive coping were not related to the level of symptoms. Clements and Sawhney’s (2000) study, using a sample of 80 battered women, reported that an increase in dysphoria among battered women was related with higher levels of avoidance coping and lower levels of problem-focused coping, while active seeking of social support was not related to
reports of dysphoric symptoms. According to the authors, it is possible that since the women in the sample may be at a point where they perceive that they lack a source of social support, seeking social support may not have been a feasible coping option for them. Regarding religious coping strategies, Abermethy, Chang, Seidltz, Evinger, and Duberstein (2002) reported that in a sample of 156 spouses of lung cancer patient, people who used high levels of religious coping reported high levels of depression than those who used moderate levels of religious coping. However, they found that low levels of religious coping were also related to high levels of depression. The above mentioned studies reveal a clear relationship between problem-centered coping strategies and psychological well-being, while on the other hand emotion-based strategies are related to poor mental health.

2.2 Attribution Theory

The study of attribution theory is a large area of research grounded primarily in the field of psychology (Fiske & Taylor, 2008). The roots of attribution theory and research are commonly traced back to Heider's (1958) classic book on the topic, "The Psychology of Interpersonal Relations." The rapid proliferation of articles published since that time attests to the burgeoning interest in the field. Heider (1976) suggested that "attribution is part of our cognition of the environment. Whenever you cognize your environment you will find attribution occurring" (p. 18). Researchers and practitioners alike have begun to recognize that the development of attribution theory represents an important step toward an increased understanding of a wide range of intrapersonal and interpersonal processes within educational and social psychology. Attributional style has been defined as cross situational consistency in causal attributions over a specific class of situations (Alloy et al., 1988; Anderson & Arnoult,
conceptualized as a personal bias to explain certain events/outcomes in a systematic way, attributional style has been described as a "cognitive trait" Weiner (1986). As with any new psychological concept, the validity and utility of attributional style has been formally examined in a number of studies (Arntz, Gerlsma, & Albersnagel, 1985; Sanderman, 1986; Peterson et al. 1982). Not all of the Press has been supportive but, on the whole, there is a growing consensus among attribution researchers that there exist substantial individual differences in people's attributional preferences in a variety of situations differences which are just beginning to be understood (Ross & Nisbett, 1991).

2.2.1 The Spontaneity of Attributions

It has been argued that people have no direct access to the cognitive processes that presumably determine behaviour (Nisbett & Wilson, 1977). Furthermore, it has been suggested that attributional activity in general is merely an artifact of the experimenter's methodological manipulations and that the spontaneity of such causal explanations has not been adequately demonstrated. This argument has not gone unchallenged. There are several studies that provide support for the spontaneity of attributions apart from the explicit prompts of the researcher Weiner (1985). Smith and Miller (1979) proposed that attributional activity is an integral component of the encoding of information rather than a separate mental operation occurring at retrieval. They argue that "the cognitive theories and studies support the idea that attributional (cause-inferring) processing is intrinsically involved in the initial comprehension of sentences and therefore that it goes on all the time, not just when a participant is asked an attributional question" (p.2247). Weiner (1985a) in review of literature presented
extensive evidence to demonstrate the prevalence of freely-occurring attributional activity. Many of the studies he reviewed involved the coding of popular books, magazines, business reports, and everyday conversations. It was apparent that the researcher does not have to go far to discover spontaneous attributional activity. Weiner (1985a) concluded that "the topic under investigation therefore should not be the existence of attributional search, but rather the conditions under which it is most promoted" (P. 81).

2.2.2 The Conditions Associated with Attributional Activity

In the light of evidences which demonstrate that attributional activity is indeed as common as Heider (1958) first suggested, it is appropriate to discuss the conditions under which such activity is most likely to occur. Harvey, Yarkin, Lightner and Town (1980) report that the amount of attributional activity is dependent on the cognitive stimulation of the person who is trying to interpret the events in his/her environment. They discovered that seriousness of outcome, empathic (as opposed to detached) cognitive set, and anticipated involvement are factors which facilitate the search for causal explanations. Certain conditions are also believed to enhance attributional activity in marital relationships. Baucom (1987) proposes that attributions in marriage are most likely to occur when the targeted behaviour is unpredictable, novel, negative, or perceived as particularly important to oneself or one's marriage.

2.2.3 Motivational Dimensions in Attribution Theory

The motivational push of attributions in the theory, originates from a classification along dimensions based on an analysis of the individual's causal structure. These dimensions have implications for an individual's expectancy beliefs, emotions, and motivated behaviors (Schunk et al., 2008). Attribution for success and
failure was initially expanded from social learning theory (which will be discussed in due course) by Rotter (1966) to include a one-dimensional classification of causality: locus of control. The main features regarding the dimension are whether the perceived behavior was internal or external to the individual. The basic distinction between causes that are internal and external correspond to the main question in attribution theory in regards to the relative personal factors or influence of environmental factors on an individual’s behavior (Rotter, 1966). If outcomes were believed to result from the individual’s own behavior then it would be classified as an ‘internal locus of control’. On the other hand, if outcomes were believed to result from the influence of the Environment then it would be classified as an ‘external locus of control’ (Schunk et al., 2008). Weiner took what Rotter (1966) and Heider (1958) had developed and proposed a new direction regarding the motivational dimension of attribution theory. Weiner first proposed that what Rotter had termed ‘locus of control’ was in fact an internal-external classification of causality (Weiner, 1979). Where as in Rotter’s theory the locus of control was focusing on control of future outcomes, Weiner claimed that the ‘locus’ was in fact conceived as a backward-looking belief (cause) and therefore renamed the term ‘locus of causality’ (Weiner, 1979). Weiner also proposed that as well as having only one motivational dimension ‘locus of causality’ (locus of control), the locus and control needed to be separated. Weiner postulated that different internal causes can result in different responses and future predictions of individuals (Stipek, 2002). For example, Weiner claimed that two distinctly different internal causes of success or failure, such as effort and ability, will determine very different results. A student failing due to lack of ability will respond very differently and have very different future expectations than a student failing due to lack of effort. Even though both causes are internal, different responses result due to the belief that people think
that they can control effort but not ability (Schunk et al., 2008). Weiner proposed from this that a second dimension needed to be included which he termed controllability’.

The controllability dimension refers to how much control a person has over a cause. For example, causes can be internal and controllable (such as effort) or uncontrollable (such as ability). External causes can also be uncontrollable (such as luck). However, there is some debate as to whether external causes can be controllable. For example, Hareli & Hess (2008) suggested that an external cause is not under that person’s control. Weiner (1986) on the other hand argued that there may be external causes that are not controllable by the individual, but are controllable by others (such as teacher bias). Another dimensional term that occasionally appears in the empirical literature, which was first incorporated by Rosenbaum in 1972, is ‘intentionality’ (Weiner, 1979). Rosenbaum explained this as having volitional control, which implies the extent of stability. However, Weiner claims that it does not refer to a cause per se, as even though people or acts are intentional, a cause is not considered intentional (Weiner, 1986). Weiner suggested that ‘intentionality’ be subsumed within the controllability dimension. Weiner also proposed that a third dimension be included in the attribution dimensional continuum, namely ‘stability’ (Weiner, 1979). Weiner claimed that the stability dimension defines “causes on a stable (invariant) versus unstable (variant) continuum” (1979, p. 6). In other words, the attribution is a consistent trait of the person or a temporary state. For example, causes can be stable (such as ability) and unstable (such as effort). Stable causes are more likely to be permanent fixtures in future predictions as opposed to unstable causes. In other words, students who fail in class due to a stable cause are more likely to predict future failing. Alternatively, students who fail in class due to an unstable cause are less likely to predict future failing. Therefore, according to Weiner’s model, causes of achievement-
related behavior theoretically can be located. Within one of eight categories (two levels of locus, by two levels of controllability, by two levels of stability).

2.2.4 The Development of Attribution Theory

2.2.4.1 TheDisconnected Nature of Attribution Theory

It has been suggested that attribution theory has become somewhat disconnected and is in need of theoretical integration. Kelley and Michela (1980) concluded that the problems in the field are those of psychology in general too few researchers spread too thinly over too many problems. Although attribution theory has its roots in social psychology, it has since branched out into the areas of achievement motivation Weiner (1979, 1985a, 1986), Learned helplessness and depression, (Abramson, Seligman, & Teasdale, 1978) and marital relationships (Doherty, 1982; Fincham, 1985a). This lack of theoretical integration is reflected by the varying perspectives on the nature of the attributional process. Researchers over the years have conceptualized the role of the person as attributor in different ways. Heider (1958) claimed that one's understanding of the events of one's environment is gained by way of a causal analysis that is "in a way analogous to experimental methods" (p. 297). This perspective of "man as naive scientist" was later adopted by Kelley (1967) and used as the basis of his ANOVA Model of Covariation. Fincham and Jaspars (1980), on the other hand, differentiated the attribution of responsibility from traditional attribution theory. Their emphasis on the former is reflected in the coining of the title of their article: "Attribution of responsibility: From man as scientist to man as lawyer." More recently, Read (1987) suggested that present attribution theories cannot account for the knowledge used and the cognitive processes involved in making everyday causal explanations. In his knowledge structure approach to causal reasoning, he recommended
that the guiding metaphor of attribution theory, people as naïve scientists, be replaced with a "more appropriate metaphor: People as story understanders and story tellers" (p. 300). Researchers over the years have tried to connect attributional functioning with other important psychological processes such as cognition, affect, and motivation. This part of literature review has resulted in a number of theories which have highlighted the important role of attributions in a variety of interpersonal and intrapersonal processes.

### 2.2.4.2 Correspondent Inference Theory

Jones and Davis (1965) were concerned with understanding when and how people make dispositional inferences to explain the intentional behaviour of others. They assert that dispositional attributes are inferred from the effects of actions. Their principle of non-common effects states that the distinctiveness of the effects of a given action and the extent to which these effects do not represent stereotypic cultural values, increases the likelihood that information about the actor will be correctly inferred from an action. A small number of effects which are unique (non-common) to the action being observed, increases the chance that correct inferences will be made. Ajzen and Holmes (1976) illustrate this reasoning process by presenting to the participants in their study the scenario of a person faced with a choice among four European tour packages, only one of which included a stopover in Oslo. When the hypothetical actor selected this particular tour package (the option which included the unique effect), the participants inferred that the choice was determined by a desire to visit Oslo. To say that an inference is correspondent, then, is to say that a disposition is rather clearly reflected in behaviour. Some evidence exists to support the principle of non-common effects. Newson (1974) found that fewer non-common effects resulted in more confident and extreme inferences about the actor. Ajzen and Holmes (1976) discovered that attributions of behaviour to one of its effects were greatest when the effect was
unique, and decreasing according to the number of additional alternative acts common
to the effect. Read (1987), however, suggests that the presence of common effects can
contribute to the inference information conveyed by a non common effect alone, a
situation which would appear to violate Jones and Davis' (1965) original theory.
Nonetheless, the theory of correspondent inference has been credited with giving
attribution theory definition and momentum in its early stages (Harvey & Weary.
1984).

2.2.4.3 Kelley’s Covariation Analysis Theory

Kelley (1967) proposed that attribution decisions are made on the basis of the
perceived co variation of the various factors of the currently experienced event with
similar events in the past. The logic of this analysis is comparable to that employed in
analysis of variance and is illustrated by a three dimensional ANOVA cube.
Specifically, Kelley postulates that three different kinds of information are used in this
causal analysis: a) consensus - the degree to which other people respond similarly to the
same stimulus, b) consistency - the degree to which the individual responds to the same
stimulus consistently over time and situations, and c) distinctiveness - the degree to
which the individual responds in the same way to other stimuli. Kelley and Michela
(1980) readily admit that attributional decisions are often made without analyzing
information according to this complex model and contend that most attributions are
made on the basis of pre-existing suppositions about causes and expectations about the
effects of these causes. The amount of information gathering is significantly reduced in
this process because these well-learned patterns of cause and effect are contained in
causal schemata (Kelley, 1972b). This encoded experience can be accessed to make
immediate inferences from only one sample of behaviour. Kelley and Michela (1980)
acknowledge that the evidence in support of the covariation analysis process is mixed.

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However, they cite a number of studies that appear to verify the influence of each of the three ANOVA variables in causal analysis.

2.2.4.4 Reformulated Learned Helplessness Model of Depression

Learned helplessness is characterized by the expectation of failure and a deterioration of performance in the face of failure. These cognitive and emotional deficits are evident subsequent to the experience of uncontrollable events (Dweck, 1975). The theory was revised along attributional lines to account for the generality and chronicity of depressive symptoms (Abramson, Seligman, & Teasdale, 1978). The central premise of this reformulation is that certain individuals have a specific attributional style which makes them especially vulnerable to depression when negative events occur (Peterson & Seligman, 1984). This particular "explanatory style" involves the tendency to give internal, stable, and global explanations for negative events, i.e., "it's me, it's going to last forever, and it's going to affect everything I do" (Peterson & Seligman, 1984, p. 350). The Attributional Style Questionnaire was developed for the purpose of assessing these attributional tendencies (Peterson, Semmel, Baeyer, Abramson, Metalsky, & Seligman, 1982). This model, particularly the concept of attributional style, has had a significant influence on the field of attribution theory.

2.2.4.5 An Attribution-Efficacy Model

Doherty (1981a, 1981b) combined constructs from attribution theory and social learning theory to develop an attribution-efficacy model of cognitive processes in intimate conflict. This model is concerned not only with the explanations that people provide for the causes of family conflict, but also with individual's expectancies that the couple or family can master the interpersonal conflict. Doherty (1981b) views causal attributions and efficacy expectations as simultaneous, interacting cognitive processes. Certain attributions such as those involving stable and uncontrollable causes will likely
lead to low efficacy expectations. Conversely, failures to resolve conflict lead to a sense of helplessness which, in turn, affects the attributions that are made. Doherty (1981b) views the state of IQW self-efficacy as very similar to learned helplessness. He suggests that low efficacy will induce: a) motivational deficits, in which the individual gives up trying to resolve the problem; and b) behavioural consequences, in which the individual may avoid the issue or engage in ritualized conflict with little hope of change. Fincham and Bradbury (in press a) tested Doherty's model and made several conclusions based on their results. They found that this model was likely insufficient by itself to adequately explain the cognitive processes which occur in various family relationships. The model faired poorly in regard to the mother-child relationship but received stronger support when applied to the husband-wife relationship. They also emphasize the importance of distinguishing self-efficacy from outcome expectations. They highlight the difference between the ability to perform certain interactional behaviours (self-efficacy) and the perceived likelihood that the successful performance of these behaviours will result in conflict resolution (outcome expectations). Furthermore, they suggest that Doherty (1981a, 1981b) may have missed an integral motivational phase by simply using self-efficacy theory to predict what partners will do once they have inferred the cause of conflict in a close relationship. They propose that helplessness responses may reflect an interaction between motivation and self-efficacy and is likely to involve a variety of affective factors. Fincham and Bradbury conclude their critique of Doherty's model by affirming the utility of the attribution-efficacy paradigm as an initial framework within which to examine these cognitive patterns in family relationships. However, they issue a warning that this model may be of limited applicability across relationships, and that the self-efficacy component is not as robust as the attributional component.
2.2.4.6 Attributional Theory of Achievement Motivation and Emotion

Weiner's (1984, 1985b, 1986) theory emphasizes the impact of causal perceptions on outcome expectancy and affective reactions. Changes in expectancy of success are reportedly influenced by the perceived stability of the cause of an event. But Weiner (1985b) argues that these goal expectancies are not sufficient determinants of action. He suggests that emotions are also generated by the chosen attributions. Expectancy and affect, in turn, are presumed to guide motivated behaviour. This relationship between attributions and feelings is an important aspect of Weiner's theory, and has received some empirical support in the literature. Of particular interest to Weiner is the apparent link between various causal dimensions and specific feelings. Russell and McAuley (1986) found that both causal attributions and causal dimensions contributed independently to affective reactions following success and failure outcomes in an achievement setting. For example, ability and effort attributions for success were found to elicit feelings of competence. In addition, feelings of competence were maximized when the cause of success was perceived as internal, stable, and controllable. Various combinations of one or more of these three causal dimensions were also connected to feelings of gratitude, anger, guilt, and surprise. Flett, Boase, McAndrews, Pliner, and Blankstein (1986) also discovered that various emotions were clearly differentiated along several dimensions of causality other theories of motivation discuss the role of outcome expectancy and the connection between attributions and self-efficacy, but do not account for the important influence of emotion on motivation (Doherty, 1981a, 1981b). Consequently, Weiner's theory represents the most thorough attempt to integrate attribution theory into an overall theory of motivation. Weiner (1985b), in discussing goal incentives, distinguishes between the objective properties of the goal (i.e., the inherent properties of a goal object) and the subjective value of the
Although causal ascriptions do not influence the objective properties of goal objects (a dollar has the inherent value of one dollar, regardless of how it is attained), they do affect emotional reactions, or the subjective consequences of goal attainment (a dollar attained by good luck could elicit surprise; a dollar earned by hard work may elicit pride). Weiner suggests that people prefer a particular goal because the anticipated consequences of achieving that goal will make them happier, give them greater satisfaction, etc. This proposition highlights the important role of emotion in motivation. Although Weiner's model has been developed in the context of achievement motivation, he attempts to demonstrate the generality of the theory by extending the analysis to helping behaviour, parole decisions, smoking cessation, and clinical issues such as rape and depression (Weiner, 1986). Weiner (1985b) defends this claim for generality on the basis that "a motivational episode is initiated following any outcome that can be construed as attainment or nonattainment of a goal" (p. 567). He then proceeds to cite numerous studies from these various domains of human behaviour to demonstrate the relationship between perceived causality, expectancy change, and affect. He concludes that "these facts and relations will survive, independent of the fate of the entire theory" (Weiner, 1985b). Although it may be somewhat premature to accept the absolute generality of Weiner's model to all areas, especially to the unique domain of marital and family relationships, the importance of Weiner's contribution to attribution theory cannot be underestimated.

2.2.5 Causal Dimensions: The Categorization of Attributions

2.2.5.1 Developing a Taxonomy of Causal Dimensions

Weiner (1979) acknowledges that the heart of his attributional theory of motivation consists of an "identification of the dimensions of causality and the relation
of these underlying properties of causes to psychological consequences” (p. 3). Russell (1982) affirms that attributional statements are often ambiguous and may vary greatly from person to person and from situation to situation. Therefore, a critical step in attribution research has been to create a classification scheme or a taxonomy of causal attributions so that the underlying properties of causes can be determined and compared (Weiner, 1983). Rotter (1966) initially proposed a one-dimensional classification of causality: causes were either within (internal) or outside (external) the person. Rotter labeled this dimension locus of control. This classification scheme sparked a host of studies which compared attributional statements in a variety of contexts on the basis of this singular dimension (Bugaighas, Schumm, Bollman, & Jurich, 1983). Despite the usefulness of this dimension, it has failed to capture the full meaning of locus attributions. Weiner (1979) contended that Rotter’s (1966) locus of control dimension was inadequate in that it confounded two distinct dimensions of causality: locus and control. Weiner (1979) renamed the locus dimension locus of causality and proposed an additional controllability dimension to categorize causes as controllable or uncontrollable. Weiner (1979) completed his initial taxonomy of attributional dimensions by labeling a third dimension stability, to define causes on a stable versus unstable continuum.

2.2.5.2 Contextual Issues in Defining Attributional Dimensions

Attribution theory has been determined to be relevant not only at the intrapersonal level, as in achievement motivation (Weiner, 1979, 1984), but also at the interpersonal level, as in conflict management (Doherty, 1982; Sillars, 1980), divorce (Barron, 1987; Doherty, 1983; Newman & Langer, 1981), Spouse abuse (Warner, Parker & Calhoun, 1984). However, the particular causes offered to explain specific events may vary across these different domains. Weiner (1983) recognizes that causes
relevant to achievement-related events may be inappropriate to explain events in other motivational domains. Fincham (1983) has emphasized some inherent differences between attributions at the interpersonal level and those at the intrapersonal level and criticizes the research which has merely extrapolated ideas useful at one realm to another completely different realm. Others have noted that it is equally untenable to generalize the results of studies across different types of interpersonal relationships (Newman, 1981a, 1981b). Relationships involving strangers may be very different from relationships involving intimates (Newman, 1981a, 1981b). Research in contexts other than achievement motivation can be credited for revising and adding to the taxonomy of dimensions originally developed by Weiner (1979). The locus of causality dimension as conceived by Weiner (1979) has since been recognized to be insufficient in adequately describing attributions in interpersonal relationships. Fincham (1985b) argued that an internal-external dimension is problematic in that it fails to distinguish among the various external causes; an external cause may rest in another person, the outside circumstances, or a relationship. Fincham and colleagues (Fincham, 1985b; Fincham, Beach, & Baucom, 1987; Fincham, Beach, & Nelson, 1987) measured the attributions related to each of these external causes separately in their studies of marital relationships. Doherty (1981a) developed an even larger list of external causes to study attributions in family relationships: other family member(s), the relationship, the external environment, theological causes (i.e., God's will), and luck, chance, or fate. An additional dimension which has received widespread recognition in the literature was originally identified by Abramson et al. (1978) in their research on depression and learned helplessness. A global versus specific dimension was used to refer to the generality of the cause, or the range of situations in which a given attribution is perceived to operate. Peterson and Seligman (1984) contended that the attributional
style characteristic of depressed individuals involves the consistent use of global attributions to explain negative events.

2.2.5.3 Attributional Dimensions in Intimate Relationships

It is apparent from the preceding discussion that the context in which attributions are occurring is of critical importance in determining which causal dimensions are most relevant. This may be especially true in the case of intimate relationships. Fincham (1983) suggests that the key distinguishing factor in these relationships is the reciprocal, ongoing nature of the interaction. The task of interrupting the causal chain, or punctuating the behavioural sequences, is a much more complex task than previously conceived. There has only been a minimal amount of research done to identify the causal dimensions applicable to intimate relationships, but it is clear that they extend beyond the usual locus of causality, stability, and controllability dimensions highlighted in the achievement motivation literature.

2.2.6 Some Important Principles of Attribution Theory

An attribution refers to the “perceived cause of an outcome; it is a person’s explanation of why a particular event turned out as it did” (Seifert, 2004, p. 138). Explanations as to why someone passed or failed an exam, or won or lost a game provide examples of this notion. Attribution theory is a term given to various theories that deal with clarifying causal perception (Bar-Tal, 1978). In other words, ‘attribution’ is a term that is related to the perception of an individual about the causes of his or her own or another person’s behavior. Heider was particularly interested in the reasons that people gave for their own successes and failures. He believed that everyone had an innate interest and need to understand and control their environments. Heider carried out an experiment which included his subjects observing an animated film of shapes
moving about the screen. Subjects were asked to report on what had been observed. From his findings, Heider termed the way in which individuals functioned and responded as 'naive psychologists' who develop causal explanations for significant events (Heider & Simmel, 1944). Heider published the findings in 1944, which stimulated much research in the area, marking him as the father of attribution theory. Heider's proposed theory was developed by Bernard Weiner and colleagues from the 1970s onwards, and is now the theoretical framework used in current attribution research. Weiner's model of achievement-related behavior deals with causal reception of success and failure. Weiner's (1985, 1986) research relating attributions to students' behaviors and successes in an academic environment has done much to further knowledge and understanding of how attributions relate to learning in school (Linnenbrink & Pintrich, 2002). Weiner presented two attribution theories of motivation. Firstly, Weiner presented a model which included what he termed 'intrapersonal theory' which addresses how individuals explain their own successes and failures and find out reasons why. The second model Weiner presented was termed 'interpersonal theory' which addresses how individuals explain other peoples' successes and failures and find out reasons why (Tollefson, 2000). In other words in an educational context, attribution theory can be used to evaluate how students perceive the behavior of themselves, and how teachers perceive the behavior of the students. These are then used for future predictions and expectations as well as responses to the causes.

2.2.6.1 Self Perceptions

Attribution theory (Weiner, 1980, 1992) is one of the most influential contemporary theories with implications for academic motivation. Attribution theory incorporates behavior modification in the sense that it emphasizes the idea that
learners are strongly motivated by the outcome of being able to feel good (or bad) about themselves and others. It incorporates cognitive theory and self-efficacy theory (which will be discussed later) in the sense that it emphasizes that learners' current self-perceptions will strongly influence the ways in which they will interpret the success or failure of their current efforts and hence their future tendency to perform these same behaviors (Stipek, 2002).

2.2.6.2 Process Underlying an Attribution

There is considered to be a three-stage process underlying an attribution. Firstly, the behavior of a person has to occur and be observed. In regards to perceiving or observing a person's behavior Heider proposed two distinct descriptions: 'phenomenal description' which is the nature of contact between the person and the environment (which is directly experienced by the person); and, 'causal description' which analyses the underlying conditions that give rise to the perceptual/observed experience (Heider, 1958). The second stage is where the perceiver/observer has to make a judgment as to whether the behavior observed is deliberate. That is, the person must decide whether the behavior was intentionally performed. The final stage is where the observer makes an attributional trait (which will be further discussed). Thus, the perceiver/observer assigns the reason for the behavioral, whether the person observed was forced to perform the behavior (in which case the cause was attributed to outside external factors) or not (in which case the cause is attributed to within the person observed) (Heider, 1958).

