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THE GENERALIZED EXPECTANCY FOR SUCCESS AND ITS RELATIONSHIP TO SOCIAL SELF-ESTEEM AND FEMALE ADOLESCENTS' SELF-REPORTED PROBLEMS

by
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Thesis presented to the School of Graduate Studies of the University of Ottawa as partial fulfillment of the requirements for the degree of Master of Arts

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CURRICULUM STUDIORUM

Howard Schachter was born on May 19, 1955 in Montréal, Québec. He received the degree of Bachelor of Arts, Major in Developmental Psychology with Distinction, from McGill University in 1977.

ABSTRACT

This study was undertaken to examine the inverse relationship between female adolescents' self-reported problem magnitudes and, social self-esteem (SSE). The thrust involved the elucidation of an hypothetical mediating variable in this relationship, which maintains social self-esteem in light of adolescent self-reported problems: the generalized expectancy for success (GES). Three hundred and fifty-two female high school students served as the subjects.

Following from the GES's strong positive relationship to SSE as well as the former's relationship to self-reported problem magnitudes, this expectancy's ability to mediate most problem-SSE relationships was demonstrated empirically. These findings were then corroborated by evidence that the GES better predicts SSE than do any of the problem categories which were related to SSE. For two problem types, GES did not mediate in accordance with the general trend for all subjects.

Age-split group data, developed via the maximization of mean age-group differences in problem saturation (magnitude) for each independent problem category, revealed that for nine of twelve problem types, the age group with the significantly higher mean problem level also exhibited GES's strongest mediating effect (toward a zero correlation). However, no

mean GESS level differences were found between any of the age-split groups for each of these nine problem categories. Each of the three problem types not exhibiting this trend did not have a significant initial correlation with SSE and, their correlations with the GES were low, relative to the other nine categories' correlations with GES.

The strength of the GES-SSE relationship was assessed by including in the prediction of SSE, only those subjects scoring beyond specific cutpoint scores. The relationship appeared to resist the disruptive effects of problem magnitude increments although small subject group cell numbers must temper any strong interpretations. Variance-based and psychological explanations for GES's mediating effect were proposed; and, the implications of these findings were seen in terms of 'hope', depression and, in light of relevant psychotherapy outcome research reporting a weak or null relationship between personal problem resolution and self-esteem increments. Future research was suggested.

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

The scope and the intensity of the problems characteristic of adolescence has been a highly debated area (Cole, 1948; Douvan & Adelson, 1966; Eme, Maisiak & Goodale, 1979; Offer & Offer, 1975) and it is a well-accepted notion that adolescence is a period of increased turmoil and stress. Beginning with Hall (1904) and continuing with Conger (1977), Malmquist (1978) and Rice (1978), textbooks have elucidated the multiplicity of problem types inherent in the adolescent growth process, by describing the adolescents' continuing adjustment to themselves (eg. biological-sexual) and their environment (eg. parents, peers, school).

Adolescence is usually thought of as beginning with puberty although this too, has been debated (Malmquist, 1978; Miller, 1974; White, 1980). The particular physical changes of puberty reflect that, for these young people as well as for their peers and parents, these adolescents are no longer the same as they were before. Biological changes are rapid and, often disproportionate physical growth as well as extreme hormonal fluctuations do occur (Pomerantz, 1979). Social expectations -- reflecting the salience of society's 'normative' or guiding effects on the onset process and the termination of adolescence -- are imposed on these adolescents and they differ from those expectations placed on

younger individuals. The adolescent is treated as both a child and an adult. However, this transitional status is accompanied by role confusion which serves to complicate the striving for a stable ego identity (Erikson, 1968). In attempting to establish and maintain a sense of inner continuity from which propriate, or long-range goal striving (Allport, 1961) may take root, the adolescent is expected to coordinate his internal changes with a changing social role (Pomerantz, 1979). Protean man (Lifton, 1970) is the prototypical adolescent who is able to succeed in creating a mask or personna for every social situation (Dickstein, 1977). In any case, the adolescent ideally moves through this transitional period which culminates in a mature identity, marked by a reworking of the past and an acceptance of the future (Erikson, 1968).

There is a pressing need today for a strong, data-based epidemiological perspective on the physical and psychological problems of adolescents in order to provide a basis for the delivery of health-care services (Dragastin & Elder, 1975; Jessor & Jessor, 1977; Lipsitz, 1977; Miller, 1974; Parcel, Nader & Meyer, 1977). For example Mezzich and Mezzich (1979) have created a data-based typological system with which adolescent depression -- 'normal' (Anthony, 1970) or 'clinical' -- may be described as well as predicted (ie. etiology, prognosis). Adolescents' self-perceived needs for help with self-perceived problems have been investigated

(Parcel et al, 1977; Tanck & Robbins, 1979) yet few other studies have responded to this need with other clinical or non-clinical samples (House, Durfee & Bryan, 1979).

"Responsiveness to societal concern about youth carries with it the necessity of a focus on problem behavior since it is the latter, obviously, that has occasioned the concern" (Jessor & Jessor, 1977, p. 4). One advantage of the study of adolescent problem behavior is that problem behavior constitutes a nexus at which many sources of influence interface and intersect -- the personal, social, institutional and behavioral realms which combine to provide an arena for the analysis of human action. A second advantage is that problem behavior is inextricably tied to the process of change, both at the personal and societal levels. For example, drug usage is reflected in social patterns. And finally, researchers have a chance to do work that will answer the immediate call for relevant, applicable research.

Some studies have investigated adolescents' perceptions of their own problems and needs, following from the earliest comprehensive study of adolescents by Hall (1904) and the first study of psychodynamics in juvenile delinquent adolescents (Healy, 1915).

And, some success has been reported in treating adolescent problems; for example, group counseling or therapy (Dinkmeyer & Carlson, 1978) has

> been successful in treating the common teenage problems associated with shyness, delinquency, depression, sex, weight, smoking, alcohol, drugs, temper and physical aggression, fear, anxiety, decision making, problem solving, assertiveness, friendship, and career/ employment (p. 3).

The purpose of this study is to investigate adolescent problems and their correlationship with self-esteem. Problems and self-esteem will be examined and an alternative explanation for their relationship will be proposed in light of the construct called generalized expectancy for success.

Adolescence: Developmental Tasks

External stress is felt by all age groups, but perhaps more so by adolescents who are, additionally, experiencing excessive amounts of internal pressure. The adolescent period is a time of much physical, social, and emotional growth and development. These changing patterns within the individual, coupled with those of society, create a less than desirable, pressureful, anxiety-laden environment (Rice, 1978; Rogers, 1972).

The various definitions of adolescence allow for their differentiation into the following categories: a period of physical development, an age span, a discrete developmental stage, a socio-cultural phenomenon, and a way of life or state of mind (Malmquist, 1978; Rice, 1978).

Adolescence probably is viewed best "as a process rather than a period, a process of achieving the attitudes and beliefs needed for effective participation in society" (Rogers, 1972, p. 9).

Manaster (1977) has divided the demands of adolescents into two groups: the developmental tasks -- those demands placed on individuals in one stage in order to foster satisfaction or adjustment at the next stage -- and, the life tasks which are those areas of living which demand attention and effective coping at all times.

Related to those areas which necessitate coping are those failures to cope, that which is the substance of worries, concerns, needs and problems. All life-problems may fall within the following five categories of life tasks: love and sex, work and school, friends and community or society, self, and, ontological strivings or tasks (Adler, 1932; Dreikurs & Mosak, 1967; Manaster, 1977). These tasks provide a reference for observing and analyzing the ways in which an individual copes with the environment -- both internally and externally.

Gould (1977, p. 6) has contended that adolescents must confront and complete four major developmental tasks: the establishment of sexual resolution and direction; the emancipation or autonomy from parents; the choice of career goals and the appropriate preparation for their actualization; and, the integration of personality.

Havighurst (1972) believes that adolescents must master eight developmental tasks, where a developmental task is conceived of as arising

> at or about a certain period in the life of the individual, successful achievement which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks (p. 2).

Manaster (1977, p. 130 has claimed that

> Adolescent development presents a number or biological, cognitive and psychological challenges for adolescents. Society presents all adolescents with many situational challenges. The developmental and situational challenges combine in the problems of the life tasks for adolescents.

Manaster (1977, pp. 14-17) has integrated Havighurst's (1972) eight developmental tasks with his conception of their associated life tasks.

> Developmental Task 1: Achieving and more mature relations with agemates of both sexes. Life Tasks: Friends and community; love and sex.
>
> Developmental Task 2: Achieving a masculine or feminine social role. Life Tasks: Self; friends and community; love and sex.
>
> Developmental Task 3: Accepting one's physique and using the body effectively. Life Tasks: Self; love and sex.
>
> Developmental Task 4: Achieving emotional independence of parents and other adults. Life Tasks: Self, friends and community; love and sex.
>
> Developmental Task 5: Preparing for marriage and family life. Life Tasks: Love and sex.

Developmental Task 6: Preparing for an economic career. Life Tasks: Work and school; self.

Developmental Task 7: Acquiring a set of values and an ethical system as a guide to behavior -- developing an ideology. Life Tasks: Existential, friends and community.

Developmental Task 8: Desiring and achieving socially responsible behavior. Life Tasks: Friends and community.

Adolescents today are searching for personalized answers to many of life's questions. In order to find these answers they need to acquire certain skills, especially those of self-understanding and social awareness. The desired direction of development, then, might be conceived of as an increase in self-identity and self-acceptance which is accompanied by self-esteem and self-actualization (Dinkmeyer & Carlson, 1978, p. 2).

An Assumpton about Adolescents

The adolescent, as a human being, is seen to be an indivisible, social, decision making being whose actions have a social purpose (Dreikurs & Sonstegard, 1968). He or she is a

> total, complete individual (holistic), whose own feelings and perspectives (phenomenological) influence his or her own personal goals (teleological) within his or her own environment (field-theoretical) as he or she lives as a member of society, as he or she must (socially-oriented approach) (Manaster, 1977, pp. 12-13).

One common thread which runs through different perspectives of adolescent growth and development is that of 'belonging' and 'knowing one's place'. The orientation can be Adlerian, Eriksonian, Lewinian, Rogerian, Maslovian or, White's. "The point in all of these is one of fit and belonging -- fitting yourself to be yourself, and fitting in with others, belonging with others" (Manaster, 1977, p. 127).

Once one is aware that adolescents, as human beings, are social beings, this leads to a new awareness of the verbal and nonverbal interactions between individuals. The individual's all-pervading view of life or the style (Adler, 1957) is always revealed in social intercourse. Yet, it also adds emphasis to the more important awareness that with the onset of adolescence, the break from one's parents and the striving for individuation makes the social area of development the most important focus in adolescence. He or she must seek comfort in relationships external to the home and thus, social interaction is the primary focus; they must seek replacements for the forsaken comfort of the home. Social existence is necessary for existence (Hemming, 1967; Rice, 1978).

The individual's unique approach to life's problems is always consistent with his or her concept of self as well as with his or her assumptions about persons and human relationships. As the individual interacts with external

reality, the essential meaning of his insides is laid bare (Adler, 1957; Dinkmeyer & Carlson, 1978).

One of the crucial elements in human growth and the ability to meet life tasks is the capacity for 'give and take', also known as social interest (Dreikurs, 1958). This is especially true of adolescent development (Malmquist, 1978). Dewey (1972) has delineated the component variables comprising social interest or, social-emotional maturation. A well adjusted person is one who: respects the rights of others, is tolerant of others, cooperates with others, encourages others, is courageous, has a true sense of self-worth, has a feeling of belonging, has socially accepted goals, puts out a genuine effort, meets situational demands, is willing to share rather than search for personal gain, is honest, and thinks in terms of 'we' and not just 'I'. This description is representative of the adolescent who has begun to master the developmental tasks in earnest.

A Developmental Perspective on Stage- or Age-Related Concerns

Before research into adolescent problems is presented, the different kinds of development characteristically expected within the different stages or age-groupings of adolescence must be delineated. It follows that the existence -- or lag regarding -- of certain developmental tasks carries an assumption that the adolescent may mishandle

(ie. problems) them.

Following the divisions of development discussed by Kagan and Coles (1972) and Malmquist (1978), three stages are described: preadolescence - early adolescence, which encompasses the pubertal stage (about 10 to 11 years of age, to 12 or 13) as well as the transition (13-14) into midadolescence (13-16 ie. the mid-teens); and, youthhood or late adolescence (17 and older, with termination depending on the societal context).

It must be noted that residual problems which carry over into a subsequent stage will complicate, or preclude, the confrontations with novel developmental tasks. The description of development within each stage will be done in terms of the developmental tasks presented earlier.

Early Adolescence

One major theme of early adolescence is the adjustment to one's physique and using the body effectively (Task 3) in light of the physiological and physical changes of puberty (Malmquist, 1978). For example, menarche is an important phenomenon; its effects appear to be integrative rather than disruptive, especially through its influence on increasing the female's identification with the mother (Rierdan & Koff, 1980). The successful resolution of conflicts in this domain will have a strong influence on three life tasks: love and

sex, as well as the establishment of a positive self-concept based on body satisfaction (Jourard & Remy, 1957; Malmquist, 1978; Pomerantz, 1979; Rice, 1978).

A crucial striving is for separation from earlier attachments and, trying to achieve emotional independence from parents and other adults (Task 4). This leads to two possible paths: isolation (Malmquist, 1978) or, towards comfort replacements in the form of peers or peer groups. These usually reflect the adolescent's ideal (Rice, 1978). This underlines the importance of the social sphere in adolescent development (Hemming, 1967; Malmquist, 1978) and, this behavior facilitates the development of new and more mature relations with peers of both sexes (Task 1) as well as necessitates the development of an appropriate masculine or feminine sex-role (Task 2). These in turn, serve to strengthen and enlarge the self-concept, to extend the self into the community and friendships, and, to facilitate the later emergence of heterosexual strivings. Thus, the impetus toward peers is, in part, a function of the desired autonomy from parents.

Isolation can be a consequence of the inability to form peer-bonds when the individuation process has already commenced. If weak, or a lack of ties are available, the adolescent's situation is further complicated by the consequences of his difficulty in utilizing and controlling his novel formal operational, cognitive abilities. The

egocentrism which ensues from this cognitive developmental growth-potential is bad enough (Elkind, 1978: eg, imaginary audience, personal fable) but if it has a layer of poor peer adjustment added on top of it, transient peer attachments and developmental, exogenous depression may result (Malmquist, 1978). This genre of depression is basically the same as the depression related to poor self-concept and low self-esteem which, in turn, has been linked back to the adolescent's dissatisfaction with his or her body (Douvan & Adelson, 1966; Jourard & Remy, 1957).

An acceptable as well as safe outlet for heterosexual affection is through a social-recreational mode, dancing. Distanced-love relationships (eg, telephone as medium) abound (Malmquist, 1978).

In attempting to break away from parental influence, the adolescent experiences an alteration in controls based on weakened superego directives to internalized authority (Malmquist, 1978). This leads to unpredictability of behavior. Orality (eg. petty larceny) and anality (eg. uncleanliness) are resorted to but these reflect more of a mockery of adult normative behavior than anything else. With or without glimpses of a personalized, disjointed ideology (some evidence of Task 7), this behavior has negative effects on parents. Conflict at home is inevitable both with parents and siblings, who represent the home (Redl, in Caplan & Lebovici, 1969). The unpredictability is extended to

potentially polymorphous sexuality (Malmquist, 1978) and, a decrease in concentration on academics. School is less important (it, too, is an institution with authority-adults) and, if the student begins to fail in school, his self-determined prophecy will be fulfilled. After all, school is not important. Actually, some school difficulties stem from the inability to properly actualize and utilize formal operational potential.

The early adolescent is faced with a dilemma: being peer-loyal while being parent-loyal. The choice, for some, is simple: defy adults with language, behavior, clothing, risk-taking and lack of acceptance of authority (Malmquist, 1978; Rice, 1978).

With a weak ego and superego, a 'drive' orientation and a concomitantly disturbed self-concept and self-esteem (Simmons, Rosenberg & Rosenberg, 1973), antisocial conduct may occur. And, once the adolescent is labelled in accordance with societal wisdom and foresight, he will begin to act in order to maintain the consistency of his self-concept. Worsened behavior usually ensues. This phenomenon works to put up barriers, precludes the development of socially responsible behavior, (Task 8) and to an extent, it seriously hampers the acquisition of an adaptive set of values as well as a functional ethical system or guide for behavior (Task 7). This has a serious effect on ideological and ontological development as well as on those individuals in the

adolescent's immediate environment.

Early adolescence also signals the embryonic stage for fantasy as an experiential medium (Malmquist, 1978). Its eventual development later on in adolescence has great implications for use as a transitory phenomenon where the adolescent can defend against anxiety via the 'safe' channelling through fantasy; and, it also has an important effect on time projection which is a necessary component in the development of commitments eg. vocational/educational/economic (Task 6), ideological (Task 7), and, family or marriage-oriented (Task 5). These form the foundation of ego identity (Erikson, 1968). In the meantime, fantasy makes a 'role-playing' contribution in the development of accurate social relations, especially as they relate to appropriate social roles (Task 2). Adolescents try on new roles.

Middle Adolescence

At this time the adolescent is still adjusting to the physiological and physical changes. Peer group attachments are beginning to decrease; ideally, group identity has begun to stabilize. There is now a greater affinity for one-to-one relationships. Utilizing friendships as a springboard, along with an appropriate social role, physical self-acceptance, and possibly, a desire for a future, the adolescent attempts heterosexual behaviors which were only present socially in

early adolescence. However, this shift to a heterosexual relationship rekindles old anxieties about old relationships. And in order that he become a sexual partner, inhibitions must dissipate and a conducive home environment must provide a secure and encouraging base from which point these strivings will accrue. This step towards heterosexuality and preferred object choice is a basic foundation for actualizing goals of marriage and a family. The development of intimacy is crucial (Erikson, 1968). If he fails, the adolescent will fall into dysphoria and the distantiation caused by failure will be hard to overcome, especially since self-enhancing or self-reinforcing mechanisms will strive for congruence of self-concept with experience.

The mid-adolescent will shift between exaggerated dependence on his parents to being hypercritical of them. Regression to a state of being the 'good little boy' is not uncommon (Malmquist, 1978) in light of such a conflict.

