Stress associated with gaining admission to first-choice colleges has increased dramatically during the past decade in Taiwan (Republic of China) and has become a process charged with anxiety. The purpose of this study was to explore the impact of college entrance exams upon student well-being, based upon the assumption that the Matriculation Examination (TME) for university-level admission is a significant stressor among high school students in the Republic of China (R.O.C.).

It was hypothesized that student self-confidence and levels of social functioning would effect student mood and that there would be a reciprocal relationship between social functioning and self-confidence, each of which would influence college entrance examination scores. Data were collected during the spring of 1995 from 350 senior female students at the leading female high school in Taipei, R.O.C. Selected subjects were asked to complete the Moos (1990) Health and Daily Living Form—Youth at 12 weeks (Time One) and at one week (Time Two) prior to graduation, which was followed within five weeks by the college entrance tests. A total of 316 (Time One) and 321 (Time Two) surveys were completed.

Among the more important results, at Time One confident students reflected more positive moods in coping with examination stress, whereas at Time Two confident students also reflected positive moods in the absence of distress, in contrast to students with less confidence who experienced greater degrees of distress. With respect to social functioning, results indicated that at Time One only friends and integration of school activities were significantly related to positive moods, whereas only schools reflected a negative
relationship to distressed moods. Family relationships did not exercise an important role at either stage.

In addition, self-confidence had no significant relationship to either family or friends, but was significantly related to schools. This finding indicated that highly self-confident students were more likely to participate in school projects or activities, and that greater social integration in school resulted in higher self-confidence. However, self-confidence, social functioning, and mood did not affect student examination grades. The failure to predict actual exam performances indicated that other variables such as academic ability were more important than preparatory coping responses or effective social functioning.
Stress, Personality, and Social Functioning During a Major Stressful Event for High School Female Students in Taiwan

by

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Stress associated with getting into a first-choice college has increased dramatically during the past decade in Taiwan (Republic of China). Choosing the "right" college has become an individual, family, and teacher process that is highly charged with anxiety.

For students in Taiwan, Republic of China (ROC), job opportunities and prospects for future success have traditionally been associated with the status of the universities the students attend. Preparation for entrance examinations begins in the middle high school years, where time is spent in an atmosphere of intense preparation and competition. In Taiwan, the numerous adverse effects of the college entrance examination system have been recognized. The competitive exam system, often referred to as the "examination war," is a war in which both students and their parents become casualties. A large population is thus affected, including students from elementary, junior high, and high school; their parents and teachers; the universities; and the government and private industry. (That is, private instruction provides preparation for a variety of subjects, but is generally used to enhance and reinforce high school classroom materials or to prepare for college entrance examinations; so-called "cram" schools also flourish for the same purposes.)

The competitive atmosphere which results is tied to Chinese culture and character. The notion of avoiding the appearance of lagging behind others is what drives the competition. If others are swimming 100 meters in nine seconds, then you must also swim 100 meters in nine seconds, no matter your personal level of swimming ability. Chinese
competitions are always measured in relative terms, and individual abilities are not assessed using an absolute scale. The “examination” is the relative measure of value that is used to determine the precise and elaborate ranking order of universities which is in turn correlated with the ranking of jobs to be gained four years following matriculation at a university. The formula is as follows: to obtain a good job, attend the right university; to gain admission to the right school, do well on the entrance examinations; and to score well on the exams, study very hard and for many years. Thus testing ultimately determines the quality of life of Chinese students.

It has become obvious that some social problems exist because of the extreme pressure placed upon students to study and compete. In recent years, delinquency rates, instances of violence at junior high school, and suicide rates have all risen. Many students struggle with depression, self-blame, withdrawal, and low self-esteem. To some authorities, it is clear that these problems occur because children have not learned how to deal with adolescent confrontations. Because of the extreme pressure to excel, the time and opportunity to progress normally through the adolescent stages of development is denied to many children (Ogura, 1987).

The adverse effects of this testing process fall into two categories. The first is concerned with the content and adequacy of precollege education, centered upon preparation for the entrance exam. A number of research centers or government-sponsored studies have sought to find ways to mitigate the personal anxieties which have resulted (information in ROC). Nonetheless, the results of these studies have not escaped the philosophical shadow of Darwinian theories of evolution—“survival of the fittest,” or the struggle for survival among all animate life by virtue of the law of natural selection. The second category is concerned with the psychological and emotional effects of the system upon Chinese student. It is commonly believed that each individual has his/her own potential, and the issue is how to help students determine the nature of their potential. Intelligent students are supposed to do everything well, but for various reasons this is not
true for any number of individuals. Adolescents with low self-esteem are more likely to experience difficult and unsuccessful interpersonal relationships, and are less likely to be described by others as “well thought of,” “makes good impression,” “often admired,” and “respected by others” (Rosenberg, 1989). Given adolescent lower social and academic success as well as their generally jaundiced attitudes toward social institutions, it may be anticipated that low self-esteem adolescents will be less likely to develop strong feelings of attachment to their schools.

1.1. Objectives of the Study

The purpose of this study was to explore the impact of a student entrance exam on student well-being. The Matriculation Examination for university level entrance in Taiwan, Republic of China (ROC), is a significant stressor among high school students. The Matriculation Examination (TME), is a two- to three-day standardized test taken by all applicants after they graduate from high school. Students who graduate in June take the TME at the beginning of July. Because it is a major hurdle in the university entry process and can have important career consequences for applicants, the TME is highly stressful. Since these examinations are scheduled events, prior measures for both personal and social resources may be obtained.

Investigations of student examination stress have usually focused upon anxiety, evaluated either as a trait or as a state, and are intended to summarize the emotional distress students experience over the entire exam preparation period by evaluating the effects of anxiety upon performance (Gaudry & Spielberger, 1971; Sarason, 1972, 1975). These studies have focused either upon normative effects or individual differences (Lazarus & Folkman, 1984).

Although broad-based studies of life events can uncover reliable associations between stress and health, these types of studies provide only inadequate understanding of
the causal complexities that underlie such associations (Bolger & Eckenrode, 1991). For
the proposed study, focus was directed at how personality differences affect psychological
conditions and social functioning during the stressful encounters. Female subjects,
classified as “TOP One” students, have been selected as the point of interest for this study,
which was intended to measure subject self-perceptions among this group, specifically how
these subjects coped with stress during the annual examinations. So-called “TOP One”
students in the ROC are those who perform in the top range of the academic and
examination scales, and are subject to different training programs than those students who
do not qualify for placement in quality schools. The intent was to measure self-confidence,
mood, and social integration before students graduate at the beginning of June. After
graduation, students have four weeks to prepare for TME. The examination result was
received around the end of July. This study measured the pattern of examination success,
between the more successful and the less successful Top one female students who
completed the TME. The manual for the Health and Daily Living Form (Moos, 1990) was
used as the instrument for monitoring the independent effects of personality and social re-
sources upon mood as the examinations approached. Since male and female students
reflect different coping skills as well as differing self-perceptions, the study was limited to
female subjects in order to reduce confounding factors. Specifically, this study was
designed to examine the following hypotheses:

1. students self-confidence would have a direct effect on students' mood;
2. students social functioning would have an effect on student's mood;
3. students mood would influence student's Examination Grade;
4. students social functioning and self-confidence would influence their
   Examination Grade; and,
5. students social functioning would have effect on student's self-confidence.
This study was directed at the identification of personality differences, measured with respect to test performance. The ultimate purpose is to design a model that can be used to provide solutions to the problem of examination stress.

1.2. **Definition of Terms**

1. **Self-Confidence**: defined on the Health and Daily Living Form--Youth Form as levels of intelligence, maturity, dependability, confidence, friendliness, athleticism and success.

2. **Distress Mood**: defined on the Health and Daily Living Form-Youth Form in terms of sad (blue), upright (tense), afraid of things, restless, very tired, worried.

3. **Positive Mood**: defined on the Health and Daily Living Form-Youth Form as being alert, cheerful, relaxed, full of energy, happy, calm.

4. **Social Functioning**: defined in this study as how well one interacts with family, levels of activity with friends and social integration in school.

5. **Activity with family**: defined as activity with family including attendance at sports, hiking, club meetings, card game, and playing musical instruments.

6. **Activity with friends**: defined as activity with friends which includes attending sports, long walks, helping out on some project, or going on a picnic.

7. **Social Integration in school**: defined as being a member of a school sports team, participating in school dancing, helping the teacher after school, and working on school projects.
8. The Matriculation Examination: The Education Department gives universities authority to select The Matriculation Examination Committee. The Committee members come from national and private universities, and they give questions to the students. The examination is composed of essay, multiple-choice or fill-in-the-blank questions.

9. Test Score: is defined as TME result.

10. Female adolescent:

For this study female adolescents are defined as 15-18 year old girls who attend a top ranked female high school in Taiwan.

11. Top One Students:

Are those who perform in the top 20 percent range of the academic and examination scales, and are subject to different training programs than those students who do not qualify for placement in this quality of school.
CHAPTER 2
LITERATURE REVIEW

The concept of stress is somewhat akin to the elusive concept of love: Everyone knows what the term means, but no two parties define it in exactly the same way. In general, people refer to stress in terms of the pressure they are feeling from something happening within their immediate environment. Students talk about being under stress because of poor exam performance or because of an impending deadline for a major paper; parents talk about the stress and strain of raising teenagers and the financial burdens of running a household; and teachers talk about the pressure of maintaining professional currency while still keeping on top of the administrative duties connected with classroom teaching.

In this chapter, several approaches to the difficult task of understanding stress are first considered from the viewpoint of four major models. In the following sections, stress is then considered with respect to stress in adolescence, stress and health, stress-related adolescent disorders, stress and social networks, and stress and personality. Finally, information from this review of the literature of stress is summarized with respect to the objectives of the proposed study.

2.1. Models for Stress

Each of the four major types of models for stress provides its own definition, and each is associated with a different body of theory and research: response-oriented theories, stimulus-oriented theories, interaction theories, and the information processing theory.
2.1.1. Response-Based Models

Response-based models tend to emphasize the determination of a particular response, or pattern of responses, that reflect situations in which an individual is placed under strain from one or more forms of stress. As shown in Figure 2-1, the actual psychological and physiological responses are considered as stress responses.

Figure 1. Response-based model of stress (Cox, 1978, p. 4).

Hans Selye (1956), considered to be the father of modern stress research, defined stress as "the nonspecific (that is, common) result of any demand upon the body, be the
effect mental or somatic” (p.7). Stress is the body’s response to demand. The more demands placed upon an individual—demands from roles, from environmental hazards such as heat or noise, from time pressures, or from various other causes or forces—the greater the stress experienced by that individual. The Selye (1956) general adaptation syndrome (GAS) is an example of the response-based concept of stress, reflecting a body stress reaction in three stages. First there is the alarm reaction, the initial effect of some noxious stimulus upon body tissues, marked by such indicators as a drop in both body temperature and blood pressure. Then the body’s physiological defenses are mounted. The adrenal cortex enlarges and secretes higher levels of hormones while temperature and blood pressure move back toward higher levels. If the stressor continues, these alarm reactions fade and are replaced by a second stage, the resistance stage, in which the body strives to achieve homeostasis. Three physiological changes are notable at this stage: enlargement of the adrenal gland, shrinkage of the thymus gland, and gastrointestinal ulceration. The individual is able to control the initial alarm reaction to the stressor, but does so in a way that lowers resistance to other stressors or stimuli. If the stressor continues for a sufficiently long period, the fragile adaptations of the resistance phase break down and the individual reaches the final stage, exhaustion, during which some of the alarm-stage responses reappear.

This model for the definition of stress has prompted a great deal of useful research, primarily by physicians and/or physiologists who have attempted to identify the specific physiological patterns that are part of the stress response, or the GAS.

2.1.2. Stimulus-Based Models

A number of psychologists with an interest in stress research have adopted a stimulus-oriented approach, defining stress in terms of the degree of environmental demand for adaptation. The basic concept underlying this approach is that any change, positive or negative, requires adaptation, and the greater change, the greater the degree of
adaptation. Figure 2–2 provides an example of the stimulus-based model, which is essentially based upon engineering principals wherein stress is defined in terms of the stimulus characteristics of the environment that are disruptive to the individual. In other words, stress arises from the environment of the individual wherein the reactions to an external stressor constitute various strains.