2.2.6.3 Factors Relating to Attribution Theory

There are many different behavioral causes (factors) that are attributed to perceived outcomes. According to researchers, the main behavioral causes are ability, effort, luck, and task difficulty (Foll, Rasale & Higgins, 2008; Holschuh, Nist &
Olejnik, 2001; Schunk, Pintrich & Meece, 2008; Stipek, 2002; Weiner, 1979, 1986; Yan & Li, 2008). However, other causes may include teacher, mood, health, fatigue and many more (Weiner, 1986, 1992). The behavioral cause that has been assigned as the reason for the outcome will have many implications. For example, depending upon the cause given for a behavioral outcome, different responses in regards to behaviors and future expectations from the individual person and observers will result. Thus, matching the correct cause to the performance and outcome is vital. Each behavioral performance (whether a successful or failed outcome resulted) is measured along different dimensions. It is these causal dimensions that have the psychological force to influence expectancies, emotions, self-efficacy beliefs, affects and actual behaviors (Schunk et al., 2008).

2.2.7 Explanatory Style

Explanatory style is the habitual way in which an individual explains the causes of Life events. In earlier research, explanatory style was referred to as attributional style and the associated causal explanations were referred to as attributions. In keeping with the original researchers in this area, who later argued that explanatory style is a more precise description of their intended meaning, I will use explanatory style except when referring to the names of the measurement scales (Peterson & Seligman, 1984). As described below, causal explanations may vary on three dimensions – global-specific, internal-external, and stable-unstable. The internal-external dimension relates to where individuals place the responsibility for an event – that is, whether it is due to them, or due to someone or something else. For example, if a student fails a test they may make either an internal explanation such as ‘I’m stupid’ or ‘I didn’t study enough’, or an external explanation such as ‘the test was too hard’ or ‘the teacher hates me’. An
individual who habitually makes internal explanations for negative events may experience decreased self-esteem over time (Peterson & Seligman, 1984). On the other hand, it seems likely that individuals who habitually make internal explanations for positive events may experience increased self-esteem over time. Therefore, wellbeing is related to both the explanation (internal-external) and the nature of the event (positive or negative).

The global-specific dimension describes how pervasive the individual perceives the causes of an event to be. For example, if a student does well in an assignment, they may make a global explanation such as ‘I’m good at schoolwork’, or a specific explanation such as ‘I worked really hard on that assignment’ or ‘the teacher was in a good mood’. As for the internal-external dimension, the relationship between explanatory style and wellbeing is thought to be different for positive and negative events, such that global explanations for positive events may be more likely to lead to positive emotional states, whereas global explanations for negative events are more likely to lead to helplessness and negative emotions. The stable-unstable dimension relates to whether the explanation an individual gives for an event is likely to persist. For example, ‘I failed the test because I’m stupid’ would be a stable (and internal) explanation as ability does not change, whereas ‘I failed the test because I didn’t study hard enough’ is an unstable (and internal) cause that may change next time the student does a test. As for the other dimensions, the effect on wellbeing depends on both the explanation and the nature of the event – with global explanations for negative events being the most damaging to wellbeing, and global explanations for positive events being the most beneficial. A negative explanatory style is one in which an individual attributes negative life events to internal, stable and global causes and attributes positive life events to external, unstable, and specific causes (Nolen-Hoeksema &
A positive explanatory style is the reverse in which an individual attributes negative life events to external, unstable, and specific causes and attributes positive life events to internal, stable and global causes (Nolen-Hoeksema & Girgus, 1995).

As discussed previously in relation to self-esteem, it is possible that explanatory style may reflect a general ‘positive thinking’ tendency. Explanatory style also has some features in common with other positive thinking constructs, particularly dispositional optimism (e.g., Gilham, Shatté, Reivich, & Seligman, 2001). The distinctiveness of explanatory style is an area in need of further research.

2.2.7.1 Theories of Explanatory Style

Explanatory style has generated a large research literature. For reviews see Gladstone and Kaslow (1995); Jacobs, Reinecke, Gollan, and Kane (2008); Joiner and Wagner (1995). The concept of explanatory style developed out of research on learned helplessness and became a prominent feature of two subsequent models of depression—the attributional reformulation of the learned helplessness model, and the theory of hopelessness depression.

2.2.7.1.1 Learned Helplessness

Research on learned helplessness showed that animals (and later people) will show a range of deficits in the face of uncontrollable negative events, and that this may provide an explanation for depression (Maier & Seligman, 1976). The theory of learned helplessness suggests the nature of events leads to helplessness and depression, rather than internal factors. Specifically, when people learn that negative events are outside their control (i.e., their actions and the outcomes of the situation are independent) this leads to motivational, emotional, and cognitive effects which Maier and Seligman (1976) labeled as helplessness. In further research, it became apparent that the learned
helplessness model did not account for individual differences in the duration and 
pervasiveness of depression, or for the lowered self-esteem evident in many individuals 
suffering from depression (Peterson & Seligman, 1984). These concerns led to the 
attributional reformulation of the learned helplessness model.

2.2.7.1.2 Attributional Reformulation of Learned Helplessness

The attributional reformulation of learned helplessness proposed that it was the 
way in which people explained the causes of events that determined whether they 
became helpless, and that a negative explanatory style also constituted a risk factor for 
depression in the face of negative events (Peterson & Seligman, 1984). Helplessness is 
characterized in the model by a range of deficits, including passivity and lowered 
aggression, cognitive and emotional deficits, decreased appetite, neuro-chemical 
problems, and greater risk of illness (Peterson & Seligman, 1984). The specific 
emotional deficits included sadness, anxiety and hostility and will all be explored in 
this thesis. The symptoms of helplessness described above are clearly similar to those 
of depression (Peterson & Seligman, 1984), and in a more circumscribed way may 
affect emotional wellbeing. A depressive explanatory style is characterized by stable, 
global and internal explanations for negative life events – that is, ‘it’s me; it’s going to 
last forever; and it’s going to affect everything I do’ (Peterson & Seligman, 1984, 
p.350). Characteristically attributing negative events to internal causes may lead to 
lowered self-esteem, whereas attributing negative events to stable causes is more likely 
to constitute a risk factor for depression and helplessness (Peterson & Seligman, 1984). 
If causes are also seen as global this may lead to more widespread functional problems 
(Peterson & Seligman, 1984). Therefore, in the attributional reformulation it is 
primarily the perceived stability of the causes of negative events, in combination with 
the events themselves that are seen as leading to helplessness and later depression.
Thus, a negative explanatory style is seen as a risk factor for decreased emotional wellbeing (sadness, anxiety and hostility), and for the development of depression. However, explanatory style in this formulation is not a cause of depression. Later researchers expanded on the theory and proposed a new subtype of depression called hopelessness depression, in which hopelessness is a proximal and sufficient cause of depression (Abramson et al., 1989).

### 2.2.7.1.3 Hopelessness Depression

Hopelessness depression was proposed as a theory-based subtype of depression. It is a diathesis-stress model in which negative life events interact with explanatory style to determine whether an individual becomes hopeless, and hopelessness is in turn the proximal cause of the depression (Abramson et al., 1989). It differs from the attributional reformulation of learned helplessness theory in that the focus is on hopelessness rather than helplessness, that it is related to one form of depression rather than to depression generally, and that rather than being a risk factor for depression hopelessness is a 'proximal sufficient cause' for depression (Abramson et al., 1989, p. 358). Unlike the attributional reformulation, this model has little to say about affect beyond specifying sad affect as one of the symptoms of hopelessness depression. In this model, self-esteem is seen as a symptom of hopelessness depression which results in part from stable, global and internal attributions for negative life events, and from drawing negative conclusions about the self given those negative events (Abramson et al., 1989). More recently, it has been suggested that explanatory style and self-esteem may interact in contributing to depressive symptoms (e.g., Metalsky, Joiner, Hardin & Abramson, 1993; Southall & Roberts, 2002). Specifically, that the explanatory style-life events diathesis should only exist for individuals with low self-esteem, with high self-esteem acting as a buffer against depression (Metalsky et al., 1993). The above
sections describe the dominant models of explanatory style and the expected relationships between explanatory style and depression. In addition to exploring the relationships proposed by these models, researchers have expanded the field of enquiry to include a range of outcomes including academic and sporting achievement, psychological wellbeing, and other mental health concerns such as anxiety.

### 2.2.8 Explanatory Style and Mental Health

A negative explanatory style is clearly correlated with depression (Joiner & Wagner, 1995; Nolen-Hoeksema & Girgus, 1995). What is less clear is whether it plays a causal role (Joiner & Wagner, 1995), as there have been relatively few longitudinal studies done in this area (Southall & Roberts, 2002). In a meta-analysis of 27 studies examining explanatory style and depression in young people, Joiner and Wagner found that scores on the Children's Attributional Style Questionnaire (Thompson, Kaslow, Weiss, & Nolen-Hoeksema, 1998) were 'strongly and reliably associated with self-reported depression among children and adolescents' (1995, p.785) of different ages and gender, and across clinical and non-clinical samples. Across studies, results varied regarding whether explanatory style for those individuals with clinical depression was statistically different from those with other mental disorders. Thus, it is not clear whether pessimistic explanatory style is specific to depression, or whether it also has a relationship with other mental disorders, although the authors suggest that it may have a greater relationship with depression than anxiety (Joiner & Wagner, 1995). The results for prospective studies were less conclusive due to their smaller numbers, but were also suggestive of a link between explanatory style and the onset and severity of depression (Joiner & Wagner, 1995).
A recent review of nine prospective studies of adolescents examining the stress-vulnerability aspect of the hopelessness depression theory found general support for the interaction of life events and explanatory style in predicting depression (Lakdawalla, Hankin, & Mermelstein, 2007). Overall, the authors concluded that research on cognitive theories of depression is relatively lacking amongst child and adolescent populations and that more work needs to be done in this area. Further, they suggest that researchers need to move away from a hypothesis testing approach to providing measures of effect sizes so that a clearer developmental picture may emerge. In their review they note that the effect sizes for child populations are smaller than for adolescent populations suggesting that developmental considerations may be important (Lakdawalla et al., 2007).

One of the available prospective studies examined the relationship between self-reported depression and explanatory style among 308 children over a one year period, and found that explanatory style predicted changes in depressive symptoms (Nolen-Hoeksema, Gurgus, & Seligman, 1986). The authors concluded that further study was needed and extended the research over a five year period (Nolen-Hoeksema, Gurgus, & Seligman, 1992). As the children aged, explanatory style showed a stronger relationship with depressive symptoms, suggesting that there is a developmental trajectory for explanatory style (Nolen-Hoeksema et al., 1992). Children who were depressed also showed negative changes in explanatory style, suggesting a somewhat complex relationship between the two measures (Nolen-Hoeksema et al., 1992). In contradiction to the attributional reformulation of learned helplessness, children who showed signs of helplessness were not at greater risk for depression, although helplessness in itself may be an appropriate target of intervention (Nolen-Hoeksema et al., 1992).
Ciarrochi and Heaven (2008) suggest that a pessimistic explanatory style combined with low social support may lead to ‘learned social hopelessness’ in which adolescents develop negative beliefs about their capacity to make friends and obtain support from others. Their research found that social support and explanatory style influenced each other over time, and that this relationship could not be explained by self-reported sadness or peer ratings of likeability (Ciarrochi & Heaven, 2008). This result is interesting in light of the link between low social support and depression (e.g., Stice, Ragan, & Randall, 2004).

Approaching the problem from a different angle, Needles and Abramson (1990) found that explanatory style for positive events may assist recovery from depression in those people who experience positive life events. Specifically, they found that those students from their sample who showed elevated levels of hopelessness and depression at the beginning of the study, but also had a positive explanatory style for positive events, showed marked decreases in hopelessness when positive events occurred (and/or negative events did not), and this was accompanied by remission of depressive symptoms (Needles & Abramson, 1990). While alternative explanations are possible, this study suggests that the hopelessness model of depression may also provide a model for recovery from depression (Needles & Abramson, 1990). The authors highlight the fact that a combination of positive explanatory style and positive events may be important in recovery from depression, in contrast to earlier research which had concentrated on negative events and negative explanatory style in the onset of depression (Needles & Abramson, 1990).

In line with the integrated theory of explanatory style and self-esteem proposed by Metalsky et al. (1993), at least four studies have found a three-way interaction between self-esteem, explanatory style, and depressive symptoms (Abela & Payne,
In general, self-esteem acted as a vulnerability factor (for low self-esteem individuals) or a buffer (for high self-esteem individuals), with explanatory style related to depressive symptoms only in the presence of low self-esteem. However, Abela and Payne (2003) found that for the female children in their study, explanatory style and negative events predicted depressive symptoms only for those with high self-esteem. Robinson, Garber, and Hilsman (1995) found that perceived self-worth in sixth grade predicted depressive symptoms in seventh grade in a sample of 371 adolescents. They also found an interaction between explanatory style and self-esteem, with explanatory style predicting depressive symptoms only for those adolescents with low self-esteem.

A prospective study of 115 adolescents by Southall and Roberts (2002) also found an interaction between self-esteem and explanatory style, with low self-esteem amplifying the effect of a negative explanatory style, and high self-esteem buffering the effect of a negative explanatory style (for those who were initially symptom-free).

There is limited support for a prospective link between explanatory style and anxiety (Robins & Hayes, 1995), although there is little research available in this area. While research has supported a relationship between explanatory style and depression, it is not clear whether the relationship is specific to depression or whether it may also apply to anxiety disorders (Mineka, Pury, & Linten, 1995). In a cross-sectional study of 466 college students Reardon and Williams (2007) found that pessimistic explanatory style was associated with both anxiety and depressive symptoms, and suggest that this may reflect both helplessness (for anxiety symptoms) and hopelessness (for depressive symptoms). In an attempt to integrate the tripartite model and the hopelessness theory of depression, Ralph and Mineka (1998) examined the interaction of self-esteem and explanatory style in predicting the responses of
undergraduate students to midterm grades. Their study included measures of anxiety and depression, as well as positive and negative effect, in order to establish whether the two thinking styles have an impact specifically on depressive symptoms or on subjective distress generally. They found that the three-way interaction between self-esteem, explanatory style, and exam outcome predicted changes in non-specific distress but not in specific depressive measures – suggesting that explanatory style may not be specific to depression (Ralph & Mineka, 1998). This finding is interesting for the current thesis as it again suggests that the relationship between affect and thinking style is worth investigating in more detail than has been done in the past.

A recent study also found a parallel between the tripartite model and findings on explanatory style, with negative explanatory style failing to distinguish between depressed and anxious students, but low scores on positive explanatory style distinguishing depressed students from both normal and anxious students (Fresco, Alloy, & Reilly-Harrington, 2006). The tripartite model (Clark & Watson, 1991) proposes that negative affect is a general factor to both anxiety and depression, while (low) positive affect is specific to depression. Thus, negative affect and negative explanatory style are common to anxiety and depression, whereas positive affect and positive explanatory style distinguish between the two conditions.

2.3 Self-Esteem

Self-esteem has been a major area of study and interest since the 1960s, resulting in a massive research literature (Hewitt, 2002). It has also become widely accepted by the general public as an important aspect of wellbeing and mental health, particularly amongst young people. For example, in recent public debates in Australia about the nature of school report cards, one of the main arguments voiced against the
government’s proposed grading system (A to E) has been the potential for a negative impact on the self-esteem of students who receive lower grades (e.g., NSW Teacher’s Federation, 2006). The Macquarie Dictionary (2nd Revision, 1988) defines self-esteem as ‘a favourable opinion of oneself; conceit’, while a recent review of the literature offers a more technical definition, ‘the evaluative component of self-knowledge’ (Baumeister, Campbell, Krueger, & Vohs, 2003). Thus, self-esteem is an individual’s perception of their own self-worth which may or may not be grounded in reality (Baumeister et al., 2003). Rosenberg (1979) saw it as an important aspect of the self-concept and developed the Rosenberg Self-Esteem Scale (RSE), which has been the most widely used measurement instrument in research on self-esteem (Baumeister et al., 2003).

To explain self-esteem, it is helpful first to clarify what is meant by self-concept. At its simplest, self-concept is the sum total of all that an individual perceives him or herself to be. It is an abstraction that all humans develop to describe themselves and includes among many things, the attitudes, competencies, personality traits, physical appearance and activities they possess and pursue. A person’s self-concept may well be different from the view that others have of him or her. Self-esteem is associated with how individuals feel, how they think, and how they behave and is generally considered to be the evaluative aspect of self-concept, and can be thought of as an evaluation of one’s self-worth (Huebner, Gilman & Laughlin, 1999).

Self-esteem can generally be defined as the evaluative dimension of the self-concept. It is viewed as a psychological state of self-evaluation that ranges from positive (or self-affirming) to negative (or self-denigrating) (Hewitt, 2005, p. 135). It is however important to note that self-esteem is of motivational importance for the individual. In conforming to the social expectations of other people, individuals are
more likely to receive the approval of significant others, thereby enhancing their levels of self-esteem. Self-esteem also has a self-serving bias that guards the self-esteem against failure. This self-serving bias assists the individual to take credit for achieving accomplishments and blame other factors when the individual has failed (Brown & Rogers, 1991; Snyder, Higgins, & Strucky, 1983).

It is also possible to view self-esteem as rooted in four ideas, viz: acceptance, evaluation, comparison, and efficacy (Hewitt, 2005, pp. 136-137). An individual's self-esteem is developed early in childhood by the non-conditional acceptance of the individual by significant others. At that point the individual's acceptance is not always conditional on the basis of behaving and performing in a specific way. As the individual develops, he/she is evaluated in terms of performance and other social norms. If the individual is evaluated favourably, then positive feedback is provided to the individual about his/her performance evaluation. This positive evaluation increases the levels of self-esteem. However, negative evaluations of the individual are likely to lead to lower levels of self-esteem. In addition to acceptance and evaluation, the third idea that is related to self-esteem is comparison. The individual is likely to compare him/her against other individuals to determine how well he/she is doing in relation to others. The individual's self-esteem will be positively affected when the comparison with others is favourable and negative when the comparison is unfavourable. However, the individual does not only compare himself/herself against others. The individual also compares himself/herself against a desired or ideal self. Thus, the individual can compare himself/herself against an ideal self, how the individual must be able achieve what he/she has set out to achieve. Finally, the individual must act accordingly in order to achieve the set goals of society, significant others, or their ideal self (Damon, 1995; Swann, 1996; Wills, 1981). Individuals with low levels of self-esteem are therefore
assumed to be more likely to avoid negative feedback. When individuals with low levels of self-esteem receive negative feedback about their performance, they tend to focus their attention to the negative meaning that information has for their self-image, instead of focusing on the details of the task and how to complete the task. Negative feedback provides negative information about their self-image that activates more negative emotions. The latter, if not properly dealt with, may hinder low self-esteem individuals to carefully evaluate the negative feedback to employ appropriate task relevant coping strategies. Thus, individuals with high levels of self-doubt, that is associated with low levels of self-esteem, are more likely to engage in a ruminative style of information processing that may reduce their ability to objectively assess the information in the negative feedback (Audia et al., 2003; Kluger et al., 1996).

Traditionally it has been assumed that self-esteem is vital for success not only in the classroom but also for life in general. Adolescents with good self-esteem may adopt better strategies to cope with stress (Mullis & Chapman, 2000), and a positive view of the self has been accepted as an essential component of mental health. Longitudinal studies, assessing self-esteem before and after various stressful life events have found that good self-esteem can act as a protective coping resource or buffer (DeLongis, Folkman, & Lazarus, 1988; Egan & Perry, 1998). High self-esteem has been correlated with academic success in high school (O’Malley & Bachman, 1979), although low self-esteem is far more influential in causing poor results in school than high self-esteem is in giving good results, with low self-esteem being blamed for poor school achievement, adverse health outcomes and risk behaviour (Crocker and Wolfe, 2001). People with high self-esteem tend to be more confident and happier than others (Martin, 2005) and better able to cope with stress (Zimmerman et al., 1997). However, high self-esteem is not believed to be positive in all cases. It can also be associated with being conceited,
arrogant and self-centered Baumeister, 2004). It may also involve overestimating one’s ability, resulting in overconfidence and failure (Baumeister, Heatherton and Tice, 1993) and some suggest it may also be a cause of poor social skills (Colvin, Block and Funder, 1995). There is no agreement about the trajectory of self-esteem from childhood to old age (Robins et al., 2002). Self-esteem might be expected to change as teenagers cope with change and challenge during adolescence but views on how it changes vary. Some research has shown self-esteem rises during adolescence (Demo & Savin-Williams, 1983; McCarthy & Hoge, 1982; O’Malley & Bachman, 1983), while a cross-sectional study by Simmons, Rosenberg and Rosenberg (1973) found that self-esteem dropped during early adolescence, rising gradually after the age of twelve. Rhodes et al., (2004) also noted declining self-esteem during adolescence while Block and Robins (1993) found that the self-esteem of boys increased and that of girls declined during adolescence. In a large study examining global self-esteem across the life span, Robins et al., (2002) found that self-esteem was high in childhood, dropped during adolescence, rose gradually throughout adulthood and declined sharply in old age. Once established, self-esteem can be quite stable over time (Hoge, Smit & Hanson, 1990).

There is a tendency for boys to have higher self-esteem than girls (Simmons et al., 1979; Block & Robins, 1993; Kling et al., 1999). Differences in self-esteem between males and females may be the result of continuing culturally accepted gender norms (Josephs, Markus & Tararodi, 1992) and derive from different sources (Kling et al., 1999). A study of gender differences in self-esteem in adolescents suggested that a crude explanation of higher self-esteem for boys than girls was the result of girls being socialized to get along in society while boys were socialized to get ahead (Block &
Robins, 1993). Even where males and females have similar levels of self-esteem, it may derive from very different sources (Kling et al., 1999).

Many researchers believe that self-esteem is shaped by our experiences during childhood. Development is a complex process involving a person’s innate characteristics, family, culture, peers and other social experiences (Block and Robins, 1993). In attempting to assess the origins of self-esteem in children, Coopersmith (1967) found that the most important factors were, first, that the child received unconditional love and was loved no matter what; second, that parents provided clear and well-enforced standards; and, finally, that parents respected their children’s actions within well-defined limits. Adolescents with a difficult home life tend to experience lower self-esteem (Kobak & Sceery, 1988). The bedrock for self-esteem thus appears to be laid down early in life (Coopersmith, 1967) and it affects how we see others and how others see us for the rest of our lives. Socio-economic status is another factor which some researchers believe might influence self-esteem. Mosley (1995) found that poverty alone did not appear to encourage lower self-esteem although the receipt of welfare payments did. The reason for this was not clear, but Mosley believed this result warranted further investigation to see if it is the stigma of public assistance per se that influences self-esteem or if welfare receipt merely serves as a surrogate for other unmeasured family characteristics (Mosley, 1995). A study by Demo and Savin-Williams (1983) supported the view that social class was a determinant of self-esteem, but this effect was relatively weak in young adolescents, becoming more important with age. Global self-esteem is an evaluation of the entire self and can be described as an individual’s general self-acceptance or their general positive or negative attitudes towards themselves. However, Crocker and Wolfe (2001, p.594) pointed out that there are also domain-specific self-evaluations: “A contingency of self-worth is a domain or
category of outcomes on which a person has staked his or her self-esteem, so that person’s view of his or her value or worth depends on perceived successes or failures or adherence to self-standards in that domain” and some of these contribute to the judgment of one’s overall self-worth or global self-esteem. People vary in the values they attach to specific domains but they need to satisfy their contingencies if they are to believe that they are people of worth and enjoy good self-esteem; self-evaluations may, of course, be either positive or negative. Thus, high self-esteem implies that individuals see themselves as people of worth, although low self-esteem is more an absence of positive rather than the presence of negative attitudes, as people do not generally hold unfavourable beliefs about themselves (Crocker & Wolfe, 2001).

The global self-esteem, has traditionally been viewed as being on a scale from high (representing a positive evaluation of the self) to low (representing a negative evaluation of the self), allowing simple measurement (Hewitt, 2002). This is exemplified by the uni-dimensional RSE. Stability in self-evaluations over time using this measure has been reported amongst young adults (Donnellan, Trzesniewski, Conger, & Conger, 2006) and adolescents (Bolognini, Plancherel, Betshart & Halfon, 1996). In a three year longitudinal study of 219 early adolescents, global self-esteem was found to be stable over time and poorer amongst adolescent females compared to males (Bolognini et al., 1996). Global self-esteem refers to a general tendency to either positive or negative thoughts about the self, and differs from dimensional self-esteem which is assessed in a variety of specific domains (e.g., athletic self-esteem, social self-esteem, academic self-esteem, and so on). It has been chosen as the focus of the current study because it has been the most widely used and well-validated measure and global self-esteem is an appropriate measure when looking at global outcomes (Swann, Chang-Schneider, & Larsen McClarty, 2007).
The research on self-esteem is somewhat fragmented due to the lack of a generally accepted theory on self-esteem and its relationship to important outcome variables. The accuracy of the traditional conceptualization of self-esteem has been questioned by a number of authors (e.g., Baumeister et al., 2003; Hewitt, 2002; Tracy & Robins, 2003). Hewitt argues that self-esteem is socially constructed in societies (especially the United States of America) that value individualism, and should be understood in its cultural and historical context. Baumeister et al. (2003) argue that an individual’s level of self-esteem may, or may not, have a basis in reality. Thus, someone with high self-esteem may be justified in their view of their capabilities, but may also be narcissistic. Likewise, someone with low self-esteem may underestimate themselves, or may have a realistic view of their failings (Baumeister et al., 2003).