One potential area for criticizing one's parents is with respect to their moral, religious, and ontological ideologies. While the adolescent begins to take a stand on these issues, formal operational capabilities facilitate his development of opposing, neutral or congruent views. A global ideology (Task 7) is beginning to take shape, with the specific subject domains' crucial, common elements reflecting the adolescent's present existential statement. The genesis of an ideology helps solidify emotional independence from the

parents. Stances on values and the meaning of responsibility are presented. However, much of this internal struggle boils down to whether the adolescent feels he can trust the external world (Malmquist, 1978). Whereas later development will lead to the concrete operationalizations and actualizations of ideological commitments, now is the time for debate and consolidation.

Potentialities appear unlimited in number and in depth yet if the adolescent cannot comfortably entertain 'the uncertain future', a sadness will probably emerge. In the face of the unlimited universe he will be overwhelmed. This is a common experience; paralysis of will, will result. Academic planning (Task 6) will in turn, halt.

Fantasy is a critical experiential medium for midadolescent growth. Manifest as daydreams, its purpose is to be a transitory phenomenon between what Malmquist (1978) describes as a compromise, narcissism and sexual object-finding. However, there is a danger because with fantasy -- and its foundation of an abstract thought process -- depersonalization may occur. The adolescent is constantly self-observing (a superego invention) and if anxiety is too great in particular situations, he will tend to experience feelings of estrangement from the body. The fantasy of 'looking at oneself' facilitates the split that is inevitably felt when the adolescent is extremely anxious or conflict-laden. Depersonalization is a defense against

anxiety; metaphorically, one 'removes' oneself from the focus of the conflict -- the body (Malmquist, 1978). A 'flatness' is felt. This reflects what has been called ego impoverishment, moodiness or, the 'blahs'.

Late Adolescence

Many late adolescents are not post-high school students.

The most challenging task of this time is ontological goal-striving within the context of a reality wherein the adolescent must set concrete objectives. The handling of an uncertain future depends on the ability for handling situational uncertainty and ambiguity while setting out to concretely emit behaviors which will 'change society'. The concept describing both the cognitive and behavioral components of effecting a relationship with the future is a personal future orientation (PFO) (Malmquist, 1978; Melges, Anderson, Kraemer, Tinklenberg & Weisz, 1971; Meldman, Stein & Calsyn, 1978; Trommsdorff, Lamm & Schmidt, 1979). Often called hope (Stotland, 1969), and reflecting subjective future expectancies (Fibel & Hale, 1978; Motowidlo, 1979), this PFO or concern is seen in terms of three major commitments which are rooted in mid-adolescence: to a vocation, which is fast becoming in vogue for females who wish to actualize this potential and gain esteem for

performance achievements (Gray, 1979); to an evolving ideology (Task 7) (Erikson, 1968) and, to love relationships (Malmquist, 1978).

The movement towards a PFO is facilitated by the adolescent's exit from egocentrism to a more sociocentric position (Elkind, 1978). He is now better able to handle, for example, the commitment to intimacy because of this growth.

The propriate, or goal-oriented, striving (Allport, 1961) allows for the further differentiation of the self and the further integration of all aspects of the self within an integrated personality. The overarching motive of the PFO reflects one's feeling of meaning of life and all behavior is subsumed under the overall existential goals. However, without an integration of the differentiated personality elements, no hierarchy of ego functions is possible. And so, one's needs that lie beyond will not be easily attained. Personality integration is solidified by the accomplishment of goals which may contravene societal wisdom. Therefore, without this necessary stabilization of personality structure the individual, for example, will not have achieved a solid sexual position; that is, in terms of object choice or preferred expression of sexual impulses, unstable self-image and object representations, and unpredictability, which makes the adolescent highly vulnerable to threats (Malmquist, 1978).

Adolescent preferences are directed, then, by the ego

ideal which, if not set too high, will lead to resolved conflicts and mastered tasks/situations that are ego-syntonic (Malmquist, 1978). The level of self-esteem will stabilize if self-ideal discrepancies are not large (Rogers & Dymond, 1954). And, high self-esteem will help preclude depressive symptomatology (Beck, 1967). The ego ideal for North American adolescents seems to be more than just superego projective identifications (Lutte, 1971; Malmquist, 1978) while for European adolescents it does depend mostly on these identifications (Lutte, 1971).

The late adolescent's relatively stabilized ego identity allows for self-esteem to be affected by another phenomenon: disillusionment (Malmquist, 1978). Three environmental factors may contribute to the youth's disillusionment: Firstly, the overselling of education and the now-realized projection that, once one graduates, no gratification will be possible. In the future it will not be a sufficient condition for 'happiness' and it seldom allows for a global understanding of life. The oversell is one of the future and one's place in it is determined as a function of educational accomplishment.

In contrast with the mid-adolescent who 'freezes' in the face of thoughts and hypothetically unlimited possibilities, the youth's actual experience with an ever-expanding physical and hypothetical world causes him to 'burn out'. In all this experiencing, however, there is little depth of meaning. 'The

notion that McDonald's experiencing is paramount has been perpetuated, 'ad nauseum'. And, the shallow interfacing with many different experiential spheres will produce Protean man (Lifton, 1970).

The third environmental factor relates to the phenomenon of over-responsiveness to environmental shifts. In other words, an adolescent grasps for, what appears to be, an opportunity for a deep and meaningful commitment, and this involvement becomes an overcompensation for all the meaningless experiences extant in the adolescent's world. And then, this cathected object or situation shifts quickly out of societal vogue. The adolescent is left behind, hanging to a commitment that was probably never based on meaningful comprehension, but rather was a response to a deep-felt need to overcome the superficiality that was present in past experience (Malmquist, 1978).

Summary

Younger adolescents, as a group, experience greater difficulty than older adolescents:

> The years from twelve to fifteen are often those of the greatest difficulty, for adolescents, when they first have to face and deal with the changes in their bodies, minds and emotions. For many of them, there seems to be almost a crisis at the age of fifteen, when their difficulties reach a peak, and after that they attain a much better level of stability (Stirling, cited in Hemming, 1967, p. 23).

It is not that the adolescence of itself creates specific problems. The period of adolescence is one of great vulnerability; problems of adjustment and relationships emerge as a result of the inevitable tasks to be met at this time (Malmquist, 1978; Manaster, 1977).

Adolescent Self-Reported Problems

The format of this section will be to substantiate the existence of adolescent problems as reported by the adolescents themselves. Problem types will conform to the kinds of developmental tasks discussed earlier.

Sex and Age Differences in Likelihood of Problem Admission

Adolescent females -- or all females over the age of five (Maccoby & Nagy, 1974) -- when given the same opportunity as males, will report more anxiety (Buxton, 1973) about more personal physical and psychological problems (Clements & Oelke, 1967; Collins, Cassel & Harper, 1975; Eme, Maisiak & Goodale, 1979; Deiker & Pryer, 1973; Hemming, 1967; Morgan, 1969; Parcel, Nader & Meyer, 1977). This tendency for females to report more personal problems than males may be related to cultural role sanctions which permit a greater latitude of problem expression for females (Hemming, 1967;

Deiker & Pryer, 1973). Consonant with this interpretation is Gardner's (1967) finding that minor symptoms reported by adolescent females are not positively related to adult forms of extreme maladjustment (eg. psychosis), whereas they are for males.

As far as incidence of problems is concerned, Cole (1954) believes that the average high school student will have about a dozen major problems taken from any representative screening instrument (eg. The Mooney Problem Checklist) although many will have 30 or 40 endorsed items. However, she contends, all of these problems will be based, as in a pyramid, on fundamental problem areas.

In terms of developmental trends for magnitude of problems, little work has been done (Deiker & Pryer, 1973). Using the high school form of the Mooney Problem Checklist, Freeman (1966) found a decrement in problem magnitude as grade increased from seven to twelve. A reversal of this trend was discovered in the ninth grade (15-16 years of age). Other early studies' results are contradictory because of divergent sample characteristics (Morgan, 1969). Deiker & Pryer (1973) have found stronger results more recently. Adolescents in junior high school (grades 7-8) reported more disrupting concerns than students in grades 9 and 10 or grades 11 and 12. The younger students were 13 to 14 years of age. This supports an adjustment-adaptation hypothesis: In adolescence the general direction of development is

towards a stable ego or character structure, effective defenses and control, and, a sense of identity which tends to produce or facilitate greater sameness and consistency of behavior (Luborsky & Schimek, 1964). This consistency of environmental and personal adaptation entails the character structure becoming more fixed and consequently, the frequency and amplitude of changes to immediately impinging external events -- adolescent problems -- or to bodily changes, is reduced and modulated. This process of character stabilization commences in preadolescence and, as reflected in self-concept, it continues to develop as adolescence progresses beyond its characteristic early disturbances (Malmquist, 1978). This process acts as a unifying mechanism by helping the adolescent to adapt to his world, without becoming shattered by the emergence of problems or difficulties in the developmental tasks. It mediates problems' potentially debilitating effects on the ego. The notions of sameness and consistency reflects a generalized orientation for dealing with developmental tasks as well as the inevitable difficulties of coping with problems. These functions have often been included in the construct called the ego identity (Erikson, 1968).

From a phenomenological perspective, the fact that younger adolescents are greater overwhelmed by and report more, problems than older adolescents is consistent with an adjustment-adaptation interpretation. Younger adolescents,

because of the sudden emergence of pubertal changes -- physiological and physical -- will experience a sudden loss of stability. The effects of these changes are disruptive by nature and are reflected in self- concept disturbance (Simmons, Rosenberg & Rosenberg, 1973) and, the greater prevalence of 'normal' depression in younger adolescents than in older ones (Albert & Beck, 1975).

In clinical studies of adolescents' problems concurrent validity attempts have yielded results that have shown that students in counseling (Esper, 1964; McCallum, 1966), adolescents from broken homes (Dyer, 1970; Held & Snow, 1972), and hospitalized adolescents (Deiker & Pryer, 1973) acknowledge more problems than 'normal' controls. In fact, hospitalized females self-reported more problems than the hospitalized males did which supports the strong trend presented earlier.

The earliest research done in adolescent problems (Elias, 1949; Hemming, 1967; Hertzler, 1950; Lewis, 1949; Morris, 1954; Remmers & Shimberg, 1949; Thom, 1935) has been well integrated by Hemming (1967). Using instruments such as the Mooney Problem Checklists, the Science Research Associates' Youth Inventory and other personalized questionnaires, problems were delineated as seven categories: health, personality, home and family, social status, heterosexual relationships, religion and morals, and, school and study. These applied to both sexes.

Physical and Physiological Changes

Probably the strongest trend that bridges the earlier and recent research veins is the adolescent's report of difficulties stemming from the adjustment to his or her physical being, physiological changes, and, general health status. He or she is more attuned to fluctuations or changes in the self, in all its possible physical and physiological manifestations (Adams, 1964, 1966; Brunswick & Josephson, 1972; Clements & Oelke, 1967; Coleman, 1961; Collins Cassel & Harper, 1975; Deiker & Pryer, 1973; Douvan & Adelson, 1966; Dyer, 1970; Elias, 1949; Gingles, 1965; Harris, 1959; Held & Snow, 1972; Hemming, 1967; Hertzler, 1950; House, Durfee & Bryan, 1979; Jourard & Remy, 1957; Jourard & Secord, 1955; Kaczkowski, 1962; Lewis, 1949; Malmquist, 1978; Morgan, 1969; Morris, 1954; Offer, Sabshin & Marcus, 1965; Parcel, Nader & Meyer, 1977; Pomerantz, 1979; Pressey and Robinson, 1933; Remmers & Shimberg, 1949; Rice, 1978; D. Rogers, 1972; Sternlieb & Munan, 1972; Thom, 1935; Vittenson, 1967; Wen & McCoy, 1976; Williamson, 1977).

Sex differences found in these studies reflect a consistent trend: females report significantly more personal appearance or physiological status problems than males do. Age differences have also been reported in the literature (Hemming, 1967; Malmquist, 1978; Rice, 1978). Younger adolescents tend to report a greater number of these

problems. Therefore, younger adolescent females report more health and physical (physiological problems than any other sex X age group, and the incidence of these problems may double up until the end of midadolescence (by age 15 or 16). These sex and age differences were also obtained from a hospitalized adolescent sample (Deiker & Pryer, 1973). The young female group also ranks these developmental problems as the most important (Eme et al, 1979) concern. A similar, yet weaker, trend has been found in young adolescent males (Eme et al, 1979).

Concern about personal appearance is considered an aspect of psychological and social well-being due to the impact of physical self-image on self-esteem and social development, especially in females (Pomerantz, 1979; Eme et al, 1979). Weight is the most important problem while skin problems and height have followed in that rank order.

This is consistent with other research which emphasizes the role of feelings of physical inferiority, shyness and self-consciousness, obsessional habits (nail biting) in maintaining a poor physical self-esteem (Hemming, 1967).

Berscheid and Walster (1976) have pointed out that this characteristic is one personal characteristic which is self-evident and accessible to others in most social interactions. Considering that it plays a major role in interpersonal attraction and the social domain is so important for adolescents, this result is not too

surprising. What is necessary is an important analysis of this factor as a major source of adolescent anxiety and satisfaction (Eme et al, 1979). Pomerantz (1979) has undertaken such a project. This will be discussed in a later section relating physical self- concept, identity, self-esteem and, satisfaction with one's social milieu.

Reaction to emotional stress was reflected in self-reports of nervousness, headaches and stomach-aches, the latter two being good indicators of somatization (House et al, 1979). These are listed in descending rank of reported frequency.

Relationships at Home

Relationships with one's parents is a major problem domain (House et al, 1979). Having difficulties in talking with parents is a common concern while a possible consequence of home conflict -- running away -- has not been found to be a prevalent method of problem resolution. Williamson (1977) found that, with increasing strivings for autonomy, the adolescent is less oriented to the home. This phenomenon causes the home environment to become a battleground for dependence mastery. Often, parental insensitivity to, or plain ignorance of, adolescent needs will contribute to the conflicts. Or, an adolescent who is unsure of his parents or the environment's normative directives will behave in such a

way as to provoke a confrontation.

Issues which are popular points for debate are: going out with the opposite sex (especially for girls), going out after supper, the hour for bedtime, pocket money, the dress code, makeup, and, what it is that the adolescent does when he or she goes out (Hemming, 1967; Malmquist, 1978).

Relationships with adults in general is another common ground for conflict over autonomy, authority and the rejection of adult normative behavior (Malmquist, 1978; Parcel et al, 1977; Rice, 1978).

In general, with the passage of time, experience and, adolescents' age, the number of problems with parents does decrease (Eme et al, 1979; Hemming, 1967) although House et al (1979) found no differences in a similar sample.

No race differences have been found (House et al, 1979; Vittenson, 1967) but females do report more home conflicts (House et al, 1979).

Patients reported more difficulties with home and family issues than did normal controls (Deiker & Pryer, 1973).

Personal-Social Difficulties

Many adolescent problems are social by nature because of the important role that the social environment plays in helping shape adolescents' self-concept and self-esteem (Hemming, 1967; Malmquist, 1978; Pomerantz, 1979; Rice,

1978). Issues such as poor self-confidence in social interactions, wanting to be more popular, difficulty in talking or relating to people, few or shallow friendships and, generally relating to peers and authority figures are significant deterrents of future social behavior. However, in some studies -- eg. House et al, 1979 -- adolescents of both sexes showed a surprisingly low endorsement both in self-reports and in the perception of classmates. This stands in contrast to Williamson's (1977) study wherein socially-oriented problems were very extreme.

Considering the dangers involved in breaking away from home and trying to establish strong social skills and bonds, there is a lot at stake if the adolescent fails to initiate the growth of his social potential. Problems in peer relations have been linked to isolation behavior which may result for many reasons: failure to establish or sustain relationships, too great a dependence on friends, lack of sharing in group interests, poor personality integration, physical disadvantages, difficulties in social encounters, being the 'odd man-out' at home, having possessive parents, a change in school or class, being the 'odd man-out' at school, or, generally one's role at school (Hemming, 1967).

Friendlessness ensues and isolation predisposes the individual to feel uneasy, anxious, and not self confident, which are related to potential personality maladjustment, poor social skills for the future, sadness, depression and

suicide. On the other hand, having positive peer relations is related to greater external activity (eg. school), greater emotional stability, more interests, and, a greater success rate in activities (Lawson, Marshall & McGrath, 1979; Malmquist, 1978; Motowidlo, 1979).

Females tend to report greater numbers of social problems than males do, especially in relation to issues of self-confidence, popularity and verbal exchanges (Deiker & Pryer, 1973; Hemming, 1967; House et al, 1979). And, younger adolescents -- who seem to struggle with the concretization of autonomy desires within the social realm -- report more social problems. Hemming (1967) found that the proportion of friendship problems, for both sexes, increases significantly with age increments across the years ten to sixteen (to the end of midadolescence).

Patients reported greater concerns for this realm than normal adolescents, with the greatest difference occurring at the older age levels (Deiker & Pryer, 1973).

Personal-Psychological Problems

With the early adolescent physiological, physical and cognitive growth, an unstable ego identity and low self-concept and low self-esteem result (Elkind, 1978). The effects of this psychological disturbance are seen in terms of one's self-perceptions, those perceptions relating to

one's overall personality, one's ability to cope with the changes and environmental stress or pressure, and, one's self-perceived competence, or abilities (Hemming, 1967; Malmquist, 1978; Simmons, Rosenbert & Rosenberg, 1973; Williamson, 1977).

Looking at sex differences, younger females (12-13) will report unstable personal abilities but these self-perceptions become more positive later on. Females also express that they experience emotional-psychological stress to a greater degree and they endorse these specific items more often than males do. In general then, females report more of these problems than do males (Deiker & Pryer, 1973; Wen & McCoy, 1976).

Hemming (1967) found that personal-psychological problems decrease with age which supports an adjustment-adaptation hypothesis. These results stand in contrast to House et al's (1979) findings that no age differences exist and Eme et al's (1979) trend that these problems actually increase with age. One possible explanation is that these problems may increase, reach a peak and then decrease. The slightly diverse choices of samples may have caused these discrepancies; each of the first and third studies may have tapped only one of the trends because of sample limitations.

No race differences -- blacks versus whites -- were obtained (House et al, 1979; Vittenson, 1967).

Hospitalized adolescents -- especially older ones --

report a significantly greater number of personal-psychological problems than 'normals' do (Deiker & Pryer, 1973).

Moral and Religious Concerns

Inextricably linked to conflict at home, moral and religious issues cause great consternation for the adolescent, especially the younger one. With increasing age, the conflict changes in a qualitative way. Early on in adolescence, much rejection of parental (or the school's) morality and religious sentiment is based on the adolescent's attempt to break away and defy authority. There is little concern over finding alternate moral stances or religious beliefs. It is only later on in midadolescence that formal operations has begun to be harnessed and the adolescent will then begin to argue based on his own conceptualizations. Thusly, the discussion, debate and resolution of moral and religious issues will facilitate the development of socially responsible behavior and, an orientation towards the future.