Figure 2. Stimulus-based model of stress (Cox, 1978, p. 12).

Hooke’s Law of Elasticity, which describes how loads produce deformation in metals, can be used as an illustration. Stress or load is placed upon a metal and deformation (strain) may result. If the strain produced by a given load or stress is within the “elastic limit” of the material, when the load or stress is removed the metal will return to its original shape. If the load exceeds the elastic limit, the metal will become deformed. In
human terms, individuals vary in their ability to tolerate stress, which can always be tolerated up to a certain point. However, when stress becomes intolerable, physical or psychological damage may result. The task for proponents of stimulus-based models is to delineate the conditions for characteristics of stressful situation.

Holmes and Rahe (1967) attempted to identify the stressful situations or life events that impact individuals at different levels. For the researcher, the task is to specify just which classes of events are stressful and what the effects of specific stresses may be upon different individuals. The Holmes and Rahe Social Readjustment Rating Scale has been widely used for this purpose and has been subjected to a wide range of validation. However, serious questions have been raised about the definition of stress and the method of measurement used for the model (e.g., Cohen, 1988). For example, it is obvious that all kinds of life change are not equivalent in their stress-producing effects. That is, are positive as well as negative life changes equally stressful? In response to this question, a number of researchers have suggested subcategorizes of life changes or stress experiences that may prove to provide more helpful predictions, of illness for example, than the original Social Readjustment Rating Scale. Pearlin (1980, 1982) drew a distinction between chronic life strains and life changes, distinguishing between those that are scheduled and those that are unscheduled. It has also been suggested that we will better understand the links between stress and illness if we count not just major life changes but also "daily hassles" and "daily uplifts" (Lazarus & DeLongis, 1983; Lazarus & Folkman, 1984). In this sense, "hassles" may be transient or chronic and may include familiar experiences; "uplifts" may include laughter, a pleasant time with a family, or other joyous or satisfying moments.
2.1.3. Interactional Models

Interactionist definitions of stress focus upon individual perceptions of an event, or on the extent to which some experience exceeds individual adaptational capacity. For example, stress may be defined as "a (perceived) imbalance between demand and response capability, under conditions where failure to meet demand has important (perceived) consequences" (McGrath, 1970, p.20), or as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p.19).

Roskies and Lazarus (1980) and Cox and McKay (1978) proposed models that focus on the transactional and ecological nature of stress as well as the importance of individual cognitive and psychological sets in evaluating stressors. These models also specified the existence of feedback components, therefore describing a cyclical rather than a linear system (Feuerstein, Labbe & Kuczmierczyk, 1986).

The person-environment transaction model as shown in Figure 2–3, has been described by Cox and Mackay (1978). The first stage identifies the existence of demands or stressors placed upon the individual, which may be either internal or external demands. Internal demands relate to the physical and psychological needs of the individual and can be potent factors in determining subsequent behaviors. External demands represent the potential sources of stress that are a function of environmental factors, such as excessive work load provided by a supervisor, a physically uncomfortable work area, or a family member who constantly requires personal involvement on the part of the affected individual.

The second stage consists of individual perceptions of the internal and external demands, and of the ability of the individual to meet these important needs. Stressors occur when an imbalance between perceived demands and perceived coping ability exists. Such orgasmic variables as personality, ego strength, and intelligence account for individual variations in the cognitive appraisal of stress. If a situation is more than an individual
can handle and this is not recognized, the individual will continue working until it becomes obvious that coping is no longer possible. This imbalance will result in the experience of stress (Cox & Mckay, 1978).

Figure 3. Transactional model of stress (Cox, 1978, p. 19)

The third stage of the model represents the stress response, which is a method of coping with the stressor. The subjective emotional experience of stress is accompanied by
cognitive, behavioral, and physiological changes that attempt to reduce the demand. Although in other models the stress response is often thought of as the final phase of the stress reaction, Cox and Mackay (1978) delineated a fourth stage, which is concerned with both the actual and perceived consequences of the coping response. Stress may continue to occur when the individual fails to meet demands or when the negative consequences resulting from failure are anticipated. The fifth stage then consists of the feedback that occurs throughout the system and may shape events at any point in the system. Feedback or appropriate responses can enhance the ability of the individual to adapt. Feedback of an inappropriate response may intensify the stress response and cause greater damage or may alert the individual to change a response.

A widely used definition of stress has been offered by Lazarus and his colleagues (Coyne & Lazarus, 1981; Folkman & Lazarus, 1985; Lazarus, 1966). In this model, stress is defined as a relationship between the person and the environment in which the individual perceives that something of personal value is at stake and judges that his or her resources are taxed or overwhelmed by the situation. Thus, if the individual determines that his or her personal or social resources are sufficient to forestall or overcome an impending threat then the situation will not be defined as stressful. But even a seemingly minor loss may be highly stressful if it threatens a valued resource and the individual sees no way of resolving the situation. For this model, two kinds of cognitive appraisal are viewed as essential. That which is most relevant to the current discussion is primary appraisal, in which the individual judges whether the situation poses a challenge, a threat, or the possibility sufficient to forestall or overcome an impending threat, then the situation will not be defined as stressful. But even a seemingly minor loss may be highly stressful if it threatens a valued resource and the individual sees no way of resolving the situation.
2.1.4. Information-Processing Model

The information-processing model distinguishes among psychological, physiological, and biochemical stressors (Hamilton, 1980). The stressor and stress response are both considered, but neither can be recognized without an interpretation of the stimuli as stressful. This approach is thus heavily reliant upon cognitive appraisal and attention (Feuerstein et al., 1986). Individual interpretations of stress require selective attention, as well as decisions on which stimuli to process, using short-term working memory, and which to ignore. The processing of information involves long-term memory structures, that is, a cognitive predisposition which allows the individual to interpret some stimuli as pleasurable and others as aversive. In other words, perceptions of incoming stimuli are compared to perceptions the individual has had experience with and can recall. Attention, short- and long-term memory, and decision-making processes are involved in the cognitive appraisal of stimuli and responses as stressful. In addition to the cognitive labeling of stressors, these processes elicit such conditioned affective-emotive responses as anxiety, fear, anger, or sadness. Figure 2–4 illustrates the information processing model, based upon the postulation that the greater the stressors appraised by the individual, the greater the strain on the system.

In general, the greater the strain, the greater the informational load upon individual cognitive and biological processes (Feuerstein et al., 1986). According to this model, three general types of stressors are proposed: (a) anticipation of physical pain or danger, (b) situations that threaten social isolation or rejection, and (c) stimulus complexity involving either concurrent response demands and complexity (Hamilton, 1980). See figure 4.
Figure 4. Information-Processing Model of Stress (Hamilton, 1980)
2.2. Stress in Adolescence

Adolescence is a time of special stress. Since the identification of adolescence as a separate human stage of development, two somewhat conflicting views about its basic nature have emerged. In one view, adolescence is a time of “storm and stress,” a time when major physical, intellectual, and emotional changes contribute to tremendous upset and crisis within the individual and conflict between the individual and society. Both Freud (1958) and Erikson (1963) stated their belief that development, especially in adolescence, is full of conflict. For minorities of adolescents at the two extremes of this stage, the transition to adulthood can be either smooth and effortless or a period of ongoing conflict. But for the larger majority, it is much more likely to fluctuate, with long periods of relative calm and shorter periods of surprisingly intense upheaval, usually occurring when least expected. Thus, psychoanalytic theorists characterize adolescence as a period of internal intrapsychic struggle between the dependency needs of childhood and the drive for independence and autonomy (Blos, 1972; Freud, 1958). Freud described adolescence as a period of increased anxiety due to development, accompanied by heightened conflict over impulse expression, intensified defenses against impulses, and emotional liability and regression.

A number of physical, psychological, and sociological influences are brought to bear upon the individual at this stage of development. Pubertal growth produces profound anatomical and physiological changes in the body. Psychologically, the adolescent is faced with new challenges, centering upon the difficult transition from the dependence of childhood to the challenge of learning to use newly developed cognitive abilities. Young people thus face a number of stressors (Arnold, 1990). For example, peer pressure can have a strong influence on both healthy and unhealthy behavior. The stress of resisting unhealthy peer pressure can be buffered by good family relationships and high self-esteem, but it is often those adolescents with neither who succumb to unhealthy peer pressures.
Parental mental illness, parental unemployment, low socioeconomic status, and marital disorder are a few of the important parent-related stresses faced by many adolescents (Stiffman, Jung & Feldman, 1986). The effect of parents upon adolescents is likely to be related to the involvement of youths in parental psychopathologies and the modes of interaction that the parents have with the adolescents.

The stress of geographic mobility is also known to affect adolescent health. Adverse adjustments are manifested in one of three ways: 1) adolescents manifest increased physiological disorders, 2) parent/child communications deteriorate, and 3) adolescents develop the psychological disorders most commonly associated with isolation and loneliness (Hendren, 1987). Adolescents who live within a harmonious family unit have been noted to adjust more readily to new environments. Adolescents whose families do not function well or adolescents that have suffered pre-move disturbances are found to be much more vulnerable to the stress of moving (Tooley, 1970).

More recent longitudinal studies have found that the majority of adolescents successfully negotiate this stage without significant instability and/or upheaval (Offer, 1969). Adolescence is also a time to develop and utilize the new cognitive abilities young adolescents gain as they move into the stage of formal operational thinking (Piaget, 1954). As this stage develops, the young person acquires a capacity for abstract reasoning, allowing for a greater understanding of the world and a greater preoccupation with vague or controversial issues such as religion, government, and relationships. The egocentrism of earlier stages becomes more balanced as the adolescent develops a broader and less immediate view of life. Superego or moral development also changes with these new cognitive abilities; the adolescent strives to develop an internal sense of morality (Kohlberg, 1971). While these new cognitive abilities help adolescents cope with their lives, anxiety is increased by these changes. The general characteristics of late adolescent development are summarized as follows (Arnold, 1990): 1) firmer identity, 2) ability to delay gratification, 3) ability to follow an idea to a conclusion, 4) ability to express
feelings in words, 5) a more developed sense of humor, 6) stable interests, 7) greater emotional stability, 8) ability to make independent decisions, 9) ability to compromise, 10) pride in one’s work, 11) self-reliance, 12) greater concern for others, 13) concern with serious relationships, 14) clear sexual identity, 15) development of capacities for tender and sensual love, 16) capability to develop useful insights, 17) stress upon personal dignity and self-esteem, 18) ability to set goals and follow through, 19) acceptance of social institutions and cultural traditions, and 20) self-regulation of self-esteem.

School-Related Stress

With respect to school-related stress among adolescents, there are fear of success and fear of failure, as well as test anxiety. In 1968, Homer introduced the concept of “fear of success” as a partial explanation of sex differences in needs achievement. Homer’s “motive to avoid success” was defined as “the arousal of expectancy”, in competitive situations, that success will lead to negative consequences for women (p.16). It was postulated that women were threatened by success because it was equated with loss of femininity and the possibility that it may result in social rejection.

Fear of Success. Research on these original hypotheses has resulted in mixed findings. Kimball and Leahy (1976) administered the Horner fear of success test to 303 children. From their findings, significant sex differences did not appear until adolescence and were associated with the appropriateness of academic training to the students’ stereotyped sex roles. For example, the highest-ability females pursuing a college preparatory program showed the highest fear of success, while those females pursuing secretarial training showed the lowest fear of success. Both college preparatory males and secretarial course females showed a decrease in fear of success in high school, suggesting
that when subjects of either gender were pursuing a “sex-appropriate” course of study, there was less ambivalence about the achievement of excellence.

Tresemer (1976) reviewed over 100 studies assessing fear of success and concluded that while this fear did exist among female subjects, its existence was not precisely demonstrated by the research. In a reanalysis of the Horner (1968) data, Tresemer suggested that the fear of success effect was strongly mediated by individual needs for achievement. In other words, negative thoughts can get in the path of achievement if individuals are not in the first place motivated to try very hard.