The utility of attempts to bolster self-esteem have also been criticized over the last few years, with several authors arguing that the evidence for a relationship between self-esteem and life outcomes does not justify attempts to increase it (Baumeister et al., 2003; Crocker & Park, 2004). Their criticisms include, amongst others, that the effect sizes are small (Baumeister et al., 2003), and that the short-term emotional and motivational benefits of self-esteem mean that people pursue feeling good over more beneficial long-term goals (Crocker & Park, 2004). These criticisms have been countered by other authors, who have proposed ideas on how self-esteem may indeed be beneficial (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004; Swann, Chang-Schneider, & Larsen McClarty, 2007). Swann et al. (2007) suggest that self-esteem has been studied too narrowly and needs to be seen as part of a broader domain of self-views, and indeed, Rosenberg (1979) made a similar argument that self-esteem was only a part of the self-concept. They also argue that the importance of small effect sizes has also been underestimated in the literature on self-esteem (Swann et al., 2007).
Pyszczynski et al. (2004) take a different view, arguing that self-esteem can be beneficial in buffering anxiety and is linked to social connection. Current thinking suggests that self-esteem varies across domains (such as academic, social, physical), rather than being a simple global self-evaluation (Baumeister et al., 2003; Dubois & Tevendale, 1999). However, it seems that global self-esteem still has a place when examining global outcomes (Swann et al., 2007).

Additionally, some authors have suggested that there are different types of self-esteem. For example, Kernis (2003) differentiates optimal and high self-esteem, arguing that high self-esteem can be either fragile or secure and this may have different consequences for wellbeing. Furthermore, it is possible that the low correlations between self-esteem and some outcome measures are due to these different categories of high self-esteem having opposite effects (Baumeister et al., 2003). There has also been discussion in the literature about the relationship between high self-esteem and narcissism (Sedikides, Rudich, Gregg, Kumshiro, & Rusbult, 2004), with Tracy & Robins (2003) suggesting that narcissism is a form of fragile self-esteem. However, Donnellan et al. (2005) found the relationship between self-esteem and externalizing problems in their study was independent of narcissism, arguing that self-esteem and narcissism are separate constructs rather than either end of a spectrum.

As can be seen from the above, the research on self-esteem is diverse and fragmented, and lacks a dominant theoretical framework for explaining the link between self-esteem and outcomes such as depression. This suggests that our current views of self-esteem may undergo some changes in the next few years as measurement instruments are developed in line with these theoretical developments. This thesis will focus on global self-esteem as this has been the most widely studied variable. The
following two sections outline some current ideas about some mechanisms by which self-esteem may have an impact on mental health.

2.3.1 Theories of Self-Esteem

2.3.1.1 Self-Esteem as a Positive Response Style

Evidence is accumulating to suggest that low self-esteem may reflect a global tendency reflecting negative thinking about the world and other people (Baumeister et al., 2003). Aspinwall and Taylor (1992) make a similar argument that variables like self-esteem and optimism may represent a positive response style, regardless of content. This global tendency to respond in a positive (or negative) way has been given a variety of labels (Baumeister et al., 2003). A meta-analysis of studies on self-esteem, neuroticism and locus of control found high convergence between the three variables (Judge, Erez, Bono, & Thoresen, 2002). Follow-up studies found limited evidence of discriminant validity between these variables and the authors concluded that much of the variance could be explained by a higher order factor (Judge et al., 2002).

2.3.1.2 Self-Esteem and Emotional Regulation

The impact of self-esteem on emotional processing and emotional regulation has been the focus of a number of recent studies. These ideas are relevant to the current thesis as they may provide a mechanism for any link between self-esteem and emotional wellbeing. That is, if high self-esteem aids emotional processing or emotional regulation in positive way, increased self-esteem may lead to greater emotional wellbeing. A variety of theories regarding emotional processing have been proposed, including the possibility that self-esteem may influence the accessibility of negative thoughts, such as self-evaluative social comparisons (Wood, Michela & Giordano, 2000). Wood et al. (2000) suggest a 'multiple influence model' with both
accessibility (mood-cognition priming) and motivational factors influencing the direction of self-evaluative comparisons. This suggests that people with higher self-esteem would be less likely to experience negative self-evaluative thoughts, and a reduction in these negative appraisals should lead to a decrease in negative emotions (as discussed previously regarding positive thinking as a target for prevention programmers).

Self-esteem may influence the likelihood of an individual experiencing particular mood states (Rusting, 1998). Rusting (1998) discusses different models for looking at the impact of personality and mood on emotional processing and concludes that a moderation or mediation approach fits the evidence better than a direct relationship. The traditional conception was that mood states and personality had independent effects on emotional processing (including attention, perception, judgement, memory, etcetera), while more recent approaches have suggested more complex relationships between the three variables (Rusting, 1998). The moderation approach suggests that mood and personality interact to effect emotional processing, while the mediation approach suggests that personality affects mood, which affects emotional processing (Rusting, 1998). Pyszczynski et al (2004) present evidence suggesting that self-esteem has an anxiety-buffering effect, reducing both anxiety and anxious behaviour. DuBois and Flay (2004) suggest that the avoidance of low self-esteem is important for wellbeing and that an adaptive search for increased self-esteem can lead to beneficial long-term outcomes.

An alternative view is that self-esteem may be important in emotional regulation (Wood, Heimpel, & Michela, 2003). According to this view, people may see positive or negative affect as being more or less congruent with their ideas of who they are or what they deserve in life, and may therefore react differently to successes or failures. In five
studies Wood et al. (2003) found that self-esteem was a significant contributor to the regulation of positive affect with those people with low self-esteem using strategies to dampen the effect of positive emotions. In a further five studies, differences in self-esteem were also found to affect the motivation of people to improve negative moods, with those low in self-esteem less likely to seek to improve their mood (Heimpel, Wood, Marshall, & Brown, 2002). In these studies individuals with low self-esteem had fewer intentions to improve mood, and were less likely to actively take steps to improve their mood. This could not be accounted for by lesser knowledge of mood improvement strategies (Heimpel et al., 2002). Possible explanations may be that low self-esteem individuals are more accepting of negative moods, have low expectations of mood improvement, and are suffering from energy depletion and an increase in negative thoughts about themselves (Heimpel et al., 2002). Similarly, Bryant (2003) found that people's belief about their ability to savour positive affect was related to both self-esteem and happiness. Higher self-esteem may also predict the use of different coping strategies. In line with this idea, Aspinwall and Taylor (1992) found that higher self-esteem predicted decreased avoidant coping and increased seeking of social support amongst a large college sample. Another possibility is that self-esteem may influence the direction of counterfactual thinking. Counterfactual thinking involves generating alternative outcomes to a given life event, with upward counterfactuals describing thoughts that are better than reality (e.g., "If I had worked harder I would have got a better mark"), and downward counterfactuals describing thoughts that are worse than reality (e.g., "At least, I did some study or my mark could have been even worse") (Sanna, Turley-Ames, & Meier, 1999). Self-esteem influenced the direction of counterfactual thinking in negative moods, with high self-esteem individuals generating both upward and downward counterfactuals, and low self-esteem
individuals only generating upward counterfactuals (Sanna et al., 1999). These authors suggest a number of explanations for this effect, including the possibility that high self-esteem individuals find negative moods incongruent with their self-concept and use downward counterfactuals as a mood repair strategy. Another possibility may be that high self-esteem individuals are more flexible in their response styles and are able to generate more alternatives than low self-esteem individuals. While the mechanism is not entirely clear it seems that self-esteem does affect mood in the short term, although longitudinal studies on the relationship between self-esteem and emotional wellbeing over time are lacking. However, the ideas discussed above suggest a longitudinal link between self-esteem and emotional wellbeing is worth investigating. As the literature on self-esteem is so large, the following sections will focus on those studies which are most relevant to this thesis that is, longitudinal studies (where available) of self-esteem and its relationship with both emotional wellbeing and mental health, with an emphasis on larger and/or more recent studies.

2.3.2 Interventions to Enhance Self-esteem

Self-esteem, as an emotional fortigenic variable, is viewed as a state that can be developed by the individual (Gecas & Schwalbe as cited by Hughes, Robinson-Whelen, Taylor, Swedlund, & Nosek, 2004, p. 295; Heatherton & Polivy, 1991). Due to the assumption of self-esteem’s state-like nature, it is possible to identify intervention strategies. The following section firstly explores general coping strategies in dealing with negative feedback to protect the self-esteem. Secondly, two specific interventions strategies are then discussed in the following section. The first strategy focuses on the thoughts that may lead to negative self-evaluations (and emotions), and by changing these thoughts (McGuire & McGuire, 1996). The second strategy provides
evidence of the effectiveness of temporary disengagement from the negative feedback received from a failure experience in order to focus on what the individual wants to achieve by discounting the relevance of the negative feedback to his/her actual self-worth (Nussbaum & Steele, 2006, in press).

2.3.2.1 General Coping Strategies in Dealing with Negative Feedback

Effectively coping with the negative feedback received from not achieving personal goals requires the aspiring chartered accountant to focus on both psychological (e.g. emotional) and behavioural responses to resolve the situation. Lazarus (1991) identified two types of coping strategies to deal with negative experiences. Firstly, individuals may use problem-focused coping strategies to deal with the negative emotions resulting from non-attainment of personal goals. Individuals who use a problem-focused coping strategy are able to avoid focusing on the incapacitating nature of rumination and self-doubt that hinders effective continuation of goal pursuits. Rumination and self-doubt are associated with individuals with low self-esteem, low hope, and a pessimistic explanatory style (Tafarodi & Swann, 1995; Tafarodi & Swann, 2001; Tafarodi & Vu, 1997; Snyder, 1994, 1995, 1999, 2002; Snyder & Lopez, 2005; Seligman et al., 1990; Seligman & Schulman, 1986; Seligman, Hoeksema, et al., 1990). Thus, aspiring chartered accountants who are more focused on the task (i.e. preparing and passing Part 1 of the Qualifying Exam) will try to change the strategy but still maintain the personal goal, as individuals with high hope (Brown et al., 2005). By focusing on the task, these individuals are also more likely to effectively deal with the negative emotions. The second coping strategy is emotion-focused. The aim of this strategy is to lessen the impact of the negative experiences by limiting counterproductive inclinations (Brown et al., 2005, p. 794). Previous research conducted (Dweck, 2000; Dweck & Leggett, 1998) on the impact of affective reactions after failing at a task
provides possible insight into the affective reactions and coping strategies to failure. Individuals, who were helpless, exhibited the following after failure: (a) strong negative affect, (b) self-depreciating statements, (c) task-irrelevant behaviours, and (d) decrease in performance levels.

2.3.2.2 Enhancing Self-Esteem through Directed-Thinking Tasks

It is possible for an individual to change his/her self-esteem by redirecting thoughts (that lead to emotions) to relevant information already within the individual’s thought system (McGuire & McGuire, 1996). This is formally achieved by providing the individual with a directed thinking-task (McGuire & McGuire, 1991). Applying the basics of such a directed thinking-task to an aspiring chartered accountant who has failed the qualifying exam, the following two questions can be asked: “Please write down all the characteristics you have to become a chartered accountant”. This question taps the cognitive/thought process involved when dealing with self-esteem. Thus, emphasis is on the identification of the presence of affirming positive information about the self. The second question emphasises the affective/emotional evaluation by the individual. An example of such a question may be the following: “Please identify the desirable characteristics you need to have to become a chartered accountant”. In essence, the aim of the directed-thinking task is to assist the aspiring chartered accountant to move away from negative and unfavourable information about the self (e.g. lacking desirable characteristics and possessing undesirable characteristics) to positive information about the self (e.g. identifying positive characteristics that are present and negative characteristics that are not present) (McGuire & McGuire, 1996, pp. 1118-1119). Thus, enhancing an aspiring chartered accountant’s levels of self-esteem will be associated with an increase in more positive and favourable self-information and less unfavourable information. The directed thinking tasks seem to be
effective based on research conducted by McGuire and his colleague (1996). Based on these researchers' results, self-esteem was enhanced when the individual could identify favourable and positive characteristics instead of identifying those favourable characteristics that were lacking. They suggested that low levels of self-esteem were the result of the individuals' thoughts of undesirable characteristics that they possessed rather than of desirable characteristics that they did not have. Therefore, low levels of self-esteem can be enhanced by focusing thoughts on those desirable characteristics that the individual do posses (McGuire & McGuire, 1996, p. 1124). Therefore, ruminative thought after failure may be enhanced through self-affirming feedback relating to the overall goal of passing the Qualifying Exam that is task specific (Rothermund, 2003, p. 351). Ironically, this seems to suggest that the individual must focus on the strengths and what is good that is already there, rather than focusing on what is lacking and what is wrong – the basic principles of Positive Psychology.

2.3.2.3 Enhancing Self-Esteem through Situational/Temporary Disengagement

Situational or temporary disengagement refers to the process by which the individual disengages his/her self-esteem from the negative evaluation being received, thereby protecting feelings of self-worth from a possibly devaluing situation. This enables the individual to distance himself/herself from the negative effects to the ego from the specific situation temporarily in order to remain committed to the larger domain and goal (Nussbaum & Steele, 2006, in press). These authors provided support, through an experimental study using 80 undergraduate students, that persistence could be enhanced and enabled through situational/temporary disengagement from a negative environment with negative feedback. They also observed that students, who failed the task given to them during the experiment, were more willing to take on more of the same task on which they had performed poorly during their disengagement (Nussbaum
& Steele, 2006, in press). Instead of permanently removing himself/herself from the negative situation, it is suggested that the aspiring chartered accountant disengage from a particular performance by denying its relevance to the individual’s self-worth and thus persist in the domain even when experiencing frustration (Nussbaum & Steele, 2006, in press). By focusing on the particular domain may theoretically be related to domain specific hope discussed previously, where the individual may or may not be hopeful about a domain related to his/her performance but still is hopeful in general (Snyder, 1995). In addition, the concept of temporary disengagement seems to be related to what Baumeister and Jones (as cited by McFarlin et al., 1984, p. 139) proposed in terms of compensatory self-enhancement. The latter implies that the aspiring chartered accountant protects his/her self-esteem by conforming verbally, but not behaviourally, to the negative feedback received about performance. It is possible that this strategy may in itself be a form of disengagement. The latter may be supported by Major and Schmader’s (as cited by Nussbaum & Steele, 2006, in press) view that disengagement is the detachment of the self-esteem from external feedback...such that feelings of self-worth are not dependent on successes or failures in that domain. It is therefore possible that aspiring chartered accountants may separate the link between negative feedback about performance on the qualifying exam and their concept of intelligence and ability to become a chartered accountant. During this time of temporary disengagement, these aspiring chartered accountants may be able to focus their attention to improve on their accounting skills and other related skills in order to improve the chances of passing the qualifying exam (Nussbaum & Steele, 2006, in press).
2.3.2.4 General Responses to Negative Feedback

In addition to problem-focused or emotion-focused coping strategies suggested by Lazarus (1991), the aspiring chartered accountant is likely to respond to negative feedback in three ways: (a) accepting the negative feedback and adjusting behaviour accordingly, (b) dismissing the negative feedback while continuing with the current course of action, and (c) persisting with the current strategy while trying to obtain additional information and feedback (Audia et al, 2003). The first response to negative feedback may result in either persisting with the set goal or quitting (Audia et al, 2003). The aspiring chartered accountant is more likely to quit the achievement of a goal when self-esteem and self-efficacy are low. Thus, this type of individual views his/her abilities as inadequate to achieve the personal goal, with the confounding problem of not having a positive evaluation of his /her selfworth. It is possible that individuals with low self-esteem may use quitting as a defense mechanism to avoid future negative feedback. In contrast to quitting, the aspiring chartered accountant may change his/her strategy to adjust to the negative feedback. Thus, the individual is likely to determine whether he/she should put in more effort in the current strategy achieving the goal. The latter implies that the individual will use the same strategy in achieving the set goal and work harder. In contrast, it is possible for the individual to keep the goal, but use different task strategies to achieve the goal, thus working smarter (Wood & Locke, 1975; Kluger & DeNisi, 1996). Although these authors did not mention hope, the "working smarter" strategy seems to be theoretically linked to hope theory (Snyder, 1994, 1995, 1999, 2002; Snyder & Lopez, 2005). The latter states that an individual will be more hopeful when there are multiple pathways to achieve the desired goal, with the associated agency in each of the different pathways. Thus, pathways thinking suggest that the individual has more than one strategy to achieve a specific goal. Thus,
negative feedback is likely to activate alternative strategies to persisting until the goal is achieved when individuals are hopeful.

The second response to negative feedback is to dismiss the information received while continuing with the current course of action (Audia et al., 2003). In such an instance, the aspiring chartered accountant does not agree behaviourally with the negative feedback and persist with the current course of action. One strategy that the individual can use in this case is known as Compensatory Self-Enhancement. Evidence from research (Baumeister et al., 1978; Baumeister, 1982; and McFarlin et al., 1981) suggested that high self-esteem individuals engage in compensatory self-enhancement (conform to their negative feedback verbally, not behaviourally). They are confident that others like them in general. When faced with failure, they would make positive claims about themselves because they hope that future interaction will justify their self-enhancing claims. High self-esteem individuals described themselves favourably on dimensions not related to the evaluation after failure. Thus, the individual is likely to state verbally that he failed, but will not focus on behaviours that will support the negative feedback of having failed and not being viewed as competent yet. The individual therefore uses self-esteem to build levels of self-confidence in the face of negative feedback.

The third, and final, response to negative feedback focuses on the aspiring chartered accountant persisting with the current strategy while trying to obtain additional information and feedback (Audia et al., 2003). In these instances, the individual is likely to delay the acceptance of the feedback until he/she can obtain additional information that may not be part of the initial negative feedback. Thus, the aspiring chartered accountant gathers additional information on possible developmental areas that may need attention in order to determine if he/she should continue with the
stated goal but change the strategy to achieve the objective. Thus, it is suggested that individuals high on self-esteem are more likely to seek additional information and support in order to make the necessary adjustments to their strategies (Tafarodi & Swann, 1995; Tafarodi & Swann, 2001; Tafarodi & Vu, 1997) and build their levels of self-confidence and self-efficacy. In addition, high-hope individuals are also more likely to develop alternative pathways based on information obtained from additional feedback to enhance the probability of achieving the set goal.

2.3.3 Self-Esteem and Mental Health

The relationship between self-esteem and depression is clear, with research repeatedly finding a relationship such that low self-esteem is related to depression, or alternatively, that high self-esteem is related to positive affect (Baumeister et al., 2003). As discussed previously, recent research has also suggested a possible link between self-esteem and affective states including happiness and hostility. The mechanism for this link may be through emotional regulation or emotional processing although much work remains to be done in this area. The following section presents the much stronger evidence for a link with mental health, especially depression. In a study of 234 adolescents and adults investigating two emotional outcomes, Furnham and Cheng (2003) found a cross-sectional relationship between self-esteem and both happiness and depression, with self-esteem predicting both states to a similar degree. The authors note that the relationship between self-esteem and depression may operate in both directions. In support of this possibility, Benetti and Kambouropoulos (2006) found that negative and positive affect mediated the effect of trait anxiety and resilience on self-esteem among 240 young adults. However, this study was cross-sectional and it would be interesting to see if this relationship was evident in a longitudinal design. Roberts and
Gamble (2001) also found an effect of past depressive episodes on self-esteem, although the authors acknowledge that the retrospective design of the study does limit the conclusions that can be drawn. Several studies have found a longitudinal relationship between self-esteem and depression (Baumeister et al., 2003). Baumeister et al. (2003) conclude that there is sufficient evidence to suggest low self-esteem is a causal factor in depression, although the pathway is not clear. This may reflect Rusting’s (1998) suggestion that a more complex model of self-esteem and depression (rather than a direct relationship) may be more appropriate. The most recent of these studies by Trzesniewski et al. (2006) found both cross-sectional and longitudinal relationships between self-esteem and mental health. Firstly, they found a cross-sectional relationship during adolescence, with low self-esteem participants twice as likely to meet criteria for a major depressive episode (using a diagnostic interview). Secondly, they found that participants with low self-esteem in adolescence were more likely to meet diagnostic criteria for both anxiety (1.6 times) and depression (1.26 times) in adulthood, even when controlling for adolescent depression. This is a convincing study given the large sample size (978), long duration (11 years), and use of diagnostic interviews rather than symptom scales. Robinson, Garber, and Hilsman (1995) found that perceived self-worth in sixth grade predicted depressive symptoms in seventh grade in a sample of 371 adolescents.

They also found an interaction between explanatory style and self-esteem, with explanatory style predicting depressive symptoms only for those adolescents with low self-esteem. A prospective study of 115 adolescents by Southall and Roberts (2002) also found an interaction between self-esteem and explanatory style, with low self-esteem amplifying the effect of a negative explanatory style, and high self-esteem
buffering the effect of a negative explanatory style (for those who were initially symptom-free).

While self-esteem and depression in adolescence has been relatively widely studied, research on adolescent anxiety is less common (McCauley, Lerner, Lerner, & Von, 1999). In a cross-sectional study of 224 adolescents, Byrne (2000) found a significant negative correlation between self-esteem and anxiety. Bolognini, Plancherel, Bettschart and Halfon (1996) found that lower self-esteem was related to both anxiety and depressive symptoms. Byrne (2000) using an Australian sample of 150 high school students also found higher self-esteem amongst boys, and an association between low self-esteem and increased levels of anxiety and fear. As discussed above, Trzesniewski et al. (2006) also found a link between low self-esteem in adolescence and anxiety disorders in adulthood. In summary, there is clear evidence for a relationship between self-esteem and depression. There is also some evidence for a relationship between self-esteem and anxiety, and between self-esteem and affective states such as happiness and hostility. The relationship between self-esteem and depression appears to be a complex one, with some indications that self-esteem may interact with other variables such as explanatory style, or that self-esteem may influence emotional regulation.

2.4 Mental Health

2.4.1 A Positive Mental Health Concept

Mental health may be conceptualized in negative or positive terms. A negative conceptualization of mental health is based on the understanding that the absence of symptoms indicates good mental health. A positive mental health concept focuses on the presence of health-promoting factors, such as meaningful work and good relationships. Mental health is more than the absence or minimization of mental
symptoms because states and capacities have value in themselves, according to the WHO’s definition of mental health: “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001, p. 1).

One of the most famous researchers of the concept of positive health is Antonovsky, who defines positive health as a sense of coherence (Heikkinen, 2000), where the main focus is on the dynamic interaction between health-promoting factors and stressors in human life, and how to move people to the healthy end of the health continuum. A sense of coherence is proposed to be a significant variable in effecting this movement (Antonovsky, 1985). Mental health refers to a person’s position, at any point in their life cycle, on “... a continuum that ranges from excruciating emotional pain and total psychological malfunctioning at one extreme to a full, vibrant sense of psychological well-being at the other” (Antonovsky, 1985, p. 274). Antonovsky describes the movement on the continuum towards better mental health as shifting: “... from the use of unconscious psychological defense mechanisms toward the use of conscious coping mechanisms; from the rigidity of defensive structures to the capacity for constant and creative inner readjustment and growth; from a waste of emotional energy toward its productive use; from emotional suffering toward joy; from narcissism toward giving of oneself; and from exploitation of others to reciprocal interaction” (Antonovsky, 1985, p. 274).

The concept of health has developed over time, becoming more and more directed the quality of life (Strandmark, 2007) and newer research in psychiatry focuses, to a large extent, on quality of life by strengthening positive experiences, rather than by limiting treatment to reducing or removing the illness or the symptoms (Naess & Eriksen, 2001).

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<th>MENTAL PROBLEMS</th>
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<td>MANY</td>
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<td>FEW</td>
<td>3. Few pleasures and many problems</td>
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*Figure 2. Mental health in relation to quality of life*

Quality of life research is searching for knowledge that may contribute to the reduction of problems and the increase of pleasures. Traditional mental health research has not made a distinction between Boxes 1 and 3, or 2 and 4. It has been aimed primarily at getting people out of Boxes 1 and 3, typically by conflating 'disease' and quality of life, by including symptom scales within the measures used to assess quality of life (Rapley, 2003). The aim of the salutogenic perspective may be understood as bringing so many people as possible into Box 2, with many pleasures and few problems, whereas sense of coherence is theorized to enhance coping and adaptation by the use of General Resistance Resources (GRRs), which effectively mediate the tension caused by stressors and ultimately reduce the number of stressful experiences.
(Landsverk & Kane, 1998), thus increasing life satisfaction. This is compatible with the salutogenic definition of mental health (Antonovsky, 1985).

2.4.2 Mental Health Problems (MHP)

Mental illness may be defined and understood in different ways. For example, the biomedical definition describes a disease connected to a neurobiological functional defect or deficit; the psychodynamic approach, based on psychoanalysis, gives insight into how instincts and deep emotional needs may provoke symptoms such as anxiety, aggression, passivity, and inability to act; and social psychiatry sheds light on how conflicts between people may create conflicts within people. The latter has led the way for important therapy forms such as family therapy and group therapy (Directorate for Health and Social Affairs, 2005).