Females tend to express greater concern over these issues (Hemming, 1967; House et al, 1979).

Adjustment to the School Context

As would be expected, school problems are an important

focus (Eme et al, 1979; House et al, 1979) for adolescents yet, it is important to note that this has been found to be related to the time of the year that the research is conducted; that is, school problems are more prevalent when research is undertaken during the school year (Hemming, 1967).

Learning problems were not ranked too high in self-reports in House et al's (1979) study but they occupied first rank in problems attributed to classmates. Parcel et al (1977) report that school-related concerns were the highest endorsed of all areas. Common concerns include adjustment to overall school work, a lack of concentration, fear of failure, conflict with authority, difficult teachers, competitive classmates, and, the pressure to perform (House et al, 1979; Hemming, 1967).

As stated earlier, difficulty in school may be related most to the disturbance in early adolescence. Hemming (1967) and Eme et al (1979) provide evidence which supports this contention -- school problems decrease with age, especially as midadolescence is about to end. House et al (1979), however, has found no age differences.

Williamson (1977) reported that girls are better adjusted to school and thusly, do not encounter as many difficulties. However, because of females' general tendency to express more problems in a freer fashion, they may endorse more school problems than males.

No race differences were yielded (House et al, 1979).

Group (patient versus normal), sex and grade were all significant factors in the number of school problems endorsed (Deiker & Pryer, 1973). Patient, younger and female subjects reported a greater number of school-related difficulties.

Finance, Social-Recreation and Free-Time Usage

Related to conflicts at home are issues revolving around money, how to obtain or borrow it and, how to use free-time. Arguments result from differences of opinion concerning part-time jobs, borrowing money from dad, borrowing the car to go out (for older adolescents), and, what to do with one's leisure time. The younger adolescent will extend his or her fight for emotional independence into the assertions that they have the right to determine what they do, where they go, and why. And so, these issues will be more argument-laden for the younger adolescent. Parents, of course, will assert their views.

House et al (1979) found that, surprisingly, the use of free time was the greatest source of self-perceived concern for their adolescents. And, this category of problems was ranked second in the perception of peers. The explanation may be linked to the fact that their sample was drawn from a rural population; with their relative isolation from large cities, leisure time is understandably important. Other

problem areas are quite consistent with other studies' findings and so, the general appraisal of this sample is admissible evidence for adolescent problems.

No sex, or race differences were found (House et al, 1979). And, being highly related to conflict problems at home, younger adolescents express greater concern for these issues (eg. Deiker & Pryer, 1973). The contexts within which they are able to interact with peers necessitate some degree of money expenditure and the investment of time.

The patient sample investigated reported significantly more problems in this area (Deiker & Pryer, 1973).

Dating, Sex and Marital Themes

Dating may begin in early adolescence (Malmquist, 1978; Rice, 1978) but the emotional stability of young adolescents precludes deeper kinds of relationships. The role of sex in relationships is a concern which is being associated with younger and younger adolescents all the time. Eme et al (1979) found that younger adolescents today are more aware of, and concerned with, sexual impulses which form the basis for a concomitant developmental theme alongside physical and physiological changes. Therefore, dating difficulties, relating to social skills prowess and sexual concerns are becoming more characteristic of younger adolescents. Sex-related concerns include fear of pregnancy, birth

control, general sexual development and venereal disease (House et al, 1979; Parcel et al, 1977), although more so for females. Males concerns center on 'sex'.

The emergence of marital themes is facilitated by the growth of the capacity for using fantasy to express potentials, desires and role-plays. Females, of course, are more concerned about their future marital roles (Deiker & Pryer, 1973). And, younger females are more likely to express concern over this aspect of an uncertain role than older females will. The latter will have a reasonable degree of stability extant in their self-concepts which has been shown to be related to intimacy, interpersonal warmth and, feelings of security (Coopersmith, 1967; Malmquist, 1978).

The Future

Despite the proposed shift in focus for females to be more vocation-oriented (Gray, 1979), some research finds that females are less concerned than males with careers/vocations, economic issues and competitiveness in status contexts as they reflect on their future (Williamson, 1977). However, Eme et al (1979) have presented discordant results; grades and future schooling are of more concern for females than for males and this finding is not a function of school failure in males. It relates to present academic achievement and its implications for a future career/vocation. Actually, the

high ranking of career, grades, future schooling and present employment (Eme et al, 1979) is not too surprising. Erikson (1968) observed that it is the inability of the young adolescent to commit his or herself to a career which seemed to be the most disturbing aspect of the ego identity crisis.

Both college-bound and undecided students had more worries about future schooling, present employment and extra-curricular activities than did work-bound students (Eme et al, 1979). It is interesting to note that the undecided students were more like the college-bound subjects than the work-bound subjects. "Their greater concern about future schooling is an obvious corollary of their self-designated status as college-bound or undecided" (Eme et al, 1979, p. 96). Emphasis on present employment and extra-curricular activities does not follow from their present status and is thusly not amenable to a simple explication. One might assume that present employment is a concern only as far as it allows for the attainment of money which is used to finance future education. It may also be that students who are going to college and those who are not decided, will involve themselves in more extra-curricular activities because they are more capable students. Since these activities are more common, they might create more worries.

College-bound students are more worried about their careers than the other adolescents and this does follow from their status. Enhancement of a career opportunity is one of

the prime motives for enrolling in college (Newcomb, 1969).

In addition, more older adolescents are concerned about a philosophy of life which they will be able to actualize in the future (Eme et al, 1979; Malmquist, 1978).

Summary

A few consistent trends cut across all problem types; females, younger adolescents and patients generally report greater levels of problem magnitude than do males, older adolescents and normal controls. One obvious discordant result occurs in 'future'-oriented issues wherein older adolescents show greater concern and sex differences are becoming less clear.

Patient and normal groups also differed in terms of the relative rankings of problem areas (Deiker & Pryer, 1973). In the former group, personal-psychological problems were ranked first while school concerns were highest for the normal controls. However, to corroborate Freeman's (1966) contention that problems' relevant effects on all adolescents should be consistent across different adolescent groups, within each of the patient and normal groups there were some significant agreements in the relative rankings of problem areas. This applied to the three age groups. No 'future'-oriented issues were included in the materials for this study (Deiker & Pryer, 1973).

The overall lack of statistical agreement in the relative ranking of the problem areas suggests that the two groups -- patient and normals -- may differ qualitatively in the problems they report (Deiker & Pryer, 1973). Individuals who were hospitalized endorsed more personal-psychological items than normals while these controls reported more school-oriented concerns. Looking at the items embedded in the personal-psychological pool, it is obvious that they pertain to direct clinical material: problems relating to mood, affect and cognition (Deiker & Pryer, 1973). One important issue arises then. A possible measurement artifact (Morgan, 1969) may have caused the subjects in schools (controls) to emphasize school problems most while subjects in the hospital (patient group) may have highlighted personal-psychological problems because of their institutionalized environment. Care must be used in interpreting these data, then.

The Sex Differences

Some of the sex differences -- eg. health and physical concerns; dating, sex and marriage; personal-social concerns -- are consistent with traditional role definitions and are reported elsewhere (Clements & Oelke, 1967; Morgan, 1969). Two problem types, however, have been generally considered male problem areas -- finances, living conditions and present

employment; adjustments to school work (Clements & Oelke, 1967; Morgan, 1969).

Two categories whereby sex differences interacted with (patient-normal) group differences suggest that these problem types carry greater clinical importance for females. Although personal-psychological concerns were a good index of patient status for both sexes, the difference was greater for females (Deiker & Pryer, 1973). Unfortunately, no discriminant analysis data is available.

The same sex difference held for home and family problems, where the larger difference within the female groups' subjects may reflect clearer role violations (Hurlock, 1968). Traditionally, these problems are of less concern for adolescent females (Abel & Gingles, 1965).

It is apparent that different response sets operate in the two sex groups. Consequently, separate norms are needed in order to interpret results for males and females (Deiker & Pryer, 1973).

The reason for the overall sex differences may be related to the findings which state that health and physical development as well as social development seem to have a greater relationship with general female development. Pomerantz (1979) has found that females are more concerned with their bodies and interpersonal-social skills than are males. Josselsón et al (1977b) and Coleman (1961) have reported that "the single most predominant and recurrent

difference between male and female adolescents is the greater 'interpersonal' focus of females" (p. 162). This position is congruent with research findings which have suggested that interpersonal skills and feedback from others are more important for, and central to the process of identity development for females than for males (Conger, 1977; Josselson, 1977b; Jourard & Remy, 1957; Pomerantz, 1979).

The observed difference between males and females appears to be representative of the major themes and interaction patterns attributed to the adolescent ie. the interpersonal mode for females and a self-oriented, independent mode for males (Coleman, 1961; Josselson et al, 1977a; 1977b; Pomerantz, 1979). Erikson (1968) has proposed a similar set of distinctions. The female is preoccupied with, what he calls 'internal space'. This stems from the inner body and is extended outwards and played out in her psychological orientation to her world. Conversely, males have an outer space orientation which, also, is played out in an external objective orientation to the world. Simply put, males develop a sense of self from their performance in the world (eg. sports). These feelings of self-worth are then carried over into the interpersonal sphere.

For females on the other hand self-worth develops as a result of feedback (eg. appraisal -- Malmquist, 1978) from others and thus, how she feels about her body and herself are closely tied to -- and in fact stem from -- her ability to

function in her social world. Therefore, while the male's self-worth is bound to achievements and is then brought into the social world, "the female is bound to her audience as a source of identity, self definition and self-evaluation" (Pomerantz, 1979, p. 61).

Conclusion

It appears from the previous section that a) adolescence is a time of qualitatively different developments and is determined by the societal context; b) these developments make the adolescent vulnerable in the face of external as well as internal forces; c) not handling certain developmental tasks will result in worries, concerns and complaints; d) these may blossom into self-perceived problems; e) adolescents admit personal problems although females do so more freely; f) the problems reported reflect common kinds of experiences in our Western culture; g) certain stages of adolescence can be delineated, either a priori in terms of developmental themes or in terms of types of problems which are then related back to development.

The implications of having specific problems are seen in terms of their deleterious effects on the adjustment of the adolescent. Even when the rare, relatively problem-free adolescent is found, even he/she presents certain problems of adjustment.

The Psychological Effect of Adolescent Self-Reported Problems

'Normal' adolescent depression has traditionally reflected the problems and difficulties of the transitional phase from childhood to adulthood. In recent years a number of systematic reports have pointed out the significant prevalence of depression (Hudgens, 1974; Mezzich & Mezzich, 1979; Schwab, Holzer & Warheit, 1973) and suicide (World Health Organization, 1979) among adolescents. Mezzich and Mezzich's (1979) data-based typological group of depressed adolescents showed feelings of social frustration, abandonment, and life-worthlessness, a desire to leave home, pessimism, hopelessness and death wishes.

Depression reflects a dissatisfaction resulting from a discrepancy between what is and what can, could or should be. It is an indicator of the capacity and desire to work through the despair of the present situation coupled with the need to separate from old and familiar objects, especially when there is permanent separation from home, problems in tolerating unabating frustrations and, conflict over sex-role behavior (Malmquist, 1978). Depression in youthhood can reflect the capacity to tolerate developmental conflict.

This genre of depression -- also called alienation, anomie or learned helplessness -- includes apathy, a loss of self-effectiveness and a diminished capacity for carrying out long-term work as well as a decreased mastery of novel

situations. Trying to deal with this flatness and anhedonia may lead to substance abuse (eg. drugs) or even cult membership in order to fill the void. The inability to initiate a moderate level of activity even poses the question of a potentially schizoid adjustment (Malmquist, 1978).

Self-esteem and depression are highly related (Albert, 1973; Albert & Beck, 1975; Anthony, 1970; Arajarvi & Huttunen, 1972; Bakwin, 1972; Connell, 1972; Cytryn & McKnew, 1974; Ferster, 1973; Freud, 1968; Frommer, 1968; Glaser, 1968; Krakowski, 1970; Kuhn & Kuhn, 1972; Ling, Oftedal & Weinberg, 1970; Mezzich & Mezzich, 1979; McConville, Boag & Purohit, 1973; Poznanski & Zrull, 1970; Rado, 1928; Schulterbrandt & Raskin, 1977; Vranjesevic, Radojicic, Bumbasirevic & Todorovic, 1972; Weinberg, Rutman, Sullivan, Penick & Dietz, 1973). In fact, Beck (1967; 1970; 1976) believes that self-esteem is one of the three components of the cognitive triad which is the locus for the manifestation of depressive symptomatology.

Considering the relationships between adolescent problems and depression and, depression and self-esteem, it follows that adolescent problems and self-esteem are highly related. Before this latter relationship is discussed adolescent self-esteem must be described.

Adolescent Self-Esteem

Once an adolescent has built concepts of himself, (Blos, 1962; Erikson, 1968) he must deal with the esteem with which he views himself. If his subsequent self-evaluative perceptions lead to self-acceptance and a feeling of self-worth, he will have enough self-esteem to accept and live with himself (Sears & Sherman, 1964). And if an adolescent is to have self-esteem, there must be at least a reasonable correspondance between his self-concepts and his self-ideals (Carlson, 1965; Connell & Johnson, 1970).

With the emergence of pubescent changes, most young adolescents begin to evaluate themselves. They compare body parts, "motor skills, intellectual abilities, talents, and social skills with those of their peers and their ideals or heroes" (Rice, 1978; p. 219). Thusly, it is "not surprising that this critical self-evaluation is accompanied by self-conscious behavior, which makes adolescents vulnerable to embarrassment" (Lambert, 1972, p. 141). The result is that, continuing throughout the period of adolescence, they remain preoccupied with attempts to reconcile, or bridge, their self-perceived selves with their ideal selves. Rogers (1972, p. 19) claims then that ideally, by the end of adolescence, these individuals will have been able to sort themselves out -- to define, determine and hopefully assert what they can most effectively become as well as to integrate their goals into their ideal selves.

Carl Rogers (1961) has discussed self-ideal theory in great detail. He conceives of the basic congruence between the phenomenal field and experience and, the conceptual structure of the self as the endpoint of personality development. He believes that this status results in relative freedom from internal turmoil and subsequent anxiety. In essence, what a person discovers he is and what he perceives himself to be and wants to be, will begin to merge. He will begin to be able to accept himself, be himself and live as himself without feeling that catastrophic internal conflict is occurring. The general source of this self-acceptance and self-esteem is derived from his ability for self-perception and, his relationships with others. "Psychological maladjustment occurs when there is a divergence between the selves they (adolescents) are being in relationship to others and, the selves they perceive that they are or want to be" (Butler, 1968; Butler & Haigh, 1954; Hansen & Maynard, 1973, p. 9; Rogers & Dymond, 1954; Wylie, 1974; 1979).

Although different terms have been used by many authors, there is a shared commonality in their formulations about the self: "What a person is and feels himself to be may be referred to as the real or phenomenal self. What he wishes or thinks he ought to be may be termed the ideal or propriate self" (Lazzari, Fioravanti & Gough, 1978, p. 361).

Harmony between the two aspects of self may be perceived as a precondition for psychological health and soundness;

conflict and discord between the real self and ideal self may serve as an indicator of psychological stress and discomfort (Gough, Lazzari & Fioravanti, 1978; Lazzari, Fioravanti & Gough, 1978). Thusly, if self-esteem depends on the degree of concordance of the two views of self and, discord between the two views leads to psychological stress and maladjustment, then it would be appropriate to say that self-esteem is inversely related to self-ideal discrepancies, as well as to indices of psychological stress and maladjustment.

Wylie (1974; 1979) has made the point that changes over time tend to occur in the view of the self and little, if at all, in the ideal.

Rogers' position is congruent with Jahoda's (1958) description of mental health:

> "A recurring theme in many efforts to give meaning to the concept of mental health is the emphasis on certain qualities of a person's self ...
>
> A number of different dimensions of components appear to run through the various proposals. Those aspects of the self-concept that stand out most clearly are: (1) accessibility to consciousness, (2) correctness, (3) feelings about self, and (4) sense of identity. Although not all of these components are made explicit by the writers who use attributes of the self as criteria for mental health, they are implicit in many of their contributions....
>
> The mentally healthy attitude toward the self is described by terms such as self-acceptance, self-confidence, or self-reliance, each with a slightly different connotation. Self-acceptance implies that a person has learned to live with himself, accepting both the limitations and possibilities he may find

> in himself. Self-confidence, self-esteem, and self-respect have a more positive slant; they express the judgment that in balance the self is "good", capable, and strong....
>
> The distinguishing mark of [the sense of identity] as compared to self-acceptance is its more cognitive emphasis on the clarity of self-image (pp. 24-29).

Self-Concept, Self-Esteem and Related Constructs

The importance of having an adequately stable set of self-conceptions and positive self-esteem is born out in the discussion of their relationships to mental health, interpersonal competency and social adjustment, school progress, vocational aspirations and delinquency (Rice, 1978).

Adolescent Self-Esteem and Mental Health

"Self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself. It is a subjective experience which the individual conveys to others by verbal reports and other expressive behavior" (Coopersmith, 1967, p. 5).

Self-esteem grows out of human interaction wherein the self is highly valued by others (see Wells & Marwell, 1976; Wylie, 1974; 1979). The ego, reflected in self-concept, grows through a process of the summing of accomplishments,

praise and success (La Benne & Greene, 1969) and is recorded in terms of causal attributions for success and failure outcomes (Weiner, Nierenberg, Goldstein, 1976).

A definite relationship has been established between mental health and identity achievement (Oshman & Manosevitz, 1974). Donovan (1975b) described male adolescents with diffuse identities as having

> few plans or personal commitments.... With regard to politics, religion and sexual relationships, these individuals were also vague and sometimes had trouble dealing with the questions et al.... The identity diffused not only had made few commitments but were unable or unwilling to attempt to define what they wished or what they felt. 'I don't know' and 'I'm not very settled about that' were frequent answers.... In appearance these students were conventional enough, but they shared a sheepish, apprehensive look, as if they expected to be called to task by a critical voice.
>
> The daily lives of these students tended toward disorganization. They slept more and at more irregular hours ... They cut class frequently, but spent the extra time alone, not talking with friends.... They appeared isolated and without interest in the people or activities around them....
>
> Feelings of "inferiority", "alienation", and "ambivalence" were often mentioned.... If all those we interviewed, these seemed to have the lowest sense of self-esteem. They were frightened, sad people (p. 17).