Fear of Failure. Feather (1969) suggested that fear of failure is especially distressing to males. Levine, Reis, Sue, Turner, and Turner (1976) found that males were more likely to attribute their successes to skill and their failures to luck, while females attributed both successes and failures to skill. These results suggested that males showed a self-defensive bias in their attributions, which in turn was interpreted as an indication of a greater fear of failure. Heckhausen (1975) suggested that in reaction to failure, individuals who manifest a fear of failure express a bias for “lack of ability” explanations, while those who hope for success have a bias for “lack of effort” explanations. The lack of ability causal attribution or explanation leads to more negative affect in self-reinforcement than the lack of effort explanation.

If lack of ability is perceived as the main cause for failing at a new task, then with further failures the subjective probability of success diminishes rapidly, persistence will be lowered, and emotional consequences will be negative in comparison to failures ascribed to momentary lack of effort. In giving up early, those who suffer fear of failure restrict their opportunities to achieve successful outcomes in the long run—that is, the stress becomes a self-fulfilling fear. Figure 2–5 provides a summary of the Arnold (1990) conceptualization of the differences between fear of failure and hope for success individuals, based upon the fear of failure as a self-reinforcing motive system. In this view, a mo-
tive perpetuates a bias in outlook and action, providing individuals with the opportunity to condition their self-reinforcements.

Test Anxiety. Test anxiety, as a special case of general anxiety, refers to those phenomenological, physiological, and behavioral responses that accompany concern about failure. The stimuli, experiences, and responses of test anxiety seem to be as varied as those of general anxiety. (Sieber, 1980). Test anxiety is usually defined as a set of responses to a class of stimuli that have been associated with an individual’s experience of evaluation or testing. Several researchers have attempted to describe the nature of and components of this process. Liebert and Morris (1967) hypothesized that test anxiety consisted of two conceptually different components: worry and emotionality. Worry refers to focusing attention on concerns about performance, the consequences of failure, negative self-evaluation, or the evaluation of personal abilities relative to others. Emotionality, on the other hand, refers to the affective-physiological experience generated from increased automatic arousal. Morris and Liebert (1970) reported evidence that worry was associated with performance decrements on cognitive and intellectual tasks, while emotionality was unrelated to task performance.

Wine (1971) hypothesized an attentional interpretation of the negative effects of test anxiety on performance, contending that during tests or examinations, high test anxious individuals divided their attention between task requirements and task-irrelevant cognitive activities such as worry. These worry cognitions distracted individuals from task requirements and appeared to interfere with effective use of time, thereby contributing to performance decrements. Wine believed that highly test-anxious persons responded to evaluative testing conditions with worry, and thus did not direct adequate attention to task-relevant variables. Mandler and Sarason (1952) suggested that the testing situation evoked both learned task drives and learned anxiety drives. Some of the anxiety drives were task-relevant, while others were task-irrelevant. The learned task drives and the task-relevant
anxiety drives facilitated test performance, while the task-irrelevant anxiety drives decreased task performance.

Sarason, Pavion, Ligertfall, Waite, and Ruebush (1960) viewed test anxiety as personality characteristics that developed during the interactions with parents during preschool years, slowly stabilizing during the elementary years. High levels of evaluation anxiety resulted when performances and achievements did not live up to parental expectations. Generally, parental expectations were unreasonably high. As a result, the parents' judgments of children's performances were frequently negative. High test-anxious children may have developed too great a dependence upon adult direction and support in evaluative situations. Some children may have attempted to avoid evaluative situations altogether unless adults were present. Thus, test anxiety resulted in ineffective cognitive strategies and attentional deficits, causing poor task performance in evaluative situations. Low test-anxious children appeared to become deeply involved in the evaluative tasks, but high test-anxious children did not. High test-anxious children experienced attentional blocks, extreme concern with emotional self-cues, and cognitive deficits such as misinterpretation of information. These attentional and cognitive deficits were likely to interfere with learning and responding in evaluative situations, and hence resulted in lowered performance.

The role teachers played in influencing the anxiety children experience in school in general, and in evaluative situations in particular, was examined by Sarason et al. (1960), who hypothesized that test-anxious reactions to test situations were at least partially a reflection of the experiences of children at home. It was further suggested that students may have transferred unconscious feelings about evaluative situations from their parents to their teacher. Sarason (1960) examined work by Doyal and Forsyth where looked at teacher-student interactions with respect to teacher influence on student test anxieties from a rather unique perspective. It was found that the teachers' anxieties may have influenced students'
test anxieties, as evidence by a weak but positive correlation between the Teacher's Manifest Anxiety Scale scores and students' Test Anxiety Scale scores.

Arnold (1990) perceived that personal efficacy, peer support, and family cohesion directly affected symptoms of stress expressed by both male and female adolescents. For males, peer support was a significant buffer against stress. However, high peer support did not buffer against stress in females. Low family cohesion was associated with high symptom levels for both males and females, even in the absence of negative life events. Other factors associated with successful coping with stress include having an internal locus on control (D'Arcy & Siddique, 1984) and belief in personal efficacy (Wheaton, 1983). Both of these strengths reflected the ability to rely upon oneself for direction and support rather than upon parents or other external sources (Figure 5).

2.3. Stress-Related Adolescent Disorders

Stress-related disorders prevalent in adolescents include depression, substance abuse, and eating disorders.

2.3.1. Adolescent Depression and Suicide

Genetic factors clearly influence the development of depression in adolescents (Weiner & Hendren, 1983). Evidence of abnormal amounts of neurotransmitters is found in young people with depression (Kashani & Cantwell, 1983). The children of depressed parents are at greater risk for developing depression, both from increased genetic vulnerability as well as from the lack of availability and stability of the ill parent. Reliable statistics regarding an apparent recent increase in adolescent depression are not available.
Evaluative Event or Situation

Outcome

Person compares outcome to own standard or level of aspiration

Consequence

Fear-of-failure persons ascribe failure to lack of ability; ascribe success to external (good luck) factors.

Hope-for-success persons ascribed failure to lack of effort; ascribed success to effort and skill.

Success

Failure

Lucky Feeling

Giving Up; Low Self-Esteem; More Fear of Failure.

Confidence & Self-esteem

Trying Harder

Figure 5. Differences in the psychological impact of failure according to characteristic cognitive attributions (Arnold, 1990, p. 261).
However, statistics are available for suicide, which has often been related to depression. The incidence of suicide in adolescence has nearly tripled since 1950 (Arnold, 1990). Following accidents, suicide is the second leading cause of death among the age group 15 to 24 years (National Center for Health Statistics, 1987). In the evaluation of adolescent suicide potential, it is important to assess both environment stresses and adolescent coping abilities. Part of the explanation for the recent rise in adolescent suicide is that stress upon adolescents has increased while environmental supports have decreased, leaving the adolescent more vulnerable (Arnold, 1990). Recent suicides have also been reported to exercise a contagious effect, providing a role model for those who would consider suicide (Gould & Shaffer, 1986).

The Holmes and Rahe (1967) life-stress model postulates that significant stresses, especially marital discord and family psychopathology, have a significant effect upon adolescent depression. Kovacs and Beck (1977) have developed a cognitive distortion model for depression resulting from unfavorable life experiences which lead to negative assumptions. It has been suggested that findings from these measures provide explanations of low self-esteem and poor body image observed among depressed children and adolescents. The learned helplessness model suggests that adolescents can learn a helpless and hopeless stance as a result of repeated failures (Dweck & Reppucci, 1973). Family systems are also found to be dysfunctional among depressed and suicidal children and adolescents (Pfeffer, 1981). Finally, the sociological model relates depression to a social structure that deprives certain individuals of desirable positions within society.

2.3.2. Adolescent Substance Abuse

The etiologic factors that characterize adolescent substance abuse include genetic and biological markers, parental values, culture, and individual characteristics, including low self-esteem and the peer/social context. The stresses of adolescent development place
young people at great risk for misusing substances as an attempt to control these stresses. If environmental and personal supports are unable to help the adolescent cope with stresses, social pressures may lead the adolescent to drugs and alcohol (Pandina & Schuele, 1983). In the past 20 years, the dramatic increase in the number of adolescents who experiment with these substances reflects the heightened stress of adolescence, weakening environmental supports, and possibly the influence of the social context during this time period when the social acceptability of substance use/abuse has increased (National Institute of Drug Abuse, 1988).

2.3.3. Adolescent Eating Disorders

Hendren, Barer, & Sigatoos (1986) state that at a time when young women are facing new pressures from society to become more independent, young women from upper-class families are at the greatest risk for the development of eating disorders. This is also the group which is under the greatest pressure to become attractive wives and mothers as well as successful career women. Eating disorders typically develop during a period of developmental crisis, that is, when the child enters adolescence or when the adolescent leaves for college. The adolescent female who has trouble coping with these changes may feel inadequate and develop anorexia nervosa or bulimia in the attempt to appear successful by fulfilling the cultural standards for thinness. Eating-disorder women also have a higher incidence of depression and substance abuse in their family histories (Herzog & Copeland, 1985).

Changes in neurotransmitters and hormone levels occur as the illness develops. These changes include alterations in stress-responsive hormones such as corticotrophin-releasing factor (CRF), which decreases appetite, and in the neurotransmitters norepinephrine, dopamine, and serotonin, all of which have been implicated in the etiology and maintenance of both anorexia nervosa and bulimia (Morley & Blundell, 1988). Psychological dysfunction is evident in the eating-disordered adolescent’s low self-esteem.
and in the difficulty of identifying and expressing feelings of ineffectiveness. In addition, the social pressures in certain activities like ballet place particular adolescents at greater risk (Garfinkle & Garner, 1982). Thus, genetic and biological vulnerability, difficulty in moving toward autonomy, and social expectations and pressures may combine in the development of an eating disorder as an ineffective attempt to cope with the stress faced by the adolescent, as may be seen from Figure 6.

2.4. Personal resources

From the Penguin Dictionary of Psychology, "self-concept" indicates that a concept of oneself is as complete and thorough a description as it is possible to give. Recent developments in self-concept theory and research are characterized by the "cognitive revolution" over the past 10 to 15 years as psychologists have developed a defining interest in learning more about the subtleties of human cognitive processes. Advances in self-concept theory and research have largely taken the form of identifying, explicating, and testing those cognitive processes that can be applied to the self as an object. According to Rosenberg (1989), the opening salvo of this revolution was sounded by Duval and Wicklund, A Theory of Self-Awareness, published in 1972, focusing upon a critical cognitive process: attention. Whether individual attention was focused on the self or on things or concepts external to the self, the result was still significant behavioral consequences.

Research in other cognitive processes relevant to the self followed soon thereafter. Bandura (1982) developed his extensive program of research on self-efficacy, in which attention was focused principally upon the personality variables that may operate as personal resources during stressful periods (Johnson & Sarason, 1979). Especially relevant were the personality dispositions underlying the related variables of self-efficacy, self-confidence, and perceived control. Bandura explained that perceived self-efficacy concerned judgments of how effectively one can execute courses of action necessary to deal
with situations involving unpredictable and stressful elements. He stated that self-efficacy could be used to predict a wide range of adaptive life behaviors, including coping behavior, resignation in the face of failure, and achievement strivings.

In sociology, the chief intellectual influence has been the development of “social identity theory,” spearheaded by Stryker (1980). Stemming from the symbolic interactive
view of human behavior that it is largely directed by role-taking and role-playing processes, identity theory has focused on how roles are negotiated and performed in the social interaction process. In recent years, the concept of self has also gained increasing prominence in the field of psychiatry (Rosenberg, 1989), work which was largely stimulated by an interest in narcissism by Kohut (1977).

These developments have greatly enriched the understanding of important features of the self-concept. But none of this work calls into question the importance of self-esteem, both for the individual and for society. Self-esteem is still a prime human need and its protection and enhancement a prime human motive. The self-esteem motive, also called the “self-maintenance motive” (Tesser & Campbell, 1983), the “motive for self-worth” (Covington, 1983), the “ego drive” (Allport, 1968), and the “self-enhancement motive” (Kaplan, 1986), was been identified by Maslow (1970) as one of the “prepotent” human needs. All these theories share the view that there exists a universal desire to protect and enhance one’s self-regard. These assumptions are buttressed by abundant empirical research showing that low self-esteem is associated with depression, somatic and psychological anxiety, self-concept volatility, irritability, low life satisfaction, loneliness, and other forms of psychological distress.