Young persons are often regarded as an invaluable asset of any country. Such an emphasis is obviously based on the potentials of young persons to contribute intellectually, politically and economically to the society. Good overall adjustment and a sense of well being are very crucial factors for their positive contributions to the society. Young age typically represents a ‘Transit’ between childhood and adulthood. This phase of life is a highly vulnerable period because of simultaneous interaction of Bio-psycho-social factors. Hence young persons form a ‘risk group’ in the community. Ability to cope and perform in the expected roles in this age group depends on a good “homeostasis” in family, environmental and personality aspects of the young person. Presence of mental health problems either transient or persistent can significantly affect social relationships and academic performance. High attrition rates in college students and academic under-achievement can be related to emotional factors, though the cause per se can be multi-factorial. Cost effectiveness of inputs from Governmental and other

80
agencies for the development and welfare of young persons, therefore, depends on minimizing attrition rates (dropout) ensuring better academic achievement and meaningful contribution to the society. Hence, there is ample justification to sensitize the college teachers towards the needs of college students. Such inputs would not only help promotion of mental health but also create a resource for appropriate and timely help for distressed young persons.

Mental health problems are a set of clinically recognizable symptoms present in an individual for a period of time and the individual experiences distress due to these symptoms as they interfere with his or her personal functioning like academic work, relationships, social interactions etc. Young persons can have certain problems like excessive fears, sadness / depression, strange behaviours such as being suspicious, inability to trust people, social withdrawal and isolation, drug or alcohol abuse. Such a constellation of symptoms, when persistent in an individual, constitutes a “Disorder”. It is important to appreciate that above described symptoms or behavioural problems can be present in varying degrees of severity in the individual. It is interesting to note that such symptoms can manifest outwardly as follows:

a) Poor memory
b) Decline in academic performance
c) Lack of confidence, inferiority feelings, lack of initiative
d) Absenteeism
e) Being dull and withdrawn
f) Poor attention / concentration
g) Subjective sadness, feelings of worthlessness, hopelessness
h) Frequent complaints of ill health resulting in frequent medical consultations
i) Being argumentative / truant / antisocial
j) Aggressive and violent
k) Not being punctual / inability to abide by rule
l) Drug and alcohol abuse
m) Deliberate self harm (Suicidal attempts)
n) Poor impulse control
o) Strange and disorganized behaviours
p) Dramatic and attention seeking behaviour

Though these problems appear innocuous, they might sometimes represent underlying significant mental health problems. It is important to appreciate that such symptom or problems are often present in the individual in various combinations. Results of epidemiological studies conducted in the general population reveal that most commonly seen mental health problems are:

a) Depression
b) Anxiety
c) Adjustment reaction
d) Hysteria
e) Somatization (Medically unexplained body pains)
f) Drug & Alcohol Abuse
g) Psychosomatic disorders
h) Psychotic disorders

(Note: Disorders 1-7 are more common than psychotic disorders)

2.4.2.1 Types of Mental Health Problems

True reflections of mental health problems of college students should be ideally based on results of scientifically conducted epidemiological investigations. However, such information is not available at this point in time. An attempt is being made to
project the profile of mental health problems in college students age group; based on general population epidemiological studies and on clinical experience.

**Depression**

- Depression is a condition characterized by
- Sad mood and crying spells
- Lack of interest / energy / motivation
- Decreased attention / concentration / memory / intelligence
- Lack of pleasure / inability to enjoy
- Disturbed sleep / appetite / bowels / sexual functioning
- Thoughts of ending one’s life
- Vague bodily symptoms like pain, weakness, fatigue
- Death wish / suicidal ideas – attempts

This condition can be transient or persistent. Depression in an individual can be ranging from mild to severe degree; some times the intensity can be less than mild degree. Such a condition (mild and less than mild degree) is quite common in day to day life of every one of us. This usually follows life events like death, separation, financial loss, failure in examination, strained relationships at home and with friends, failure of love affairs etc. Suicidal thoughts or ideas are common in depression and needs immediate attention. Depression is one of the important causes of inefficiency, under achievement and memory or concentration problems, alcohol and other substance abuse, and suicide.

**Anxiety**

- It is a condition characterized by
- Subjective feeling of apprehension, discomfort and fear
- Restlessness
- Feeling of impending danger
- Palpitation
- Tremulousness
- Sweating / dryness of mouth
- Frequent need to pass urine
- Body pains like headache, fatigue, weakness
- Breathlessness

Like depression, anxiety is very common in young persons. It may be transient or long standing. Anxiety may manifest outwardly as poor memory, impaired attention/concentration, discomfort in social situations, and a general feeling of restlessness. Anxiety is a normal reaction in a threatening situation, but persistence of such a state without any understandable threatening situation is abnormal.

**Adjustment Reaction**

It is state of subjective distress and emotional disturbance, usually interfering with social functioning and performance, and arising in the period of adaptation to a significant life change or to these consequences of a stressful life even like failure in examination, loss of a close friend or family member.

**Symptoms are**

- depressed mood
- anxiety
- worrying
- feeling of inability to cope / helplessness
- dramatic and attention seek behaviour
• outbursts of anger and violence, suicidal attempt
• antisocial behaviours

The onset is usually within one month of the occurrence of the stressful event or life change. It lasts for a short period only.

**Hysterical – Conversion Disorders**

Symptoms of psychogenic origin often temporarily related to traumatic events, insoluble and intolerable problems or disturbed relationships. This is characterized by sudden onset of bizarre movements of limbs, unresponsiveness, or attacks of possession by god / spirits. Such problems start and terminate dramatically.

**Somatization**

Somatization characterised by persistent and distressing complaints of increased fatigue and exhaustion after minimal physical or mental effort. This is associated with muscular pains, headaches, sleep disturbance, irritability and disturbed sleep and mild symptoms of anxiety or depression. Such phenomenon is seen in males who unnecessarily worry about masturbation or seminal loss. In females such symptoms occur on the background of white discharge per vaginum. Somatizations are also a way of communicating one’s distresses and draw the attention of others to get help.

**Psychosomatic Disorders**

Long standing emotional distress may lead to certain physical illnesses in vulnerable individuals. These are known as 'Psychosomatic disorders'. E.g.

- Hyperacidity and peptic ulcers
- Diarrheas and Dysenteries (colitis, irritable bowel syndrome)
- Asthma
- Arthritis (joint pains)
- Obesity
- Migraine or Tension Headache
- Menstrual irregularities
- Diabetes Mellitus
- High Blood Pressure
- Eczema, Psoriasis (Skin Disorders)

**Psychotic Disorders**

Psychotic disorders characterised by onset of strange behaviours like -

- Ununderstandable strange talk and behaviour
- Suspicious
- Withdrawn, poor or no communication
- Increasing social isolation
- Hearing voices when there are none
- Feeling persecuted
- Sudden excitement, over activity, wandering aimlessly, unprovoked aggression
- Excessively cheerful and boastful
- Associated disturbances in sleep, appetite and bowe-bladder functioning
- Some time psychotic behaviour can manifest as a progressive academic decline and change in personality.

- Psychotic disorders may occur due to alcohol, ganja and other drug abuse. They may appear following head injury, brain fever and fits.
2.4.3 Prevalence

Studies have shown that in India 15% of the students suffer from mental disorders like Depression, Anxiety, Hysteria, Somatoform disorders, Adjustment reactions, and Alcohol and drug abuse. In addition, many more students may have emotional problems related to their family and college life (Chandrashekar et al., 2007). Over 16000 school and college student in India committed suicide in the last three years (Nanda, 2008). 28.1% medical students at university Ardabil in Iran were likely to suffer from mental disorders (Dadkhah, Mohamadi & Mozafari, 2005). 45.5% of the students had mild to severe depression and there were a significant relationship between depression and academic achievement (p = 0.004). 75% of the successful students and 39.4% of the unsuccessful ones were suffered from mild to moderate depression (Najafipour & Yktatalab, 2009). Only 10.33% students had suicidal ideation. Suicidal thoughts were significantly more frequent in male students of Isfahan University of Technology as compared with all other students (p < 0.05). Suicidal thoughts were also significantly more frequent in students residing in this university’s dormitories than its native students and also than students residing in other universities’ dormitories p < 0.05 (Mousavi et al., 2008).

The prevalence of MHP is increasing and 3.1% of the Norwegian population aged 16–67 receives disability pensions based on psychiatric diagnosis. In total, 0.4% suffers from organic disorders, schizophrenia, and schizotypal and delusional disorders, 0.2% from mental and behavioral disorders due to psychoactive substance use, 0.5% from mood disorders, 0.4% from mental retardation, and 1.5% from other mental disorders. This constitutes 30% of all people on disability pensions. An additional 0.6% of the population is on long-term sick leave because of a mental health condition.
Three percent of the adult population visits a mental health outpatient clinic, and 0.8% receives treatment on an inpatient basis at least once a year (Norwegian Ministry of Health and Care Services, 2005).

Most people with MHP live in the community, and a number of those with long-lasting MHP have serious difficulties in achieving a satisfactory quality of life. Special attention has been given to this group, which requires coordinated services over a long period. In the National Action Plan for Mental Health, it is estimated that 0.75% of the adult population, or approximately 25,000, has long-term MHP and a need for mental health services in the community. In addition, 0.25%, or approximately 8000, have less serious MHP, but have a need for some mental health services in the community (Norwegian Ministry of Health and Care Services, 1997–2008).

2.4.4 Mental Health Promotion

The core component of the principles of health promotion is suggested to be the combination of salutogenesis and quality of life, where salutogenesis is the process leading to quality of life (Lindstrom & Eriksson, 2006). Mental health promotion often refers to positive mental health and involves adopting an approach based on a positive view of mental health, rather than emphasizing mental illness and deficits. It considers mental health as a resource, as valuable on its own, and as a basic human right. It implies the creation of individual, social, and environmental conditions that enable optimal psychological development. Realizing that mental health is more than the absence of illness can be helpful to people with MHP and their careers. Protective health resources and positive mental health can coexist with sometimes severe mental symptoms, for instance in people living with schizophrenia. This suggests the value of developing more comprehensive clinical approaches, with an additional focus on people’s positive mental health, such as their strengths, capabilities, and personal efforts in the recovery process. Assessing and building on strengths helps people to
cope with MHP and to avoid being further diminished by it (Schmolke, 2003). Three health-promoting factors have been identified as important in the recovery process (Anthony, Cohen, & Farkas, 1994; Strauss, 1996). These factors are that participants: (1) perceive themselves as something other than just a diagnosis and a disease; (2) explore themselves with respect to their whole person, and (3) take control over their own lives.
CHAPTER THREE

METHODOLOGY
METHODOLOGY

In behavioural sciences the researcher has to make scientific endeavour while contemplating scientific investigation has to ascertain several facts related to the designing of study, sample selection and analysis of data in an objective manner. A research investigation cannot be called scientific unless it is carried out in a systematic and planned manner. It is prerequisite for any scientific investigation to take into consideration the design of the proposed study so as to carry out the research in a planned and systematic manner. Seltiz et al. (1962) stated that the “research design is the assignment of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economic in procedure”. For conducting any scientific research there is need to select standard tools, and tests, identifying adequate samples by using suitable sampling techniques, adequate procedures for collecting data and using appropriate statistical methods for analysis of the data. These are necessary steps to be employed for the predictions and drawing inferences.

3.1 Sample

In social science research sample is a portion of population of interest, Kerlinger (1983) pointed out that sampling is taken any portion of a population or universe representative of that population or universe. Thus sampling is a small portion of population selected for observation. By making observations on the appropriate sample it is possible to draw meaningful inferences or make generalizations on the population as a whole from where the sample is drawn.

The sample of this study is comprised of 800 university students, 400 students from Iran (Sistan and Baluchestan University) and 400 students from India (Aligarh Muslim University). At first 8 faculties of Sistan and Baluchistan University (Iran) and
8 facilities of Aligarh Muslim University, Aligarh (India) and 50 students from each faculty were selected by random sampling. The age range of the students was 19-29 years.

3.2 Tools

3.2.1 Coping Inventory for Stressful Situations (CISS)

This is a 48-item self-report inventory that evaluates the coping strategies normally used in a stressful situation. The items are divided into 3 separate coping scales, which measure problem-focused coping, emotion-focused coping, and avoidance-focused coping. Avoidance-focused coping is then divided into two subscales- a Distraction scale (8 items) and a Social Diversion scale (5 items). The problem-focused subscale includes items that indicate an active approach to stressful situations. The emotion-focused coping subscale includes items about engagement in maladaptive behaviours such as ruminating or becoming emotional in response to stress. Finally, the avoidance subscale includes items about avoiding stressful situations. The items relating to each main scale are located randomly through the questionnaire to avoid the order of the questions having an effect. For each item, the subject indicates ‘to what extent he/she engages in this type of activity when a difficulty or a stressful or destabilizing situation is encountered’. The respondent answers each item through a 5-point Likert-type rating scale ranging from 1 (not at all) to 5 (very much).

Some examples of the items describing how one would engage in specific types of activities when one encounters a difficult, stressful, or upsetting situation are: “schedule my time better”, “try to be with other people”, or “worry about what I am going to do”.

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The CISS displays high construct reliability and validity. Internal reliability is very high. The alpha coefficients for the CISS are reported separately for males and females and are as follows. For males, alpha levels for the task coping ranged from .90 to .92, for females the range was .87 to .90. The emotion coping alpha ranges were from .82 to .90 for males and .83 to .89 for females. For avoidant coping, alphas ranged from .81 to .85 for males and .76 to .83 for females. The alphas for distraction coping ranged from .72 to .78 for males and .69 to .79 for females. The alphas for social diversion coping ranged from .74 to .84 for males and .78 to .81 for females. Tests-retest reliabilities computed for the CISS for university undergraduates were .73 for males and .72 for females for task coping; .68 for males and .71 for females for emotion coping; .55 for males and .60; for females for avoidance coping; .51 for males and .59 for females for distraction coping; and .54 for males and .60 for females for social diversions (Endler & Parker, 1990).

3.2.2 Attributional Style Questionnaire

ASQ; Peterson et al., 1982; is made up of 12 different hypothetical situations, consisting of 6 good events (three achievement and three affiliation events) and 6 bad events (three achievement and three affiliation events). Each of these situations is followed by a series of four questions. The first question following each situation asks the participant to describe one major cause of the situation. This question is not scored but helps the respondent to answer the remaining questions. For the researcher, these responses are also useful to determine if the questionnaire was taken seriously. The remaining three questions are arranged in the same order for each situation and measure three different dimensions on a scale ranging from one to seven. The first question measures whether the response is internal or external, the second question measures whether the participant's response in stable or unstable, and the third question measures
whether the response is global or specific. Accordingly, the minimum score for each of these dimensions is 6; and the maximum score is 42. Peterson, et al. (1982) reported internal reliably coefficients of .75 and .72 for the composite positive and negative events, respectively. The six subscales (Internal Negative, Stable Negative, Global Negative, Internal Positive, Stable Positive, Global Positive) reliabilities range form .44 to .69, with a mean reliability of .54 (Peterson, et al., 1982; Tennen & Herzberger, 1985). The 5-wk test-retest correlation for the composite attritional style scales (Negative and Positive) using a sample of 100 participants ranged from .57 to .70 (Peterson, et al. 1982).

3.2.3 Self-Esteem Inventory

Coopersmith's Self-Esteem Inventory (Ryden, 1978) is a 58-item self-reports used to measure self-esteem in adult subjects. The rotated dimensions were labelled (1) anxiety; (2) defensiveness; (3) negative social attitude; (4) rejection of self; and (5) inadequacy of self. The test has a test-retest reliability of .80. Because self-esteem may be related to a person's depression, Ryden's modification of the Coopersmith's self-esteem inventory was chosen to measure the subject's self-esteem.

Scoring

The test has a built in “lie scale” to help determine if you are trying too hard to appear to have high self-esteem. If you answered “like me” to three or more of the following items, retake the test with an eye toward being more realistic in your responses: 1, 6, 13, 20, 27, 34, 41 and 48. To calculate your score, add up the number of times your responses match those given below. To determine how your level of self-esteem compares to that of others, find the value closest to your score in the table.

**Like me:** Items 2, 4, 5, 10, 11, 14, 18, 19, 21, 23, 24, 28, 29, 32, 36, 45, 47, 55, 57
Unlike me: Items 3, 7, 8, 9, 12, 15, 16, 17, 22, 25, 26, 30, 31, 33, 35, 37, 38, 39, 40, 42, 43, 44, 46, 49, 50, 51, 52, 53, 54, 56, 58.

3.2.3 General Health Questionnaire

The General Health Questionnaire-28 (GHQ-28; Goldberg & Hillier, 1979) was developed to measure psychological health in large non-psychotic populations. The 28-item GHQ-28 is a shortened version of the original 60-item GHQ derived from factor analyses. The GHQ-28 is scored on a Likert scale of 0-3, producing a maximum total score of 84. Lower scores indicate higher mental health and functioning, while higher scores indicate psychological distress. Goldberg and colleagues (1997) reported that test-retest reliabilities range from .61 to .90, and Cronbach’s alpha range from .71 to .88. The Cronbach’s alpha in the present study was .93. The convergent validity of this scale has been supported by correlations with several other extant measures of psychological distress (Cano, Sprafkin, Saturo, Lantinga, Fiese, & Brand, 2001). The construct validity of this scale has been supported by the ability of this scale to detect psychopathology as independently diagnosed by structured interviews designed to generate diagnoses according to the ICD-10 and DSM-IV (Goldberg et al., 1997). This questionnaire also contains four subscales, measuring somatic complaints, anxiety and insomnia, social dysfunction, and severe depression, respectively.
CHAPTER FOUR

RESULTS
RESULTS

This chapter presents descriptive statistics and the outcomes of the statistical analyses that are, correlation, step-wise multiple regression and enter multiple linear regressions that are used to evaluate the research hypotheses and independent sample t-test, two way ANOVA test and post-hoc are used to evaluate the research questions.

Table 4.1 Descriptive Statistics of Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>178</td>
<td>44.5</td>
</tr>
<tr>
<td>India</td>
<td>Female</td>
<td>222</td>
<td>55.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>143</td>
<td>35.8</td>
</tr>
<tr>
<td>Iran</td>
<td>Female</td>
<td>257</td>
<td>64.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table 4.1 shows the descriptive statistics of gender. As can be seen there are 178 Indian male students and 222 Indian female students and total Indian students are 400. The percentage of males is 44.5%, females are 55.5% and total is 100%, and also there are 143 Iranian male students and 257 Iranian female students and total Iranian students are 400. The percentage of males is 35.8% and percentage females is 64.3% and total is 100%.
Table 4.2 Descriptive Statistic of Academic Level of the Students

<table>
<thead>
<tr>
<th>Country</th>
<th>Academic Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Graduation</td>
<td>334</td>
<td>83.5</td>
</tr>
<tr>
<td></td>
<td>Post Graduation</td>
<td>66</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
<tr>
<td>Iran</td>
<td>Graduation</td>
<td>373</td>
<td>93.3</td>
</tr>
<tr>
<td></td>
<td>Post Graduation</td>
<td>27</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table 4.2 shows the descriptive statistics of Academic level of the students. As can be seen there are 334 Indian students who are in graduation and 66 students are in post graduation and total Indian students are 400. The percentage of Indian students in graduation is 83.5% and post graduation is 16.5% and total is 100%. Iranian students who are in graduation are 373 and post graduations are 27 and total Iranian students are 400. The percentage of Iranian students in graduation is 93.3%, post graduation 6.8%, and total is 100%.
Table 4.3 Descriptive Statistic of Marital Status of the Students

<table>
<thead>
<tr>
<th>Country</th>
<th>Marriage</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Married</td>
<td>15</td>
<td>3.8</td>
</tr>
<tr>
<td>India</td>
<td>Unmarried</td>
<td>385</td>
<td>96.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
<tr>
<td>Iran</td>
<td>Married</td>
<td>46</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>Unmarried</td>
<td>354</td>
<td>88.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table 4.3 shows the descriptive statistics of marital status of the students. As can be seen there are 15 Indian students who are in married and 385 students are in unmarried and total Indian students are 400. The percentage of Indian students in married is 3.8% unmarried is 96.2% and total is 100%. Iranian students who are in married are 46 and unmarried are 354 and total Iranian students are 400. The percentage of Iranian students in married is 11.5% unmarried is 88.5% and total is 100%.
First Hypothesis

Students who employ problem-focused coping strategies would have significantly better mental health than students who employ emotion-focused and avoidance-focused coping strategies.

In order to test the first hypothesis correlation matrix (Pearson correlation), and after that Regression analysis has been applied which are as follows:

Table 4.4. The Correlation Matrix of Mental Health, Coping Strategies and its Subscales in Indian Sample (N=400)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem-focused coping strategies</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Emotion-focused coping strategies</td>
<td>0.09</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Avoidance-focused coping strategies</td>
<td>0.19**</td>
<td>0.26**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.23**</td>
<td>0.23**</td>
<td>0.04</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.4 in Indian samples all variables are significantly correlated with each other at 99% of confidence, except the correlation between emotion-focused coping strategies and problem-focused coping strategies, mental health and avoidance-focused coping strategies. Also, in order to predict mental health on the basis of coping strategies regression analysis has been applied which is as follows:
Table 4.5 Stepwise Multiple Linear Regressions: Predicting Mental Health on Coping Strategies Subscales in Indian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>12.40</td>
<td>3.20</td>
<td>-</td>
<td>3.871**</td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.295</td>
<td>0.06</td>
<td>0.231</td>
<td>4.732**</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>30.78</td>
<td>4.62</td>
<td>-</td>
<td>6.661**</td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.324</td>
<td>0.06</td>
<td>0.254</td>
<td>5.364**</td>
</tr>
<tr>
<td></td>
<td>P.F.C.S (b)</td>
<td>-0.339</td>
<td>0.06</td>
<td>-0.254</td>
<td>-5.360**</td>
</tr>
</tbody>
</table>

**\( P < 0.01 \)

(a): Emotion-Focused Coping Strategies, (b): Problem-Focused Coping Strategies

As can be seen from table 4.5 emotion focused coping strategies which entered the first step alone accounted for 5.3% of the variance in total mental health scores of Indian students and came out to be the strongest predictor variable (\( \beta = 0.254, \quad p = 0.000 < 0.01 \)) as compared to problem focused coping strategies which accounted for only 6.4% of the variance of the total mental health scores of Indian students. However, problem focused coping strategies is second important predictor (\( \beta = -0.254, \quad p = 0.000 < 0.01 \)), and together emotion focused coping strategies and problem focused coping strategies accounted for only 11.7% of variance in total mental health scores of Indian students, as it mentions emotion focused coping strategies and problem focused coping strategies are significant predictors of mental health in Indian students. The rest variable could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = 0.254 (Emotion focused coping strategies) - 0.254 (Problem focused coping strategies)

Table 4.6. The Correlation Matrix of Mental Health, Coping Strategies and its Subscales in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem-focused coping strategies</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Emotion-focused coping strategies</td>
<td>0.20</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Avoidance-focused coping strategies</td>
<td>0.36**</td>
<td>0.36**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.20**</td>
<td>0.32**</td>
<td>-0.02</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.6 in Iranian sample all variables are significantly correlated with each other at 99% of confidence, except the correlation between Emotion-focused coping strategies and Problem-focused coping strategies, mental health and Avoidance-focused coping strategies. Also, in order to predict mental health on the basis of coping strategies regression analysis has been applied which is as follows:
Table 4.7 Stepwise Multiple Linear Regressions: Predicting Mental Health on Coping Strategies Subscales in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.42</td>
<td>3.41</td>
<td>-</td>
<td>1.005</td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.480</td>
<td>0.07</td>
<td>0.317</td>
<td>6.673**</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>18.21</td>
<td>4.133</td>
<td>-</td>
<td>4.406**</td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.563</td>
<td>0.07</td>
<td>0.372</td>
<td>7.976**</td>
</tr>
<tr>
<td></td>
<td>P.F.C.S (b)</td>
<td>-0.366</td>
<td>0.06</td>
<td>-0.273</td>
<td>-5.861**</td>
</tr>
</tbody>
</table>

** p < 0.01

(a): Emotion-Focused Coping Strategies, (b): Problem-Focused Coping Strategies

As can be seen in the table 4.7 emotion focused coping strategies which entered the first step alone accounted for 10.1% of the variance in total mental health scores of Iranian students and came out to be the strongest predictor variable (β= 0.372, p=0.000<0.01) as compared to problem focused coping strategies which accounted for only 7.1% of the variance of the total mental health score of Iranian students. However, problem focused coping strategies is second important predictor (β= -0.273, p=0.000<0.01), together emotion focused coping strategies and problem focused coping strategies accounted for only 17.2% of variance in total mental health scores of Iranian students, as it mentions emotion focused coping strategies and problem focused coping strategies are significant predictor of mental health in Iranian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = 0.372 (Emotion focused coping strategies) - 0.273 (Problem focused coping strategies)

Table 4.8. The Correlation Matrix of Mental Health, Coping Strategies and its Subscales in Indian-Iranian Sample (N=800)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem-focused coping strategies</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Emotion-focused coping strategies</td>
<td>0.21**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Avoidance-focused coping strategies</td>
<td>0.39**</td>
<td>0.36**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.17**</td>
<td>0.28**</td>
<td>0.03</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.8 in total sample all variables are significantly correlated with each other at 99% of confidence, excluded the correlation between mental health and Avoidance-focused coping strategies. Also, in order to predict mental health on the basis of coping strategies regression analysis has been applied which is as follows:
Table 4.9 Stepwise Multiple Linear Regressions: Predicting Mental Health on Coping Strategies Subscales in Indian-Iranian Sample (N=800)

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictors</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>8.004</td>
<td>2.29</td>
<td>-</td>
<td>3.494**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.382</td>
<td>0.05</td>
<td>0.280</td>
<td>8.237**</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>21.28</td>
<td>2.87</td>
<td>-</td>
<td>7.412**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.F.C.S (a)</td>
<td>0.453</td>
<td>0.046</td>
<td>0.332</td>
<td>9.854**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P.F.C.S (b)</td>
<td>-0.305</td>
<td>0.042</td>
<td>-0.246</td>
<td>-7.288**</td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01

(a): Emotion-Focused Coping Strategies, (b): Problem-Focused Coping Strategies

As can be seen in the table 4.9 emotion focused coping strategies which entered the first step alone accounted for 7.8% of the variance in total mental health scores of both Indian and Iranian students and came out to be the strongest predictor variable (β = 0.332, p = 0.000<0.01) as compared to problem focused coping strategies which accounted for only 5.8% of the variance of the total mental health score of both Indian and Iranian students. However, problem focused coping strategies is second important predictor (β = -0.246, p = 0.000<0.01), together emotion focused coping strategies and problem focused coping strategies accounted for only 13.6% of variance in total mental health scores of both Indian and Iranian students, as it mentions emotion focused coping strategies and problem focused coping strategies are significant predictor of mental health in both Indian and Iranian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = 0.332 (Emotion focused coping strategies) - 0.246 (Problem focused coping strategies)

**Second Hypothesis**

Students who attribute positive events to internal, stable and global causes would have significantly better mental health than students who attribute positive events to external, unstable and specific causes.