Adolescents, whose identities appear to be weak or whose self-esteem has not sufficiently developed, exhibit -- depending on one's conceptualizations -- a number of symptoms of emotional ill health, adjustment problems, personality disorders, psychopathology, poor personality integration,

neuroses, general maladjustment, and, behavioral deficits (Howard & Kubis, 1964; Nixon, 1964; Offer & Howard, 1972; Offer, Ostrov & Howard, 1977; Rosenberg, 1965; Wylie, 1974; 1979; Zongker, 1977). They may manifest a number of psychosomatic symptoms of anxiety: hand trembling, nervousness, insomnia, palpitations of the heart, pressures or pains in the head, fingernail biting, shortness of breath when not exercising or working hard, palm perspiration, sick headaches, and nightmares (Allport, 1950, p. 54). They will also be more likely to report that they suffer from a loss of appetite.

Not surprisingly, not only has manifest anxiety been related to low self-regard (Bass & Fiedler, 1961; Clements, 1966; Coopersmith, 1967; Cowen, Heilizer, Axelrod & Alexander, 1957; Diloreto, 1971; Fiedler, Hutchins & Dodge, 1959; Frankel & Barrett, 1971; Heath, 1965; Horowitz, 1962; Hughes, 1968; Johnson, 1956; Lekarczyk & Hill, 1969; Lewis & Adank, 1975; Lipsitt, 1958; Luck & Heiss, 1972; Mackeen & Herman, 1974; Marcia & Friedman, 1970; Ohnmacht & Muro, 1967; Parsons, Peterson & Davids, 1968; Phillips, Hindsman & Jennings, 1960; Pilisuk, 1963; Sinha & Sinha, 1868; Truax, Schuldt & Wargo, 1968; Weitzner, Stallone & Smith, 1967; Winkler & Myers, 1963; Wylie, 1974, 1979) but it has also been linked to depression (Bachman, 1970; Berger, 1955; Block & Thomas, 1955; Heath, 1965; Luck & Heiss, 1972; Mackeen & Herman, 1974; Rosenberg, 1965; Zuckerman, Baer & Monashkin,

1956), and, to those individuals considered disturbed enough to enter therapy or to be admitted to a psychiatric hospital (Butler & Haigh, 1954; Chase, 1957; Sarbin & Rosenberg, 1955; Shlien, Mosak & Dreikurs, 1962; Zuckerman, Baer & Monishkin, 1956). In fact, in psychotherapy outcome research, the most consistently positive outcomes reviewed by Wylie (1979) involved subjects who manifested problems at admission to therapy; that is, subjects who were observed to show serious behavior problems or delinquency as well as subjects selected for their high levels of self-reported trait anxiety. At admission, self-esteem was negatively related to these particular problem conditions.

Those with the highest self-esteem are much less likely to manifest psychosomatic symptoms (Rosenberg, 1965, pp. 149-54). High self-esteem has been related to a low degree of psychopathology, a structured home environment satisfaction with family and friends, and, fewer school absences (Peterson & Kellam, 1977). While psychopathology and low self-esteem were linked to frequent anger in the family and low attribution of influence, adequate self-esteem was positively correlated with confidence in the family, more adults extant in the nuclear family, a stronger identification with parents, greater satisfaction with affection in the family, more sources to turn to when in trouble, being a leader in activities, an internal locus of control, and, a positive attitude about sex (Peterson &

Kellam, 1977).

The Phenomenology of Adolescent Self-Esteem

Coopersmith (1967) found marked differences in the experiential worlds and social behaviors of children differing in self-esteem. Children high in their estimation of themselves approached tasks and persons with the expectation that they would be well received and successful. They have confidence in their perceptions as well as in their judgments and theirs is a belief that their own efforts will lead to favourable resolutions. This attitude reflects an internal locus of control. Their favorable self-attitudes facilitate their acceptance of their own opinions. They place credence as well as trust in their own reactions and conclusions. They are then able to follow their own judgments when a splitting of opinions occurs; these preadolescents are then also able to consider novel ideas. The implicit self-trust which is a correlate of positive self-worth fosters the conviction that one is correct; it is then easy to express those convictions.

The positive attitudes and expectations which lead the high self-esteem individual to a higher degree of social independence and creativity will also lead him to the easier expression of assertive and vigorous actions. They are more likely to be active participants than listeners in forming

friendships and they freely express their opinions despite their anticipation of a hostile reaction from other individuals.

> Among the factors that underlie and contribute to these actions are their lack of self-consciousness and their lack of preoccupation with personal problems. Lack of self-preoccupation permits them to present their ideas in a full and forthright fashion; lack of self-preoccupation permits them to consider and examine external issues (Coopersmith, 1967, pp. 70-71).

Those preadolescents with low self-esteem do not trust themselves -- or others -- and are apprehensive about expressing convictions, especially nonconformist or unpopular ideas. Not wishing to draw attention to themselves for fear of exposing themselves, they attempt not to anger others or emit behaviors that would attract the public eye. Consequently, they live within the 'shadows' of a social group; they listen rather than lead a discussion and, if they ever find themselves on the 'hot-seat', they withdraw into a quasi-isolated state.

> Among the factors that contribute to the withdrawal of those low in self-esteem are their marked self-consciousness and preoccupation with inner problems. This great awareness of themselves distracts them from attending to other persons and issues and is likely to result in a morbid preoccupation with their difficulties. The effect is to limit their social intercourse and thus decrease the possibilities of friendly and supportive relationships (Coopersmith, 1967, p. 71).

This is the mechanism by which adolescent problems disrupt

the adolescent's behavior.

Often, the adolescent with a weak or diffuse identity and low self-esteem will try to present a facade with which to face the world (Rice, 1978). This false front is a compensatory mechanism by which the adolescent can overcome his feeling of worthlessness by convincing the world that he is worthy. He puts on an act yet, to act confident or friendly when one feels the opposite is a constant source of conflict. He is always on guard against slipping.

A second source of anxiety for the low self-exteemed adolescent is his shifting and unstable identity. They are more likely to have 'very unstable' self-pictures (Rosenberg, 1965, p. 152). In addition, they are overly vulnerable to criticism, rejection or any other evidence extrapolated from their daily existence that testifies to their feelings of personal inadequacy (English & Higgins, 1971), incompetence, or worthlessness (Rice, 1978). They may experience a profound disturbance if they are laughed at, scolded, blamed, or when others present a poor opinion about them. In fact, the more vulnerable they feel, the greater the anxiety (Malmquist, 1978; Rice, 1978). These adolescents will report: 'Criticism hurts me terribly' or 'I can't stand to have anyone laugh at me, or blame me when something goes wrong'. Consequently, they feel awkward and uneasy in social situations; embarrassment is avoided whenever possible (Lomas, 1965).

Self-Esteem, Interpersonal Competence and Social Adjustment

Those adolescents with poor self-concepts will inevitably be rejected by other individuals (Rice, 1978). Acceptance of others, acceptance by others and especially by best friends, are all related to level of self-concept. Those who are best accepted in a group will have, at least, a moderate self-concept. Those with the lowest acceptance in a group will have a low self-concept.

Thus "acceptance of self is positively and significantly correlated with acceptance, and by, others" (Zahran, 1967). Therefore, "there is a close relationship between self-acceptance and social adjustment" (Lawrence, 1965, p. 328). In fact, one of the indices of possible adolescent disturbance is an inability to establish friendships (Gallatin, 1975).

Poor social adjustment is related to low self-concept and self-esteem and, it is manifested in many ways. For example, adolescents with low self-esteem tend to be expert at creating a cloak of social invisibility (Lomas, 1965). They are not noticed, are not selected as leaders and do not often join in school or peer-social activities. They tend to have feelings of isolation and intense moments of loneliness. Feeling awkward and tense in social situations, these adolescents find it difficult to communicate with others. They would endorse the following statements: "I am kind of

hesitant in a large group of people", "I get all quiet', and, "I don't like to say anything, the words just don't come out right". Despite their desire that others like and accept them, and since they are less likely to perceive their qualities as positive and themselves as likeable, they are not likely to rate themselves as being well-liked, accepted and respected (Rice, 1978). Their intense wish to be liked places them in situations wherein they are easily influenced. It is not surprising, then, that they let others make important decisions for them because they lack an optimal level of self-confidence.

In addition, these low self-esteemed adolescents tend not to like other people or have faith in them (Rice, 1978). It is almost always true that if they do not like themselves -- if they have a basic contempt for themselves -- they will despise others.

It is apparent, then, that based on the important role that social relationships play in adolescent development and, the descriptions above, self-esteem for adolescents is very much reflected in self-esteem feelings within the social realm.

Adolescent Satisfaction with the Social Milieu

Three psychological variables -- self-esteem, identity and physical self-satisfaction -- are able to predict a

moderate amount of an adolescent's satisfaction with his or her social milieu (Pomerantz, 1979). For males, the most powerful predictor is feelings of self-esteem while identity (Erikson, 1968) and physical self-acceptance are ranked in that order. The latter two add very little to the prediction of the criterion. For females, on the other hand, identity is the best predictor, followed by physical self-satisfaction and self-esteem.

The importance of self-esteem for males has been elucidated in the past. Rosenberg (1965) was able to relate levels of self-esteem to interpersonal relationship variables as well as to indulgence in social activity, both of which are strongly represented in Pomerantz's (1979) measure of satisfaction. It seems that those males with high self-esteem feel more secure about their interpersonal relationships and consequently tend to participate in more social activities. Josselson, Greenberg and McConchie (1977a) have found self-esteem to be highly related to psychosocial maturity in males.

In females, identity was the best predictor of satisfaction. From both a theoretical and empirical point of view, identity is a construct that is comprised of many different aspects of adolescent concerns. These include those related to the self, interpersonal situational contexts, and work or achievement (Pomerantz, 1979). Thusly, it would be expected that interpersonal and self-concerns

would be most directly related to satisfaction with one's social milieu. In fact, self-esteem is moderately correlated with satisfaction and this is represented in both the self-esteem measure (Rosenberg, 1965) and in the identity measure (Ego Identity - Rasmussen, 1964). However, identity is a better predictor of female satisfaction (eg. with friends, extra-curricular activities) than self-esteem because the former also includes the interpersonal concerns typical of females during this period (Pomerantz, 1979).

Problems or Dissatisfaction with the Social Environment, and, Self-Esteem

The absence of friendships and lack of an engaging social network has been related to a dissatisfaction in social relationship, social loneliness and normal depression (Weiss, 1973). Included among the concomitant feelings of unhappiness and negative evaluations about life are negative evaluations about one's self (Depue & Monroe, 1978; Weissman, Prusoff & Pincus, 1978). And, while this genre of depression has been linked to various situational determinants, the role of social relationship (Sermat, 1974) dissatisfaction in the etiology of normal depression is of paramount significance. Work in adolescent normal depression (Anthony, 1970) has supported these findings regarding both the etiology and feelings (Mezzich & Mezzich, 1979) described above. Adolescents often report feelings of loneliness which seem to

be related to their striving -- and failures -- to make friends and maintain relationships.

Girodo, Dotzenroth and Stein (1980) have pointed out that the research relating to social adjustment and self-esteem deals with heterosexual, social anxiety (Curran, 1975), social competence (Arkowitz, Lichenstein, McGovern & Hines, 1975), minimal dating behavior (Melnick, 1973), social skills training for shy males (Twentyman & McFall, 1975), and, behavioral programming strategies for increasing social interactions (Gambrill & Richey, 1976).

Albert and Beck (1975) have found a higher level of depression in eighth grade students than in seventh graders. They posit that this difference occurs as a result of increased pressure and demands in academics as well as in the social arena. They feel that this coincides with the move into adolescence proper. Adjustment difficulties of this type have been related to the disturbance of the self-image in early adolescence (Rosenberg & Simmons, 1975; Simmons, Rosenberg & Rosenberg, 1973; Simmons & Rosenberg, 1975) and problems relating to physical or bodily self-satisfaction and peer-involvement satisfaction (Jourard & Remy, 1957; Malmquist, 1978; Pomerantz, 1979; Rice, 1978; Simmons et al, 1973). A critical period is hypothesized wherein there is great vulnerability in the adolescent and, depressive symptomatology is easily elicited (Albert & Beck, 1975). The gravest implication of these findings is the related

incidence of adolescent suicide (Silver, Bohnert, Beck & Marcus, 1971).

The mediating role of cognitive facts in heterosocial problems has been studied (Girodo et al, 1980; Watson & Friend, 1969).

A summary of this literature reflects that difficulties in social adjustment -- as manifest in anxiety, avoidance behavior and shyness -- are closely linked to excessive negative self-evaluation. This supports Coopersmith's (1967) phenomenological analysis of the low self-esteem individuals' preoccupation with inner problems which are reflected in negative self-appraisals.

In addition, Girodo et al (1980) revealed that self-esteem is negatively related to social avoidance and distress, and a fear of external negative evaluation, and positively related to dating frequency and overall satisfaction with heterosexual social relations.

Sources of Adolescent Self-Esteem

When children are very young their self-esteem is primarily related to their mastery of skills appropriate to their age, and the importance of their sex-role is just beginning to become salient. Based upon a stable feeling that they are loved, Bardwick (1971) believes that their main preoccupations have to do with achievement. This is highly

characteristic of latency-age children.

In prepubescence, this notion is still tenable but females begin to anticipate adult sex-roles by engaging in fantasies of dating, or child-rearing and by concrete behaviors like coping. These anticipations are still basically seen in terms of achievement, providing that she feels valued and loved by her family and, accepted and liked by her friends (Bardwick, 1971). However, despite her needs to be loved from within the family, she experiences increased anxiety about love of affiliation when she turns, for love, to people outside of her family -- especially since that love will result from competition with others.

So much of the female preadolescent's and early adolescent's self-perceived appeal is her physical appearance (Jourard & Remy, 1957; Malmquist, 1978). This, in some respects, is a more primary concern in that she will seek external affection and contact if she feels positive about her physical appearance. And ironically, the way in which she gains this kind of self-esteem is from the external source -- the approval, feedback or reinforcement from outside of herself.

Peer ratings of the female adolescent's appearance exhibit greater effects on her self-esteem if and when her physical self deviates greatly from the ideal (Douvan & Adelson, 1966; Malmquist, 1978).

"The greater the extent of deviation from ideal

dimensions, the more negative feelings experienced toward those body parts and their selves" (Malmquist, 1978, pp. 371-72). Jourard and Secord (1955), in evaluating the psychological correlates of deviation from preferred body size in college women, found that preferred bust size was larger than the actual size. However, estimated size of hips, waist, height, and weight were smaller than their respective mean actual sizes. For the latter, there was a feeling of satisfaction with these bodily parts. Not one of the physical dimensions was equal to the desired and so, such discrepancies were hypothesized as a source of low self-esteem. Malmquist (1978) contends that this is a crucial source for feelings of depression.

Females are more concerned with their bodies than are males (Elkind, 1978; Jourard & Remy, 1957; Pomerantz, 1979). Pomerantz's findings that satisfaction with one's social milieu -- a reflection of one's perceived acceptability to others -- is highly related to physical self-satisfaction for females supports Jourard and Remy's (1957) clinical findings. Also, satisfaction with the social arena may be a greater concern for females and may be a more intergral part of the developmental process for females. This position is congruent with research findings which have suggested that interpersonal skills and feedback from others are more salient for, and central to, the process of identity development for females than for males (Conger, 1977;

Josselson et al, 1977b; Jourard & Remy, 1957).

For males, although self-esteem was moderately related to social satisfaction, the development of identity and self-esteem are probably closer related to concerns such as occupational aspirations, which are also reflectable in the movement towards autonomy (Josselson et al, 1977a; Pomerantz, 1979).

The observed difference, as discussed in relation to sex differences in adolescent problems, appears to be representative of the major themes and interaction patterns attributed to the adolescent, ie. the interpersonal mode for females and a self-oriented, independent mode for males (Coleman, 1961; Josselson et al, 1977a; 1977b; Pomerantz, 1979).

How one perceives the value of the self determines the level of self-esteem and the lower a person's self-esteem, the greater the anxiety, as well as the greater the response to pressures to assume a particular role (Bardwick, 1971). Boys opt for more self-utilization, using the skills and attributes encouraged by society. However, due to role expectations which are slowly changing (Gray, 1979), girls may not want to develop all of their abilities eg. scholastic strength. Resultantly, they may perceive themselves as not actualizing their potential thereby not attempting to approximate their ideal self. Wide divergence from one's ideal self-concept tends to lead to low self-esteem

(Bardwick, 1971). It is not only culture which values the achievements of the masculine world; if a girl internalizes these values she, too, will have an idealized self-concept partially dependent upon the actualization of achievement -- or performance -- oriented skills. In studies of adolescent problems, future schooling and grades are becoming increasingly important foci for adolescent females and are also becoming increasingly problematic issues, especially because of others' instilled beliefs that females should not stress this realm of development (Eme et al, 1979).

Girls who combine roles and who use their abilities and skills, as well as girls who are motivated within the traditional feminine role model, are likely to have high feelings of self-esteem (Bardwick, 1971). On the other hand, girls who, for defensive purposes, utilize only a fraction of their potentialities but who are driven to attain achievement needs in addition to the feminine aspects are likely to experience low feelings of self-esteem. Therefore, the critical determinants of high self-esteem, according to Bardwick (1971), appear to be the range of important motives developed, the diversity of subidentities, and, the extent to which she is able to achieve these varied aspects of her self-identity. Role conflict, or seen as the frustration of aspects of the self, does not occur unless conflicting motives exist. It is felt, then, that "because role conflict is more likely to exist in women, in particular situations

and in general women have lower self-esteem than men" (Bardwick, 1971, p. 155).

Middle-class female adolescents may continue to be pressured for achievement (Bardwick, 1971; Gray, 1979) which is now a part of the ideal self. And, they may feel a new pressure for affiliation -- previously reinforced in early childhood by not having been overly reinforced, as with boys, for individuation and exploration behavior (Bardwick, 1971; Douvan & Adelson, 1966; Malmquist, 1978) -- whereby affiliation is also conceived of as achievement and as an affirmation of the self (Bardwick, 1971).

In adolescence the issue of self-identity is a core anxiety, relating to the earliest, basic identity that has cut across specific roles and subidentities throughout middle childhood. One's self-esteem is vulnerable. It is at this time that because of potential societal and peer pressure, the female will begin to perceive heterosexual affiliation as the dominant source of self-esteem as well as anxiety. In order to gain basic esteem feelings she must be certain that she can achieve in an affiliative mode. This becomes the more important motive. She will tend to approach rather than avoid. In fact, as time proceeds, the closer she approaches to the time of being able to literally participate in the adult sex-role. Realizing this, she will experience an increase in her motivation to secure the love of a man so that she can partake in the role (Bardwick, 1971).