The term self-esteem is used to refer to a sense of positive self regard, or feeling good about oneself. Self-esteem is sometimes confused with self-concept. Actually, self-concept is a very broad term which includes all of the ways in which people compare and evaluate themselves (physically, mentally, and socially) compared to others. Self-esteem thus feeds into self-concept (Rice, 1987). Recent research suggests self-esteem is composed of three psychosocial factors and two physical factors. The three psychosocial factors are self-regard, social confidence, and school ability. The physical factors are appearance and ability (Fleming & Courtney, 1984). The relationship of self-esteem to coping is a complex one. It includes feedback from many previous successfully unsuccessful attempts at coping (Rice, 1987).
In this sense, self-esteem is part of and feeds a long-term cycle. When people feel good about themselves, they are less likely to respond to or interpret events as emotionally loaded or stressful. In addition, they even cope better when stress does occur. Because they cope better, it provides positive information feedback that further increases self-esteem. Many investigators have tried to determine what specific aspects of self-esteem are more related to coping failure and success (Rosenberg, 1989). The lower the subject’s self-esteem level, the more likely he/she is to report experience of various physiological indicators of anxiety—hand trembling, nervousness, insomnia, and heart pounding as examples. People with low self-esteem were more likely to report that they had suffered from “nervousness”, “loss of appetite,” “insomnia” and headaches. When low-esteem people were put in threat situations, they tended to show poorer overall coping skills and lower overall competency. According to Rosen, Terry, and Leventhal (1982), the difficulty with coping among low-esteem people can be traced to two basic negative self-perceptions. First, low-esteem people have higher levels of fear under threat than high-esteem people. Second, low-esteem people perceive themselves as having inadequate skills to deal with the threat.

A number of programs have been developed to help high-school students improve their self-esteem and their coping skills. One such program showed a generally positive outcome in increasing interpersonal coping skills (Folkman & Lazarrus, 1984). An interesting note is that there seems to be a relationship between locus of control and self-esteem. Specifically, low-self-esteem subjects tended to score high for external locus of control. In the programs that have been developed to increase locus of control, it may be that self-esteem improves with reduction in locus of control. This would be consistent with the idea that as people learn that stress can be controlled, and that they can do the controlling, they feel better about themselves (Rice, 1987).

Personal resources may protect an individual from the negative effects of stress. The personality disposition underlying the related variables of self-efficacy, self-
confidence, and self-esteem is especially relevant. Perceived self-efficacy concerns judgments of how effectively one can deal with situations involving unpredictable and stressful elements. Bandura (1982) believes that self-efficacy predicts a wide range of adaptive behavior including coping responses, persistence in the face of failure and achievement striving. Self-esteem means how an individual feels about himself or herself (Steinberg, 1989, Hee-Og, 1994). Adolescents with low self-esteem are more likely to experience difficult and unsuccessful interpersonal relationships and are less likely to be described by others as "well thought of," "respected by others," "makes good impression," and "often admired." (Rosenberg, 1989). Given adolescent lower social and academic success as well as their generally jaundiced attitudes toward social institutions, it may be anticipated that low self-esteem adolescents will be less likely to develop strong feelings of attachment to their school (Rosenberg, 1989). Other studies have shown that people with low self-esteem are decidedly more likely to report low feelings of life satisfaction (Campbell, 1981), and stronger feelings of irritability (Rosenberg, 1985). Epstein (1981) demonstrated that many emotions are closely tied to self-esteem, for example, when self-esteem was lowered, high levels were reported for unhappiness, anger, feelings of treat, weariness, withdrawal, and nervousness. A related dispositional variable easy-going may provide resistance to stress. Hinkle (1974) observed that individuals who remained healthy under stress were characterized by an "emotional insulation"(p.27) from the effects of life change and a tendency to experience significant change "without a profound emotional or psychological response"(p.24).

Rosenberg (1989) stated that people with low self-esteem tend to be characterized by a broad range of qualities that in various ways weaken their interpersonal, instructional, and normative integration. Other studies have shown that people with low self-esteem are decidedly more likely to report low feelings of life satisfaction (Campbell, 1981), stronger feelings of irritability (Rosenberg, 1985), and more frequent feelings of depersonalization. Epstein (1981) demonstrated that many emotions are closely tied to self-esteem.
self-esteem was raised, high levels were reported for happiness, security, affection, energy availability, alertness, calmness, security, affection, energy availability, alertness, clearmindedness, singleness of purpose, lack of restraint, and spontaneity. When self-esteem was lowered, high levels were reported for unhappiness, anger, feelings of threat, weariness, withdrawal, nervousness, disorganization, conflict, feelings of restraint, and self-consciousness. When students fail, how to help them rebuild themselves and how to help them cope well are my major concerns.

2.5. Environmental Resources

Environmental resources refer to the informational, material, and emotional support provided by initiates, other family members, and nonkin social network members. Research has demonstrated that the physical aspects of the environment influence friendship formation and the functioning of social support (Oxley & Battera, 1984; Oxley, Barrear, & Sadalla, 1981). The term social support is an umbrella term that covers a variety of diverse phenomena, considered here with respect to stress and social relationships where a strong linkage has been established. Social networks refer to the social connections provided by the environment and can be assessed in terms of structural and functional dimensions (Marsella & Snyder, 1981). For example, size, density, and multiplexity, refer to structural network characteristics while network functions include the provision of information, comfort, emotional support, and material aid. Perceived social support refers to the impact networks have on the individual. If networks provide support, information, and feedback (Caplan, 1974, Procidano & Heller, 1983) then perceived social support can be defined as the extent to which an individual believes that his/her needs for support, information, and feedback are fulfilled.

The perception of social support is one element in an individual's appraisal of and subsequent coping with stress (Lazarus, 1966; Lazarus). Support-seeking results from
appraisals that there is a threat to which one must response, that information or help is needed to adequately deal with the threat, and that aid is perceived to be available within one's social network. Perceived support is influenced by within-person factors (Procidano & Heller, 1983), including both long-standing traits on the one hand, and temporal changes in attitude or mood on the other. Both of these may influence the perception of whether support is available or has been provided. Research on social support and stress has focused on the buffering hypothesis, which predicts that perceived social support will beneficial only during stressful situation (Cohen & Wills, 1985).

Individuals with high levels of perceived support appear to be more resistant to the adverse psychological effects of environmental stressors than do individual with relatively low levels of perceived support (Cohen & Wills, 1985). That is, perceived social support may buffer individuals from the adverse psychological consequences of exposure to stressors. The perceived availability of resources seems to be more important than actual use in protecting individuals from the harmful psychological effects of stressors (Cohen & Hoberman, 1983). Consistent with this view is the conclusion that the effectiveness of social resources are central in determining their psychological importance (Procidano & Heller, 1983). These resources can be drawn upon for emotional support, contributing to the feeling that one is loved or cared about; for tangible support, which involves direct assistance in terms of services or material goods; and for informational support and/or advice (Schadfer, Coyne, & Lazarus, 1982). The type of support that is used should be determined in part by the demands of the situation (Lazarus & Folkman, 1984).

For example, with the respect to the stage of an examination system, it has been found that subjects seek informational support to help them with preparations for exams prior to their occurrence, and then shift to emotional support for reassurance during the waiting period and for comfort after grades have been announced. Thus, informational support should be sought more before exams than after. A variety of mechanisms have been used to described to explain the buffering or modeling effects of social support
(Lepore, Evans, & Schneider, 1992; Vaux, 1989). For example, the psychological benefits of support might result from its effect on subjective appraisal of stressors, on the choice of coping strategies, or upon feelings of self-esteem and personal mastery (Cohen & Mckay, 1984; Gore, 1981; Lepore et al., 1992; Lieberman, 1982; Perliln, Lieberman, Menaghan, & Mullan, 1981). Sarason, Gregory, and Sarason (1990) have stated that social support, since it remains stable over time, even during periods of developmental transition when environmental change may peak, may be considered as a personality variable. People high in perceived social support to have social skills superiors to those of people low in social support (Sarason, Sarason, & Shearin, 1986). People high and low in social support may also have quite different self-images (Roser, 1986; Sarason et al., 1985). Individuals high in social support describe themselves more favorably than others who are low in social support, and those who differ in social support also differ in their responses to measures of self-esteem (Pierce, Sarason, & Sarason, 1989). Those higher in social support list more positive and fewer negative qualities in describing themselves than do those people lower in social support. Thus, high levels of perceived social support appear to minimize psychological distress (Lepore, 1992).

Different populations (e.g., different age cohorts) may rely on or benefit from friend or family support to different extents (Procidano & Heller, 1983). At a given time, there might be more change in an individual's friend network (e.g., through moving for education or employment) or family network (e.g., through death). Peer support has been linked repeatedly to adolescent's well-being (e.g., Cauce, 1986; Epsstein, 1983; Greenberg, Siegel, & Leitch, 1983; Hartup, 1983; Hirsch & Reischl, 1985; Hirsch, Engel-Levy & Hardsty, 1990). In school, peers can offer useful support in dealing with academic tasks or other school requirement, can provide pleasant socializing interactions, and can be source of emotional support in the face of stressful experience with teachers (Asp & Garbarino, 1983). Positive ties with peers in school can also enhance a sense of community and social integration (Hirsch, Engel-Levy & Hardsty, 1990). Friend
relationships are often of relatively shorter duration than family relationships. While an individual's social competence probably plays a role in the maintenance of his/her support network (Heller, 1979; Procidano & Heller, 1983), this is probably more true for friends relationship than family relationships since some of the latter are, by definition, ours by birth.

Research suggests that individual differences such as, age, sex, social class, and personality factors may affect both the structure and functioning of individual social networks and the degree to which individuals use social relationships as supportive resources. For example, Burda, Vaux, and Schill (1984) found that females have larger social support networks and receive more emotional support than males. Hays and Oxley (1986) conducted a longitudinal study of the evolution of social networks among individuals undergoing major life transition (i.e. entering college). From their results, we are aware that females have been found to interact more frequently with their network members and to exchange more informational and emotional support than male counterparts. Analysis also indicated that this difference was primary to interactions with student friends.

**Coping Response**

Lazarus and Folkman (1984) define it as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p.141). Coping is determined by cognitive appraisal. Cognitive appraisal processes affect (mediate) stress response levels, and identify some of the personality characteristics and situation factors on which mediation depends. A lot of research about cognitive appraisal processes in stress reaction have been printed. Most of the studies have been focused on the determinants of emotional response or other outcomes (Folkman and Lazarus, 1984). The context of this study was the midterm examination mentioned earlier. Two days before the exam students were asked
how difficult they expected it to be, what was at stake for them in its outcome, how much they felt in control, and their grade-point average (GPA). The students were also asked the extent to which they were experiencing threat-related emotions including anxiety, worry, and fear. Two appraisal variables—how much the student had at stake and how difficult the exam was expected to be—proved to be important predictors of threat emotions. GPA is not a cognitive appraisal variables per se, and did not predict threat. Krantz (1983) assessed the cognitive appraisal process prior to an examination in a college student group. She found that appraisal predicted coping behaviors but not actual exam performance. Krantz (1983) interpreted the failure to predict actual exam performance as indicating that other variables, such as academic ability, were more important than preparatory coping behavior. An unpublished finding from Lazarus and Folkman's examination stress (1984) lended support to this interpretation. That cognitive appraisal is central in mediating subsequent thought, feeling, and action is not only logically necessary to an understanding of individual differences and normative patterns of reaction, it also accords well with observations of people in adaptationally relevant encounters. The way a person appraises an encounter strongly influences the coping process and how the person reacts emotionally.