In order to test the second hypothesis correlation matrix (Pearson correlation) and after that Regression analysis has been applied which as follows:

**Table 4.10 The correlation matrix of mental health, attributional style of positive events and its subscales in Indian sample (N=400)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.59**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.44**</td>
<td>0.51**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.29**</td>
<td>-0.30**</td>
<td>-0.23**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.10 in Indian sample and for positive events, all variables are correlated significantly positive with each other at 99% of confidence, except the correlations between mental health and Internal-External attributional style, Stable-Unstable attributional style, Global-Specific attributional style. The mentioned correlations are significantly negative. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
### Table 4.11 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Positive Events in Indian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>Beta</td>
<td>S.E</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>45.80</td>
<td>2.96</td>
<td>-</td>
<td>15.472**</td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>-0.613</td>
<td>0.096</td>
<td>-0.304</td>
<td>-6.377**</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>48.88</td>
<td>3.12</td>
<td>-</td>
<td>15.647**</td>
</tr>
<tr>
<td></td>
<td>Stable-unstable</td>
<td>-0.412</td>
<td>0.12</td>
<td>-0.205</td>
<td>-3.486**</td>
</tr>
<tr>
<td></td>
<td>Internal-external</td>
<td>-0.306</td>
<td>0.11</td>
<td>-0.168</td>
<td>-2.870**</td>
</tr>
</tbody>
</table>

**p < 0.01

As can be seen in the table 4.11 stable-unstable attributional style which entered the first step alone accounted for 9% of the variance in total mental health scores of Indian students and came out to be the strongest predictor variable (β = -0.205, p=0.000 < 0.01) as compared to internal-external attributional style which accounted for only 2.1% of the variance of the total mental health score of Indian students. However, internal-external attributional style is second important predictor (β = -0.168, p=0.004<0.01), together stable-unstable attributional style and internal-external attributional style accounted for only 11.1% of variance in total mental health scores of Indian students, as it mentions stable-unstable attributional style and internal-external attributional style are significant predictor of mental health in Indian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = -0.205 (Stable-unstable attributional style) -0.168 (Internal-external attributional style)

Table 4.12 The Correlation Matrix of Mental Health, Attributional Style of Positive Events and its Subscales in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.76**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.78**</td>
<td>0.79**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.33**</td>
<td>-0.34**</td>
<td>-0.32**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.12 in Iranian sample and for positive events, all variables are correlated significantly positive with each other at 99% of confidence, except of the correlations between mental health and Internal-External attributional style, Stable-Unstable attributional style, Global-Specific attributional style. The mentioned correlations are significantly negative. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
### Table 4.13 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Positive Events in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictors</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>43.29</td>
<td>-</td>
<td>0.339</td>
<td>0.115</td>
<td>51.54**</td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>-0.62</td>
<td>-0.339</td>
<td>-7.179**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>43.62</td>
<td>-</td>
<td>0.356</td>
<td>0.127</td>
<td>28.79**</td>
</tr>
<tr>
<td></td>
<td>Stable-unstable</td>
<td>-0.385</td>
<td>-0.210</td>
<td>-2.915**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internal-external</td>
<td>-0.254</td>
<td>-0.169</td>
<td>-2.338*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01; *p < 0.05

As can be seen in the table 4.13 stable-unstable attributional style which entered the first step alone accounted for 11.5% of the variance in total mental health scores of Iranian students and came out to be the strongest predictor variable (β = -0.210, p=0.000<0.01) as compared to internal-external attributional style which accounted for only 1.2% of the variance of the total mental health score of Iranian students. However, internal-external attributional style is second important predictor (β = -0.169, p=0.020<0.05), together stable-unstable attributional and internal-external attributional style accounted for only 12.7% of variance in total mental health scores of Iranian students, as it mentions stable-unstable attributional style and internal-external attributional style are significant predictor of mental health in Iranian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = - 0.210 (Stable-unstable attributional style) – 0.169 (Internal-external attributional style)

Table 4.14 The Correlation Matrix of Mental Health, Attributional Style of Positive Events and its Subscales in Iranian-Indian Sample (N=800)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.70**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.65**</td>
<td>0.68**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>-0.30**</td>
<td>-0.31**</td>
<td>-0.28**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.14 in total sample and for positive events, all variables are correlated significantly positive with each other at 99% of confidence, excluded of the correlations between mental health and Internal-External attributional style, Stable-Unstable attributional style, Global-Specific attributional style. The mentioned correlations are significantly negative. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
Table 4.15 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Positive Events in Iranian-Indian Sample (N=800)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td></td>
<td>-.312</td>
<td>-.201</td>
<td>.22914**</td>
</tr>
<tr>
<td>1</td>
<td>Stable-Unstable</td>
<td>-0.59</td>
<td>-.312</td>
<td>-.201</td>
<td>.9272**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>43.16</td>
<td>1.91</td>
<td></td>
<td>85.96**</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td></td>
<td>-.201</td>
<td>-.158</td>
<td>23.292**</td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>-0.381</td>
<td>-.201</td>
<td>-.158</td>
<td>8.285**</td>
</tr>
<tr>
<td></td>
<td>Internal-external</td>
<td>-0.253</td>
<td>-.158</td>
<td>-.158</td>
<td>.3359**</td>
</tr>
</tbody>
</table>

As can be seen in the table 4.15 stable-unstable attributional style which entered the first step alone accounted for 9.7% of the variance in total mental health scores of both Indian and Iranian students and came out to be the strongest predictor variable (β= -0.201, p=0.000<0.01) as compared to internal-external attributional style which accounted for only 1.3% of the variance of the total mental health score of both Indian and Iranian students. However, internal-external attributional style is second important predictor (β= -0.158, p=0.001<0.01), together stable-unstable attributional and internal-external attributional style accounted for only 11% of variance in total mental health scores of Indian and Iranian students, as it mentions stable-unstable attributional style and internal-external attributional style are significant predictor of mental health in both Indian and Iranian students. The rest variables could not enter in regression equation
because they could not satisfy the criterion of entrance. The following regression equation is as follow:

\[ \text{Mental Health} = -0.201 \text{ (Stable-unstable attributional style)} -0.158 \text{ (Internal-external attributional style)} \]

**Third Hypothesis**

Students who attribute negative events to external, unstable and specific causes would have significantly better mental health than students who attribute negative events to internal, stable and global causes.

In order to test the third hypothesis correlation matrix (Pearson correlation) and after that Regression analysis has been applied which are as follows:

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.23**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.37**</td>
<td>0.42**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>0.13**</td>
<td>0.20**</td>
<td>0.21**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01**

As can be seen from table 4.16 in Indian sample for negative events, all variables are correlated significantly positive with each other at 99% of confidence. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
Table 4.17 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Negative Events in Indian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>Beta</td>
<td>t</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>-</td>
<td>7.585**</td>
<td>0.207</td>
<td>0.043</td>
</tr>
<tr>
<td></td>
<td>Global-Specific</td>
<td>0.21</td>
<td>4.220**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.147</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>-</td>
<td>5.024**</td>
<td>0.244</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td>Global-Specific</td>
<td>0.147</td>
<td>2.743**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>0.143</td>
<td>2.665**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01

As can be seen in the Table 4.17 global-specific attributional style which entered the first step alone accounted for 4.3% of the variance in total mental health scores of Indian students and came out to be the strongest predictor variable (β = 0.147, p=0.000<0.01) as compared to stable-unstable attributional style which accounted for only 1.7% of the variance of the total mental health score of Indian students. However, stable-unstable attributional style is second important predictor (β = 0.143, p=0.008<0.01), together global-specific attributional style and stable-unstable attributional style accounted for only 6% of variance in total mental health scores of Indian students, as it mentions global-specific attributional style and stable-unstable attributional style are significant predictor of mental health in Indian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Results

Mental Health = 0.147 (Global-specific attributional style) + 0.143 (Stable-unstable attributional style)

Table 4.18 The Correlation Matrix of Mental Health, Attributional Style of Negative Events and its Subscales in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.40**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.59**</td>
<td>0.50**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>0.24**</td>
<td>0.25**</td>
<td>0.29**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.18 in Iranian sample for negative events, all variables are correlated significantly positive with each other at 99% of confidence. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
Table 4.19 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Negative Events in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>B</td>
<td>12.74</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S.E</td>
<td>2.28</td>
<td>0.09</td>
</tr>
<tr>
<td>1</td>
<td>Global-Specific</td>
<td>B</td>
<td>0.543</td>
<td>0.09</td>
<td>5.950**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.E</td>
<td>0.09</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Global-Specific</td>
<td>B</td>
<td>0.402</td>
<td>0.10</td>
<td>3.859**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.E</td>
<td>0.10</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>B</td>
<td>0.304</td>
<td>0.11</td>
<td>2.715**</td>
</tr>
</tbody>
</table>

**p < 0.01

As can be seen in the table 4.19 global-specific attributional style which entered the first step alone accounted for 8.2% of the variance in total mental health scores of Iranian students and came out to be the strongest predictor variable ($\beta=0.212$, $p=0.000<0.01$) as compared to stable-unstable attributional style which accounted for only 1.6% of the variance of the total mental health score of Iranian students. However, stable-unstable attributional style is second important predictor ($\beta=0.149$, $p=0.007<0.01$), together global-specific attributional style and stable-unstable attributional style accounted for only 9.8% of variance in total mental health scores of Iranian students, as it mentions global-specific attributional style and stable-unstable attributional style are significant predictor of mental health in Iranian students. The rest variables could not enter in regression equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:
Mental Health = 0.212 (Global-specific attributional style) + 0.149 (Stable-unstable attributional style)

Table 4.20 The Correlation Matrix of Mental Health, Attributional Style of Negative Events and its Subscales in Indian-Iranian Sample (N=800)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal-External</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Stable-Unstable</td>
<td>0.32**</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Global-Specific</td>
<td>0.51**</td>
<td>0.46**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>0.19**</td>
<td>0.23**</td>
<td>0.25**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.20 in total sample for negative events, all variables are significantly positively correlated with each other at 99% of confidence. Also, in order to predict mental health on the basis of attributional styles regression analysis has been applied which is as follows:
Table 4.21 Stepwise Multiple Linear Regressions: Predicting Mental Health on the Subscales of Attributional Style of Negative Events in Indian-Iranian Sample (N=800)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>15.23</td>
<td>1.63</td>
<td>-</td>
<td>9.346**</td>
</tr>
<tr>
<td></td>
<td>Global-Specific</td>
<td>0.479</td>
<td>0.07</td>
<td>0.247</td>
<td>7.207**</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>11.30</td>
<td>1.90</td>
<td>-</td>
<td>5.955**</td>
</tr>
<tr>
<td></td>
<td>Global-Specific</td>
<td>0.344</td>
<td>0.074</td>
<td>0.178</td>
<td>4.644**</td>
</tr>
<tr>
<td></td>
<td>Stable-Unstable</td>
<td>0.305</td>
<td>0.078</td>
<td>0.151</td>
<td>3.934**</td>
</tr>
</tbody>
</table>

** p < 0.01

As can be seen in the table 4.21 global-specific attributional style which entered the first step alone accounted for 6.1% of the variance in total mental health scores of both Indian and Iranian students and came out to be the strongest predictor variable (β= 0.178, p=0.000<0.01) as compared to stable-unstable attributional style which accounted for only 1.8% of the variance of the total mental health score of both Indian and Iranian students. However, stable-unstable attributional style is second important predictor (β= 0.151, p=0.000<0.01), together global-specific attributional style and stable-unstable attributional style accounted for only 7.9% of variance in total mental health scores of Indian and Iranian students, as it mentions global-specific attributional style and stable-unstable attributional style are significant predictor of mental health in both Indian and Iranian students. The rest variables could not enter in regression
Results

equation because they could not satisfy the criterion of entrance. The following regression equation is as follow:

\[
\text{Mental Health} = 0.178 \text{ (Global-specific attributional style)} + 0.151 \text{ (Stable-unstable attributional style)}
\]

**Fourth Hypothesis**

Students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem.

In order to test the fourth hypothesis correlation matrix (Pearson correlation) and after that Regression analysis has been applied which are as follows:

**Table 4.22 The Correlation Matrix of Mental Health, Self-Esteem in Indian Sample (N=400)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mental health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>-0.42**</td>
</tr>
</tbody>
</table>

**p<0.01**

As can be seen from table 4.22 in Indian sample there is negative significant correlation between Self-Esteem and Mental Health at 99% of confidence, i.e. students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem, because in the GHQ-total lower scores indicate higher mental health and functioning, while higher scores indicate psychological distress. Also, in order to predict mental health on the basis of self-esteem regression analysis has been applied which is as follows:
Table 4.23 Enter Multiple Linear Regressions: Predicting Mental Health on Self-Esteem in Indian Sample (N=400)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>R</th>
<th>R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>Beta</td>
<td>t</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>(Constant)</td>
<td>50.04</td>
<td>-</td>
<td>19.808**</td>
<td>0.420</td>
</tr>
<tr>
<td></td>
<td>Self-Esteem</td>
<td>-0.74</td>
<td>-0.420</td>
<td>-9.229**</td>
<td><strong>p&lt;0.01</strong></td>
</tr>
</tbody>
</table>

As can be seen in the table 4.23 self esteem has satisfied entrance criterion of regression and it is explained 17.6% of variance in Indian students' mental health scores, individually (β= -0.420, p=0.000<0.01), as it mentions self esteem as significant predictor of mental health in Indian students.

Table 4.24. The Correlation Matrix of Mental Health, Self-Esteem in Iranian Sample (N=400)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-Esteem</td>
<td>-0.57**</td>
</tr>
</tbody>
</table>

**p<0.01

As can be seen from table 4.24 in Iranian sample there is negative significantly correlation between Self-Esteem and Mental Health at 99% of confidence. i.e. students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem, because in the GHQ-total lower scores indicate higher mental health and functioning, while higher scores indicate psychological distress. Also, in order to predict mental health on the basis of self esteem regression analysis has been applied which is as follows:
As can be seen in the table 4.25 self esteem has satisfied entrance criterion of regression and it is explained 32.6% of variance in Iranian students' mental health scores, individually ($\beta=-0.571$, $p=0.000<0.01$), as it mentions self esteem as significant predictor of mental health in Iranian students.

As can be seen from table 4.26 in total sample there is negative significant correlation between Self-Esteem and Mental Health at 99% of confidence, i.e. students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem, because in the GHQ-total lower scores indicate higher mental health and functioning, while higher scores indicate psychological distress. Also, in order to predict mental health on the basis of self esteem regression analysis has been applied which is as follows:
Table 4.27 Enter Multiple Linear Regressions: Predicting Mental Health on Self-Esteem in Indian-Iranian Sample (N=800)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>( F )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictors</td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>52.73</td>
<td>1.61</td>
<td>-</td>
<td>32.647**</td>
</tr>
<tr>
<td></td>
<td>Self-Esteem</td>
<td>-0.835</td>
<td>0.05</td>
<td>-0.510</td>
<td>-16.733**</td>
</tr>
</tbody>
</table>

** \( p < 0.01 \)

As can be seen in the table 4.27 self esteem has satisfied entrance criterion of regression and it is explained 26% of variance in both Indian and Iranian students' mental health scores, individually (\( \beta = -0.510, \ p=0.000<0.01 \)), as it mentions self esteem as significant predictor of mental health in both Indian and Iranian students.
First Research Question

Is there significant difference between the mean scores of coping strategies (Problem-Focused, Emotion-Focused, and Avoidance-Focused) betwixt Iranian and Indian students?

In order to answer to the first question independent sample t-test has been applied which is as follows:

Table 4.28 Independent Samples T-test in order to Compare Mean Scores of Coping Strategies with Consideration of Country

<table>
<thead>
<tr>
<th>Variables</th>
<th>Country</th>
<th>N</th>
<th>Mean</th>
<th>S.E. Mean</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-Focused</td>
<td>India</td>
<td>400</td>
<td>58.65</td>
<td>0.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>50.88</td>
<td>0.51</td>
<td>11.368**</td>
<td>798</td>
</tr>
<tr>
<td>Emotion-Focused</td>
<td>India</td>
<td>400</td>
<td>50.53</td>
<td>0.48</td>
<td>6.176**</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>46.48</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance-Focused</td>
<td>India</td>
<td>400</td>
<td>52.05</td>
<td>0.49</td>
<td>12.470**</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>43.40</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < 0.01

As can be seen from table 4.28 because of (t=11.368, p<0.01) Indian student (M=58.65) have obtained significantly higher scores on Problem-Focused coping strategy in comparison of their Iranian counterparts (M=50.88), on Emotion-focused coping strategy (t=6.176, p<0.01), Indian students have obtained significantly higher scores (M=50.53) than their Iranian counterparts (M=46.48). Also on avoidance-focused coping strategy (t=12.470, p<0.01), Indian students have obtained significantly higher scores (M=52.05) than their Iranian counterparts (M=43.40).
Second Research Question

Is there significant difference between the mean scores of attributional positive events (Internal-External, Stable-Unstable, and Global-Specific) betwixt Iranian and Indian students?

In order to answer to the second question independent sample t-test has been applied which is as follows:

Table 4.29 Independent Samples T-test in order to Compare Mean Scores of Attributional Styles of Positive Events with Consideration of Country

<table>
<thead>
<tr>
<th>Variables</th>
<th>Country</th>
<th>N</th>
<th>Mean</th>
<th>S.E. Mean</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal-External</td>
<td>India</td>
<td>400</td>
<td>29.87</td>
<td>0.34</td>
<td>4.236**</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>27.48</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable-Unstable</td>
<td>India</td>
<td>400</td>
<td>30.17</td>
<td>0.30</td>
<td>3.963**</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>28.27</td>
<td>0.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global-Specific</td>
<td>India</td>
<td>400</td>
<td>27.58</td>
<td>0.31</td>
<td>0.578</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>27.28</td>
<td>0.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01; *p<0.5

As can be seen from table 4.29 because of (t=4.236, p<0.01) Indian student (M=29.87) have obtained significantly higher scores on Internal-External attributional style in comparison of their Iranian counterparts (M=27.48). On Stable-Unstable attributional style (t=3.963, p<0.01) Indian students have obtained significantly higher scores (M=30.17) than their Iranian counterparts (M=28.27). But no significant difference was found between Indian and Iranian students on Global-Specific attributional style (t=0.578, p<0.05).
Third Research Question

Is there significant difference between the mean scores of attributional negative events (Internal-External, Stable-Unstable, and Global-Specific) betwixt Iranian and Indian students?

In order to answer to the third question independent samples t-test has been applied which is as follows:

**Table 4.30 Independent Samples T-test in order to Compare the Mean Scores of Attributional Styles of Negative Events with Consideration of Country**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Country</th>
<th>N</th>
<th>Mean</th>
<th>S.E. Mean</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal-External</td>
<td>India</td>
<td>400</td>
<td>24.35</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>26.20</td>
<td>0.38</td>
<td>-3.988**</td>
<td>798</td>
</tr>
<tr>
<td>Stable-Unstable</td>
<td>India</td>
<td>400</td>
<td>23.37</td>
<td>0.30</td>
<td>0.531</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>23.13</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global-Specific</td>
<td>India</td>
<td>400</td>
<td>23.22</td>
<td>0.31</td>
<td>-1.625</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>23.98</td>
<td>0.36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < 0.01; *p<0.5

As can be seen from the table 4.30 because of \( t = -3.988, \) \( p < 0.01 \) Iranian students \( \text{M}=26.20 \) have obtained significantly higher scores on Internal-External attributional style in comparison of their Indian counterparts \( \text{M}=24.35 \). But, on Stable-Unstable attributional style \( t=0.531, \) \( p>0.05 \), and Global-Specific attributional style \( t=-1.625, \) \( p>0.05 \) Indian and Iranian students do not differ significantly with each other.
Fourth Research Question

Is there significant difference between the mean scores of self-esteem between Iranian and Indian students?

In order to answer to the fourth question independent samples t-test has been applied which is as follows:

**Table 4.31 Independent Samples T-test in order to Compare the Mean Scores of Self-Esteem with Consideration of Country**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Country</th>
<th>N</th>
<th>Mean</th>
<th>S.E. Mean</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>India</td>
<td>400</td>
<td>30.73</td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iran</td>
<td>400</td>
<td>32.07</td>
<td>0.44</td>
<td>-2.400*</td>
<td>798</td>
</tr>
</tbody>
</table>

**p < 0.01; *p < 0.5

As can be seen from the table 4.31, because of (t= -2.400, & P<0.05) Iranian students (M=32.07) have obtained significantly higher scores on self esteem in comparison of Indian students (M=30.73).

Fifth Research Question

Is there significant difference between the mean scores of mental health between Iranian and Indian students?

In order to answer to the fifth question independent samples t-test has been applied which is as follows:

**Table 4.32 Independent Samples T-test in order to Compare the Mean Scores of Mental Health with Consideration of Country**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Country</th>
<th>N</th>
<th>Mean</th>
<th>S.E. Mean</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental</td>
<td>India</td>
<td>400</td>
<td>27.29</td>
<td>0.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Iran</td>
<td>400</td>
<td>25.75</td>
<td>0.68</td>
<td>1.684</td>
<td>798</td>
</tr>
</tbody>
</table>

**p < 0.01; *p < 0.5

125
As can be seen from the table 4.32, because of \((t=1.684, P>0.05)\), Iranian \((M=25.75)\) and Indian \((M=27.29)\) students do not differ significantly with each other on mental health.

**Sixth Research Question**

Is there significant difference between the mean scores of coping strategies (Problem-Focused, Emotion-Focused, and Avoidance-Focused) with consideration of country and gender, simultaneously?

In order to answer this question two way ANOVA is run. The descriptive statistics (number, mean, standard deviation) and tests of between-subjects effects on the Problem-Focused coping Strategies with consideration of gender and country is mentioned in following tables.

**Table 4.33 Descriptive Statistics of Problem-Focused Coping Strategies with Consideration of Country and Gender**

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>58.39</td>
<td>9.913</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>58.86</td>
<td>8.499</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>58.65</td>
<td>9.146</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>52.13</td>
<td>9.626</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>50.19</td>
<td>10.399</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>50.88</td>
<td>10.160</td>
</tr>
</tbody>
</table>
Table 4.34 Tests of Between-Subjects Effects on Problem- Focused Coping Strategies

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>12444.10</td>
<td>3</td>
<td>4148.034</td>
<td>44.501</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>2295114.56</td>
<td>1</td>
<td>2295114.560</td>
<td>24622.555</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>10616.87</td>
<td>1</td>
<td>10616.875</td>
<td>113.900</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>104.13</td>
<td>1</td>
<td>104.131</td>
<td>1.117</td>
<td>0.291</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>277.22</td>
<td>1</td>
<td>277.225</td>
<td>2.974</td>
<td>0.085</td>
</tr>
<tr>
<td>Error</td>
<td>74196.65</td>
<td>796</td>
<td>93.212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2486224.00</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>86640.75</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from table 4.34 there is no statistically significant main effect for gender [F (1,796) =1.117, P=0.291>0.05]. Also, interaction effect of gender and country is not statistically significant [F (1,796) =2.974, P=0.085].

The plot of students' mean scores on Problem-Focused Coping Strategies with consideration of country and gender is drawn which is as follows:
Table 4.35 Descriptive Statistics of Emotion-Focused Coping Strategies with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>49.73</td>
<td>9.878</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>51.17</td>
<td>9.271</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>50.53</td>
<td>9.560</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>46.83</td>
<td>7.666</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>46.28</td>
<td>9.656</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>46.47</td>
<td>8.990</td>
</tr>
</tbody>
</table>

Table 4.36 Tests of Between-Subjects Effects on Emotion-Focused Coping Strategies

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>3516.752</td>
<td>3</td>
<td>1172.251</td>
<td>13.625</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>1791732.954</td>
<td>1</td>
<td>1791732.954</td>
<td>20825.815</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>2887.760</td>
<td>1</td>
<td>2887.760</td>
<td>33.565</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>36.900</td>
<td>1</td>
<td>36.900</td>
<td>0.429</td>
<td>0.513</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>188.941</td>
<td>1</td>
<td>188.941</td>
<td>2.196</td>
<td>0.139</td>
</tr>
<tr>
<td>Error</td>
<td>68483.247</td>
<td>796</td>
<td>86.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1953897.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>71999.999</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As can be seen from table 4.36 there is no statistically significant main effect for gender \( F (1,796) = 0.429, P = 0.513 > 0.05 \). Also, interaction effect of gender and country is not statistically significant \( F (1,796) = 2.196, P = 0.139 > 0.05 \).