As college looms closer, both males and females are preoccupied with questions about their identity (Erikson, 1968), about relationships with others, their self-worth, abilities, competencies, satisfaction, goals, power, morality and the general direction their life is taking (Bardwick, 1971; Blos, 1962; Hemming, 1967; Malmquist, 1978; Pomerantz, 1979). While males are preoccupied with achievement and performance, affiliation assumes an important, yet secondary, role motive. Females' adult sex-role identity is contingent upon success incurred in affiliation experiences and therefore, affiliative motives are dominant. Achievement motives are important but secondary. The critical interior for female self-esteem is heterosexual affiliation.

In preadolescence, both males and females perceive their parents as inhibitors and, as representatives of childhood. They devalue their parents and seek a more autonomous self through identification with people outside the family. However, because of guilt, anxiety and long-term dependency relations, females' independence strivings will not be as complete as the males'. With increasing maturity, the dependence previously linked to her parents will be transferred to her boyfriend, and then to her spouse. Striving for independence, she swings between independence and dependence. And, the greatest independent sense of self will be attained once she successfully acknowledges her potential in the interdependent relationships of wife and

mother.

Bardwick's (1971) line of reasoning leads to the following conclusion:

> I think that if a woman has a feminine and normal core identity, failure in the feminine roles will preclude feelings of self-esteem. Normally, women will not participate in roles which threaten their affiliative needs, because these needs are critical in their basic concept of themselves (p. 158).

Carlson (1965) shares Bardwick's position. The self-image is comprised of two independent dimensions, one of which she labels social/personal orientation. A social orientation is one in which interpersonal experiences and social appraisals figure importantly in an individual's self-conception. A personally oriented self-image is pretty well immune to these influences.

As preadolescents, males and females are preoccupied with strivings for mastery and autonomy, tasks which may be considered personally-oriented. With the emergence of adolescence, however, adult sex-role expectations play a more important role for both sex groups. Carlson (1965) believes that the stereotyped masculine and feminine roles imply personal and social orientations, respectively. She posits that during adolescence, sex differentiation occurs in terms of this dimension: self-concepts of females become more socially oriented while males' self-concepts become more personally-oriented.

Carlson (1965) then outlines a different developmental path for self-esteem, the second dimension of self-image. In accordance with most theorists describing adolescence, self-esteem is defined as the degree of correspondance between the individual's self-concept and his or her ideal self. And, in contrast to the other dimension -- social/personal -- self-esteem is thought to be independent of sex-role and reasonably stable from preadolescence through adolescence. Carlson has stated that she expects that the degree of congruence between the self-concept and the ideal self to be equivalent across sex despite divergence across sex in the content of each component of self-esteem.

Actually, Carlson's (1965) conceptualizations of her first dimension -- social/personal -- supports, at least on the theoretical level, Erikson's (1968) notion of inner and outer orientations regarding the sex difference in the directionality and locus of development.

Summary

Adolescent problems exist. Problem magnitude -- both total and problem-types -- is inversely related to self-esteem and positively related to 'normal' depression, and anxiety. An adolescent self-image disturbance occurs early in pubescence and is a result of the changes inherent in pubertal development. Self-esteem stabilizes as

adolescence progresses (Simmons, Rosenberg & Rosenberg, 1973).

Evidence to be presented next, however, places into question the simple and direct inverse nature of the relationship between adolescent problem magnitude and self-esteem.

Development of the Theoretical Question

Assuming that the inverse relationship between adolescent problems and self-esteem is a tenable one, one would expect that the eradication of a particular (set of) problem(s) -- through therapeutic intervention, for example -- would be manifest in a positive change in self-regard. That is, this (or these) problem(s) will no longer prove disruptive for the individual and will not cause him to be internally preoccupied with it(them), which is related to poor self-esteem. However, this predicted phenomenon has not been demonstrated; to be more accurate, only certain kinds of therapeutic interventions seem to facilitate both the eradication of a problem and a subsequent positive change in self-regard, as we shall see.

Wylie (1974; 1979) has reviewed the literature on changes in self-regard as a function of psychotherapeutic intervention, from two perspectives: therapeutic and placebo conditions. The trends for self-esteem to increase are weak

or null. Despite the fact that uncontrollable and variable factors have characterized virtually every aspect of phase research studies (eg. therapist's experience or orientation; the actual indices of self-regard), one possible, alternative explanation may exist: another construct or factor may be hidden in the relationship between self-reported problems and self-esteem and it may play a contributing or attenuating (mediating) role in the relationship between self-perceived personal problems and self-esteem. Considering that self-esteem is the evaluative dimension of self-concept (Dickstein, 1977) and self-perceived behaviors or cognitions form self-concept, it is not unreasonable to posit a relationship between adolescent problems, self-concept and self-esteem. And so, behavioral change may not be related to changes in self-concept or self-esteem due to a possible construct which may maintain this spurious relationship.

Wylie (1979, p. 660) unwillingly sheds some light on the possible answer:

> Moreover, positive results, had they occurred might have been partly or wholly attributable to the subjects' expectations or hopes (the placebo effect) rather than to any activity or relationship specific to the therapy situation.

The relationship is not so simple. It is possible that self-esteem did not increase because it was suppressed by a third variable. Behavioral change was not recorded in terms of the client's feelings of self-competence because the

client did not have to try and master the problem; its resolution did not come as a product of a strategy, its implementation and subsequent feedback as in past problem solving experiences of trying to master problem tasks or situations. All of the studies used either a group approach (encounter, T-group) or an individual approach (client-centered). The client did not have an action, or goal-setting and attaining, orientation. Assuming, for a moment, then, that both feelings of personal self-efficacy and self-esteem result from the relation of success to pretensions (Dickstein, 1977; James, 1890), and, that 'success' in reflective-relationship therapy should result from the relationship and not specifically from any problem-solving mastery attempts of the client, then, it would be expected that feelings of personal mastery of the presenting problem would be unavailable to the client thereby not facilitating or producing a change (increase) in the present self-competency attitude or in self-esteem.

In phenomenological terms, if the client does not take an 'action-oriented' role in resolving his problem, self-efficacy feelings and self-esteem will not change. It has been hypothesized and demonstrated (Coopersmith, 1967; Dickstein, 1977; James, 1890) that self-esteem <u>is</u> based on, among other things, the ratio of past success experiences to pretensions. A success experience can be equated with a personal problem's resolution. However, once it is resolved,

self-esteem will not increase unless the success experience is encoded via the causal attribution cognitive mechanism which, in turn, forms the basis for an expectancy for success for that particular problem's resolution. This expectancy for success may take two forms: the situation- or task-specific, or, the generalized or dispositional expectancy for success (Fibel & Hale, 1978; Jones, 1977; Motowidlo, 1979; Weiner et al, 1976). The generalized expectancy for success cuts across other generalized expectancies (see Rotter) and is modifiable by internal and stable causal attributions for success.

Therefore, it appears that essential elements for increasing self-esteem as well as perceived self-competence are the personal masteries of tasks or situations and, a modicum of feedback regarding the success outcomes.

As will be discussed later, the generalized expectancy for success reflects feelings of perceived self-efficacy; and, self-efficacy and self-esteem do develop through parallel processes which utilize common success and failure experiences. The causal attributions for these outcomes are the basis for expectancies of future successes and failures.

Increasing Self-Esteem by Manipulating Self-Competency

Self-image can be affected; at least for a while, by disruptive events (Rice, 1978). The implication of such

findings is that self-image and self-esteem in adolescents can be improved by helpful events (Hamachek, 1976; Rice, 1978). Very little is known directly about how to actually create the conditions that would produce increments in self-esteem. Despite some psychotherapy's or sensitivity training's claims (Gibb, 1971; Rogers & Dymond, 1954) to have been able to do so, other null results seem to overshadow these successes (Wylie, 1979). Koocher (1971) has found that boys who learned how to swim during the course of summer camp showed an increase in self-esteem. Videbeck (1960) found that praise could produce the same effect. Rogers and Dymond (1954) had defined self-esteem in terms of the discrepancy between a person's ideal and real selves.

Reinherz et al (1976) employed a treatment package of psychotherapy, group activity and therapeutic community techniques. The latter two activities were situationally mastery-oriented. Behavioral change as well as better social adjustment and increased self-regard were noted. Rathus and Ruppert (1973) utilized an assertion training method in order to increase social skills in adolescents. The clients were taught these social skills, practiced them and, feedback was given for their performance. Self-regard increased. Parrott and Hewitt (1978), based on the hypothesis that the attainment of important personal goals could increase self-esteem, put each one of fifty subjects on a program that required behavior consistent with these ideal

conceptualizations of the self. Low self-esteem will exist when there is a large discrepancy between the self and the ideal self.

High and low self-esteem subjects (N=20 and 30 respectively) were placed in one of three treatment conditions. Those in the goal-attainment group were instructed to keep a daily record of the extent to which they complied with each of 10 goals. These goals centered on increasing sociability, improving interpersonal relations, and enhancing individual achievement. Pre- and post-test administrations of a self-esteem measure were done with three weeks representing the length of time for the study.

It was predicted that low self-esteem subjects would show an increase in the goal-attainment condition. And, in an attempt to control for demand characteristics, two other control conditions were set up. One group was told to enjoy themselves rather than work on goal-attainment while, in the third group, subjects attended three therapy sessions at a counseling center. It was expected that self-esteem might decrease in the first control group.

The record of goals and goals attained per week was kept in checklist form.

Results showed that low self-esteem subjects showed a significant increase in self-esteem while subjects in the two other conditions did not show similar increments. High self-esteem individuals showed no change. The authors also

assessed at post-test, how much the subjects enjoyed the activities that were comprised in the goal-attainment condition. They found that subjects' perception of how enjoyable the activities were, varied as a function of their level of self-esteem. Low self-esteem individuals ordered the counseling sessions high in terms of enjoyability and the goal-attainment condition last. High self-esteem subjects rank ordered the goal-attainment condition first. Similar results were obtained on the degree to which similar results were obtained on the degree to which these activities were considered worthwhile.

The results seem to say that goal-attainment facilitates increases in self-esteem as a result of an increased compliance with important personal goals (Parrott & Hewitt, 1978). However, such a conclusion might be premature. In actual fact, no evidence had been collected by the authors prior to the study concerning whether these goals actually were important personal ones. And, also, no pre-test measure was taken to assess whether low self-esteem subjects tend to show more deficient goal-attainment behavior -- or, be less likely to engage in it -- when compared with high self-esteem subjects.

The finding that low self-esteem subjects gave the goal-attainment condition low enjoyability and worthwhile rates may have strong implications for future research (eg. depression). These individuals may prefer to do little (eg.

talk) or nothing, about their problems instead of doing those things which would be more successful in raising their self-concept (Parrott & Hewitt, 1978). This is a self-fulfilling prophecy (Jones, 1977).

However, the preceding studies do not provide conclusive evidence that goal-setting and/or action-oriented therapy will increase self-esteem due to an increment in perceived self-competency. Stronger and more direct proof of the apparent relationship between feelings of self-efficacy and self-esteem will come, once one investigates the relationship between the generalized expectancy for success and self-esteem. The evidence needed to test for a mediating variable in the problems and self-esteem relationship may be derived from the strong link between the generalized expectancy for success and self-esteem.

Expectancies

> "In social learning theory expectancies in each situation are determined not only by specific expectancies in that situation but also, to some varying degree, by experiences in other situations that the individual perceives as similar. One of the determinants of the relative importance of generealized expectancies, as opposed to specific expectancies, in a given situation is the amount of experience one has had in that particular situation (Rotter, 1980, p. 2).

The Generalized Expectancy for Success (GES)

This construct can be defined "as the expectancy held by an individual that in most situations he/she will be able to attain desired goals" (Fibel & Hale, 1978, p. 924). Restating Rotter's (1978) generic formula for human behavior, "an individual's behavior is a function of reinforcement value and expectancies that are determined by a person's reinforcement history for relevant situations" (Fibel & Hale, 1978, p. 924). Consequently, when other factors are held constant, it would be expected that the behavior potential for a high expectancy for success individual, should be greater than the behavior potential belonging to someone with a low expectancy for success.

In addition, since real-life situations "do vary in the degree to which a person's reinforcement history is relevant, expectancies for success may vary along a continuum from relatively specific to general as a function of the degree of situational novelty or ambiguity" (Fibel & Hale, 1978, p. 924; Jones, 1977).

With respect to behavioral performance many researchers have shown that individuals who are experimentally given a high expectancy for success on particular tasks will be more likely to perform more successfully than those who acquire a low expectancy for success (Dickstein & Kephart, 1972; Feather, 1966; Feather & Saville, 1967; Rosenthal & Jacobson, 1966; Tyler, 1958). However, real-life seldom provides

individuals with such explicit expectancies for success as were cited in these studies (Fibel & Hale, 1978). Usually, individuals encounter relatively novel or ambiguous situations for which no highly specific expectancy for success has been provided or formulated. It would be acceptable to state then, that an individual's behavior in these situational contexts is greatly, or possibly even mostly, influenced by his expectancy for success; and furthermore, it seems reasonable to assume that this expectancy increasingly becomes a function of a generalized expectancy as the degree of novelty or ambiguity increases (Fibel & Hale, 1978; Jones, 1977). A generalized expectancy for success scale was constructed and, just as Internal-External Locus of Control is quantifiable (Rotter, 1971; 1978), and is amenable to investigations in terms of shifts resulting from situationally induced skill versus chance expectancies for control, the Generalized Expectancy for Success too, is researchable as an individual difference variable.

The value of such a construct, like the other generalized expectancies, is found in the study of those factors involved in the development of such expectancies, the situational characteristics that influence expectancies, and the implications of a generalized expectancy for success on a whole range of goal-oriented behaviors, and psychological adjustment variables eg. self-esteem.

Based on the solid premises of Rotter (1954) and Jones

(1977) regarding the existence of two types of expectancies -- the generalized or dispositional and the specific types -- Fibel and Hale (1978) contend that the choice of one or the other must be determined by the level of analysis desired (p. 929). They feel that measures of the latter kind will be of "greater predictive utility when the level of analysis is task focussed" (p. 929). A generalized measure will be best suited when the level of analysis is broadly defined across need areas, situations, or within novel or ambiguous situations.

The Factor Underlying the Generalized Expectancy for Success

The factor which appears to underlie the GES is the feeling of general efficacy (Fibel & Hale, 1978). This unidimensional factor structure was extrapolated from data on the GES Scale (Fibel, 1976; Fibel & Hale, 1978).

People integrate past feedback information about what was needed to produce specific outcomes. Being that consequences do affect behavior and the latter is influenced by the cognitive representation of these relationships, the beliefs about reinforcement schedules that a person upholds will have a greater effect on his behavior than the actual reinforcement itself (Baron, Kaufman & Stauber, 1969; Kaufman, Baron & Kopp, 1966). In essence, the incidence of positively reinforced behavior may not increase if an

individual believes, based on some other feedback, that this same behavior will not be positively reinforced in the future (Estes, 1972); in addition, depending upon the consequences' messages concerning the correctness, incorrectness or noncontingency of the individual's responses, these consequences may increase, reduce or have no effect whatsoever on the behavior's occurrence (Dulany, 1968). This locus of control is inextricably linked to motivation, the activating, mobilizing and persistence-maintaining mechanism which guides behavior. Thus, this is rooted in cognitive activity. Being able to hold in thought a representation of future consequences and outcomes of behavior will generate, what Bandura calls, current motivators of behavior. And so, the effect of reinforcement operations on behavior is manifest in the creation of expectations that certain behavior will either produce anticipated benefits or avert future difficulties (Bolles, 1972b). Consequently, reinforcement is described as being more of a motivational lever than a response strengthener.

A second cognitively-based source of motivation is mediated by the processes of goal-setting and self-evaluative reactions (Bandura, 1976b; 1977). Standards exist, against which one's performances are evaluated. When an individual makes self-reinforcement contingent upon the attainment of a desired level or strength of behavior, he will coax or induce himself to persist in his efforts until the discrepancy

between performance and self-prescribed standards is zero. A good source of motivation may also be the situations wherein perceived negative discrepancies produce dissatisfactions. These, in turn, motivate this person to effect corrections in his subsequent behavior. "Both the anticipated satisfactions of desired accomplishments and the negative appraisals of insufficient performance thus provide incentives for action" (Bandura, 1977, p. 193). Thus, an individual's history of attaining goals while perceiving his subjective standard-versus-performance discrepancies will then be seen in light of the attribution of causes for specific outcomes presumed resultant from his behavior (Weiner et al, 1976). This processing of past experience will act as a more complex, cognitively-based source of motivation and two related representations of past experience will ensue: the expectancy for success in future goal-setting and, the logical construct which has self-evaluation subsumed under it, self-esteem. Actually, the whole process of standard comparison is linked to the creation, and strengthening by validation, of one's feeling of self-efficacy. These constructs will then display great influence on the individual's future behavior. In fact, if both are sufficiently high, people will do things in order to insure success in future goal-seeking. Once they perceive themselves as such, their expectancy or 'prophecy' will be self-fulfilled (Jones, 1977).

Self-efficacy (SEFF) theory presupposes that any psychological process, or mechanism, will act as a vehicle for the creation and (further) strengthening of expectations of personal effectiveness (Bandura, 1977). Expectations of self-efficacy differ from response-outcome expectancies, the latter being a subjective estimate that a given behavior will inevitably result in certain outcomes. "An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p. 193). An individual may believe that certain behavior will lead to a certain outcome but if he has any doubt as to whether he can actually produce such action, this response-outcome knowledge will not influence the behavior.

These expectations of personal mastery may influence both the initiation and maintenance of coping behavior. One's strength of self-efficacy feeling will determine the extent of their coping efforts. Thus, perceived SEFF will have great bearing on one's choices of behavioral contexts. It will also affect "... how much effort (people) ... expend, and how long they will persist in the face of obstacles and aversive experiences" (Bandura & Adams, 1977, pp. 287-88). And so, the greater one's perceived self-efficacy is, the more active the behavioral performance efforts are eg. coping behavior. If an individual persists in dealing with subjectively threatening activities, he will eventually

eliminate his inhibitions for behaving in a particular situation, through 'corrective experience'. This will, in turn, reinforce one's sense of self-efficacy, thereby eliminating his defensiveness. Conversely, if he avoids that which he fears or he ceases in his efforts to cope prematurely, he will retain his self-defeating expectations and consequential defensive behavior.