The most helpful category system is proposed by Lazarus and Folkman (1984), who suggest two categories, problem-focused coping and emotion-focused coping. People use emotion-focus coping strategies which consists of cognitive processes directed at lessening emotional distress and includes strategies such as avoidance, minimization, distancing, selective attention, positive comparisons, and wrestling positive value from negative events. Other emotion-focus coping strategies are directed at increasing emotional distress. Some individuals need to feel worse before they can feel better; in order to relief they first need to experience their distress acutely and to this end engage in self-blame or some other form of self-punishments. Some individuals deliberately increase their emotional distress in order to mobilize themselves for action.
Problem-focus coping strategies are similar to strategies used for problem solving. Such as, problem-focused efforts directed at defining the problem, generating alternative solutions, weighting the alternatives in terms of their costs and benefits, choosing among them, and acting. The study by Anderson (1977) of owner-managers whose business were damaged by flood is particularly interesting in that it examines the effects of stress on both problem and emotion-focused forms of coping. The situation was characterized by both harm/loss and threat. The harm/loss occurred at the time of flooding, and the threat concerns its consequences. Problem- and emotion-focused forms of coping were used with different frequencies depending on the level of perceived stress.

Anderson thinks that at high levels of stress, emotion-focused coping began to predominate, with subjects exhibiting a greater frequency of emotional or defensive behavior. He concludes that "anxiety associated with high stress leads to overconcentration on emotional and defensive coping mechanisms and insufficient attention to problem-solving coping mechanism, resulting in lower levels of performance" (p.-34).

There is evidence that approach coping strategies, such as logical analysis, information seeking, and problem-solving action, are positively related to adaptation (Moos & Billings, 1982). Folkman and Lazarus (1980) observed that work-related stressors were associated with increased problem-focused coping while health-related stressors were associated with increased emotion-focused coping. There were gender differences in the sources of stressors, but gender difference in coping were relatively small after controlling for the source of stressors. Pearlin and Schooler (1978) found coping responses may be effective in reducing the emotional distress associated with relatively enduring social strains. They conclude that self-reported coping strategies as well as psychological resources such as self-esteem and a sense of environmental mastery attenuated the impact of strain on functioning as indexed by reported mood and symptom levels.
Coping strategies may mitigate the harmful effects of life stress (Cohen & Lazarus, 1979; R.H. Moos, 1977). Kobasa (1982a) found that among lawyers experiencing life stress, those who used fewer avoidance coping strategies (attempts to deny, minimize, or get away from the stressful situation) showed less symptoms of psychological and physical strain than did lawyers who engage in avoidance coping. Men were more likely to use more effective types of coping than were women (Billings & Moos, 1981). It is commonly assumed that women are more emotionally responsive and sensitive while men tend to be more analytic and task oriented. Hence women may be more likely to use emotion-oriented and less likely to use problem-oriented coping responses than men.

2.6. The Relationships Among Personal Resources, Social Resources, Coping Responses and Examination Performance

Billings and Moos (1982) proposed one integrative framework to interpret why stressful life circumstance lead to depression among some persons but not others. They hypothesized that the depression-related outcomes of stressful life circumstances are influenced by individuals' personal and environmental resources as well as by their appraisal and coping responses. In the context of environmental and personal resources, individuals appraise stressors; that is, perceive and interpret specific events. With the appraisal process, individuals develop coping responses that are intended to minimize the adverse effects of stress. The outcome of this process influences individual levels of functioning and adaptation. From this perspective, adaptation includes those cognitive, affective, and behavioral aspects of functioning that may be disrupted in the depressive syndrome. The pathways highlight interrelationships among the domains that affect depression. For instance, the impact of environmental stressor on functioning is mediated by the other domains identified.

Referring to figure 7, a stressor elicits coping responses (Path F), whose nature and effectiveness determine whether the stressful event leads to depression and
distributions in functioning (Path I). These processes are conditioned by personal and environmental resources. Such personal resources as high self-esteem may mitigate depressive outcomes by reducing the occurrence of stressors (Path B), facilitating stress-reducing coping (Path E), or fostering health functioning even in the absence of stress (Path D). Environmental resources can affect functioning in similar ways. Furthermore, personal resources can indirectly affect depression by facilitating the development of environmental resources such as supportive interpersonal ties (Path A) that also affect functioning. Finally, depressed moods and related aspects can affect each of the preceding sets of factors. For example, depression may lead to the use of less effective coping strategies (Path I) and attributions of uncontrollability (Path D). Such as strategies may alienate members of the individual's social network and thereby reduce future social support (Path H).

Sarason, Gregory, and Sarason (1990) have stated that social support, since it remains stable over time, even during periods of developmental transition when environmental changes may peak, may be considered as a personality variable. People high in perceived social support do have social skills superior to those of people low in social support (Sarason, Sarason, & Shearin, 1986). People high and low in social support may also have quite different self-images (Rosser, 1986; Sarason et al., 1985). Individuals high in social support describe themselves more favorably than others who are low in social support, and those who differ in social support also differ in their responses to measures of self-esteem (Pierce, Sarason, & Sarason, 1989). Those higher in social support list more positive and fewer negative qualities in describing themselves than do those people lower in social support. Thus, higher levels of perceived social support appear to minimize psychological distress (Lepore, 1992).
Research suggests that individual differences such as age, sex, social class, and personality factors may affect both the structure and functioning of individual social networks and the degree to which individuals use social relationships as supportive resources. For example, Burda, Vaux, and Schill (1984) found that females have larger social support networks and receive more emotional support than males. Hays and Oxley (1986) conducted a longitudinal study of the evolution of social networks among individuals undergoing a major life transition (i.e., entering college). From their results, we are aware
that females have been found to interact more frequently with their network members and to exchange more informational and emotional support than male counterparts. Analysis also indicated that this difference was primary to interactions with student friends. Previous research had shown females to be more self-disclosing and emotionally expressive with their friends than were males (Rubin, 1973).

Social support has generated intense interest because of the number of findings that point to its potential as a buffer for the deleterious effects of stress. Numerous researchers have assessed the impact of social support or adjustment to a broad range of stressful life events and circumstance experiences by adolescents (e.g., Caldwell & Bloom, 1982; Cauce, Felner, & Primavera, 1982; Felner, Ginter & Primavera, 1982; Rowlison & Felner, 1988; Sandler, 1980; Wilcox, 1981). However, it is noted that many of these studies reflected either conceptual or methodological shortcomings (Heller & Swindle, 1983; Rowlison & Felner, 1988; Thoits, 1982). On the whole, this research direction has provided only tentative evidence for the notion that social support may buffer the impact of stressful life events (Cohen & Wills, 1985; Rowlison & Felner, 1988). Social networks have rarely been studied as dependent variables whose structure and processes are integrally tied to individual and situation contexts (Hays & Oxley, 1986). The characteristics of the networks and the degree to which they are adaptive or maladaptive are seen to vary, depending on physical and temporal setting and the goals and orientations of the individuals of which they are comprised.

In short, individuals under higher levels of stressors, who reported depressed moods or physical symptoms, and persons who adapted to stressors without experiencing physical or emotional distress were more easy-going and less likely to rely on avoidance coping responses. Stress-resistant men were more self-confident and stress-resistant women enjoyed more family support. Moreover, feelings of self-confidence operated to protect both men and women from negative psychological consequences of life
stressors one year following the stressful events, even when initial functioning was controlled.

New issues in stress-resistance research has examined how life-stress stressors can create an opportunity for psychological growth by strengthening personal and social resources. Holahan and Moos (1987) found that individuals who had more personal and social resources were more likely to rely on active forms of coping and less likely to use avoidance coping, wherein coping was defined as a stabilizing factor that may help to maintain psychosocial adaptation during stressful periods (Lazarus & Folkman, 1984; Moos et al., 1982). Thus the adaptative advantages of coping should involve maintaining stable functioning and should be greatest under high stressors. Stable functioning under high stress would be associated with higher levels of personal (i.e., self-confidence and easy-going disposition) and social (i.e., family support) resources at the beginning of a year of effort and with more adaptive coping during the ensuing year.

Taylor and Brown (1988) explained that mentally healthy people have the capacity to view themselves in ways that enhance self-esteem and personal efficacy and which also encourage optimistic views of the future. It is possible that direct linkage between personal resources and improved functioning operates through such positive self-referent thought. Both Caplan (1964) and Lindemann (1979), as theorists of personal crises, believed that stressors can provide an opportunity for psychological growth. Taylor and Brown suggested that positive thinking may help people profit from negative life events by allowing them to alter the meaning of the events in positive ways. Positive feedback from effective coping responses to stressors probably also plays a role in strengthening resources. Bandura (1991) noted that successful mastery experiences provide the most powerful means to strengthen self-efficacy. Lazarus and Folkman (1984) posited that the meaning of an event plays a central role in determining its psychological impact. For example, negative or undesirable life events are more strongly associated with distress than with ambiguous or positive events (Thoits, 1983). Though individuals who are psycho-
logically distressed may feel less self-confident (Holahan & Moos, 1987), that self-confidence is a significant resistance factor for adults is supportive of the earlier work by Kobasa et al. (1982) on hardiness and health and by Bandura (1982) on the protective role of self-efficacy.

"We can make stress work for us in a positive way. It is true that stress has a great potentiality for destruction, but it can also be constructive. If stress is perceived and managed poorly, it can lead to grief, disease and premature death" (Moos, 1979). On the other hand, the correct use and management of stress can actually lead to longer, healthier and happier lives. This will be a principal area of research concern for the future.

2.7. **Summary**

An understanding of psychological illness and health necessitates the development of predictive frameworks linking adjustment with vulnerability and resistance factors. In this study, the resistance approach was used to predict psychological distress among high school students. The "stress resistance" approach involves identifying personal or environmental resources that are related to remaining healthy during stressful life periods (Holahan, Moos, 1987). Stress resistance factors index individuals' strengths and help to keep them healthy when unavoidable stressors (such as a high stakes examination) occur (Jenkins, 1979; Johnson & Sarason, 1979; Kobasa, 1982b).

The purpose of this study was to explore the impact of a student college entrance exam on student well-being. The Matriculation Examination for university level entrance in Taiwan, Republic of China (ROC), is a significant stressor among high school students. The Matriculation Examination (TME), is a two- to three-day standardized test taken by all applicants after they graduate from high school. Students will graduate in June and take TME at the beginning of July. Because it is a major hurdle in the university entry process and can have important career consequences for applicants, the TME is highly stressful.
Since these examination are scheduled events, prior measures for both personal and social resources may be obtained.

For this study, focus was directed at how personality differences affect psychological conditions and social functioning during the stressful encounters. Female subjects, classified as “TOP One” students, had been selected as the point of interest for this study, which was intended to measure subject self-perceptions among this group, specifically how these subjects cope with stress during the annual examinations. So-called “TOP One” students in the ROC are those who perform in the top range of the academic and examination scales, and are subject to different training programs than those students who do not qualify for placement in high quality of schools. The intent was to measure self-confidence, mood and social integration before students graduate at the beginning of June. After graduation, students had four weeks to prepare for TME. The examination result was received around the end of July. This study measured the pattern of examination success, between the more successful and the less successful Top One female students who complete the TME. The manual for the Health and Daily Living Form (Moos, 1990) was used as the instrument for monitoring the independent effects of personality and social resources upon mood as the examinations are approached. Since male and female students reflect different coping skills as well as differing self-perceptions, limiting the study to female subjects reduced one confounding factors. The framework hypothesized that examination performance was influenced by an individual's personal and social resources as well as by their coping response; that these resources affected the impact of the stressor (Entrance Examination), and shaped the nature of the cognitive appraisal and coping responses selected to deal with the outcome of the examination performance. The link between examination stress and examination performance was seen as mediated by individual's personal and environmental resources, cognitive appraisal and coping responses, and the interrelationships among these domains.

Specifically, this study was designed to examine the following hypotheses:
1. Student's self-confidence would have a direct effect on students' mood.