The plot of students' mean scores on Emotion-Focused Coping Strategies with consideration of country and gender is drawn which is as follows:

![Estimated Marginal Means of emotion-focused](image)

Table 4.37 Descriptive Statistics of Avoidance-Focused Coping Strategies with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>50.73</td>
<td>8.842</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>53.11</td>
<td>10.549</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>52.05</td>
<td>9.885</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>45.99</td>
<td>10.205</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>41.96</td>
<td>9.170</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>43.40</td>
<td>9.735</td>
</tr>
</tbody>
</table>
Table 4.38 Tests of Between-Subjects Effects on Avoidance-Focused Coping Strategies

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>17019.516</td>
<td>3</td>
<td>5673.172</td>
<td>60.418</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>1751020.739</td>
<td>1</td>
<td>1751020.739</td>
<td>18647.822</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>12017.027</td>
<td>1</td>
<td>12017.027</td>
<td>127.978</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>130.868</td>
<td>1</td>
<td>130.868</td>
<td>1.394</td>
<td>0.238</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>1958.152</td>
<td>1</td>
<td>1958.152</td>
<td>20.854</td>
<td>0.000</td>
</tr>
<tr>
<td>Error</td>
<td>74743.984</td>
<td>796</td>
<td>93.899</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1913904.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>91763.500</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from Table 4.38 there is no statistically significant main effect for gender \([F (1,796) =1.394, P=0.238>0.05]\). On the other hand, interaction effect of gender and country is statistically significant \([F (1,796) =20.854, P=0.000<0.01]\). In order to find the significant differences of groups Tukey post hoc has been applied which is as follows:
Table 4.39 Tukey Post Hoc on Avoidance-focused Coping Strategies

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Dif. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Male</td>
<td>Iranian Male</td>
<td>4.74</td>
<td>1.09</td>
<td>0.000</td>
</tr>
<tr>
<td>Indian Male</td>
<td>Iranian Female</td>
<td>8.77</td>
<td>0.94</td>
<td>0.000</td>
</tr>
<tr>
<td>Indian Female</td>
<td>Iranian Male</td>
<td>7.12</td>
<td>1.04</td>
<td>0.000</td>
</tr>
<tr>
<td>Indian Female</td>
<td>Iranian Female</td>
<td>11.15</td>
<td>0.89</td>
<td>0.000</td>
</tr>
<tr>
<td>Iranian Male</td>
<td>Iranian Female</td>
<td>4.04</td>
<td>1.01</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As can be seen from table 4.39 Indian male and female have obtained significantly higher scores on Avoidance-Focused Coping Strategies in comparison of Iranian male and female. Also, Iranian males have obtained significantly higher scores on Avoidance-Focused Coping Strategies in comparison of Iranian females.

The plot of students' mean scores on Avoidance-Focused Coping Strategies with consideration of country and gender is drawn which is as follows:

Estimated Marginal Means of avoidance-focus
Seventh Research Question

Is there significant difference between the mean scores of attributional positive events (Internal-External, Stable-Unstable, and Global-Specific) with consideration of country and gender, simultaneously?

In order to answer this question two way ANOVA is run. The descriptive statistics (number, mean, standard deviation) and tests of between-subjects effects on the Internal-External Positive Events with consideration of gender and country is mentioned in following tables.

<table>
<thead>
<tr>
<th>Table 4.40 Descriptive Statistics of Internal-External Positive Events with Consideration of Country and Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Iran</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Table 4.41 Tests of Between-Subjects Effects on Internal-External Positive Events

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>3216.749</td>
<td>3</td>
<td>1072.250</td>
<td>17.552</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>610544.851</td>
<td>1</td>
<td>610544.851</td>
<td>9994.298</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>1630.358</td>
<td>1</td>
<td>1630.358</td>
<td>26.688</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>1771.529</td>
<td>1</td>
<td>1771.529</td>
<td>28.999</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>360.395</td>
<td>1</td>
<td>360.395</td>
<td>5.899</td>
<td>0.015</td>
</tr>
<tr>
<td>Error</td>
<td>48627.100</td>
<td>796</td>
<td>61.089</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>709591.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>51843.849</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from table 4.41 there is a statistically significant main effect for gender [F (1,796) =28.999, P=0.000<0.01)]. That is females have obtained significantly higher scores on Internal-External Positive Events in comparison of their male counterparts. Also, interaction effect of gender and country is statistically significant [F (1,796) =5.899, P=0.015<0.05]. In order to find the significant differences of groups Tukey post hoc has been applied which is as follows:
Table 4.42 Tukey Post Hoc on Internal-External Positive Events

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Dif. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Male</td>
<td>Iranian Male</td>
<td>4.30</td>
<td>0.878</td>
<td>0.000</td>
</tr>
<tr>
<td>Indian Female</td>
<td>Iranian Male</td>
<td>5.98</td>
<td>0.838</td>
<td>0.000</td>
</tr>
<tr>
<td>Iranian Female</td>
<td>Iranian Male</td>
<td>4.43</td>
<td>0.815</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As can be seen from table 4.42 Indian male and female also Iranian female have obtained higher significantly scores on Internal-External Positive Events in comparison of Iranian male.

The plot of students' mean scores on Internal-External Positive Events with consideration of country and gender is drawn which is as follows:

Estimated Marginal Means of internal-external

COUNTRY
Table 4.43 Descriptive Statistics of Stable-Unstable of Positive Events with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>29.27</td>
<td>5.846</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>30.90</td>
<td>6.146</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>30.17</td>
<td>6.061</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>26.34</td>
<td>7.330</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>29.35</td>
<td>7.280</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>28.27</td>
<td>7.431</td>
</tr>
</tbody>
</table>

Table 4.44 Tests of Between-Subjects Effects on Stable-Unstable of Positive Events

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>1818.351</td>
<td>3</td>
<td>606.117</td>
<td>13.554</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>638928.029</td>
<td>1</td>
<td>638928.029</td>
<td>14287.731</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>955.521</td>
<td>1</td>
<td>955.521</td>
<td>21.367</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>1025.458</td>
<td>1</td>
<td>1025.458</td>
<td>22.931</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>91.685</td>
<td>1</td>
<td>91.685</td>
<td>2.050</td>
<td>0.153</td>
</tr>
<tr>
<td>Error</td>
<td>35596.044</td>
<td>796</td>
<td>44.719</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>720578.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>37414.395</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As can be seen from table 4.44 there is a statistically significant main effect for gender \([F(1,796) = 22.931, P = 0.000 < 0.01]\). That is females have obtained significantly higher scores on Stable-Unstable of Positive Events in comparison of their male counterparts. On the other hand, interaction effect of gender and country is not statistically significant \([F(1,796) = 2.050, P = 0.153 > 0.05]\). In order to find the significant differences of groups Tukey post hoc has been applied which is as follows:

Table 4.45 Tukey Post Hoc on Stable-Unstable of Positive Events

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Dif. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Male</td>
<td>Iranian Male</td>
<td>2.93</td>
<td>0.751</td>
<td>0.001</td>
</tr>
<tr>
<td>Indian Female</td>
<td>Iranian Male</td>
<td>4.56</td>
<td>0.717</td>
<td>0.000</td>
</tr>
<tr>
<td>Iranian Female</td>
<td>Iranian male</td>
<td>3.01</td>
<td>0.698</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As can be seen from table 4.45 Indian male, female and also Iranian female have obtained significantly higher scores on Stable-Unstable Positive Events in comparison of Iranian male.
The plot of students' mean scores on Stable-Unstable of Positive Events with consideration of country and gender is drawn which is as follows:

![Estimated Marginal Means of stable-unstable c](image)

Table 4.46 Descriptive Statistics of Global-Specific of Positive Events with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>178</td>
<td>27.02</td>
<td>6.355</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>28.02</td>
<td>5.969</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>27.58</td>
<td>6.156</td>
</tr>
<tr>
<td>India</td>
<td>Male</td>
<td>143</td>
<td>25.27</td>
<td>8.682</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>28.40</td>
<td>7.446</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>27.28</td>
<td>8.042</td>
</tr>
</tbody>
</table>
Table 4.47 Tests of Between-Subjects Effects on Global-Specific of Positive Events

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>1020.284</td>
<td>3</td>
<td>340.095</td>
<td>6.782</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>562589.488</td>
<td>1</td>
<td>562589.488</td>
<td>0.000</td>
<td>1.782</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>89.360</td>
<td>1</td>
<td>89.360</td>
<td>11218.064</td>
<td>0.000</td>
</tr>
<tr>
<td>SEX</td>
<td>813.743</td>
<td>1</td>
<td>813.743</td>
<td>16.226</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>218.699</td>
<td>1</td>
<td>218.699</td>
<td>4.361</td>
<td>0.037</td>
</tr>
<tr>
<td>Error</td>
<td>39919.655</td>
<td>796</td>
<td>50.150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>642809.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>40939.939</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from table 4.47 there is a statistically significant main effect for gender \([F(1,796)=16.226, P=0.000<0.01]\). That is females have obtained significantly higher scores on Stable-Unstable of Positive Events in comparison of their male counterparts. Also, interaction effect of gender and country is statistically significant \([F(1,796)=4.361, P=0.037<0.05]\). In order to find the significant differences of groups Tukey post hoc has been applied which is as follows:
### Table 4.48 Tukey Post Hoc on Global-Specific of Positive Events

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Dif. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Female</td>
<td>Iranian Male</td>
<td>2.75</td>
<td>0.759</td>
<td>0.002</td>
</tr>
<tr>
<td>Iranian Female</td>
<td>Iranian Male</td>
<td>3.14</td>
<td>0.739</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As can be seen from Table 4.48, Indian and Iranian female have obtained significantly higher scores on global-specific of positive events in comparison of Iranian male.

The plot of students' mean scores on Global-specific of Positive Events with consideration of country and gender is drawn which is as follows:
Eighth Research Question

Is there significant difference between the mean scores of attributional negative events (Internal-External, Stable-Unstable, and Global-Specific) with consideration of country and gender, simultaneously?

In order to answer this question two way ANOVA is run which is as follows:

Table 4.49 Descriptive Statistics of Internal-External of Negative Events with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>24.56</td>
<td>5.379</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>24.18</td>
<td>5.406</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>24.35</td>
<td>5.391</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>25.55</td>
<td>7.927</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>26.56</td>
<td>7.274</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>26.20</td>
<td>7.520</td>
</tr>
</tbody>
</table>
As can be seen from Table 4.50, there is no statistically significant main effect for gender \( F(1, 796) = 0.437, P = 0.509 > 0.05 \). Also, interaction effect of gender and country is not statistically significant \( F(1, 796) = 2.123, P = 0.146 > 0.05 \).

The plot of students' mean scores on Internal-External of Negative events with consideration of country and gender is drawn, which is as follows:

![Estimated Marginal Means of Internal-External of Negative Events](image-url)
Table 4.51 Descriptive Statistics of Stable-Unstable of Negative Events with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>178</td>
<td>23.94</td>
<td>5.814</td>
</tr>
<tr>
<td>India</td>
<td>Female</td>
<td>222</td>
<td>22.91</td>
<td>6.282</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>23.37</td>
<td>6.092</td>
</tr>
<tr>
<td>Iran</td>
<td>Male</td>
<td>143</td>
<td>22.20</td>
<td>6.553</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>23.65</td>
<td>6.717</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>23.13</td>
<td>6.686</td>
</tr>
</tbody>
</table>

Table 4.52 Tests of Between-Subjects Effects on Stable-Unstable of Negative Events

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>306.409</td>
<td>3</td>
<td>102.136</td>
<td>2.513</td>
<td>0.057</td>
</tr>
<tr>
<td>Intercept</td>
<td>409088.618</td>
<td>1</td>
<td>409088.618</td>
<td>10066.110</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>47.977</td>
<td>1</td>
<td>47.977</td>
<td>1.181</td>
<td>0.278</td>
</tr>
<tr>
<td>SEX</td>
<td>8.371</td>
<td>1</td>
<td>8.371</td>
<td>.206</td>
<td>0.650</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>289.701</td>
<td>1</td>
<td>289.701</td>
<td>7.128</td>
<td>0.008</td>
</tr>
<tr>
<td>Error</td>
<td>32349.591</td>
<td>796</td>
<td>40.640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>465106.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>32656.000</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As can be seen from table 4.52 there is no statistically significant main effect for gender [F (1,796) =0.206, P=0.650>0.05]. On the other hand, interaction effect of gender and country is statistically significant [F(1,796)=7.128, P=0.008<0.01]. In order to find the significant difference groups Tukey post hoc has been applied which is as follows:

Table 4.53 Tukey Post Hoc on Stable-Unstable of Negative Events

<table>
<thead>
<tr>
<th>Group (I)</th>
<th>Group (J)</th>
<th>Mean Diff. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Male</td>
<td>Iranian Male</td>
<td>1.74</td>
<td>0.716</td>
<td>0.016</td>
</tr>
<tr>
<td>Iranian Female</td>
<td>Iranian Male</td>
<td>1.44</td>
<td>0.665</td>
<td>0.030</td>
</tr>
</tbody>
</table>

As can be seen from table 4.53 Indian male and Iranian female have obtained significantly higher scores on Stable-Unstable of negative events in comparison of Iranian male.

The plot of students’ mean scores on Stable-Unstable of Negative events with consideration of country and gender is drawn which is as follows:
Table 4.54 Descriptive Statistics of Global-Specific of Negative Events with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Male</td>
<td>178</td>
<td>23.87</td>
<td>5.773</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>22.69</td>
<td>6.394</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>23.21</td>
<td>6.146</td>
</tr>
</tbody>
</table>

| Iran    | Male   | 143    | 22.69 | 6.474 |
|         | Female | 257    | 24.70 | 7.449 |
|         | Total  | 400    | 23.98 | 7.173 |

Table 4.55 Tests of Between-Subjects Effects on Global-Specific of Negative Events

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>626.225</td>
<td>3</td>
<td>208.742</td>
<td>4.735</td>
<td>0.003</td>
</tr>
<tr>
<td>Intercept</td>
<td>420207.461</td>
<td>1</td>
<td>420207.461</td>
<td>9531.671</td>
<td>0.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>33.010</td>
<td>1</td>
<td>33.010</td>
<td>.749</td>
<td>0.387</td>
</tr>
<tr>
<td>SEX</td>
<td>32.517</td>
<td>1</td>
<td>32.517</td>
<td>.738</td>
<td>0.391</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>484.328</td>
<td>1</td>
<td>484.328</td>
<td>10.986</td>
<td>0.001</td>
</tr>
<tr>
<td>Error</td>
<td>35091.974</td>
<td>796</td>
<td>44.085</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>481239.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>35718.199</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As can be seen from Table 4.55 there is no statistically significant main effect for gender \( F(1,796) = 0.738, P = 0.391 > 0.05 \). On the other hand, interaction effect of gender and country is statistically significant \( F(1,796) = 10.986, P = 0.001 < 0.01 \). In order to find the significant difference groups Tukey post hoc has been applied which is as follows:

**Table 4.56 Tukey Post Hoc on Global-Specific of Negative Events**

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Diff. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iranian Female</td>
<td>Indian female</td>
<td>2.01</td>
<td>0.608</td>
<td>0.005</td>
</tr>
<tr>
<td>Iranian Female</td>
<td>Iranian male</td>
<td>2.01</td>
<td>0.693</td>
<td>0.020</td>
</tr>
</tbody>
</table>

As can be seen from Table 4.56 Iranian female has obtained significantly higher scores on Global-Specific of negative events in comparison of Iranian male and Indian female.

**The plot of students’ mean scores on Global-Specific of Negative events with consideration of country and gender is drawn as follows:**

![Graph showing Estimated Marginal Means of global-specific (](image-url)
Ninth Research Question

Is there significant difference between the mean scores of self-esteem with consideration of country and gender, simultaneously?

In order to answer this question two way ANOVA is run which is as follows:

Table 4.57 Descriptive Statistics of Self-Esteem with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>178</td>
<td>29.88</td>
<td>6.369</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>222</td>
<td>31.41</td>
<td>7.285</td>
</tr>
<tr>
<td>India</td>
<td>Total</td>
<td>400</td>
<td>30.73</td>
<td>6.927</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>143</td>
<td>30.73</td>
<td>9.050</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>257</td>
<td>32.81</td>
<td>8.475</td>
</tr>
<tr>
<td>Iran</td>
<td>Total</td>
<td>400</td>
<td>32.07</td>
<td>8.731</td>
</tr>
</tbody>
</table>

Table 4.58 Tests of Between-Subjects Effects on Self-Esteem

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>991.245</td>
<td>3</td>
<td>330.415</td>
<td>5.375</td>
<td>.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>741809.886</td>
<td>1</td>
<td>741809.886</td>
<td>12068.222</td>
<td>.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>240.929</td>
<td>1</td>
<td>240.929</td>
<td>3.920</td>
<td>.048</td>
</tr>
<tr>
<td>SEX</td>
<td>625.193</td>
<td>1</td>
<td>625.193</td>
<td>10.171</td>
<td>.001</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>14.293</td>
<td>1</td>
<td>14.293</td>
<td>.233</td>
<td>.630</td>
</tr>
<tr>
<td>Error</td>
<td>48928.553</td>
<td>796</td>
<td>61.468</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>838625.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>49919.799</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As cab be seen from table 4.58 there is a statistically significant main effect for gender \([F (1,796) =10.171, P=0.001<0.01]\). On the other hand, interaction effect of gender and country is not statistically significant \([F(1,796)=0.233, P=0.630>0.05]\). In order to find the significant difference groups Tukey post hoc has been applied which is as follows:

**Table 4.59 Tukey Post Hoc on Self-Esteem**

<table>
<thead>
<tr>
<th>Group(I)</th>
<th>Group(J)</th>
<th>Mean Dif. (I-J)</th>
<th>St. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iranian Female</td>
<td>Indian Male</td>
<td>2.94</td>
<td>0.765</td>
<td>0.001</td>
</tr>
</tbody>
</table>

As cab be seen from table 4.59 Iranian female has obtained significantly higher scores on self-esteem in comparison of Indian male.

The plot of students' mean scores on Self-esteem of with consideration of country and gender is drawn which is as follows:

![Estimated Marginal Means of self-esteem](chart.png)
Tenth Research Question

Is there significant difference between the mean scores of mental health with consideration of country and gender, simultaneously?

In order to answer this question two way ANOVA is run which is as follows:

Table 4.60 Descriptive Statistics of Mental Health with Consideration of Country and Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Number</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>178</td>
<td>27.62</td>
<td>12.274</td>
</tr>
<tr>
<td>India</td>
<td>Female</td>
<td>222</td>
<td>27.03</td>
<td>12.182</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>27.29</td>
<td>12.11</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>143</td>
<td>25.80</td>
<td>13.061</td>
</tr>
<tr>
<td>Iran</td>
<td>Female</td>
<td>257</td>
<td>25.72</td>
<td>13.941</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>25.75</td>
<td>13.616</td>
</tr>
</tbody>
</table>
Table 4.61 Tests of Between -Subjects Effects on Mental Health

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>508.891</td>
<td>3</td>
<td>169.630</td>
<td>1.012</td>
<td>.387</td>
</tr>
<tr>
<td>Intercept</td>
<td>536673.295</td>
<td>1</td>
<td>536673.295</td>
<td>3201.506</td>
<td>.000</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>463.867</td>
<td>1</td>
<td>463.867</td>
<td>2.767</td>
<td>.097</td>
</tr>
<tr>
<td>SEX</td>
<td>21.173</td>
<td>1</td>
<td>21.173</td>
<td>.126</td>
<td>.722</td>
</tr>
<tr>
<td>COUNTRY * SEX</td>
<td>12.188</td>
<td>1</td>
<td>12.188</td>
<td>.073</td>
<td>.788</td>
</tr>
<tr>
<td>Error</td>
<td>133434.704</td>
<td>796</td>
<td>167.632</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>696698.000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>133943.595</td>
<td>799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from table 4.61 there is no statistically significant main effect for gender \[F (1,796) =0.126, P=0.722>0.05\]. Also, interaction effect of gender and country is not statistically significant \[F (1,796) =0.073, P=0.788>0.05\].

The plot of students' mean scores on Mental Health with consideration of country and gender is drawn which is as follows:
CHAPTER FIVE

DISCUSSION
DISCUSSION

The purpose of this study was exploring relationship between coping strategies, causal attributions, self-esteem and mental health among Iranian and Indian students. For this purpose four hypotheses have been formulated. Pearson correlation, step-wise multiple regression and enter multiple regression are used to evaluate research hypothesis. Another purpose of this study was to investigate the differences of coping strategies, causal attribution, self-esteem and mental health between Iranian and Indian students (girls and boys), for that independent sample t-test, two way ANOVA test, post-hoc are used to evaluate the research questions.

First Hypothesis

Students who employ problem-focused coping strategies would have significantly better mental health than students who employ emotion-focused and avoidance-focused coping strategies.

Responding to this hypothesis the stepwise regression was applied for students of India and Iran and total sample of both countries. Mental health is as criterion variable and problem-focused, emotion-focused and avoidance-focused are as the predictor variables. Emotional focused coping strategies accounted for 5.3% of the variance in step 1; problem focused coping strategies accounted for 6.4% of the variance in step 2. Collectively these variables accounted for 11.7% of the variance in mental health in Indian students. In the regression, emotional focused coping strategies was first important predictor ($\beta = 0.254, p = 0.000 < 0.01$) and problem focused coping strategies ($\beta = -0.254, p = 0.000 < 0.01$) was second significant predictor, and the third predictor variable was the avoidance focused coping strategies that did not emerge as significant predictor for mental health. Also, in Iranian students Emotional focused
coping strategies accounted for 10.1% of the variance in step 1, problem focused coping strategies accounted for 7.1% of the variance in step 2. Collectively these variables accounted for 17.2% of the variance in mental health in Iranian students. In the regression, emotional focused coping strategies was first important predictor ($\beta = 0.372, p = 0.000 < 0.01$) and problem focused coping strategies ($\beta = -0.273, p = 0.000 < 0.01$) was second significant predictor, and the third predictor variable was the avoidance focused coping strategies that did not emerge as significant predictor for mental health.

In total sample Emotional focused coping strategies accounted for 7.8% of the variance in step 1, problem focused coping strategies accounted for 5.8% of the variance in step 2. Collectively these variables accounted for 13.6% of the variance in mental health. In the regression, emotional focused coping strategies was first important predictor ($\beta = 0.332, p = 0.000 < 0.01$) and problem focused coping strategies ($\beta = -0.246, p = 0.000 < 0.01$) was second significant predictor, and the third predictor variable was the avoidance focused coping strategies that did not emerge as significant predictor for mental health in total sample.

Altogether, results showed that emotion-focused coping strategies was first, and problem-focused coping strategies was second important predictor for mental health, but avoidance-focused coping strategies was not a predictor for mental health.

These results have been endorsed in a number of studies. For instance, Bouteyre, Maurel, and Bernaudl (2007) in their study on daily hassles and depressive symptoms among first year psychology students in a French university found that emotion-centered coping was positively correlated with depression. Another such study was conducted by Solomon, Avitzur and Mikulincer (1990), who found emotion-focused coping to be related to the presence of psychiatric symptoms in soldiers who
had been involved in a war. Roy-Byrne et al. (1992) also found emotion-based coping to be related to increased subjective distress in people with panic and major depressive disorder. DeGenova et al. (2001) reported that those who used more emotion-focused coping exhibited more depression. Billings and Moos (1984), Carver et al (1989) found positive correlation between emotion-focused coping and psychological distress in large samples sizes.

To explain why emotion-based coping strategies are related to poor mental health, Windle and Windle (1996) reported that emotion-centred coping is characterised by internalising one’s cognitive processes, such as thoughts/ruminations and self blame. Subsequently, reacting in this way extends and worsens the effects of the adverse situation, triggering the onset of depressive symptoms.

The finding that problem-focused coping was negatively associated with GHQ-Total confirms hypothesis 1 and is consistent with past research (Billings & Moos, 1984; Knibb & Horton, 2008; Penland et al., 2000; Sherbourne et al., 1995; Wijndaele et al., 2007). Negative associations between problem-focused coping and mental disorders symptoms have been shown in clinical samples (Billings & Moos, 1984; Sherbourne et al., 1995), community samples (Knibb & Horton, 2008; Wijndaele et al., 2007) and university samples (Ben-zur, 1999; Penland et al., 2000). The negative correlation between problem-focused coping and depressive symptoms found in the current study is similar to that found in Wijndaele et al’s (2007) community study and Ben Zur’s (1999) university sample. Problem-focused coping appears to be associated with reduced mental disorders symptoms as this style actively removes or resolves stressors (Carver et al., 1989). As stressors are removed before they develop into functionally inhibiting stressors, this may reduce stress levels and prevent individuals from experiencing more severe psychological distress (Lazarus, 1966). For example, an
individual with a high work load may reduce distress by carefully planning a schedule that will help them meet their work deadline. This should increase the likelihood of accomplishing their task and help remove the stress associated with it. Problem-focused coping is the most adaptive coping style as it appears to reduce symptoms of stress, anxiety and depression. A number of different populations have demonstrated that problem-focused coping is associated with reduced distress. Wijndaele et al. (2007) recently showed that problem-focused coping is the most effective at reducing psychological distress in the general population. Their study analyzed the coping styles and psychological distress levels of 2,616 Belgian adults. Wijndaele et al. found that participants that engaged in problem-focused coping had reduced symptoms of stress, anxiety and depression, compared to participants that engaged in other coping styles. Sherbourne et al. (1995) found that depressed participants showed greater improvement when they engaged in problem-focused coping compared to avoidant coping. Their study measured the coping styles and depressive symptoms of 604 depressed individuals at two points in times: 12 months post baseline and 24 months post baseline.