Of course, a self-efficacy expectancy, or any expectancy for that matter, is not the only determinant of behavior. One's capabilities or skills must still be deployed. And, although people may have certain skills and they may have had past success in employing them, incentives are necessary. Thus, taking these factors into account, self-efficacy expectancies are an important determinant of a person's choice of activities, the amount of effort to be expended, and, how long he will effortfully persist in handling stress situations.

SEFF expectations vary in terms of magnitude (simple, moderate or difficult tasks), generality (eg. beyond treatment) and, strength. And, these have reciprocal effects on each other.

The Sources of Self-Efficacy Expectancies

Bandura (1977) and Bandura and Adams (1977), in trying to study the mechanisms behind the behavioral changes

achieved by varying modes of treatment, claim that expectations of personal efficacy grow out of four major sources of information: performance accomplishments, vicarious experience, verbal persuasion and, physiological states. Past performance accomplishments comprise the most important efficacy because it is based on personal mastery of situational or task experiences. Heightened SEFF expectations tend to generalize across other situations where performance had been self-defeated because of a preoccupation with personal inadequacies (Bandura, Adams & Beyer, 1977; Bandura, Jeffery & Gajdos, 1975). Feeling inadequate is traditionally reflectable in measures of self-esteem (SE) relative to those situations (eg. Social self-esteem, or, SSE) and usually in overall self-esteem (Coopersmith, 1967; criterion four).

A second kind of information is that data which is extrapolated from the vicarious experiences of observing others in handling situations, with effort being an important causal attribution for outcome. Expectations are generated and are related to the intensity and persistence of effort. Vicarious learning relies on inferences drawn from social comparison processes and is a less reliable source of information concerning one's capabilities than is a direct assessment such as personal accomplishment appraisal.

"Any form of verbal persuasion that one possesses the capabilities to cope successfully" (Bandura & Adams, 1977, p.

288) is considered a third origin. It is easily utilized and is readily available for use in attempts to influence human behavior. The fourth source are those "states of physiological arousal from which people judge their level of anxiety and vulnerability to stress" (Bandura & Adams, 1977, p. 288). Stressful situations usually produce emotional arousal that, depending on the contextual variables, might have informative value concerning personal competency (Bandura, 1977).

Considering the nature of self-efficacy, one may expect that there would be great convergence on this factor by one or more indices of self-esteem. The factor structure of the GESS points to a logical relationship with SE. That is, self-esteem is reflectable in a feeling of general efficacy as a human being and both constructs do have roots in the development of cognitions and feelings related to the success-failure differential in personal problem solving.

Self-Esteem and the Generalized Expectancy for Success

There are two ways to conceptually link the constructs of self-esteem and generalized expectancy for success: to discuss their shared, common ground; and then, to show that they are related, in a similar direction, to an independent set of variables.

Motowidlo, Loehr and Dunnette (1972) and Moulton (1974)

describe the generalized expectancy of task success as the individual's "overall feeling of self-competence and expectancy of achieving that level of performance considered to be success in task situations" (Motowidlo, 1979, p. 70). This generalized expectancy shares the same foundation of feelings of social and interpersonal self-confidence and self-efficacy resulting from the achievement of difficult and important goals, as does the generalized expectancy described by Fibel and Hale (1978).

Self-esteem shares elements in common with the generalized expectancy for success. The common ground is best represented by Lawler's (1973) description of self-esteem as a general sence of "competence in dealing with the environment" (p. 54). This may be conceived as describing the general sense of SEFF, as presented by Bandura as well as Fibel and Hale. Coopersmith (1967), representing those who support a more global construct and measure, sees self-esteem as resulting from at least four different kinds of success experiences: 1) winning acceptance, attention, and affection from others; 2) influencing and controlling others; 3) adherence to moral, ethical and religious principles; and 4) performing tasks at a sufficiently high level to meet demands for achievement (pp. 38-41). This fourth aspect, or criterion, of self-esteem -- success through task performance -- is the one which best mirrors the concept of generalized expectancy for success. Self-esteem seems to develop through

feelings of self-efficacy which are based on mastery experiences.

Actually, self-esteem has often been characterized as a sense of personal competence or efficacy. This latter construct, of course, is reflected in the generalized expectancy for success (Fibel & Hale, 1978). White (1959; 1963) has talked about a primary 'competence motivation' (in addition to hunger and sexual drives) by which behavior naturally tends to accomplishment and evaluation. Other writers (Diggory, 1966; Murphy, 1947; Sears, 1941; Stotland, 1969; Stotland, Thorley, Thomas, Cohen & Zanger, 1957) have related self-esteem to 'level of aspiration'. This suggests that self-esteem underlies the level of task difficulty that a person will attempt or, their projected subjective probability of success (Jones, 1977; Stotland, 1969). In fact, comparing 'level of aspiration' with competence formulations (Lewin, Dembo, Festinger & Sears, 1944) illustrates similarities, especially in the emphasis of the experienced discrepancy between attainments and goals.

Just as in self-efficacy theory, in the competence sense of self-esteem the emphasis is on the evaluative process, success and failure (Jones, 1977; Wells & Marwell, 1976), and, abilities. The distinction between the two main processes underlying self-esteem -- evaluation and affection (Wells & Marwell, 1976) -- is difficult to make because they seem empirically related: an individual's feelings about

himself are bound to be highly related to his evaluations of his qualities, abilities and performances. For White (1959; 1963) self-esteem is a type of self-respect, having its roots in the individual's sense of self-competence or efficacy. Gordon (1968) concurs as does Symonds (1951), who suggests that self-evaluation and self-affection actually constitute two different kinds of self-esteem resulting from different forms of positive experience -- affiliation and task success. Gecas (1971), Hollender (1972) and McCandless (1961) also support this notion.

Above and beyond the components of competence motivation, one's environment must be a receptive audience for the evaluation of performance (Jones, 1977; Moore, Underwood, Heberlein, Doyle & Litzie, 1979; Weiner et al, 1976). This is especially true of childhood and adolescent development (Mamlquist, 1978).

The unreceptivity of the environment in light of adolescent achievement may be due to others' (eg. parents, peers, teachers) unstable nature or, their indifference even in light of an adolescent's fantastic accomplishment (Malmquist, 1978). In other words, adolescent competency needs to be developed through a process of environmental reinforcing of behavioral performance. Without this, and in adolescence the social sphere is the ultimate focus, self-efficacy feelings will not ensue; and, resultant expectancies which tend to produce future behavior, will not

be high. In fact, negative or low expectancies may lead to paralysis of will, feelings of helplessness and hopelessness which allow the adolescent to slip into a reactive kind of depression (Malmquist, 1978).

An individual will then maintain the consistency of his bruised self-esteem and impaired level of self-competence by acting in self-reinforcing ways. Example are those adolescents with a history of school failure who turn to other contexts; in order to reinforce their self-image of overall worth and competency, they turn to delinquent behavior or, learning problems develop. Often-times, parents are blind to their child's needs to be reinforced for competency because they are too busy with their own personal difficulties (Winnicott, 1965). They, too, have a low self-esteem (Coopersmith, 1967). And so, these children are not reinforced. Or, not knowing which qualities an adolescent has for defining his sense of personal competence may be the biggest problem that an external agent has (Mamlquist, 1978).

Relating the issue of competency to mood disturbance, "the question as to the origin is unsettled, such as the extent to which an impaired sense of competency contributes to depressive proneness, or the extent to which it is a secondary factor reinforcing these tendencies" (Malmquist, 1978, p. 372).

Wessman and Ricks (1966) report findings on nonclinical

adolescent populations. For eleventh and twelth graders, low self-esteem, depression, anxiety and low GPA were all positively correlated. Only those low self-esteem individuals felt they would be unable to attain success. The projection, into a future, of their expectancy for success reflected a negative expectancy and a poor personal future orientation. They preferred to choose an occupation which they themselves deemed unattainable while they saw themselves as lacking the attributes needed to succeed. They purposefully chose an unattainable goal in order to maintain a consistently negative self-image once they would fail. Those with high self-esteem were more likely to rate themselves as high in constructs such as self-expression, self-confidence, hard work, leadership potential, talent, intelligence, skill, ability to make a good impression, feeling at ease with others, and self-assurance (Malmquist, 1978). Those low self-esteem individuals tended to reveal their incompetencies socially, reflecting the importance of the social arena in adolescent development (Coopersmith, 1967). By provoking others, they created situations which led to the continued reinforcement of their own self-abasement. These intrapunitive mechanisms are related to masochistic character structure (Malmquist, 1978).

How an adolescent perceives the future, then, is related to his sense of self-esteem and sense of self-competency. Having a negative expectancy about the future impairs present

behavioral performance. Hence, the degree and clarity of self-perceptions as well as how they are integrated into the nuclear personality structure, are both affected adversely. Smith (1966) states that self-competency is positively correlated with a personal future orientation wherein a well-delineated and differentiated perception of the future has developed to the point that what one does now is considered both important and meaningful.

And, self-esteem and its relationship with generalized expectancy for success reflect the shared genesis and establishment of feelings of self-efficacy.

The second way of relating self-esteem and generalized expectancy for success is assessing how, independently, these constructs are related to a third set of constructs. The generalized expectancy for success has significant and negative correlations with: depression, hopelessness and helplessness, pessimism, suicidal ideation, negative cognitions, anxiety, hostility and, all the factor analysis-produced subscales from the Internal-External locus of Control Scale (eg. just-unjust world) (Crepeau, 1977; Fibel, 1976; Fibel & Hale, 1978; Koerner, 1977; Strickland, 1976). Generalized expectancies are related at the general level, then, as well as across specific underlying factor dimensions (Fibel & Hale, 1978). These relationships are weaker for males than for females.

Self-esteem is related to all of the aforementioned

constructs in a similarly significant and negative manner.

In addition, many studies (Gilmore, 1976; Lefcourt, 1976; Phares, 1976; Strickland, 1977) report that a positive correlation has been found between a belief in an internal control of reinforcement and successful coping behaviors which may contribute to counteracting the oppressive effects of helplessness, depression and anxiety. Fibel (1976) assessed the relationship between a person's generalized expectancy for success, task-specific expectancies for success, and differential responding to a learned helplessness paradigm with a collegiate female sample. She found a significantly positive correlation between the generalized expectancy for success and expectancies for success in novel and ambiguous situations and, relatively lower correlations as specific situational information was acquired. This supports the notion "that one's specific or immediate expectancy increasingly becomes a function of one's generalized expectancy as the degree of novelty or ambiguity is amplified" (Fibel & Hale, 1978, p. 929; Fibel, 1976; Jones, 1977).

It seems, then, that self-esteem and the generalized expectancy for success are highly related by virtue of their similar relationships to a third set of variables and, because they both seem to develop through feelings of self-efficacy or competence. This self-perceived efficacy results from the ratio of success or mastery experiences to

attempts or pretensions.

However, self-esteem and the generalized expectancy for success have yet to be empirically related. And, if the GES -- reflecting feelings of self-efficacy -- is the third variable hidden in the relationship between adolescent problems and self-esteem, what would be the mechanism by which it affects or mediates this reported, inverse relationship between self-reported problem magnitudes and self-esteem?

Self-Esteem and Social Self-Esteem

Carlson (1970), Prerost and Lacheta (1979) and Ziller, Hagey, Smith and Long (1969) note that the construct of social self-esteem involves the reflection of social factors within the self-evaluation system and that social self-esteem is based on the major premise that self-acceptance and social acceptance are intrinsically interdependent. This is supported by, as presented earlier in this review, Zahran (1967) and Lawrence (1965, p. 328): "there is a close relationship between self-acceptance and social adjustment" mostly where poor social adjustment has been seen in low self-esteem individuals (Coopersmith, 1967; Malmquist, 1978; Lomas, 1965, Rice, 1978).

Prerost and Lacheta (1979) feel that based on these findings and formulations, an individual's self-esteem should

also be reflected by his perception of his own status as reflected in the topological placement of 'the self' to others (p. 413-14).

Wylie (1974; 1979) reports that attempts to relate self-esteem and social self-esteem have yielded significant correlations. Yet, the kinds of samples used in the studies reported by Wylie (1974; 1979) are quite diverse. And, in none of them did the researchers propose a theoretical linkage expressly for male or female adolescents. The theory for such a link would rest on the acceptance of the notion that the social sphere is of crucial importance for adolescents (Kokenes, 1978), and especially females, because of their reliance on approval and appraisal from significant others (Malmquist, 1978). These 'others' are usually peers who act as 'comfort' replacements once the adolescent begins to individuate from the home. In fact, female adolescent self-esteem and overall self-satisfaction are related to, and best predict satisfaction with her social milieu (Pomerantz, 1979). Then, the subsequent projection of the self into the social environment should reflect the self-adjustment and self-acceptance extrapolated from earlier self-social experiences (Malmquist, 1978; Rogers, 1961). Self-perceived social competence has also been highly linked to overall self-perceived competence (Wells & Marwell, 1976; White, 1963).

In males, social self-esteem seems to be empirically

linked to a status ideal (Prerost & Lacheta, 1979) while this relationship does not hold for females. The authors explain the results for females as the female's overreliance on others for status (eg. boyfriend, husband) which may preclude the empirical demonstration that her status ideal is linked to social self-esteem.

From a clinical perspective, support for the strong overlapping of self-esteem and social self-esteem comes from the findings that individuals who exhibit difficulties with self-esteem will manifest these disturbances in social situations (Coopersmith, 1967; Lawson, Marshall & McGrath, 1979). And, social self-esteem is highly related to -- and can discriminate between 'high-low' groups of subjects suffering from -- depression (see Girodo et al, 1980). Self-esteem's relationship to depression has been reported earlier in this review.

In conclusion, based on the theoretical significance of the social sphere for adolescents -- especially females -- and the theoretical and empirical linkings of self-esteem and social self-esteem, it is felt that there is great overlap between the two constructs when elucidating adolescent adjustment.

The Generalized Expectancy for Success as Mediating Adolescent Problem Magnitudes and Social Self-Esteem

It is quite plausible the GES plays a mediating role

between adolescent problem magnitude and self-esteem. If so, it is likely that having a particular level of problems would not necessarily, or simply, cause a dimunition in self-esteem. Problems' potentially debilitating effects will likely cause self-esteem to decrease if the individual does not have an expectancy for solving them successfully. Of course, this expectancy represents a sense of self-efficacy which is based on past mastery experiences.

Personal problems' debilitating and correlated effects have been well described by Coopersmith (1967) and have already been presented in relation to low self-esteem. The main effect is found in the individual's morbid preoccupation with inner life and inner problems. This precludes both self- and social-adjustment.

The GES underlines a cognitive process of self; that is, being able to hold in thought a representation of future consequences and outcomes of behavior which has been built out of past experiences. This generates 'current motivators of behavior' (Bandura, 1977). GES is a unifying construct reflecting a generalized life-stance and, it directs behavior. Accordingly, it reflects components of an adaptation process: the sameness and relative consistency of thought and action which characterizes the 'generalized' ego identity (Erikson, 1968; Luborsky & Schimek, 1964). GES also mirrors past, present and future in terms of the development towards an adaptive approach to life and its problems.

Therefore, as one index of the adaptation process, it is expected that it will moderate impinging external problems and ensure a stability in light of developmental difficulties (Luborsky & Schimek, 1964). It may facilitate developmental adaptation in light of difficulties in developmental tasks (Manaster, 1977). And, since this process reflects a form of ego functioning, it is not difficult to relate GES to self-concept, and, self-esteem.

A similar mediating, or moderating, role of cognitive factors extant in heterosocial problems of adjustment gives support for this contention. These problems seem to be strongly associated with excessive thoughts concerning negative self-evaluation and the fear of being negatively evaluated (See Girodo et al, 1980). This is strong evidence for the phenomenon which low self-esteem individuals experience as a morbid preoccupation with inner representations of personal problems (see Coopersmith, 1967). As stated earlier, the effects of this mechanism's processing of all subsequent experience in light of the preoccupation with the self and its failings, will be to prevent future adaptation to the self and the environment. Poor self-concept, low self-esteem and interpersonal difficulties will result. Yet, what constitutes the process of self-preoccupation?

If we assume that any cognitive process will mediate perceptions of experience and future behavior, the

preoccupation can be seen as the individual's knowing that he has a problem and that he cannot resolve it (although this does not mean that it will not be solved). In accordance with research findings on expectancies' consequential effects on behavior, the individual will not display behavior, or a motivation, to resolve the problem. His negative expectancy prevents him from solving it as well as assures the maintenance of poor self-perceived efficacy and low self-esteem. He will be afraid to enter situations where the problem might emerge.

Therefore, it is not enough to say that problem magnitude affects self-esteem in an adverse way. It is the expectancy of the way in which one is able to deal or cope with them, that influences self-esteem shifts. This is based on past experience. And, in all cases, consistency or congruency of behavior and self-concept will be maintained.

Phenomenologically, when an individual self-reports a problem, inherent in the awareness of this problem and its relationship 'to me' is the realization that because it is endorsed, it is not being resolved now. Also, a concomitant optimistic or pessimistic attitude is related to the person's expectancy of the problem's effects on him and the likelihood (high or low) that he will resolve it. In other words, if the individual anticipates that, based on past experience with this or similar problems, he will be unable to resolve it, his expectancy will neither lead to a constructive

assault on the problem nor a feeling of relief from its effects. If, perchance, this problem has been resolved in the past via chance or powerful others' intervention, the person's expectancy will reflect this experience and his feelings of self-efficacy related to this problem's resolution will not be very high (Jones, 1977).

Therefore, in explaining psychotherapy outcome researchers' findings that self-esteem does not increase even with presenting problem's disappearance, it seems that feelings of self-efficacy must increase in order for self-esteem to increase. And therefore, the kinds of therapy which include goal-setting, and goal-attainment, or mastery, and feedback should be -- and are -- the ones where self-esteem increments are the most obvious. Goal-attainment 'therapy' does provide these results. Bandura and his associates have found that treatment packages which focus on self-efficacy perceptions seem to effect changes in self-conceptions; and although no self-esteem measures were utilized it appears that self-esteem feelings are also changed.

Study 1 - Part I

The purpose of this first part of the study is to investigate the extent to which adolescent problem types -- as described in the literature on adolescent developmental

difficulties (see Hemming, 1967; Malmquist, 1978; Manaster, 1977; Rice, 1978) and as previously discussed -- are represented in an adolescent female sample; and, whether certain problem magnitude types are more prevalent in particular age groups as has been assumed and demonstrated to be the case by researchers and clinicians whose work was presented earlier.