2. Student's social functioning would have an effect on student's mood.

3. Student's mood would influence student's examination grade.

4. Student's social functioning and self-confidence would influence their examination grade.

5. Student's social functioning would have effect on student's self-confidence.
CHAPTER 3
METHODS

Examinations such as The Matriculation Exam (TME) are useful for studying the stress-buffering effects of self-confidence and social functioning for several reasons. First, stress-buffering effects can be more easily detected in intensive, prospective studies of a major stressor than in conventional retrospective studies (Bolger & Eckenrode, 1991; House, Umberson, & Landis, 1988). Intensive studies of a major stressor can examine stress buffering when the event can be expected to have its largest impact, at or near the time it occurs. Second, since many naturally occurring types of stressors are heterogeneous in nature, and because examinations entail the same objective event for all subjects, the investigation of such events ensures that the results are not due to unmeasured differences in the types of stressful events experienced. The heterogeneity of stressors may explain why some individuals become more distressed than others. Third, examinations do not inherently involve changes in social relationships (Bolger & Eckenrode, 1991; Thoits, 1982). In contrast, exams provide an environment from which we may determine whether prior health and social functioning differentiated those who become highly distressed from those who do not.

3.1. Subjects

Subjects were selected from among senior students attending the first female high school established in Taipei, Taiwan (ROC), many of whom engaged in TME preparation during spring of 1995. Students from this type of school had the greatest possibility of gaining entry into universities which principally matriculate “TOP One” students. However, it should be noted that a percentage of these students will either fail to gain entry to major universities, or they will choose to continue their educations only at the
vocational-college level. Some of the subjects will also be unable to gain entrance to either their first or second choice schools, and will rather choose to go to “cram schools” (make-up schools) to prepare for the next examination year.

In demographic terms, the sample was distinguished by its homogeneity, providing the following modal characteristics: (a) female gender, (b) ages from 15 to 18 years, and (c) students at the senior high school level. In the school from which the subjects were selected, 30 classrooms were provided for senior high school students, each of which was assigned approximately 50 students who could be expected to undergo the TME. The sampling procedure involved the random selection of 350 individuals from within selected classrooms, equally selected at random. Students were chosen based upon a random selection of assigned seat numbers.

Selected subjects were asked to complete a questionnaire twelve weeks and again one week before graduation. The TME testing occurred 5 weeks after the graduation. Data from the questionnaire provide a basis for predicting responses to TME testing. The findings from the study as well as recommendations which may ensue will be derived from comparison of TME grade results and subject anticipated scores.

3.2. Analytical Procedure and Instrument

As developed by Moos et al. (1982) at the Social Ecology Laboratory, Stanford University, the Health and Daily Living Form (HDL) constituted the questionnaire administered to each subject prior to undergoing TME testing. The HDL is a structured assessment procedure that can be administered as an interview or as a self-completed questionnaire. It was originally designed to study treatment outcomes among alcoholic patients and their families, but also has been used for studies of stress and coping among communities of married men and women and for an examination of the rehabilitation of men who had experienced heart attacks. In the current edition of the HDL manual (1990), the actual
survey forms are included in the appendices, including HDL Adult Forms A and B and the Youth Form. The Youth Form is described as suitable for administration to adolescents between the ages of 12 and 18 years who are in junior or senior high school. The form was adapted for using in Chinese culture. The questionnaire of this form is in appendix F. The Youth Form does not include the basic demographic questions essential to the study of ethnic racial correlates, family variables, or related factors that adolescent researchers may otherwise regard as important considerations (Nezu, 1989). Moreover, some of the Youth Form questions cannot be easily interpreted by younger persons of less than average intelligence (Schinke, 1989). Illustrative items include questions concerning asthma, allergies, and weight gain and loss. According to Shinke, the apparent middle-class bias of the Youth Form is a more serious issue. Many of the question items assume that the youth respondents are actively attending school. A few, equally important items ask respondents about participation in extracurricular activities associated with middle-class culture. Furthermore, several of the items require respondents to report on such feelings as their maturity, dependability, confidence, and intelligence.

3.2.1. Instrument Reliability

Normative and psychometric data for the HDL Youth Form have not been fully provided, including data for only nine indices (Nezu, 1989). Users wishing to use the Youth Form are advised to do so with caution with respect to the interpretation of the results. According to Nezu, “limited normative data, and the lack of extensive psychometric data concerning reliability, and especially validity, severely limits its use by the general test consumer” (p. 137).

3.2.2. Instrument Validity

The psychometric parameters for the HDL are evident throughout the manual, including scoring keys and composite scale indices (Moos et al., 1982). However, caution
similar to that given for instrument reliability is advised by Shinke (1989) for use of the Youth Form:

Youth form psychometric reflect the author's research with 70 children of depressed parents and 77 children of "normal" community residents. These parameters on validity and internal consistency appear in the range of acceptable scores, though not grounded on as rich a data base as score for the adult version. (p. 137)

3.2.3. Variables

The HDL—Youth Form was used to assess respondent self-confidence, mood and social functioning during a major stressful event. Two sets of indices composed the dependent variables, including three health-related variables (self-confidence, positive mood, distress mood,) and three social functioning variables (family activities, activities with friends, and social integration in school). The independent variables are the Test scores.

TME test results were obtained from selected high schools for all subjects selected to participate in the study. These results were used to compare TME scores for students who score higher or lower, respectively, for the health-related indices and the social functioning indices. The following model represent theoretical approach to test my hypotheses (Figure 8).
Figure 8. Theoretical model for hypothesis
4.1. Method of Analysis

A series of analysis using regression techniques was used to examine the research hypotheses. For the first hypothesis, student's mood scores were regressed on self-confidence scores. For the second hypothesis student's mood scores were regressed on social functioning. For the third hypothesis The college entrance Examination scores were regressed with mood scores. For the fourth hypothesis student's grade scores were regressed on student's self-confidence and social functioning. For the fifth hypothesis student's self-confidence scores were regressed on social functioning.

Table 1 presents the means and deviations for Time One. Table 2 presents the means and deviations for Time Two variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Max.</th>
<th>Min.</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
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<td>Confidence</td>
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<td>9</td>
<td>20.85</td>
<td>2.94</td>
<td>0-30</td>
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<tr>
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<td>0</td>
<td>2.58</td>
<td>0.95</td>
<td>0-5</td>
</tr>
<tr>
<td>Activity with Friend</td>
<td>5</td>
<td>0</td>
<td>3.26</td>
<td>1.13</td>
<td>0-7</td>
</tr>
<tr>
<td>School Integration</td>
<td>7</td>
<td>0</td>
<td>2.66</td>
<td>1.60</td>
<td>0-5</td>
</tr>
<tr>
<td>Positive Mood</td>
<td>20</td>
<td>8</td>
<td>15.26</td>
<td>2.58</td>
<td>0-20</td>
</tr>
<tr>
<td>Distress Mood</td>
<td>24</td>
<td>8</td>
<td>16.96</td>
<td>3.19</td>
<td>0-20</td>
</tr>
<tr>
<td>Test Score</td>
<td>587.74</td>
<td>166.83</td>
<td>373.86</td>
<td>77.92</td>
<td>0-700</td>
</tr>
</tbody>
</table>

Table 1. Means and standard deviations of the subjects for Time One
4.2. Testing the Hypothesis

4.2.1. Hypothesis One

As predicted in Hypothesis One, the Time One results indicate that self-confidence had a significant positive effect on positive mood \( (R^2=.14, \beta=.34, P=.0001) \) (Figure 9), whereas self-confidence was not significantly related to distress mood.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Max.</th>
<th>Min.</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>28</td>
<td>13</td>
<td>20.52</td>
<td>2.87</td>
<td>0-30</td>
</tr>
<tr>
<td>Activity with Family</td>
<td>5</td>
<td>0</td>
<td>1.96</td>
<td>0.86</td>
<td>0-5</td>
</tr>
<tr>
<td>Activity with Friend</td>
<td>5</td>
<td>0</td>
<td>3.39</td>
<td>0.96</td>
<td>0-7</td>
</tr>
<tr>
<td>School Integration</td>
<td>5</td>
<td>0</td>
<td>2.19</td>
<td>1.54</td>
<td>0-5</td>
</tr>
<tr>
<td>Positive Mood</td>
<td>20</td>
<td>7</td>
<td>14.68</td>
<td>2.80</td>
<td>0-20</td>
</tr>
<tr>
<td>Distress Mood</td>
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<td>9</td>
<td>17.28</td>
<td>3.10</td>
<td>0-20</td>
</tr>
<tr>
<td>Test Score</td>
<td>602.82</td>
<td>182.5</td>
<td>425.45</td>
<td>72.64</td>
<td>0-700</td>
</tr>
</tbody>
</table>

Table 2. Means and standard deviations of the subjects for Time Two

Figure 9. The effect of confidence on positive mood at TIME One
At the Time Two, self-confidence had a negative effect on distress mood ($R^2=.01$, $Beta=-.11$, $p=.04$), but had a positive effect on positive mood ($R^2=.2$, $Beta=.44$, $p=.0001$) (Figure 10).

![Figure 10. The effect of confidence on positive mood and distress mood at TIME Two](image)

4.2.2. Hypothesis Two

Hypothesis Two stated that students' social functioning would have an effect on student's mood. As shown in Figure 11, for Time One measure, distress mood had a significant positive relationship with school ($R^2=.032$, $Beta=-.36$, $p=.0011$). However distress mood was not significantly related to friend and family. Positive mood had a significantly relationship to friends ($R^2=.03$, $Beta=.45$, $p=.0006$) and to school ($R^2=.02$, $Beta=.25$, $p=.0046$). Positive mood was not significantly related to family.
For the Time Two measured see Figure 12, there was a significant positive relationship between positive mood and friend ($R^2=.03$, Beta=.56, $P=.0005$) and school ($R^2=.03$, Beta=.32, $P=.0013$). Distress mood was negatively related to family ($R^2=.01$, Beta=-.416, $P=.042$). Distress mood was not significantly related to friends and but was related to school.
Figure 12. (a). Simple regression for the effect of social functioning on positive mood (b). simple regression for the effect of social functioning on distress mood (c). multiple regression for the effect of social functioning on distress mood at TIME Two
After controlling family, friend, school, there was a negative relationship between distress mood and school.

4.2.3. Hypothesis Three

Hypothesis three stated that student's mood would influence the examination grade of the student. For the time One and Time Two measures, there were no significant relationships between positive or distress mood and examination scores.

4.2.4. Hypothesis Four

Hypothesis fourth stated that student's self-confidence and social functioning would have an effect on the scores obtained in the entrance examination. For Time One and Time Two, there was no significant relationship between self-confidence and grade and between social functioning and grade.

4.2.5. Hypothesis Five

Hypothesis five stated that social functioning would have an effect on confidence. For Time One (Figure 13). There was a significant positive relationship between school and confidence ($R^2=.029$, Beta=.09 & .31 , $P=.0023$) and there was a significant positive relationship between confidence and school ($R^2=.029$, Beta=.31 & P=.0023). However, the relationships between confidence and friends and between confidence and family were not significant.
As in Figure 14, the result of Time Two testing were the same as Time One. Only school activities had a positive effect on confidence ($R^2=.03$, Beta=.1 & .3, $p=.0008$). Confidence had a reciprocal positive effect on school activities ($R^2=.03$, $b=.3$, $p=.0008$).
4.3. Summary

According to the simple regression and multiple regression analysis, the relationships among the social functioning (family, school, and friend), confidence, and moods for TIME 1 can be expressed in Figure 15. Similarly, the relationships among the social functioning, confidence, and moods for TIME 2 can be summarized in Figure 16.

Figure 15. The relationships among social functioning, confidence, and mood for TIME One
Figure 16. The relationships among the social functioning, confidence, and mood for TIME Two.
It is now commonly believed that personal and environmental resources may buffer the individual from the potential impact of stress. Some commentators have argued that the stress-buffering effects of social relationships may reflect personal rather than environmental resources (e.g., Gottlieb, 1983; Hanson, Jones & Carpenter, 1984; Heller, 1979; Thoits, 1982). Supporting this claim is evidence that people's perceptions of social support are confounded by their personality (Henderson, Byrune, & Duncan-Jones, 1981) and their prior mental health (Monroe, Bromet, Connell, & Steiner, 1986; Furnfer, 1981). Contrary findings also exist (e.g., S Cohen, Sherrod, & Clark, 1986). Billings and Moos (1982) proposed an integrative model, in which the functioning-related outcomes of stressful life circumstances are influenced by individual's personal and environmental resources as well as by their appraisal and coping responses. In this study, personal resources were measured by self-confidence. Environmental resources included activity with family, friends, and social integration in school.