Interestingly, the greatest improvement was displayed in severely depressed participants, suggesting that problem-focused coping may be the most effective coping style for severely depressed individuals. Students have lower levels of stress, anxiety and depression when they engage in problem-focused coping compared to other coping styles. Penland et al. (2000) found that participants who engaged in problem-focused coping experienced a greater decrease in depressive symptoms compared to participants who engaged in other coping styles. Crockett et al. (2007) also found problem-focused coping to be the most adaptive coping style employed by university students. Crockett and colleagues examined the associations between problem-focused coping and stress,
anxiety and depression in 148 Mexican American college students. Their study measured participants' level of social support (Network of Relationships Inventory; Furman & Buhrmester, 1992) coping styles, (Carver et al., 1989), stress (The Social, Attitudinal, Familial and Environmental Acculturative Stress Scale; Mena, Padilla, & Maldonado, 1987), anxiety (Beck Anxiety Inventory; Beck & Steer, 1993) and depressive symptoms (The Center for Epidemiological Studies Depression Scale; Radloff, 1977). Their findings showed that problem-focused coping was associated with reduced depressive symptoms. An additional study by Bouteyre et al. (2007) further demonstrates the negative association between problem-focused coping and psychological distress in university students. Bouteyre et al. was interested to examine both the prevalence of depressive symptoms in French students' and the role of coping styles in relation to depressive symptoms. Their study showed that 41% of the 233 students they measured exhibited depressive symptoms, however, participants that engaged in problem-focused coping were less likely to exhibit depressive symptoms. Problem-focused coping appears to be effective simply because it removes daily stressors.

Although daily stressors are only small they have been associated with lowered mood in university students (Wolf, Elston, & Kissling, 1989). Perhaps more significantly, daily stressors can develop into major stresses, thus increasing the potential for increased stress, anxiety and depression (Holahan et al., 2005). The removal of these stressors therefore decreases the likelihood of experiencing distress. In addition, problem-focused coping may be negatively associated with psychological distress as it requires individuals to set and accomplish goals. As a consequence individuals are provided with a sense of mastery and control, thus reducing their anxiety and stress (Folkman, 1997).
Research has also shown that problem-focused coping is adaptive in uncontrollable situations as it provides individuals with a sense of mastery and gain (Folkman, 1997). For example, an ill individual may feel an increased sense of mastery and reduced stress as a consequence of exploring different treatment options. Folkman (1997) found in a study of 314 men caring for a dying partner that participants experienced an increase in mood once they engaged in problem-focused coping. In addition, Folkman showed that participants were more inclined to engage in problem-focused coping closer to their partner’s death as they needed to feel an increased sense of control. Folkman’s study suggests that problem-focused coping is negatively associated with psychological distress as it empowers individuals and allows them to set and achieve small goals in situations where they have little control. Crockett et al. (2007) found that specific problem-focused strategies such as planning and problem-solving were negatively associated with depressive symptoms. These findings suggest that active coping styles are the most effective at reducing depressive symptoms.

The research surrounding avoidance-focused coping has produced mixed findings, with some studies showing it to be associated with increased distress and others decreased distress.

Avoidant coping has also been associated with increased psychological distress in nonclinical populations such as the general population (Wijndaele et al., 2007) and university samples. Penland et al. (2000) found in their university study that participants experienced greater depressive symptoms when they engaged in an avoidant coping style such as wishful thinking. Crockett et al’s (2007) study also revealed strong positive associations between avoidant coping and psychological distress. Participants were shown to have increased symptoms of anxiety and
depression when they engaged in avoidant coping, as opposed to participants that engaged in problem-focused coping.

As Endler and Parker (1994) have noted, coping strategies are intricately related to an individual's approach to stressful life events. Specific coping styles can either promote physical and mental health or exacerbate illness (cf. Clark & Hovanitz, 1989; Endler & Parker, 1990a, 1990b, 1994; Suls & Fletcher, 1985; Summerfeldt & Endler, 1996). Windle and Windle (1996) have noted "the positive and negative influences that different coping responses may exert on adaptation" (p. 551). In general, task- or problem-focused coping styles are positively related to adaptation and good health; emotion-focused coping styles are negatively related to adaptation and good health (cf. Compas, Malcarne, & Fondacaro, 1988; Endler & Parker, 1994).

The results regarding the relationship between avoidance-focused coping and adaptation are equivocal. This is due to a number of factors, including the fact that avoidance has been defined differently across various studies, and some investigators (e.g., Endler & Parker, 1990a, 1994) have found two subcomponents to avoidance: distraction and social diversion. For example, Endler and Parker (1990a) found that although distraction correlated positively with social symptomatology, there was no relationship between social diversion and social symptomatology. Depression correlated negatively with social diversion, but it showed no relationship to distraction. There may also be a temporal factor that has not yet been investigated systematically. For example, if one has a heart attack, it is not adaptive to ignore or avoid this. While in the hospital, it may be adaptive to avoid focusing on the heart attack and instead focus on recouping one's energy and getting better. However, the avoidance behaviour may be maladaptive if, in the long term, a person continues to avoid confronting the problem and does not change his or her lifestyle.
Cosway, et al. (2000) found a significant negative correlation between GHQ-Total and problem-focused \( (r = -0.17, p < 0.01) \), a significant correlation positive between GHQ-Total and emotion-focused \( (r = 0.46, p < 0.01) \), and didn’t find significant relationship between GHQ-Total and avoidance-focused coping strategies \( (r = 0.10, p > 0.05) \) in 730 Scottish consultant doctors and farmers.

Altogether result of this study showed that emotion-focused and problem-focused coping strategies are predictor variables for mental health similar finding were reported by (Ben-zur, 1999; Billings & Moos, 1984; Bouteyre et al., 2007; Carver et al., 1989; Crockett et al., 2007; Knibb & Horton, 2008; Lazarus, 1966; Penland et al., 2000; Sherbourne et al., 1995; Wijndaele et al., 2007).

Also the result of this study showed that avoidance-focused coping strategies is not predictor variable for mental health similar finding was reported by (Cosway et al., 2000) but some researchers found positive coloration between avoidance coping strategies and mental disorders for example (Crockett et al., 2007; Wijndaele et al., 2007).

**Second Hypothesis**

Students who attribute positive events to internal, stable and global causes would have significantly better mental health than students who attribute positive events to external, unstable and specific causes.

Responding to this hypothesis the stepwise regression was applied for students of India and Iran and total sample of both countries. Mental health is as criterion variable and internal-external, stable-unstable and global-specific are as the predictor variables. Stable-unstable causal attribution accounted for 9% of the variance in step 1, internal-external causal attribution accounted for 2.1% of the variance in step 2.
Collectively these variables accounted for 11.1% of the variance in mental health in Indian students. In the regression, stable unstable causal attribution was first important predictor ($\beta = -0.205$, $p = 0.001 < 0.01$) and internal-external causal attribution ($\beta = -0.168$, $p = 0.004 < 0.01$) was second significant predictor, and the third predictor variable was the global-specific causal attribution that did not emerge as significant predictor for mental health. Also, in Iranian students accounted for stable unstable causal attribution accounted for 11.5% of the variance in step 1, internal-external causal attribution accounted for 1.2% of the variance in step 2. Collectively these variables accounted for 12.7% of the variance in mental health in Iranian students. In the regression, stable unstable causal attribution was first important predictor ($\beta = -0.210$, $p = 0.004 < 0.01$) and internal-external causal attribution ($\beta = -0.169$, $p = 0.020 < 0.01$) was second significant predictor, and the third predictor variable was the global-specific causal attribution that did not emerge as significant predictor for mental health. In total sample Stable unstable causal attribution accounted for 9.7% of the variance in step 1, internal external causal attribution accounted for 1.3% of the variance in step 2. Collectively these variables accounted for 11% of the variance in mental health. In the regression, stable-unstable causal attribution was first important predictor ($\beta = -0.201$, $p = 0.000 < 0.01$) and internal-external causal attribution ($\beta = -0.158$, $p = 0.001 < 0.01$) was second significant predictor, and the third predictor variable was the global-specific causal attribution that did not emerge as significant predictor for mental health in total sample.

The ASQ (Attributional Style Questionnaire) assumes that an individual’s attributional style (i.e., pessimistic or optimistic) determines the type of cause the person uses to explain an event (Anderson & Deuser, 1991; Maher & Nordstrom, 1996; Peterson, 1991a, 1991b; cf. Lefcourt, von Baeyer, Ware, & Cox, 1979; Rotter, 1954).
Indeed, Schulman et al. (1989) have suggested that “the reality of a situation may be irrelevant to individual differences in explanatory style” (p. 508). However, it is also well known that the type of cause a person uses to explain an event may be strongly determined by the event itself (e.g., Anderson, 1983a, 1985; Higgins et al., 1999; Weiner, 1986). This apparent contradiction is, in essence, a recasting of the “person–situation debate”; that is, to what extent are people’s causal explanations of events determined by individual differences (attributional styles), and to what extent are they determined by the events (situations) themselves? In the reformulated learned helplessness model, an optimist should theoretically generate internal, stable, and global causes (e.g., high ability) for positive events and external, unstable, and specific causes (e.g., task difficulty) for negative events. A pessimist, in contrast, should generate external, unstable, and specific causes (e.g., luck) for positive events and internal, stable, and global causes (e.g., low ability) for negative events (Abramson et al., 1978). This pattern should be present not only in the causal dimension ratings but also in the causes used to explain the events (Peterson & Seligman, 1987; cf. Peterson, Luborsky, & Seligman, 1983). In other words, a pessimist’s relatively internal, stable, and global causal dimensional ratings for negative events should be accompanied by a higher frequency of internal, stable, and global types of causal explanations (e.g., ability or trait) for the negative events. In contrast, an optimist’s relatively external, unstable, and specific causal dimensional ratings for negative events should be accompanied by a higher frequency of external, unstable, and specific types of causal explanations (e.g., others or circumstances) for the negative events. Pessimists are more likely than optimists to display helplessness deficits when they experience a negative event (Schulman, Castellon, & Seligman, 1989). Attributional styles have been demonstrated to play a mediating role between negative events and problems in living,
such as depression (Sweeney, Anderson, & Bailey, 1986), loneliness (Anderson, 1983b), and shyness (Alfano, Joiner, & Perry, 1994). For example, a pessimistic as appears to increase the risk for depression through the negative impact of the attributions on self-esteem (locus attributions) and expectations about future events (stability and globality attributions; Peterson & Seligman, 1984).

The finding that positive attribution to internal, stable and global causes was negatively associated with mental GHQ-Total confirms hypothesis 2 and is consistent with past research. Needles and Abramson (1990) found that explanatory style for positive events may assist recovery from depression in those people who experience positive life events. Specifically, they found that those students from their sample who showed elevated levels of hopelessness and depression at the beginning of the study, but also had a positive explanatory style for positive events, showed marked decreases in hopelessness when positive events occurred (and/or negative events did not), and this was accompanied by remission of depressive symptoms (Needles & Abramson, 1990). While alternative explanations are possible, this study suggests that the hopelessness model of depression may also provide a model for recovery from depression (Needles & Abramson, 1990). The authors highlight the fact that a combination of positive explanatory style and positive events may be important in recovery from depression, in contrast to earlier research which had concentrated on negative events and negative explanatory style in the onset of depression (Needles & Abramson, 1990).

A recent review of nine prospective studies of adolescents examining the stress-vulnerability aspect of the hopelessness, depression theory found general support for the interaction of life events and explanatory style in predicting depression (Lakdawalla, Hankin, & Mermelstein, 2007).
Research on attributional style for positive events suggests that only the internality externality dimension differs among trauma survivors with and without PTSD. Ginzburg et al. (2003) reported that veterans with PTSD were more likely to attribute success to external factors. Similarly, Mikulincer and Solomon (1988), using a sample of Israeli soldiers with and without PTSD, found that veterans with PTSD made more external attributions for positive events. Because attributional style for positive events does not carry obvious implications for understanding how people tend to respond to traumatic events, many PTSD researchers only focus on attributional style for negative events (e.g., Gray et al., 2003; Wenninger & Ehlers, 1998).

The answer to the seconded hypothesis, result of this research showed that there is a significant negative correlation between GHQ-Total and causal attribution (internal-external, stable-unstable, global-specific) for positive events in all sample groups. Similar finding were reported by Abramson et al (1978), Peterson & Seligman (1987), cf. Peterson, Luborsky, & Seligman, (1983) for some mental disorders like depression. Also (stable-unstable and internal-external) are predictor variable for mental health in stepwise multiple linear regression.

**Third Hypothesis**

Students who attribute negative events to external, unstable and specific causes would have significantly better mental health than students who attribute negative events to internal, stable and global causes.

Responding to this hypothesis the stepwise regression was applied for students of India and Iran and total sample of both countries. Mental health is as criterion variable and internal-external, stable-unstable and global-specific are as the predictor variables. Global-specific causal attribution accounted for 4.3% of the variance in step
1, stable-unstable causal attribution accounted for 1.7% of the variance in step 2. Collectively these variables accounted for 6% of the variance in mental health in Indian students. In the regression, global-specific causal attribution was first important predictor ($\beta = 0.147, p = 0.006 < 0.01$) and stable-unstable causal attribution ($\beta = 0.143, p = 0.008 < 0.01$) was second significant predictor, and the third predictor variable was the internal-external causal attribution that did not emerge as significant predictor for mental health. Also, in Iranian students accounted for global-specific causal attribution accounted for 8.2% of the variance in step 1, stable-unstable causal attribution accounted for 1.6% of the variance in step 2. Collectively these variables accounted for 9.8% of the variance in mental health in Iranian students. In the regression, global-specific causal attribution was first important predictor ($\beta = 0.212, p = 0.000 < 0.01$) and stable-unstable causal attribution ($\beta = 0.149, p = 0.007 < 0.01$) was second significant predictor, and the third predictor variable was the internal-external causal attribution that did not emerge as significant predictor for mental health. In total sample global-specific causal attribution accounted for 6.1% of the variance in step 1, stable-unstable causal attribution accounted for 1.8% of the variance in step 2. Collectively these variables accounted for 7.9% of the variance in mental health. In the regression, global-specific causal attribution was first important predictor ($\beta = 0.178, p = 0.000 < 0.01$) and stable-unstable causal attribution ($\beta = 0.151, p = 0.000 < 0.01$) was second significant predictor, and the third predictor variable was the internal-external causal attribution that did not emerge as significant predictor for mental health in total sample.

The finding that negative attribution to external, unstable and specific causes was positively associated with GHQ-Total confirms hypothesis 3 and is consistent with past research.
According to the reformulated learned helplessness model (Abramson, Seligman, & Teasdale, 1978), persons with certain causal attributional styles for negative life events are prone to depression. Specifically, people who explain bad events in a global, internal, and stable fashion tend to become depressed when negative life events occur whereas those who attribute the events to specific, external, and unstable factors are less prone to depression. Research has been conducted to test the diathesis-stress component of the hopelessness theory in terms of how individuals make attributions regarding negative life events (Metalsky, Halberstadt, & Abramson, 1987). Specifically, it was hypothesized that persons who attributed negative life events to global, stable causes would be more prone to experience depressive symptoms following a negative life event. Thus, specific attributional diatheses (global, stable attributional styles) would precipitate the onset and facilitate the maintenance of depressive symptoms following exposure to stressors or negative life events (Metalsky et al., 1987). Using an undergraduate sample, attributional style was initially assessed. Depressive symptoms were then assessed at several time intervals: before, during, and after the students received their midterm grades. Individuals who endorsed stable, global explanatory styles were found to have more lasting depressive symptoms in reaction to poor performance than those with unstable, specific attributional styles. This finding was replicated in subsequent research on the interaction of attributional style and failure (Metalsky, Jomer, Hardin, & Abramson, 1993).

Former research has not explored the relationship between anxiety and attributional style. Only a few studies have examined the relationship between anxiety and attributional style (Ahrens & Haaga, 1993; Heimberg, Klosko, Dodge, Shadick, Becker, & Barlow, 1989; Heimberg, Vermilyea, Dodge, Becker, & Barlow, 1987).
The relationship between trait anxiety and children’s causal attributions has also been studied. Rodriguez and Routh (1989) investigated the relationship between anxiety and attributional style among learning disabled and non-learning disabled elementary school students. Using the Children’s Attributional Style Questionnaire (CASQ; Kaslow et al., 1984) to measure attributional style, the researcher found that anxiety was significantly associated with negative attributional style among both learning disabled and non-learning disabled groups. In another study, Bell-Dolan and Last (1990) found that trait anxiety and anxiety disorders in children were significantly correlated with negative attributional style. In particular, children with anxiety disorders made significantly more negative attributions (internal, stable, global) for negative events than did normal. Thus, there is a meaningful relationship between trait anxiety and children’s attributional style.

In a cross-sectional study of 466 college students, Reardon and Williams (2007) found that pessimistic explanatory style was associated with both anxiety and depressive symptoms, and suggest that this may reflect both helplessness (for anxiety symptoms) and hopelessness (for depressive symptoms). Ciarrochi and Heaven (2008) suggest that a pessimistic explanatory style combined with low social support may lead to ‘learned social hopelessness’ in which adolescents develop negative beliefs about their capacity to make friends and obtain support from others. Their research found that social support and explanatory style influenced each other over time, and that this relationship could not be explained by self-reported sadness or peer ratings of likeability (Ciarrochi & Heaven, 2008). This result is interesting in light of the link between low social support and depression (e.g., Stice, Ragan, & Randall, 2004).

Some researchers have found a relationship between depressogenic inferential style (more internal, stable, and global attributions for negative events) and PTSD. In a
study of veterans who were receiving treatment for alcohol dependence and gambling addictions, McCormick, Taber, and Kruegichbach (1989) found that patients who had PTSD were more likely to explain causes for negative events in ways that were more internal, stable, and global than patients without PTSD. Several other studies, however, have not found a relationship between depressogenic attributional style and PTSD. In a study of college students who survived the Northridge earthquake in California in 1994, students who tended to attribute negative events to internal, global, and stable causes were more likely to experience emotional distress but were not more likely to be diagnosed with PTSD than those students without this depressogenic attributional style (Greening, Stoppelbein, & Docter, 2002). Similarly, findings from the Temple-Wisconsin Cognitive Vulnerability to Depression Project suggested that a negative attributional style characterized by more internal, stable, and global attributions for negative events was a cognitive risk factor for depression but not PTSD (Alloy, Abramson, Hogan, Whitehouse, Rose, Robinson, Kim, & Lapkin, 2000).

Other studies have found support for the relationship between specific dimensions of attributional style and PTSD. Runyon and Kenny (2002) found that, among children who had been sexually abused, those with PTSD were more likely to make internal attributions for negative events than those sexually abused children without PTSD. Wenninger and Ehlers (1998) found that adult survivors of childhood sexual abuse were more likely to make internal, stable, and global attributions for negative events than those who were not abused, but only the globality dimension was significantly related to the severity of PTSD symptoms among abuse survivors. Some studies suggest that veterans with PTSD tend to make more stable attributions for negative events than those without PTSD (Ginzburg, Solomon, Dekel, & Neria, 2003; Mikulincer & Solomon, 1989), but others have not found this relationship (Mikulincer
& Solomon, 1988; Wenninger, 1998). Studies that have included the controllability dimension of attributional style have consistently found that trauma survivors with PTSD tend to attribute negative events to uncontrollable causes (e.g., physical ability to fend off an attacker), whereas trauma survivors without PTSD are not as likely to show this tendency (Ginzburg et al., 2003; Kushner, Riggs, Foa, & Miller, 1992; Mikulincer & Solomon, 1988; 1989).

The answer to the third hypothesis, result of this research showed that there is a significant positive correlation between GHQ-Total and causal attribution (internal-external, stable-unstable, global-specific) for negative events in all sample groups. Similar finding were reported by Metalsky et al., (1987), Abramson, Seligman, & Teasdale (1978) Kaslow et al., (1984) Bell-Dolan and Last (1990) for some psychological problems like depression and etc. Also in this study (global-specific and stable-unstable) are predictor variable for mental health in stepwise multiple linear regression. Abramson et al. (1989) cite a number of previous studies demonstrating that the stable/unstable and global/specific factors are more predictive of hopelessness depression (a broad subtype of depression believed to be precipitated by maladaptive cognitions) than overall indices of attributional style (that combine the internal, stable and global dimensions).

**Fourth Hypothesis**

Students who have higher self-esteem would have significantly better mental health than students who have lower self-esteem.

Responding to this hypothesis the inter regression was applied for students of India and Iran and total sample of both countries. Mental health is as criterion variable and self-esteem is as the predictor variables. Self-esteem accounted for 17.6% of the
variance in mental health in Indian students ($\beta = -0.420$, $p = 0.000 < 0.01$). Also, in Iranian students self-esteem accounted for $0.32.6\%$ of the variance in mental health. ($\beta = -0.571$, $p = 0.000 < 0.01$).

In total sample self-esteem accounted for $0.26\%$ of the variance in mental health ($\beta = -0.510$, $p = 0.000 < 0.01$).

The finding that self-esteem was negatively associated with GHQ-Total confirms hypothesis 4 and is consistent with past research. The relationship between self-esteem and depression is clear, with research repeatedly finding a relationship such that low self-esteem is related to depression, or alternatively, that high self-esteem is related to positive affect (Baumeister et al., 2003). Benetti and Kambouropoulos (2006) found that negative and positive affect mediated the effect of trait anxiety and resilience on self-esteem among 240 young adults. The most recent of these studies by Trzesniewski et al. (2006) found both cross-sectional and longitudinal relationships between self-esteem and mental health. Firstly, they found a cross-sectional relationship during adolescence, with low self-esteem participants twice as likely to meet criteria for a major depressive episode (using a diagnostic interview). Secondly, they found that participants with low self-esteem in adolescence were more likely to meet diagnostic criteria for both anxiety (1.6 times) and depression (1.26 times) in adulthood, even when controlling for adolescent depression. This is a convincing study given the large sample size (978), long duration (11 years), and use of diagnostic interviews rather than symptom scales. In a cross-sectional study of 224 adolescents, Byrne (2000) found a significant negative correlation between self-esteem and anxiety. Bolognini, Plancherel, Bettshart and Halfon (1996) found that lower self-esteem was related to both anxiety and depressive symptoms.
Byrne (2000) using an Australian sample of 150 high school students also found higher self-esteem amongst boys, and an association between low self-esteem and increased levels of anxiety and fear. As discussed above, Trzesniewski et al. (2006) also found a link between low self-esteem in adolescence and anxiety disorders in adulthood.

In summary, there is clear evidence for a relationship between self-esteem and depression. There is also some evidence for a relationship between self-esteem and anxiety, and some other mental disorders.

**First Research Question**

Is there significant difference between the mean scores of coping strategies (problem focused, emotion focused and avoidance focused) betwixt Iranian and Indian students?

For responding to this question independent sample t-test has been applied. The results showed that there is significant difference ($p = 0.000 < 0.01$), between two groups i.e. Indian students have higher mean scores (problem focused $M = 58.65$, emotion focused $M = 50.53$, avoidance focused $M = 52.05$) and showed greater problem focused, emotion focused and avoidance focused coping strategies in comparison to their Iranian counterparts i.e. (problem focused $M = 50.88$, emotion focused $M = 46.48$, avoidance focused $M = 43.40$).

In literature review not a single study found by the researcher till date and knowledge on coping strategies betwixt Iranian and Indian students. So this study may work as a midnight lamp for future researches.

This study shows that Indian students have higher mean scores in comparison to their Iranian counterparts. In other words Indian students reported that they use all 3
kinds of useful and harmful coping strategies more than Iranian students. These significant differences may be interpreted by environmental and cultural differences, or can show higher stress perception among Indian sample that is higher stress should be moderated by all coping strategies.

**Second Research Question**

Is there significant difference between the mean scores of attributional positive events (internal-external, stable-unstable, and global-specific) betwixt Iranian and Indian students?

In order to examine the second question independent sample t-test has been applied. The result showed that there is significant difference in two variables (internal-external, p = 0.000 < 0.01), (stable-unstable, p = 0.000 < 0.01) between two groups. But there is no significant difference in one variable (global-specific, p = 0.564 > 0.05) between two groups. That is Indian students have higher mean scores (internal-external M = 29.87, stable-unstable M = 30.17) and showed greater internal-external and stable-unstable in comparison to their Iranian (internal-external M = 27.48, stable-unstable 28.27) counterparts.

In literature review not a single study found by the researcher till date and knowledge on attribution causal betwixt Iranian and Indian students. So this study may work as a midnight lamp for future researches.

This study shows that Indian students have higher mean scores in comparison to their Iranian counterparts. In other words Indian students reported that they use 2 kinds of attributional positive events (internal-external, stable-unstable) more than Iranian students. These significant differences may be interpreted by environmental and cultural differences.
Third Research Question

Is there significant difference between the mean scores of attributional negative events (internal-external, stable-unstable, and global-specific) betwixt Iranian and Indian students?