Certain studies and theoretical expositions have supported the notion that adolescent problem types are represented in diverse adolescent samples (Eme et al, 1979; Malmquist, 1978; Manaster, 1977; Parcel et al, 1977; Sternlieb & Munan, 1972) and, that certain problem types are more prevalent in particular age groups (Eme et al, 1979; House et al, 1979; Manaster, 1977; Malmquist, 1978; Rice, 1978). Early and middle adolescent problems tend to occur prior to, and during the years 15 and 16 (Malmquist, 1978). Late adolescent problems occur after this time.

From what is known about developmental tasks and difficulties characteristic of specific age groups, it is expected that this sample may conform to these developmental expectancies.

Hypothesis I

It is expected that for all eleven problem categories, plus Total Problems, one age split around the age of sixteen (16) will serve to divide the sample into 'younger' and 'older' adolescents. This age-split will emerge from the data's inherent sample age-split.

Hypothesis II

It is expected that all problem types -- Health and Physical Development (HPD); Finances, Living Conditions, and Employment (FLE); Social-Recreational Activities (SRA); Courtship, Sex and Marriage (CSM); Social-Psychological Relations (SPR); Personal-Psychological Relations (PPR); Morals and Religion (MR); Home and Family (HF); Adjustment to School Work (ASW); Curriculum and Teaching Procedure (CTP); and, Total Problems (MPCTOT) -- except Future: Vocational, Educational (FVE), may be more prevalent (in terms of magnitude) in the 'younger' adolescent group. And, it is expected that FVE will probably be more prevalent in the 'older' adolescent group.

Study 1 - Part II

Statement of the Problem and Hypotheses to be Tested

The purpose of part two of this study is to test an adjustment-adaptation hypothesis regarding the relationship between total problem magnitude and social self-esteem; to assess the relationship between the generalized expectancy for success and social self-esteem; and, as the main thrust of this research, to test GES's mediating, or moderating, effect on the relationship between adolescent problems and social self-esteem.

Mostly clinical research has substantiated the first hypothesis area. No known research studies have attempted to investigate the latter two hypotheses.

Hypothesis I

Based on the notion that increased adaptation occurs with an increase in adolescent chronological development -- and its implicit experiences (Luborsky & Schimek, 1964; Malmquist, 1978) -- it is hypothesized that 'older' adolescents will have fewer total problems endorsed than will 'younger' adolescents.

Hypothesis II

Considering the theoretical linking of self-esteem and the generalized expectancy for success, (GES) (Fibel & Hale, 1978; Lawler, 1973; Motowidlo, 1979), and, theoretical-clinical linking of adolescent self-esteem and the social self-esteem (SSE) (Coopersmith, 1967; Lawson et al, 1979, Malmquist, 1978; Ziller et al, 1979), it is expected that SSE and GES will be positively related in the whole sample, as well as across all age groups.

Hypothesis III

Based on the psychotherapy outcome research data regarding the lack of self-esteem's increment with personal problem's disappearance (Wylie, 1974; 1979), on the theoretically close positive relationship between SE and GES, and, on the positive relationship between adolescent SE and SSE, it is expected that the GES will likely act as a mediating and highly predictive variable within the relationship between adolescent problem magnitudes and, social self-esteem. Extracting GESS from the relationship will likely decrease the problem - SSE correlationship. Problem magnitude types are those measured by the MPCL - High School Form.

Study 1 - Part III

Part three will be undertaken as an investigative-exploratory approach, only, to the clarification of GES's mediating effect within the relationship between problem magnitudes and, SSE. Two methods will be employed. Firstly, each problem category magnitude -- for the whole sample and then for the appropriate age-split groups -- will be

introduced and then eliminated from the correlationship between GES and SSE. Each problem category's magnitude score will be investigated in terms of its effects, or influence, on the GES-SSE relationship. An investigative hypothesis follows: it is expected that if GES and SSE are highly related within the relationship between adolescent problem magnitudes, then the manipulation of problem category magnitudes -- for N=352 and age-groups -- will not likely affect the GES-SSE relationship in a disruptive (decremental) fashion.

Secondly, using a standardized procedure, subjects scoring at, or beyond, a specified problem magnitude cutpoint score will be included in the analysis of specific problem magnitudes' effects on the GES-SSE relationship. For each problem category, increments on the cutpoint score will reflect, at each step, those included subjects' increasingly higher scores within that problem category. Separate analyses will also be used for specific age-groups that reflect the sample within each problem category (see Data Analysis). The question addressed is: at which score, in a particular problem category, will the relationship between SSE and GES break down or disappear? That is, at what level or score, or magnitude will the GES's positive relation to SSE, break down?

It is expected that if any trends are found where magnitude increments in a problem type causes the GES-SSE

relationship to weaken or disappear, then these increments in problem magnitude 'score' will be related to increments in this problem category's ability to predict SSE.

CHAPTER II

METHOD

Subjects

Three hundred and fifty-two female subjects enrolled in a predominately female and Catholic, private high school in Ottawa had parental permission granted in order that they participate in this study. Grades nine through thirteen were represented. The subjects completed a questionnaire package designed to assess social self-esteem, generalized expectancy for success, and, self-reported problems characteristic of adolescent development. Subjects ranged in age from thirteen to nineteen years.

Females were chosen because, as demonstrated in the literature, they are more accessible for studies in self-reported problems because of their tendency to report more problems than males do. It was expected that females would endorse all of the problem checklist's problem categories because the categories would represent all developmental task domains.

A copy of the questionnaire may be found in Appendix 1.

Procedure

The Instruments

Social Self-Esteem Inventory (SSEI)

Lawson, Marshall and McGrath (1979) devised this instrument as a self-report index of self-esteem as it derives from various social situations. Data concerning reliability, factorial structure and norms were provided by the authors. The SSEI contains thirty self-evaluative statements. Subjects are required to rate each statement on a six-point scale in terms of how accurately each statement reflects their self-perceptions.

Higher scores indicate a greater level of self-esteem in social situations.

The SSEI has been shown to be highly reliable over a four-week test-retest period, eg. r=0.88 (Lawson et al, 1979); r=0.76 (Girodo, Dotzenroth & Stein, 1980). Its validity is supported by evidence that it discriminates depressed from nondepressed psychiatric patients (Gauthier, Marshall & Hoaken, 1980), sexual offenders from normal controls (Marshall, Christie & Lanthier, 1980), causal attributional patterns for success and failure in heterosocial interactions (Girodo et al, 1980); in addition it has been shown to predict skilled and unskilled behavior

in social situations (Marshall, Cherniavsky & Malcolm, 1977). The normative mean provided by Lawson et al (1979) is 132.5; the standard deviation is 22.5. Scores may range between 30 and 180.

The Generalized Expectancy for Success Scale (GESS)

The GESS measures both Rotter's (1966) notion of a generalized expectancy and, Jones's (1977) construct of a dispositional (versus specific) subjective probability of success. Fibel (1976), and Fibel and Hale (1978) designed the GESS in order to assess a subject's expectancy that in most situations he will be able to attain desired goals.

Higher scores reflect a higher level of generalized expectancy of future success.

The GESS has been shown to be highly reliable over a six-week test-retest period (r=0.83 overall; r=0.89 for males and r=0.80 for females). Internal consistency was also established. The split-half reliability coefficient for odd versus even items, using the Spearman-Brown correction formula, was 0.90 for females and 0.91 for males. The correlation between the first fifteen items and the last fifteen items was 0.82 for females and 0.83 for males (Spearman-Brown). The authors (Fibel & Hale, 1978) feel that in light "of the fact that all items have a single stem" (p. 926), this result is not surprising.

Correlations with other measures tend to provide

evidence for this scale's validity. Depression, hopelessness, helplessness, anxiety, hostility and an external locus of control can be identified in subjects via their significantly negative correlations with GESS scores. GESS is minimally related to social desirability (Fibel & Hale, 1978). Additional construct validity was provided by Fibel (1976), who demonstrated a positive relationship between GESS score and specific expectancies for success in novel, ambiguous and familiar situations. The choice of a generalized measure, as stated earlier, will depend on the level of analysis desired (Fibel and Hale, 1978). The GESS reflects a global or generalized expectancy for success.

The factor structure extrapolated (Fibel & Hale, 1978) seems to underline, tentatively, the existence of one general factor -- a sense of general, self-perceived efficacy.

The normalized mean for females is 112.32 (mode=112; median=113.14; males is 112.15 (mode=109; median=112.88; standard deviation=13.24). Scores may range between 30 and 150.

The Mooney Problem Checklist - High School Form

The Mooney Problem Checklist (MPCL) -- in its high school form -- has been used extensively in the study of adolescent problems (Abel & Gingles, 1965; Amos & Washington, 1960; Arnold & Mooney, 1943; Brunswick & Josephson, 1972;

Collins, Cassel & Harper, 1975; Deiker & Pryer, 1973; Dyer, 1970; Garrison & Cunningham, 1952; Heid & Snow, 1972; Kuhlen & Bretsch, 1964; Mooney, 1942; 1943; Mooney & Gordon, 1950; Morgan, 1969; Parcel, Nader & Meyer, 1977; Sternlieb & Munan, 1972; Stewart & Deiker, 1976; Vittenson, 1967; Wen & McCoy, 1976).

As a research instrument, a checklist is only useful when the adolescent recognizes those problems in the phenomenal realm, finds that they are listed and is willing to record them. Research conditions facilitating anonymity circumvent the problem of face validity. McIntyre (1963) has found that the MPCL meets these requirements. And, the Commission on Youth Work (1970) concluded that the MPCL is valid even when used with an Australian sample of youths, because the problems of these adolescents are quite similar to North American adolescents'.

The MPCL began as a simple counseling aid and survey instrument designed to help students express their problems more clearly (Mooney, 1942). The potential of this approach for aiding in differential diagnosis and treatment planning (eg. Dyer, 1970) has resulted in research efforts to develop it as a more rigorous test instrument (Deiker & Pryer, 1973).

The high school form contains 330 total items, divided into eleven categories of 30 items each. In turn, these will be described below. Subjects were asked to respond to the following request:

> A problem is something which troubles or bothers you. It can disrupt or disturb your thinking, your behavior, or both. This is not a test. It is a list of problems which often trouble students of your age -- problems of health, money, social life, school work, home relations, religion, vocation, and the like.
>
> Some of these problems are likely to be troubling you now and some are not.
>
> Read through the list slowly and when you come to a problem which is troubling you now, circle it.

This was designed in order to assess problem magnitudes within each of the eleven categories, and, the total number category. The categories are:

1) Health and Physical Development (HPD) -- a list of items pertaining to difficulty in adjusting to physical and physiological changes (growth); and, somatic complaints;

2) Finances, Living Conditions and Employment (FLE) -- concerns about present personal finances (eg. needing to borrow money from parents), satisfaction with the amenities at home (eg. own room; having a car to borrow), and, the felt-needs and satisfactions related to present employment (ie. part- or full-time);

3) Social and Recreational Activities (SRA) -- a survey of problems related to recreational activities (eg. learning how to dance) as well as adjusting to social relations within recreational contexts;

4) Courtship, Sex, and Marriage (CSM) -- difficulties in

discussing dating, sexual or marital issues as well as problems involved in wanting (or not wanting) to actualize desires or beliefs in these subject areas;

5) Social-Psychological Relations (SPR) -- self-perceived difficulties in the attainment or deployment of generalized social skills (eg. not knowing how to talk to another person) and concern over 'the spilling of' psychological problems into the social environment;

6) Personal-Psychological Relations (PPR) -- dissatisfaction regarding personality characteristics, or, behavior considered problematic (eg. losing one's temper too easily; daydreaming; worrying);

7) Morals and Religion (MR) -- issues either already internalized or presently being indoctrinated, which are not in accordance with what the adolescent really believes or wants to believe (ie, usually a rebellion against the parents or established institutions like the church); or, feeling guilty about behaviors done (or not done) as they should not (or should) be done;

8) Home and Family (HF) -- concern over a family member's health, or, issues and interactions at home which are strained due to, for example, a clash of opinions; loss of a family member;

9) The Future: Vocational and Educational (FVE) -- concerns regarding future vocational, educational as well as ontological directions;

10) Adjustment to School Work (ASW) -- problems of adjusting to the school, and the class material; mostly because of either a dislike for school or a subject or, having difficulty with certain classes due to a personal deficit (eg. weak in writing);

11) Curriculum and Teaching Procedure (CTP) -- dissatisfaction with: overall curriculum, little freedom in classes, the textbooks, and, the general process of teaching (and learning) via the present teachers' methods; in general, a dissatisfaction more with 'education' than with personal abilities and failures;

12) Total Problems Endorsed (MPCTOT) -- the sum of all problems endorsed across all eleven categories.

Validity has been provided by results stating that a significantly higher total number of problems endorsed was able to distinguish between the following groups of adolescents, and normals: those accepted into counseling (Esper, 1964; McCallum, 1966); adolescents from broken homes (McIntyre, 1953); obese females (Dyer, 1970; Held & Snow, 1972) delinquent girls (Barnett & Tarver, 1959); and, emotionally-disturbed, hospitalized adolescents (Deiker & Pryer, 1973). The clinical subjects -- especially females -- (Deiker & Pryer, 1973) endorsed significantly more problems in all categories than did the normal controls.

Three large observe factor analyses using all items were

performed for adolescents belonging to one of three groups: emotionally disturbed, delinquents, and, controls (Stewart & Deiker, 1976). In all data sets, a large general factor emerged with considerable overlap for the three criterion groups. In terms of implications for use with single cases, none of the 25 smaller factors corresponded with any of the problem categories and so, a clinician must avoid using the MPCL scales for prediction.

For research purposes, because of the MPCL's ability to distinguish clinical patients from normals using the PPR scale (Deiker & Pryer, 1973), and its inability to distinguish between normals versus delinquents or the emotionally disturbed, the implications of a single general factor are not easily determinable (Stewart & Deiker, 1976). Differences may have simply resulted from the inclusion of different samples. It is possible that the latter study's results reflect an interesting phenomenon: that problems in adolescence are based on general, underlying problem areas which are reflected in the high intercorrelations between problem categories (Stewart & Deiker, 1976).

The large general factor accounted for more variance in the younger adolescent group (junior high school) which may indicate a greater capacity for differentiating problems in the older adolescent (Stewart & Deiker, 1976).

It has been suggested that based on the evidence (Stewart & Deiker, 1976), using the total number of problems

endorsed could be a crude index of general adjustment.

Data Analysis

In order to divide the sample in terms of age groups, it was felt that creating all the possible (and logical) combinations of age and testing to maximize the mean age-group differences would be the best procedure. This procedure -- maximizing the 'F-ratio's' significance level -- was employed separately for all eleven problem categories, the total problem category, and, the other two dependent variables (GESS, SSEI). The age splits for all of the respective problem categories were utilized throughout this study.

Analyses of variance, correlations, multiple stepwise regression, partial correlations and multiple correlations were the other analyses employed to test the mediational hypotheses. T-tests, Z-tests and F-distribution scores were used to assess significance levels for correlations, differences between correlations and analyses of variance, respectively.

Multiple Stepwise Regression

The analysis of a variable's ability when partialled out, to cause a decrement in the relationship between two

variables (eg. problem magnitude and social self-esteem) is equivalent, by way of transformation, to the comparison of independent variables' (eg. problem magnitude, GESS) singular or linearly combined efforts to predict a dependent variable (eg. SSEI). Age, in the present analyses, will be a grouping factor. In order to perform the regressions, variables were standardized in order to preclude scaling problems. This was done prior to the analyses.

For each analysis, four steps are delineated: at Step 0, no variables are entered into the stepwise regression equation to predict SSEI; at Step 1, GESS is entered; with GESS in, at Step 2, the problem category's magnitude is forced in; and, at Step 3, GESS is removed, leaving the problem category magnitude as the sole predictor.

At each step is a related set of regression coefficients (asterisks indicate those in the equation at each step), an F-ratio (and p value) which assesses the significance of the regression coefficients, and their related multiple correlations, squared multiple correlations and, increments/decrements in R^2 at each step. See Tables 9-20. A significant F-ratio reflects significance attained across all of the equivalent statistics (regression coefficients, R and R^2).

In this study, multiple stepwise regression data using the same combinations of predictors yields this equivalence: regression data for 'problem-category magnitude extracted'

analyses are the same as the inverted 'GESS extracted' analyses. The former form the nucleus of the first section of the investigative part of this study. The tables relating to this latter section (Appendix 2) reflect Step 0 as no variables entered; Step 1 as problem category entered; Step 2 as GESS entered; and Step 3 as problem category removed.

Multiple Regression and, Problem Magnitude Increments

The problem category magnitudes used for N=352 and all problem-related age-groups were increased thusly: for N=352, subjects having a magnitude score at, or above, the upper quartile cutpoint for each problem categories' effects on decreasing the GESS-SSEI relationship. The relationship was assessed here, and for scores (increments) at one, one and a half and two standard deviations above the problem category mean. Therefore, with an increase in problem score (magnitude) at each step, the GESS-SSEI relationship was investigated. The most important trend criteria were: decrement in the GESS-SSEI relationship with problem score increase, and, the increase in SSEI variance predicted by the respective problem category.

For each age-group within each problem category, the same criteria held. However, problem score cutpoints started at one standard deviation above the mean and increased through one and a half, to two standard deviations above the

problem category mean.

Limitations of Multiple Regression Computer Programs

Although certain tests of significance are available to assess the 'best' predictive equations as well as the 'best' predictive ability of one variable in the equation over another, the comparison of multiple correlation squared (R^2) increments in the prediction of the dependent variable and the significance levels related to these increments can be investigated only by way of assessing the probability levels for the regression coefficients themselves. And assessing the significance of a simple correlation's decrement to a partial correlation must also be seen in terms of the 'best' F-values and significance levels representing the regression coefficients in the equations at each step of the stepwise analysis. Hence, most of the Results presentation concerning R's and partial correlations will be descriptive and after, these will be related to inferential statistics once the regression equations' significance levels are elucidated.

For all regression data, 'best predictor' refers to the F-ratios and they reflect the most parsimonious explanations of SSEI variance.

CHAPTER III

RESULTS

Internal Consistency as Reliability

The Spearman-Brown split-half reliability coefficient relating to odd-even splits for the Social Self-Esteem Inventory (SSEI) is r=.78. Adjusted, it attains a level of r=.84.