The purpose of this study was to examine the connectedness between personal and environmental resources, coping responses, and one outcome college examination scores. The following were hypothesized 1) students' self-confidence and social functioning would have an effect on positive mood and distress mood; 2) students' moods would have an effect on college entrance examination scores; 3) students' self-confidence and social functioning would also have an effect on grade. Self-confidence and social functioning influence each other reciprocally. A summary model of the result of this study is seen below (Figure 17).
Results showed that at Time One, more confident students had used a more positive mood to meet examination stress, but distress mood was not significantly related. At Time Two, more confident students exhibited more positive mood characteristics and less distress mood patterns. Less confident students demonstrated more distress mood characteristics. These findings are in accord with Holahan and Moos (1987a) who
indicated that more personal resources at the beginning would be associated with more coping ability during the year. Taylor and Brown (1988) reported that mentally healthy people have the capacity to view themselves in ways that enhance self-esteem and personal efficacy that encourage optimistic views of the future. Self-labels such as intelligent, mature, confident, which are assessed by measures of self-confidence, are normatively positive self-appraisals that tap aspects of esteem, efficacy, and optimism. If people believe they can deal effectively with stressors, they are not perturbed by them. But if people believe they cannot control adverse circumstances, they demonstrate higher levels of distress. Their distress impairs their functioning (Beck, Emery, & Greenberg, 1985; Lazarus & Folkman, 1984; Meichenbaum, 1977; Sarason, 1975).

With regard to social function pattern at Time One, the results showed that friends and school had a significant relationship with positive mood, and school activities had a negative relationship with pattern of distress. This suggests that the more support and activities with friends and school activities, the more positive a student will be when facing the stress of a critical examination. Family did not play an important role at this stage. This finding is consistent with Smillansky (1991) who states that as adolescents undergo new internal and external experiences, they cannot get the necessary support from their parents because they are adults and at a different experiential stage of life. Adolescence itself entails the need to separate from parents and its attendant difficulties in the adolescent-parent relationship. Members of peer groups within the age cohort have the same problems, are undergoing the same types of changes, physical and emotional, and are capable of supplying mutual support through sharing their personal, internal experiences (i.e., doubts about values and behavior patterns accepted by the family, society).

Students who also participate in school projects or activities utilized more positive coping patterns and fewer distress patterns at Time One and at Time Two. The more projects or activities they participated in, the less distress moods they had. There are four reasons to explain why this group of students showed a positive mood. First, these
students were proud of their performance in different activities. They thought they had the
ability to prepare for the examination. Second, they had some ways to release their
academic pressure when they were in projects. Third, they had more opportunities to talk
to other people and get more information from them. Taken together, this is a pattern for
decreasing stress. Fourth, they had higher self-confidence.

Family support did not play an important role at Time One, whereas results
indicated that students who had more activities with family experienced less distress mood
at Time Two. Parents may not have cared about pretests, but for the real examination they
used more caring to help their children. This means, students who had less activities with
their family had more distress. It was consistent with Wilcox’s finding (1981), where it
was found the relationship between lack of social support and psychological distress
increased as a function of the level of life stress individuals had experienced.

Personal resources and environmental resources reciprocally influence one another
(Hee-og, 1994). Results of this resource showed that self-confidence had no significance
in relation to family and friends but had significance in relation to school. This finding
indicated that highly self-confident students were more likely to participate in school
projects or activities and that higher social integration in school results in higher self
confidence. These findings are consistent with Rosenberg (1989), who found that
interpersonal success in high school is both a cause and a consequence of self-esteem.
People with high self-esteem are more likely to join formal groups and become leaders in
high school, and are also more likely to participate actively in informal groups and assume
positions of informal leadership. An impressive body of evidence has accumulated over
the past year which has demonstrated that high self-esteem results in higher participation
and leadership (Rosenberg, 1989).

Self-confidence, social functioning and mood did not affect students' examination
grade. The failure to predict actual exam performance indicates that other variables, such
as academic ability, were more important than preparatory coping responses or social
functioning. An unpublished finding from the Folkman and Lazarus (1984) study of examination stress lends support to this interpretation. The coping responses reported by the students before the exam did not predict their grade, but GPA did.

The results of this study are subject to several limitations. First, the sample size, 321 persons, is small. Second, the results discussed above are based on a study of acute stress; personality and social functioning may play different roles in coping with chronic stress. More specifically, this study focused on an anticipated acute stressor. Thus the support effect uncovered may not generalize to unanticipated stressors such as major dental work. Third, this study only focused on female students. The results, therefore cannot be generalized to male students. Fourth, this study focused on Top One level students, not average students. Clearly, the findings need replication with male students, average students and other nonstudent samples.

This study illustrates the value of intensively studying a single major stressful event to understand the causal dynamics of the stress process (Kessler, Price, & Wortman, 1985; Leventhal & Tomarken, 1987, Bolger, & Eckenrode, 1991). One caution should be exercised in interpreting these findings on stress, this study involved correlational data on paper-and-pencil indices collected two times. Although the results of this study point to important associations between stress-resistance factors and emotional health, they do not demonstrate causal effects of stress resistance on emotional health. For example, Holahan and Moos (1985), state that health status itself might exert some effect on individuals' actual or perceived feelings about themselves, their coping efforts, and their social relationships.

The present findings suggest some ways to help individuals deal more effectively with examination stress. Assertiveness training may engender a sense of efficacy in the face of stress, and it may foster the feeling of self-confidence associated with stress resistance. Relaxation training may help more intense persons learn behavioral responses to stress.
REFERENCES


Schaefer, C., Coyne, J. C., & Lazarus, R. S. (1982). The health-related function(s) of social support. *Journal of Behavioral Medicine, 4*, 381-406.


APPENDICES
APPENDIX A

HUMAN SUBJECT FORM
January 16, 1995

Principal Investigator:

The following project has been approved for exemption under the guidelines of Oregon State University’s Committee for the Protection of Human Subjects and the U.S. Department of Health and Human Services:

Principal Investigator: Joanne B. Engel

Student's Name (if any): Yu-ling Liu

Department: Education

Source of Funding: ________________________________

Project Title: Stress, Personality and Social Functioning During a Major Stressful Event

Comments: ____________________________________

A copy of this information will be provided to the Chair of the Committee for the Protection of Human Subjects. If questions arise, you may be contacted further.

Mary E. Nunn
Sponsored Programs Officer

cc: CPHS Chair
APPENDIX B

PERMISSION FROM TAIPEI MUNICIPAL FIRST GIRLS' HIGH SCHOOL
Dec. 22, 1994

Attention: Joanne B. Engle, Ph. D.

Dear Sirs:

Regarding the request of your student, Mrs. Yu-ling Liu, we give our consent to let her conduct questionnaire on the research of "Stress, Personality, Social Functioning During a Major Stressful Event" in our school from January to April, 1995.

sincerely Yours,

[Signature]

Ya-wen Ding
APPENDIX C

PERMISSION FROM DR. MOOS
August 10, 1999

Yu-Lung Liu

Dear M. Liu,

The Health and Daily Living Form is now published (see attached). You are very welcome to use it for your patient interest.

You may also be interested in a new scale we have, the Life Stressors and Social Resources Inventory, which is enclosed.

Good luck with your work.

Sincerely,

Rudolf Moos
APPENDIX D

HEALTH AND DAILY LIVING YOUTH FORM (ENGLISH FORM)

by Moos
HEALTH AND DAILY LIVING - YOUTH FORM

This is your copy of the Health and Daily Living Youth Form. Please answer each question by placing an "X" in the box next to the answer that you choose or by writing in the space provided. If you do not wish to answer a question, please circle the question so that we know you decided to skip it. Please ignore the small numbers by the boxes and in the margins. They help us record your answers.

PART I. SOME FACTS ABOUT YOU

1. How old are you? ____

2. Are you: [ ] a boy [ ] a girl

PART II. YOUR HEALTH IN THE LAST YEAR

1. In the LAST YEAR (12 months), have any of these happened to you?

<p>| | | | | | | |</p>
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</tr>
<tr>
<td></td>
<td>overweight (10 lbs. or more)</td>
<td></td>
<td>stayed overnight in the hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>underweight (10 lbs. or more)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. In the LAST YEAR, how often have you had or done the following things?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Fairly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>a) upset stomach, indigestion</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) headaches</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) nightmares or bad dreams</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) bite your nails</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e) sore throats</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>f) colds or coughs</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>g) trouble going to sleep</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>h) acne or pimples</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>i) missed school due to illness</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>j) visited the doctor</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

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### PART III. YOUR HEALTH IN THE LAST MONTH

1. We have asked about your health in the last year. Now we want to know how you have been feeling **IN THE LAST MONTH**. Check how often you have felt each of the following:

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) alert</td>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>b) cheerful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) relaxed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) sad, blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) uptight, tense</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) afraid of things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) full of energy</td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>h) happy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) calm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) restless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k) very tired</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l) worried</td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

2. **IN THE LAST MONTH** how often did you:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) exercise (like swim or bike)</td>
<td></td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>b) take vitamins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) drink wine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) drink beer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) drink hard liquor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) smoke cigarettes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) wear a seat belt in the car</td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>
3. People feel different ways about themselves. For each word, check the box that shows how well the word describes you:

<table>
<thead>
<tr>
<th>Word</th>
<th>Not at All</th>
<th>Somewhat Well</th>
<th>Fairly Well</th>
<th>Very Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) intelligent</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b) mature</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c) dependable</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d) confident</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e) friendly</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>f) successful</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>g) athletic</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

**PART IV. YOUR FAMILY AND FRIENDS**

1. **DURING THE LAST MONTH,** have you done or attended any of these activities? Answer **TWICE** for each activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Together with another family member</th>
<th>Together with one or more friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) ball game (like football or soccer)</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>b) other sports (like skiing or tennis)</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>c) hike or long walk</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>d) club meeting (like Scouts, 4H, or Y-club)</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>e) card games or board games</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>f) had a long talk</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>g) helped out on some project</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>h) went to a party</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>i) went on a picnic or to the beach</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
<tr>
<td>j) played a musical instrument or sang</td>
<td>Yes 1 □ □</td>
<td>No 2 □ □</td>
</tr>
</tbody>
</table>

2. How many very good friends do you have?

1 □ none  2 □ 1 or 2  3 □ 3 or 4  4 □ 5 or more
PART V. SOME QUESTIONS ABOUT SCHOOL AND WORK

1. Are you going to school?
   Box: Yes [2] No (if no, go to item #5)

2. In general, how well do you get along with your teachers?

3. What are your school grades?

<table>
<thead>
<tr>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly D's and F's</td>
<td>Mostly C's and D's</td>
<td>Mostly B's and C's</td>
<td>Mostly A's and B's</td>
<td>Mostly A's</td>
</tr>
</tbody>
</table>

4. Have you done any of the following IN THE LAST YEAR?

   Box: Yes [1] No [2]
   - [ ] been a member of a school sports team
   - [ ] took part in a school play or show
   - [ ] went to a school dance
   - [ ] helped a teacher after school
   - [ ] went to a meeting of a school club or group
   - [ ] worked on a school project
   - [ ] elected to some school or club office

5. Do you have a job outside your home for which you get paid?
   (check all that apply)

   If yes, what is this job? ________________________________

   What is today's date? ________________________________

This is the end of the form. Thank you for your help.
APPENDIX E

HEALTH AND DAILY LIVING YOUTH FORM

(CHINESE FORM: adapted by Yu-Ling Liu)

* Adaptation were made to account for cultural differences in language and activities. A true English translation of this form is in Appendix F. The researcher also collected data on self esteem. These questions follow the Moos' form and are on pages 85 to 88. There is no scoring protocol for these questions.
Health and Daily Living Youth Form

這是一份問卷調查，請打一個“×”表示回答你的問題，或將答案寫在空格上。
如果你不想回答問題時，請在題號上劃圈，以便於我們知道你決定不回答這個問題。
請不要在空格旁或空白處的小數字，它只是幫助我們記錄你的答案，謝謝你幫助完成這份重要問卷。