To ascertain the answer of this question independent t-test has been applied. The result showed that there is significant difference in one variables (internal-external, \( p = 0.000 < 0.01 \)) between two groups. But there is not significant difference in two variable (stable-unstable, \( p = 0.596 > 0.05 \), global-specific, \( p = 0.105 > 0.05 \)) between two groups. That is Iranian students have higher mean scores (M = 26.20) showed greater internal-external in comparison to their Indian counterparts (M = 24.35).

In literature review not a single study found by the researcher till date and knowledge on attribution causal strategies betwixt Iranian and Indian students. So this study may work as a midnight lamp for future researches.

Fourth Research Question

Is there significant difference between the mean scores of self-esteem betwixt Iranian and Indian students?

For answering to this question independent sample t-test has been applied. The result showed that there is significant difference (\( p = 0.017 < 0.05 \)), between two groups. That is Iranian students have higher mean scores (M = 32.07) showed greater self esteem in comparison to their Indian counterparts (M = 30.73).

In literature review not a single study found by the researcher till date and knowledge on self-esteem strategies betwixt Iranian and Indian students. So this study may work as a midnight lamp for future researches.
This study shows that Iranian students have higher mean scores in comparison to their Indian counterparts. In other words self esteem will shape in developmental processes of childhood. The relationships between baby and his/her mother or mother substitute has a vital effect on producing of self esteem.

**Fifth Research Question**

Is there significant difference between the mean scores of mental health betwixt Iranian and Indian students?

To ascertain the answer of this question independent sample t-test has been applied. The result showed that there is no significant difference ($p = 0.093 > 0.05$), between two groups but Indian students have higher mean scores ($M = 27.29$) showed greater GHQ total in comparison to their Iranian counterparts ($M = 25.75$).

In literature review not a single study found by the researcher till date on mental health strategies betwixt Iranian and Indian students. So this study may work as a guideline for future researches.

This study shows that Indian students have higher mean scores in comparison to their Iranian counterparts. In other words Indian students reported poor mental health than Iranian students. These differences may be interpreted by social-cultural differences between two groups.

**Sixth Research Question**

Is there significant difference between the mean scores of coping strategies (problem focused, emotion focused, and avoidance focused) with consideration of country and gender, simultaneously?

In order to examine the sixth question two way ANOVA has been applied. The result showed, in problem focused, emotion focused and avoidance focused coping
strategies there is not a statistically significant main effect for gender. Also, interaction
effect of gender and country in problem focused and emotion focused are not
statistically significant, but in avoidance focused coping strategies, interaction effect
statistically significant. Indian male and female have reported higher scores on
Avoidance focused Coping Strategies in comparison of Iranian male and female. Also,
Iranian males have reported higher scores on Avoidance focused Coping Strategies in
comparison of Iranian females. Research regarding gender differences in coping
remains equivocal; however, a preponderance of studies suggest that women use more
support-seeking coping than men, and men use more problem-focused coping than
women (e.g., Endler & Parker, 1990; Leong et al., 1997). Research has reported mixed
findings concerning gender differences in the use of coping strategies among children
and adolescents (Byrne, 2000; Compas et al., 2001). Since there are a variety of
definitions and measurements of coping, different stressors, different age groups and
different age ranges, it is difficult to compare different studies on stress and coping.
Therefore, factors that might influence the inconsistencies with regard to gender
differences in coping strategies in children and adolescents should be addressed. Byrne
(2000) found that by the age of 12 years boys and girls were using different coping
strategies. Boys were also more successful in reducing both anxiety and fear. In terms
of the types of coping strategies the most consistent results were found for gender
differences within the three coping strategies: seeking social support (females > males),
problem solving (females > males), and avoidant coping (tendency: males > females),
respectively (Eschenbeck et al., 2007). Studies have also found that adolescent females
reported using a broader range of coping strategies more frequently than did males
(Kausara & Munir, 2004; Patterson & McCubbin, 1987; Wilson, Pritchard & Revalee,
2005). In addition, female adolescents have typically reported a higher use of seeking
social support as a coping strategy than males (Eschenbeck et al., 2007; Hampel & Petermann, 2005). Several studies have found that boys consistently use more avoidance coping strategies, and girls use significantly more approach coping strategies (Causey & Dubow, 1992; Hamid et al., 2003; Herman-Stahl, Stemmler & Petersen, 1995). Boys tended to use blaming self/others and avoidance strategies more often whilst girls tended to rely on social resources more often when encountering problems (Hamid et al., 2003). Chapman and Mullis (1999) found that female adolescents scored higher than males in terms of the coping strategies of self-reliance, social support, seeking spiritual support, and engaging in demanding activities. Result of this study showed that Iranian males have reported higher scores on Avoidance focused Coping Strategies in comparison of Iranian females. Similar finding was reported by (Causey & Dubow, 1992; Hamid et al., 2003; Herman-Stahl, Stemmler & Petersen, 1995).

**Seventh Research Question**

Is there significant difference between the mean scores of attributional positive events (internal-external, stable-unstable, and global-specific) with consideration of country and gender, simultaneously?

For responding to this question two way ANOVA has been applied. The result showed, in internal-external, stable-unstable and global-specific there are a statistically significant main effect for gender, That is females have reported higher scores on internal-external, stable-unstable, global-specific Positive Events in comparison of male counterparts. Also, interaction effect of gender and country in internal-external and global-specific are statistically significant. Indian male and female and Iranian female have reported higher scores on internal-external positive events in comparison of Iranian male. Also Indian and Iranian female have reported higher scores on global-
specific of positive events in comparison of Iranian male. Different cultures may use different attributional style to explain events (Fletcher & Ward, 1988). Even if the same attribution, such as luck, is used within two cultures, the connotations of that attribution may differ across those cultures (Kukla, 1988). Thus, it can be concluded that the interactions between persons and environmental variables such as culture are thought to play a significant role in their attributional styles. Although numerous studies have been conducted on attributional style relatively few investigations in recent years have been concerned with cross-cultural differences (e.g., Corenblum, Annis, & Young 1996). Tuss, Zimmer, and Ho (1995) found that Asian students emphasized both stable and unstable effort as more important factors than did the United States students, in which American students valued ability, task difficulty and situational factors, such as mood, more than did Asian students. In another cross-national study, found significant differences in causal attributions for performance between students in Japan and the United States. Japanese students were the most internal in causal ascription for failures and the least internal for success when compared with American students. These investigators also showed that American students believed effort to be more important for success than lack of effort for failure, whereas Japanese students believed that lack of effort is the more likely cause of failure.

**Eighth Research Question**

Is there significant difference between the mean scores of attributional negative events (internal-external, stable-unstable, and global-specific) with consideration of country and gender, simultaneously?

To ascertain the answer of this question two way ANOVA has been applied. The result showed, in internal-external, stable-unstable and global specific causal
Ninth Research Question

Is there significant difference between the mean scores of self-esteem with consideration of country and gender, simultaneously?

For answering to this question two way ANOVA has been applied. The result showed, in self-esteem there is a statistically significant main effect for gender i.e. Iranian female has reported higher scores on self-esteem in comparison of Indian male. Also, interaction effect of gender and country in self-esteem is not statistically significant. Several researchers have concluded that gender is weakly related to global self-esteem (e.g., Basow, 1986; Hattie, 1992; Marsh & Ayotte, 2003). Feingold (1994) conducted two meta-analyses. In the first meta-analysis, Feingold re-analysed studies that been included in the classic narrative review by Maccoby and Jacklin (1974). Feingold’s quantitative analysis supported Maccoby and Jacklin’s earlier qualitative finding: there was no significant difference between males and females. However, this finding may have been masked by averaging out age differences, because in sub-analyses Feingold noted that female children had higher self-esteem than male children, but male adolescents and adults had higher self-esteem than female adults and adolescents (although in both cases the effects were very small). Feingold (1994) also conducted a replication of a previous meta-analysis, which included a more up-to-date
sample of studies reporting self-esteem gender differences. Feingold found that, for this set of studies, the mean effect size was .16, suggesting a small but significant sex difference in global self-esteem favouring males. Thus, overall, Feingold concluded that sex differences in global self-esteem favoured males, but only to a very small extent. Like Feingold's (1994) finding (based on the Maccoby & Jacklin, 1974, re-analysis) that younger females have higher self-esteem than males but lower as adults, some researchers (e.g., Wylie, 1979; Hyde, 2005) have concluded that there is no evidence for gender differences in general self-esteem, or that differences are so small as to be negligible or unimportant. In a recent review of meta-analyses of gender differences, Hyde (2005) emphasised that males and females are more similar than different on most variables. She argued that over-inflated interpretations of small gender differences can do much harm and lead to counter-productive policies. (As a side note, it is interesting that this theory, which she termed the Gender Similarities Hypothesis, emanated from a review of meta-analytic research on the topic; Hyde, 2007).

**Tenth Research Question**

Is there significant difference between the mean scores of mental health with consideration of country and gender, simultaneously?

For responding to this question two way ANOVA has been applied. The result showed, in mental health there is not a statistically significant main effect for gender. Also, interaction effect of gender and country in mental health is not statistically significant.

Some researches address the potential difference in general mental health reported by men and women. The empirical literature on stress and coping is replete
with findings that women report more psychological distress than men (e.g., Hamilton & Fagot, 1988; Higgins Endler, 1995; McDaniel & Richards, 1990). Women will have significantly higher depression scores, as indicated by the Beck Depression Inventory, than men (e.g., Butler & Nolen-Hoeksema, 1994). It was hypothesized that men and women would report different levels of psychological distress with women reporting more distress than men. However, analyses indicated no consequential gender differences in mental health. This is surprising, given the relatively consistent finding in the literature that women consistently report higher levels of mental disorders than men (e.g., McDaniel & Richards, 1990; Nolen-Hoeksema, 1990).

5.1 Limitation of the present research

As with any research, this study has limitations to consider. First, the population from which the research sample was drawn consisted of students from only one university. The results from this study, therefore, provide only a template on which to base further research and cannot be applied to the general populations of either student.

The readers must remember that the makeup of the population of university students changes every year due to graduation, attrition and admission. In order for the recommendations based on the study to remain valid, the perceptions of this population must be re-evaluated after every few years to ensure that any changes within the population are reflected in appropriate changes in the interventions that are offered. If patterns within certain populations can be discovered through this continued evaluation, however, then it may be appropriate to establish general perceptions to provide a preliminary structure on which to frame future interventions.

The most significant limitation of this study was that the data for all variable included in this study were collected via participants self report. Although self report of
participant is a common way of collecting data in social sciences (Kline, Sulskey and Rever-moriyaman, 2000), the use of such data of collection for the only assessment of mental health is criticized for two major reasons: the inferences made by the research as to correlation and causal relationship between the variable under investigation might be artificially inflated by the problem of common method variance and secondly, studies involving self-report data are prone to response biases which need to be acknowledged and understood when interpreting results (Donaldson and Grant-Vallone, 2002).

Contamination through common method may have occurred in this study as a result of the fact that all measures were assessed using the same paper and pencil response format. The problem with common method variance in correlational investigations is that in addition to the relationship calculated by the correlation coefficient, some of this correlation coefficient may be measuring a false relationship, meaning, that the correlation between variables is estimated as higher than is actually true to the same response bias being applied by the participants to each measure in the questionnaire battery (Kline et al. 2000). Therefore, it is possible that the relationship observed and reported in this study have been slightly inflated due to common methods variance. One way to control for this bias in future research would be to use different versions of the questionnaire batteries, where the items are ordered differently, to detect order effects. Although this does not completely eradicate common method variance, it would provide the researcher with an indication of its effect and possibly allow them to control for this type of biasness in research.

**5.2 Further research suggestions**

Despite the spurt of research work in the field of positive psychology especially mental health, there are some areas that need to be explored further in order to gain better understanding of the phenomena:
➢ The awareness of risk factor associated with positive psychology.

➢ Research on the role of psychological and behavioral factors in the management of mental health must be expanded. For example, the role of hardiness, quality of life, self concept etc.

➢ It would be better to use large samples.

➢ An important research area concerns how the teacher's and student's kith and kin view their health.
REFERENCES


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References


Runyon, M. K., & Kenny, M. C. (2002). Relationship of attributional style, depression, and post trauma distress among children who suffered physical or sexual abuse.


APPENDICES
Appendix A: Personal data sheet

Age.................................................................

Gender..........................................................

Academic Level .............................................

Marital Status ..............................................
**Appendix B: Coping Inventory for Stressful Situations**

**Instructions:** The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a number from 1 to 5 for each item. Indicate how much you engage in these types of activities when you encounter a difficult, stressful, or upsetting situation.

It is important that you try to answer **ALL** the questions.

Thank you very much for your cooperation.

<table>
<thead>
<tr>
<th>Not at All</th>
<th>Very Much</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>Not at All</td>
<td>Very Much</td>
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</tr>
<tr>
<td>1 2 3 4 5</td>
<td>23. Go to party.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>24. Work to understand the situation.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>25. “Freeze” and not know what to do.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>26. Take corrective action immediately.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>27. Think about the event and learn from my mistakes.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>28. Wish that I could change what had happened or how I felt.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>29. Visit a friend.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>30. Worry about what I am going to do.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>31. Spend time with a special person.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>32. Go for a walk.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>33. Tell myself that it will never happen again.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>34. Focus on my general inadequacies.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>35. Talk to someone whose advice I value.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>36. Analyze my problem before reacting.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>37. Phone a friend.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>38. Get angry.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>39. Adjust my priorities.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>40. See a movie.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>41. Get control of the situation.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>42. Make an extra effort to get things done.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>43. Come up with several different solutions to the problem.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>44. Take some time off and get away from the situation.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>45. Take it out on other people.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>46. Use the situation to prove that I can do it.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>47. Try to be organized so I can be on top of the situation.</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>48. Watch TV.</td>
</tr>
</tbody>
</table>
Appendix C: Attributional Style Questionnaire

Instructions:
1. Read each situation and vividly imagine it happening to you.
2. Decide what you believe would be the one major cause of the situation if it happened to you.
3. Write this cause in the blank provided.
4. Answer three questions about the cause by circling one number per question. Do not circle the words.
5. Go on the next situation.

Situations;
You meet a friend who compliments you on your appearance.
1. Write down the one major cause

2. Is the cause of your friend’s compliment due to something about you or something about other people or circumstances?
   Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

3. In the future when you are with your friend, will this cause again be present?
   Will never again be present. 1 2 3 4 5 6 7 will always be present.

4. Is the cause something that just affects interacting with friends, or does it also influence other areas of your life?
   Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You have been looking for a job unsuccessfully for some time.
5. Write down the one major cause

6. Is the cause of your unsuccessful job search due to something about you, something about other people or circumstances?
   Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

7. In the future when you look for a job, will this cause again be present?
   Will never again be present. 1 2 3 4 5 6 7 will always be present.

8. Is the cause something that just influences looking for a job, or does it also influence other areas of your life?
   Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You become very rich.
9. Write down the one major cause

10. Is the cause of your becoming rich due to something about you, something about other people or circumstances?
    Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.
11. In your financial future, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

12. Is the cause something that just affects obtaining money, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

A friend comes to you with a problem and you don’t to help him/her.
13. Write down the one major cause.................................................................

14. Is the cause of your not helping your friend due to something about you, or something about other people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

15. In the future when a friend comes to you with a problem, will this cause again present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

16. Is the cause something that just affects what happens when a friend comes to you with a problem, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You give an important talk in front of a group and the audience reacts negatively.
17. Write down the one major cause.................................................................

18. Is the cause of the audience’s negative reaction due to something about you, something about other people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.
19. In the future when you give talks, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

20. Is the cause something that just influences giving talks, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You do a project which is highly praised.
21. Write down the one major cause.................................................................

22. Is the cause of your being praised due to something about you, something about other people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

23. In the future when you do a project, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.
24. Is the cause something that just affects doing projects, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You meet a friend who acts hostility towards you.
25. Write down the one major cause.................................................................

26. Is the cause of your friend acting hostile due to something about you or something about people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

27. In the future when interacting with friends, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

28. Is the cause something that just influences interacting with friends, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You can’t get all the work done that others expect of you.
29. Write down the one major cause.................................................................

30. Is the cause of your not getting the work done due to something about you or something about other people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

31. In the future when doing that others expect, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

32. Is the cause something that just affects doing work that others expect of you, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

Your friend has been treating you more lovingly.
33. Write down the one major cause.................................................................

34. Is the cause of your friend treating you more lovingly due to something about you or something about other people or circumstances?
Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

35. In future interactions with your friend, will this cause again be present?
Will never again be present. 1 2 3 4 5 6 7 will always be present.

36. Is the cause something that just affects how your friends treats you, or does it also influence other areas of your life?
Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations.
You apply for a position that you want very badly (e.g. important job, graduate school admission, etc.) and you get it.

37. Write down the one major cause...

38. Is the cause of your getting the position due to something about you or something about other people or circumstances?
   Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

39. In the future when you apply for a position, will this cause again be present?
   Will never again be present. 1 2 3 4 5 6 7 will always be present.

40. Is the cause something that just influences applying for a position or does it also influences other areas of your life?
   Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You go out on a tour and it goes badly.

41. Write down the one major cause...

42. Is the cause of the tour going badly due to something about you or something about other people or circumstances?
   Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

43. In the future when you go out on a tour, will this cause again be present?
   Will never again be present. 1 2 3 4 5 6 7 will always be present.

44. Is the cause something that just influences tour, or does it also influence other areas of your life?
   Influences just this particular situation. 1 2 3 4 5 6 7 Influences all situations in my life.

You are awarded a prestigious scholarship.

45. Write down the one major cause...

46. Is the cause of your getting a scholarship due to something about you or something about other people or circumstances?
   Totally due to other people or circumstances. 1 2 3 4 5 6 7 totally due to me.

47. In the future in your academic career, will this cause again be present?
   Will never again be present. 1 2 3 4 5 6 7 will always be present.

48. Is this cause something that just affects getting a scholarship, or does it also influence other areas of your life?
   Influences just this particular situation. 1 2 3 4 5 6 7 influences all situations in my life.
## Appendix D: Self-Esteem Inventory

**Instructions:** Please, read each of the following statements; check the “like me” column if it describes how you usually feel and the “unlike me” column if it does not describe how you usually feel.

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Like me</th>
<th>Unlike me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I spend a lot of time daydreaming.</td>
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</tr>
<tr>
<td>2.</td>
<td>I’m pretty sure of myself.</td>
<td></td>
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<tr>
<td>3.</td>
<td>I often wish I were someone else.</td>
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<tr>
<td>4.</td>
<td>I’m easy to like.</td>
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<tr>
<td>5.</td>
<td>My family and I have a lot of fun together.</td>
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<tr>
<td>6.</td>
<td>I never worry about anything.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I find it very hard to talk in front of group.</td>
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</tr>
<tr>
<td>8.</td>
<td>I wish I were younger.</td>
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</tr>
<tr>
<td>9.</td>
<td>There are lots of things about myself I’d change if I could.</td>
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<tr>
<td>10.</td>
<td>I can make up my mind without too much trouble.</td>
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<tr>
<td>11.</td>
<td>I’m a lot of fun to be with.</td>
<td></td>
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<tr>
<td>12.</td>
<td>I get upset easily at home.</td>
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<tr>
<td>13.</td>
<td>I always do the right thing.</td>
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<tr>
<td>14.</td>
<td>I’m proud of my work.</td>
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<tr>
<td>15.</td>
<td>Someone always has to tell me what to do.</td>
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<tr>
<td>16.</td>
<td>It takes me a long time to get used to anything new.</td>
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<tr>
<td>17.</td>
<td>I’m often sorry for the things I do.</td>
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<tr>
<td>18.</td>
<td>I’m popular with people my own age.</td>
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<tr>
<td>19.</td>
<td>My family usually considers my feelings.</td>
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<tr>
<td>20.</td>
<td>I’m never happy.</td>
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<tr>
<td>21.</td>
<td>I’m doing the best work that I can.</td>
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</tr>
<tr>
<td>22.</td>
<td>I give in very easily.</td>
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</tr>
<tr>
<td>23.</td>
<td>I can usually take care of myself.</td>
<td></td>
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</tr>
<tr>
<td>24.</td>
<td>I’m pretty happy.</td>
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<tr>
<td>25.</td>
<td>I would rather associate with people younger than me.</td>
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<tr>
<td>26.</td>
<td>My family expect too much of me.</td>
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<tr>
<td>27.</td>
<td>I like everyone I know.</td>
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<tr>
<td>Like me</td>
<td>Unlike me</td>
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<tr>
<td>28. I like to be called on when I am in a group.</td>
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<tr>
<td>29. I understand myself.</td>
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<tr>
<td>30. It’s pretty tough to be me.</td>
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<tr>
<td>31. Thing are all mixed up in my life.</td>
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<tr>
<td>32. People usually follow my ideas.</td>
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<tr>
<td>33. No one pays much attention to me at home.</td>
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<tr>
<td>34. I never get scolded.</td>
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<tr>
<td>35. I am not doing as well at work as I’d like to.</td>
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<tr>
<td>36. I can make up my mind and stick to it.</td>
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<td></td>
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<tr>
<td>37. I really don’t like being a man/woman.</td>
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<tr>
<td>38. I have a low opinion of myself.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>39. I don’t like to be with other people.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>40. There are many times when I’d like to leave home.</td>
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</tr>
<tr>
<td>41. I’m never shy.</td>
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<td></td>
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<tr>
<td>42. I often feel upset.</td>
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<tr>
<td>43. I often feel ashamed of myself.</td>
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<tr>
<td>44. I’m not as nice-looking as most people.</td>
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<tr>
<td>45. If I have something to say, I usually say it.</td>
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<tr>
<td>46. People pick on me very often.</td>
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<tr>
<td>47. My family understands me.</td>
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<tr>
<td>48. I always tell the truth.</td>
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<td></td>
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<tr>
<td>49. My employer or supervisor makes me feel I’m not good enough.</td>
<td></td>
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</tr>
<tr>
<td>50. I don’t care what happens to me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. I’m a failure.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52. I get upset easily when I am scolded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. Most people are better liked than I am.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. I usually feel as if my family is pushing me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55. I always know what to say to people.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56. I often get discouraged.</td>
<td></td>
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</tr>
<tr>
<td>57. Things usually don’t bother me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58. I can’t be depended on.</td>
<td></td>
<td></td>
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</tbody>
</table>
Appendix E: General Health Questionnaire

We should like to know if you have had any medical complaints and how your health has been in general, over the past few weeks. Please answer ALL the question on the following pages simply by underlining the answer which you think most nearly applies you. Remember that we want to know about present and recent complaints, not those that you had in the past.

Have you recently:

1. been feeling perfectly well and in good health?
   - Better than usual
   - Same as usual
   - Worse than usual
   - Much worse than usual

2. been feeling in need of a good tonic?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

3. been feeling run down and out of sorts?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

4. felt that you are ill?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

5. been getting any pains in your head?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

6. been getting a feeling of tightness or pressure in your head?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

7. been having hot or cold spells?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

8. lost much sleep over worry?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

9. had difficulty in staying asleep?
   - Not at all
   - Not more than usual
   - Rather more than usual
   - Much more than usual

10. felt constantly under strain?
    - Not at all
    - Not more than usual
    - Rather more than usual
    - Much more than usual

11. been getting edgy and bad-tempered?
    - Not at all
    - Not more than usual
    - Rather more than usual
    - Much more than usual

12. been getting scared or panicky for no good reason?
    - Not at all
    - Not more than usual
    - Rather more than usual
    - Much more than usual

13. found everything getting on top of you?
    - Not at all
    - Not more than usual
    - Rather more than usual
    - Much more than usual

14. been feeling nervous and strung-up all the time?
    - Not at all
    - Not more than usual
    - Rather more than usual
    - Much more than usual

15. been managing to keep yourself busy and occupied?
    - More so than usual
    - Same as usual
    - Rather less than usual
    - Much less than usual

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Have you recently:

16. been taking longer over the things you do?

17. felt on the whole you were doing things well?
1. Better than usual 2. About the same 3. Less well than usual 4. Much less well

18. been satisfied with the way you’ve carried out your task?

19. felt that you are playing a useful part in things?
1. More so than usual 2. Same as usual 3. Less useful than usual 4. Much less useful

20. felt capable of making decisions about things?
1. More so than usual 2. Same as usual 3. Less so than usual 4. Much less capable

21. been able to enjoy your normal day-to-day activities?
1. More so than usual 2. Same as usual 3. Less so than usual 4. Much less than usual

22. been thinking of yourself as a worthless person?
1. Not at all 2. No more than usual 3. Rather more than usual 4. Much more than usual

23. felt that life is entirely hopeless?
1. Not at all 2. No more than usual 3. Rather more than usual 4. Much more than usual

24. felt that life isn’t worth living?
1. Not at all 2. Not more than usual 3. Rather more than usual 4. Much more than usual

25. thought of the possibility that you might make away with yourself?
1. Definitely not 2. I don’t think so 3. Has crossed my mind 4. Definitely

26. found at times you couldn’t do anything because your nerves were too bad?
1. Not at all 2. Not more than usual 3. Rather more than usual 4. Much more than usual

27. found yourself wishing you were dead and away from it all?
1. Not at all 2. Not more than usual 3. Rather more than usual 4. Much more than usual

28. found that the idea of taking your own life kept coming into your mind?
1. Definitely not 2. I don’t think so 3. Has crossed my mind 4. Definitely has

Again, thank you very much for your co-operation.