你的背景資料

1. 今年幾歲？________________學號_________________________1-2
2. 你決定選那一組作爲聯考志願
   1□第一類組  2□第二類組  3□第三類組  4□第四類組  3

你去年的健康情形

1. 去年曾發生下列情形嗎？
   有  無  有  無
   1  2  1  2
   □  □過敏症  4  □  □氣喘    7
   □  □體重過重（超過4公斤以上）  5  □  □在醫院過夜  8
   □  □體重過輕（減輕4公斤以上）  6

2. 去年發生下列情況的頻率？

<table>
<thead>
<tr>
<th>(a) 胃部不適，消化不良</th>
<th>從不</th>
<th>很少</th>
<th>有時</th>
<th>經常</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(b) 頭痛</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(c) 作惡夢</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(d) 咽喉痛</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(e) 咳嗽</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(f) 感冒或咳嗽</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(g) 難以入睡</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(h) 術前症；面饅；粉刺</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(i) 因病不上學</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>(j) 看醫生</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
你上個月的健康情形

1. 我們已經問過你去年的健康情形，現在是否可以讓我們知道這個月你
   的感覺如何？

<table>
<thead>
<tr>
<th>感覺</th>
<th>從未</th>
<th>很少</th>
<th>有時</th>
<th>經常</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 時常戰戰兢兢的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 19</td>
</tr>
<tr>
<td>(b) 喜樂的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 20</td>
</tr>
<tr>
<td>(c) 放鬆心情愉快的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 21</td>
</tr>
<tr>
<td>(d) 心裡憂愁</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 22</td>
</tr>
<tr>
<td>(e) 緊張的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 23</td>
</tr>
<tr>
<td>(f) 害怕某些事會發生</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 24</td>
</tr>
<tr>
<td>(g) 充滿精力的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 25</td>
</tr>
<tr>
<td>(h) 快樂的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 26</td>
</tr>
<tr>
<td>(i) 平靜的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 27</td>
</tr>
<tr>
<td>(j) 不安的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 28</td>
</tr>
<tr>
<td>(k) 疲倦的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 29</td>
</tr>
<tr>
<td>(l) 焦急的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 30</td>
</tr>
</tbody>
</table>

2. 上個月你較經常作下列事項嗎？

<table>
<thead>
<tr>
<th>活動</th>
<th>從未</th>
<th>很少</th>
<th>有時</th>
<th>經常</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 運動</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 31</td>
<td></td>
</tr>
<tr>
<td>(b) 飲食</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 32</td>
<td></td>
</tr>
<tr>
<td>(c) 吃藥酒或葡萄酒</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 33</td>
<td></td>
</tr>
<tr>
<td>(d) 喝啤酒</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 34</td>
<td></td>
</tr>
<tr>
<td>(e) 吸煙</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 35</td>
<td></td>
</tr>
</tbody>
</table>

3. 每個人對自己有不同的觀感，請選擇最適合你的答案。

<table>
<thead>
<tr>
<th>感覺</th>
<th>從未</th>
<th>很少</th>
<th>有時</th>
<th>經常</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 聲明的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 37</td>
<td></td>
</tr>
<tr>
<td>(b) 成熟的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 38</td>
<td></td>
</tr>
<tr>
<td>(c) 負責任的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 39</td>
<td></td>
</tr>
<tr>
<td>(d) 自信的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 40</td>
<td></td>
</tr>
<tr>
<td>(e) 友善的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 41</td>
<td></td>
</tr>
<tr>
<td>(f) 成功的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 42</td>
<td></td>
</tr>
<tr>
<td>(g) 健康有活力的</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□ 43</td>
<td></td>
</tr>
</tbody>
</table>
4. 去年曾參與以下活動嗎？

**YES**  **NO**

1. 
2. 
3. 
4. 
5. 

5. 你在外有工作嗎？這個工作能付你零用錢嗎？

1. □ 沒有  2. □ 有

如果有，你的工作項目是  

2. 你想至國外升學嗎?

□ 不  □ 是

如果是，你的理由是  

有關你自己

1. 我是一個有價值的人，至少在一般水平上

□ 十分同意  
□ 同意  
□ 不同意  
□ 十分不同意

2. 我覺得自己有許多優點

□ 十分同意  
□ 同意  
□ 不同意  
□ 十分不同意

3. 大致上我認爲自己可能有失敗的傾向

□ 十分同意  
□ 同意  
□ 不同意  
□ 十分不同意
有關你的家庭及朋友

1. 上個月你曾經參與下列那些活動項目？每個項目針對家人及朋友部份各回答一次

<table>
<thead>
<tr>
<th></th>
<th>與家人一起</th>
<th>與朋友一起</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 球類活動</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(b) 其他運動</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(c) 健行、爬山郊遊</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(d) 社團活動或俱樂部</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(e) 棋牌或下棋</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(f) 聊天、談心</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(g) 幫忙完成某些事情</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(h) 參加派對等會</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(i) 野餐、去海灘</td>
<td>有</td>
<td>無</td>
</tr>
<tr>
<td>(j) 彈奏樂器、歌唱或音樂欣賞</td>
<td>有</td>
<td>無</td>
</tr>
</tbody>
</table>

2. 你有幾個要好的朋友？

|  |  |  |  |  |
|---|---|---|---|
|  | 1 | 2 | 3 | 4 |
| □ 無 | □ 1或2位 | □ 3或4位 | □ 5個以上 | 64 |

有關學校課業情況

1. 你將要繼續國內升學嗎？

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□ 是</td>
</tr>
<tr>
<td>2</td>
<td>□ 不是（如果不是請跳到第5項）</td>
</tr>
</tbody>
</table>

2. 長而言，你覺得和老師相處情況如何？

|  |  |  |  |  |
|---|---|---|---|
|  | 1 | 2 | 3 | 4 |
| □ 不好 | □ 好 | □ 好 | □ 非常好 |  |

3. 你的學校成績如何？

|  |  |  |  |  |  |
|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |  |
| □ 非常好 | □ 好 | □ 好 | □ 平均 | □ 中等以下 |  |
| 95-90分 | 89-85 | 84-80 | 79-75 | 74-65 |  |
4. 我處理事情的能力與一般相同
□ 十分同意
□ 同意
□ 不同意
□ 十分不同意

5. 我覺得自己沒有太多可誇耀的
□ 十分同意
□ 同意
□ 不同意
□ 十分不同意

6. 我用積極的態度面對自己
□ 十分同意
□ 同意
□ 不同意
□ 十分不同意

7. 大體而言，我滿意自己
□ 十分滿意
□ 滿意
□ 不滿意
□ 十分不滿意

8. 我希望自己能更加的尊重自己
□ 十分滿意
□ 滿意
□ 不滿意
□ 十分不滿意

9. 偶爾覺得一無是處
□ 十分滿意
□ 滿意
□ 不滿意
□ 十分不滿意

10. 偶爾覺得自己不好
□ 十分滿意
□ 滿意
□ 不滿意
□ 十分不滿意

今天是星期幾請以西元回答_________________________ 13-16
問卷到此全部結束，謝謝您的合作，祝您愉快
APPENDIX F

HEALTH AND DAILY LIVING YOUTH FORM

(CHINESE TO ENGLISH: adapted by Yu-Ling Liu)
HEALTH AND DAILY LIVING - YOUTH FORM

This is your copy of the Health and Daily Living Youth Form. Please answer each question by placing an "X" in the box next to the answer that you choose or by writing in the space provided. If you do not wish to answer a question, please circle the question so that we know you decided to skip it. Please ignore the small numbers by the boxes and in the margins. They help us record your answers.

PART I. SOME FACTS ABOUT YOU
1. How old are you? _______ SSN: __________

2. Which group you participate in the TME 1_I group 2_II group 3_III group 4_IV group

PART II. YOUR HEALTH IN THE LAST YEAR
1. In the LAST YEAR (12 months), have any of these happened to you?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>allergies</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>overweight (10 lbs. or more)</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>underweight (10 lbs. or more)</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

2. In the LAST YEAR, how often have you had or done the following things?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Fairly</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) upset stomach, indigestion</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b) headaches</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c) nightmares or bad dreams</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d) bite your nails</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e) sore throats</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>f) colds or coughs</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>g) trouble going to sleep.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>h) acne or pimples</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>i) missed school due to illness</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>j) visited the doctor</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

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**PART III. YOUR HEALTH IN THE LAST MONTH**

1. We have asked about your health in the last year. Now we want to know how you have been feeling **IN THE LAST MONTH**. Check how often you have felt each of the following:

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Fairly Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) alert</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) cheerful</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) relaxed</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) sad, blue</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e) uptight, tense</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f) afraid of things</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g) full of energy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h) happy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i) calm</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j) restless</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>k) very tired</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>l) worried</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

2. **IN THE LAST MONTH** how often did you:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Fairly Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) exercise (like swim or bike)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) take vitamins</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) drink wine</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) drink beer</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e) drink hard liquor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f) smoke cigarettes</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
YOUR HEALTH IN THE LAST MONTH (continued)

3. People feel different ways about themselves. For each word, check the box that shows how well the word describes you:

<table>
<thead>
<tr>
<th>Word</th>
<th>Not at All</th>
<th>Somewhat Well</th>
<th>Fairly Well</th>
<th>Very Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) intelligent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) mature</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) dependable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) confident</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) friendly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) successful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) athletic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PART IV. YOUR FAMILY AND FRIENDS

1. DURING THE LAST MONTH, have you done or attended any of these activities? Answer TWICE for each activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Together with another family member</th>
<th>Together with one or more friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) ball game (like football or soccer)</td>
<td>Yes 1</td>
<td>No 2</td>
</tr>
<tr>
<td>b) other sports (like skiing or tennis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) hike or long walk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) club meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) card games or board games</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) had a long talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) helped out on some project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) went to a party</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) went on a picnic or to the beach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) played a musical instrument or sang</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. How many very good friends do you have?

<table>
<thead>
<tr>
<th>Number of Friends</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>1</td>
</tr>
<tr>
<td>1 or 2</td>
<td>2</td>
</tr>
<tr>
<td>3 or 4</td>
<td>3</td>
</tr>
<tr>
<td>5 or more</td>
<td>4</td>
</tr>
</tbody>
</table>
PART V. SOME QUESTIONS ABOUT SCHOOL AND WORK

1. Are you going to school?
   1 □ Yes  2 □ No (if no, go to item #5)

2. In general, how well do you get along with your teachers?
   1 □ Not well  2 □ Fairly well  3 □ Well  4 □ Very well

3. What are your school grades?

<table>
<thead>
<tr>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Mostly D's</td>
<td>(Mostly C's and B's)</td>
<td>(Mostly A's and B's)</td>
<td>(Mostly A's)</td>
<td></td>
</tr>
<tr>
<td>and F's</td>
<td>and D's)</td>
<td>and C's)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   1 □  2 □  3 □  4 □  5 □

4. Have you done any of the following IN THE LAST YEAR?

   Yes  No
   1 □  2 □

   □ been a member of a school sports team
   □ took part in a school play or show
   □ went to a school dance
   □ helped a teacher after school
   □ went to a meeting of a school club or group
   □ worked on a school project
   □ elected to some school or club office

5. Do you have a job outside your home for which you get paid?
   (check all that apply)

   1 □ No  2 □ Yes, part time  3 □ Yes, full time  4 □ Yes, summer job

   If yes, what is this job? ________________________________

   Do you want to go abroad for further study?

   _ No _ Yes

   If yes, What is the reason? ________________________________ 12
About yourself

1. I feel that I'm a person of worth, at least on an equal plane with others.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree

2. I feel that I have a number of good qualities.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree

3. All in all, I am inclined to feel that I am a failure.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree

4. I am able to do things as well as most other people.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree

5. I feel I do not have much to be proud of.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree

6. I take a positive attitude toward myself.
   _ Strongly agree
   _ Agree
   _ Disagree
   _ Strongly disagree
About yourself (continued)

7. On the whole, I am satisfied with myself.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

8. I wish I could have more respect for myself.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

9. I certainly feel useless at times.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

10. At times, I think I am no good at all.
    - Strongly agree
    - Agree
    - Disagree
    - Strongly disagree

What is today's date? ____________________

This is the end of the form. Thank you for your help.