The corresponding coefficients for the Generalized Expectancy for Success Scale (GESS) are r=.81 and adjusted, r=.88. Both instruments reflect good internal consistency.

Part I

Population Description and Analysis

Age

The sample had a mean age of 15.727 (S.D.=1.377) years with a range from 13 to 19 years of age. Seven, or 2 percent, of the 352 subjects were 13 years old; 72 (22.5%) were 14 years; 80 (22.7%) were 15; 90 (25.6%) were 16; 67 (19%) were 17; 26 (7.4%) were 18; and 10 (2.8%) had attained 19 years of ago. Both the median and modal ages were 16. See Table 1.

Table 1

MEANS AND DESCRIPTIVE DATA FROM THE SELF-REPORT INSTRUMENTS
(N=352)

	Mean=$\bar{X}$	SD	Smallest Value	Largest Value	Median	Mode	Means by age/(SD) 13 n=	14 n=	15 n=	16 n=	17 n=	18 n=	19 n=	Ranks of Age Groups Based on Dependent Variable Means
Age	15.727	1.377	13	19	16	16	7	72	80	90	67	26	10	
SSEI	132.048	23.064	41	174	134	134	27.857 (18.68)	131.125 (22.60)	131.987 (26.07)**	129.489 (23.82)	134.448 (22.49)	138.538* (16.14)	132.2 (15.02)	18>17>19>15>14>16>13
GESS	113.65	14.216	66	147	113	113	111.143 (13.17)	112.472 (13.42)	115.087 (14.13)	112.522 (15.30)**	114.224 (14.24)	117.0* (14.14)	110.0 (11.83)	18>15>17>16>14>13>19
HPD	5.764	3.510	0	17	5	3	6.571 (2.76)	6.0 (3.82)	5.887 (3.51)	6.6* (3.76)**	4.91 (3.01)	4.462 (2.69)	4.1 (2.18)	16>13>14>15>17>18>19
FLE	5.778	3.922	0	19	5	6	5.143 (4.38)**	6.306 (3.77)	5.637 (3.55)	6.544* (4.21)	4.985 (4.13)	4.885 (3.91)	4.3 (1.77)	16>14>15>13>17>18>19
SRA	6.259	4.304	0	21	6	6	6.571 (2.76)	7.083* (4.59)	6.187 (3.86)	6.556 (4.47)	5.642 (4.35)	5.692 (4.66)**	3.6 (2.41)	14>13>16>15>18>19>19
CSH	6.80	4.800	0	26	6	7	3.714 (2.36)	7.306 (5.23)	7.1 (4.62)	7.5* (5.31)**	5.955 (4.42)	5.769 (3.39)	5.0 (3.3)	16>14>15>17>18>19>13
SPR	7.932	5.441	0	27	7	8	6.0 (2.94)	8.472 (5.24)	7.55 (5.34)	9.656* (5.99)**	6.896 (5.16)	5.846 (4.32)	5.3 (4.27)	16>14>15>17>13>18>19
PPR	7.940	5.158	0	28	7	6	6.571 (3.21)	7.889 (5.01)	7.75 (5.01)	9.189* (5.72)**	7.015 (4.95)	7.192 (4.46)	7.7 (5.29)	16>14>15>19>18>17>13
MR	6.841	4.799	0	24	6	6	6.0 (4.66)	7.458 (4.92)	6.875 (4.57)	7.811* (5.12)**	5.925 (4.33)	4.962 (4.84)	5.0 (3.83)	16>14>15>13>17>19>18
HF	6.688	5.249	0	24	5	5	5.857 (5.05)	7.25 (5.27)	7.112 (5.21)	7.311* (5.98)**	5.657 (4.76)	5.308 (4.04)	4.7 (3.02)	16>14>15>13>18>18>19
FVE	5.5199	4.689	0	24	5	2	3.857 (3.67)	4.806 (4.76)	5.225 (4.57)	5.989 (4.78)	5.955 (4.63)	6.5* (5.37)**	4.5 (2.92)	18>16>17>15>14>19>13
ASW	8.170	5.559	0	26	7	4	7.143 (4.67)	7.931 (5.97)	8.037 (5.99)**	9.4* (5.42)	7.537 (5.17)	7.192 (4.63)	7.4 (5.08)	16>15>14>17>19>18>13
CTP	6.974	5.617	0	25	6	0	5.857 (4.85)	7.722 (6.69)**	7.337 (5.34)	7.733* (5.52)	5.866 (4.76)	5.615 (5.83)	3.6 (3.09)	16>14>15>17>13>18>19
MPCTOT	74.616	41.415	8	233	70	71	63.286 (30.33)	78.153 (43.03)	74.575 (39.69)	84.377* (45.58)**	66.194 (37.35)	63.385 (36.19)	55.2 (31.13)	16>14>15>17>18>13>19

* highest mean per dependent variable.
** highest S.D. per dependent variable.
S.D. = standard deviation.

Social Self-Esteem

The 352 subjects' mean SSEI score was 132.048. Values ranged between 41 and 174. Both the median and modal scores were 134. The standard deviation was 23.064.

Generalized Expectancy for Success

The sample mean for GESS was 113.631 (SD=14.216) and scores ranged from 66 to 147. Both the median and modal scores were 113.

The Average Adolescent's Problem Scores

As can be seen from Table 1, the average adolescent (aged 15.727) had 5.764 HPD problems, 5.778 FLE problems, 6.259 SRA problems, 6.801 CSM problems, 7.932 SPR problems, 7.940 PPR problems, 6.841 MR problems, 6.688 HF problems, 5.5199 FVE problems, 8.170 ASW problems, 6.974 CTP problems, and, 74.616 total problems. Data for the average 13-through-19 year olds may be found in Table 1.

Ranks of Age-Groups Based on the Means for Each Dependent Variable

Age 16 occupies the first rank for problem mean scores

in 10 of the 12 problem categories (including Total) while age 14 is ranked second in 8 of the 12 categories and first for SRA. Age 16 falls into the second rank on one occasion. Age 15 assumes the third highest rank on 8 of 12 opportunities. Age 18 is ranked first for FVE.

Age 19 occupies the twelfth and last rank in 7 of the 12 problem categories. Age 13 assumes this position on 4 occasions, with age 18 ranked last for MR. Age 18 is ranked second to last 6 times, age 19 four times. Ages 13 and 17 each ranked eleventh once.

For both SSEI and GESS, age 18 is ranked first.

Rankings of Problems' Magnitudes for Age Groups

With an increase in age, ASW, PPR and SPR do not change ranks to any great degree, shifting no more than 1, 3 and 4 ranks, respectively (Table 2). With the increase in the age to 16, little shifting in ranks is evident. With the increase in age beyond 17, FVE and CSM begin to attain higher rankings while CTP and MR start to achieve lower rankings. And, HPD decreases in rank from ages 13 to 18.

Age-Splits for Each Problem Category

Utilizing a logical combinatory set of differing age-splits for each dependent variable, the age-split of 13

Table 2

DESCRIPTIVE DATA:
RANKINGS OF PROBLEMS' MAGNITUDES FOR AGE GROUPS
(IN DESCENDING ORDER)

RANK=	1	2	3	4	5	6	7	8	9	10	11
N = 352	ASW	PPR	SPR	CTP	MR	CSM	HF	SRA	FLE	HPD	FVE
Age 13	ASW	HPD =	SRA =	PPR	SPR =	MR	HF =	CTP	FLE	FVE	CSM
Age 14	SPR	ASW	PPR	CTP	MR	CSM	HF	SRA	FLE	HPD	FVE
Age 15	ASW	PPR	SPR	CTP	HF	CSM	MR	SRA	HPD	FLE	FVE
Age 16	SPR	ASW	PPR	MR	CTP	CSM	HF	HPD	FLE	SRA	FVE
Age 17	ASW	PPR	SPR	CSM =	FVE	MR	CTP	HF	SRA	FLE	HPD
Age 18	PPR =	ASW	FVE	SPR	CSM	SRA	CTP	HF	MR	FLE	HPD
Age 19	PPR	ASW	SPR	CSM =	MR	HF	FVE	FLE	HPD	SRA =	CTP

to 16 and 17 to 19 best reflects the maximization of the ANOVA's F-ratio for SSEI and GESS as well as for 8 of the 12 problem categories (see Table 3). The split of 13 to 14, 15 to 16, and 17 to 19 best maximizes mean age-group differences for SPR, PPR and ASW. And, FVE is best reflected in the 13 to 15 and 16 to 19 split.

The age-splits corresponding to specific problem categories will be utilized in all subsequent hypothesis-testing.

Problems' Prevalence Within Specific Age-Split Groups

As can be seen in Tables 3 and 4, for all 8 problem categories split between the age of 16 and 17, the greatest number of problems is found in the 13-16 years group; that is, in the younger adolescent group. The problem types which maximize these differences between the age-group (13-16, 17-19) means are: HPD, FLE, SRA, CSM, MR, HF, CTP, and MPCTOT (Total Problems).

Of the 3 problem categories (SPR, PPR, ASW) split 13-14, 15-16 and 17-19, the greatest number of problems are found in the middle age group of 15 to 16.

And for FVE the largest problem mean is in the older (16-19) age group.

F-tests and two-tailed t-tests (see Table 4) were performed for appropriate group comparisons. Since F=t for

Table 3

THE MAXIMIZATION OF MEAN AGE-GROUP DIFFERENCES
FOR PROBLEM CATEGORIES, SSEI AND GESS (p<values)
(N=352)

Age Splits	Dependent Variables													
	SSEI	GESS	HPD	FLE	SRA	CSM	SPR	PPR	MR	HF	FVE	ASW	CTP	MPCTOT
13,14,15,16,17,18,19	.6473	.6380	.0145	.1025	.1863	.1002	.0028	.1963	.0417	.1962	.4301	.3520	.0788	.0427
13-14,15,16,17,18-19	.4697	.6465	.0035	.0427	.1367	.1441	.0010	.0863	.0139	.0884	.3582	.1614	.0460	.0179
13-14,15,16,17-19	.3450	.4913	.0017	.0206	.0845	.0823	.0006	.0446	.0090	.0488	.2236	.0896	.0266	.0090
13-15,16-17,18-19	.4125	.5887	.0375	.1705	.0724	.2587	.0330	.6788	.0398	.1532	.2209	.4318	.0769	.1168
13-15,16,17,18-19	.3260	.7948	.0014	.0288	.1431	.0773	.0005	.0429	.0068	.0040	.2706	.0887	.0219	.0080
13-15,16,17-19	.3172	.6894	.0110	.0294	.1566	.1391	.0018	.0388	.0071	.0109	.2618	.0777	.0193	.0074
13-14,15-16,17-19	.1994	.6225	.0005	.0114	.0791	.0354	.0002	.0176	.0036	.0195	.1407	.0394	.0103	.0032
13-15,16-19	.6408	.9247	.3222	.5445	.1646	.3896	.9193	.5545	.3574	.1614	.0476	.4997	.1526	.6571
13-16,17-19	.0927	.4639	.0003	.0063	.0243	.0130	.0012	.0567	.0016	.0052	.2673	.1115	.0027	.0028

_____ basis for corresponding age-split

Table 4

ANOVA DATA RELATING TO AGE-SPLITS AND, PROBLEMS' PREVALENCE IN PARTICULAR AGE GROUPS

Problem Category	Age-Split (mean,SD,n) (13-16)	(17-19)	F-value (df) (F=t)	p<
HPD	6.197 (3.67) 249	4.718 (2.85) 103	13.38 (1,350)	.0003
FLE	6.145 (3.89) 249	4.893 (3.89) 103	7.56 (1,350)	.0063
SRA	6.590 (4.27) 249	5.456 (4.29) 103	5.12 (1,350)	.0243
CSM	7.209 (5.03) 249	5.816 (4.06) 103	6.23 (1,350)	.0130
MR	7.357 (4.87) 249	5.592 (4.40) 103	10.11 (1,350)	.0016
HF	7.189 (5.49) 249	5.476 (4.42) 103	7.91 (1,350)	.0052
CTP	7.550 (5.79) 249	5.583 (4.93) 103	9.15 (1,350)	.0027
MPCTOT	78.834 (42.70) 249	64.417 (36.33) 103	9.03 (1,350)	.0028

	Age-Splits A (13-14)	B (15-16)	C (17-19)	F-value (df;p<)	t-contrasts A-B	A-C	B-C
SPR	7.899 (5.23) 159	9.656 (5.97) 90	6.476 (4.88) 103	8.56 (2,349) p<.0002	2.331 (247) p<.02	2.241 (260) p<.05	4.015 (191) p<.001
PPR	7.761 (4.93) 159	9.189 (5.72) 90	7.126 (4.82) 103	4.09 (2,349) p<.0176	1.987 (247) p<.05	1.032 (260) p>.20	2.688 (191) p<.01
ASW	7.950 (5.89) 159	9.400 (5.42) 90	7.437 (4.99) 103	3.26 (2,349) p<.0394	1.965 (247) p<.05	0.756 (260) p>.20	2.604 (191) p<.01

	Age-Splits (13-15)	(16-19)	F-value (df) (F=t)	p<
FVE	4.975 (4.61) 159	5.969 (4.72) 193	3.95 (1,350)	.0476

df = degrees of freedom.

two groups, the ANOVA comparison is equivalent to a t-test comparison. For the 8 problem categories where age is split 13-16 vs. 17-19, means for the younger group are significantly greater.

For SPR, the t-test contrasts reflect the 15-16 year olds' group mean as significantly greater than either of the 13-14 or 17-19 year olds' groups. The youngest group (13-14) mean is also significantly greater than the 17-19 mean. Concerning PPR, contrasts show that the 15-16 year old group has a significantly greater mean than the 13-14 or 17-19 age groups. The mean difference contrast between 13-14 and 17-19 age groups does not attain significance. Looking at ASW, all contrast results and significance of differences are the same as for PPR.

With FVE split between the ages 15 and 16, the older age group (16-19) has a significantly greater mean score than the 13 to 15 year old group.

Prevalence of Problems Within Specific Age Groups and Their Relationship to SSEI

If each problem category is more prevalent in a particular age group, how are these related to SSEI in comparison with the other age groups' relationships to SSEI? (see Table 5).

The results indicate that for none of the eight problem

Table 5

PROBLEM PREVALENCE IN CERTAIN AGE GROUPS AND THEIR RELATIONSHIP TO SSEI

Age-Split = Problem Correlated With SSEI

N= Problem Correlated with SSEI		(13-16) (n=249)	(17-19) (n=103)	Z-contrast(s)	p<
HPD	= -.2501	-.2542	-.1801	.657	p>.20
FLE	= -.1261	-.0800	-.2153	1.16	p>.20
SRA	= -.3623	-.3341	-.4205	.860	p>.20
CSM	= -.1805	-.1793	-.1408	.329	p>.20
MR	= -.1196	-.1065	-.1068	.003	p>.20
HF	= +.0194	+.0429	-.0011	.328	p>.20
CTP	= -.0607	-.0318	-.0988	.565	p>.20
MPCTOT	= -.2510	-.2261	-.2901	.582	p>.20

		Age-Split (13-14) (n=79)	(15-16) (n=170)	(17-19) (n=103)	Z-contrasts (p<) 13-14 vs. 15-16		13-14 vs. 17-19		15-16 vs. 17-19	
SPR	= -.4218	-.2479	-.4756	-.4134	1.915	(p<.10)	1.229	(p>.20)	.617	(p>.20)
PPR	= -.2625	-.0894	-.2822	-.3370	1.453	(p<.20)	1.715	(p<.10)	.475	(p>.20)
ASW	= -.2457	-.0693	-.3082	-.2510	1.821	(p<.10)	1.222	(p>.20)	.505	(p>.20)

		Age-Split (13-15) (n=159)	(16-19) (n=193)	Z-contrast	p<
FVE	= -.1619	-.1271	-.1995	.685	p<.20

categories split between ages 16 and 17 is the age group with the highest problem mean (13-16) higher related to SSEI than is the other age group (17-19).

Some significant differences are displayed in the three problem categories (SPR, PPR, ASW) split into the age groups 13-14, 15-16 and, 17-19. For all three problem categories the correlations with SSEI for 15-16 year olds are significantly greater than for 13-14 year olds ($p < .10$, $.05$, $.10$, respectively).

Only PPR's 17 to 19 year olds had a significantly higher correlation than did the 13 to 14 year olds ($p < .10$). And, no differences for any of the three problem categories were found between mean scores of 15-16 and 17-19 year olds.

No significant difference in correlation was found for FVE across the age split of 13-15 versus 16-19.

Part II

The Relationship Between GESS and SSEI

In Table 6, it is apparent that GESS and SSEI are significantly related for the whole sample and across age groups. The lack of a significant relationship at age 13 is related to an n of 7.

Since F is maximized for mean age-group differences and both GESS and SSEI F's were maximized for the groups 13-16

Table 6

THE RELATIONSHIP BETWEEN GESS AND SSEI

GESS correlated with SSEI (Two tailed t for Pearson r)

N=352	:	.5137	(p<.001)
Age 13 (n=7)	:	.3321	(p>.10)
Age 14 (n=72)	:	.5058	(p<.001)
Age 15 (n=80)	:	.4618	(p<.001)
Age 16 (n=90)	:	.6288	(p<.001)
Age 17 (n=67)	:	.3650	(p<.01)
Age 18 (n=26)	:	.6752	(p<.001)
Age 19 (n=10)	:	.8010	(p<.01)

Maximized Age Split

Age 13-16 (n=249)	=	.5339	(p<.001)
Age 17-19 (n=103)	=	.4540	(p<.001)

Z = .894 (p>.20)

and 17-19, the correlations between GESS and SSEI for each of these groups was assessed. Both were highly significant ($p < .001$) yet not different from each other ($p > .20$).

Correlations of GESS and SSEI with Problem Categories, for the Whole Sample (N=352)

GESS predicts 26.38 percent of SSEI variance (r=.5137). In Table 7, correlation data yields that there is no significant difference between GESS's and SSEI's correlations with HPD ($p > .50$). GESS predicts virtually the same amount of HPD variance (7.25%) as SSEI does (6.26%).

There is a difference ($p < .10$) between GESS's and SSEI's correlations with FLE ($t=1.7512$; $p < .10$). GESS explains more FLE variance than SSEI does (5.06% versus 1.59%).

No significant differences for correlations with SRA, CSM and SPR are found. Consequently, problem variance prediction is not significantly different between GESS and SSEI.

GESS and SSEI differ significantly in their correlations with PPR ($p < .05$). The former accounts for 13.46% while the latter accounts for 6.89%. The same significant difference is found in correlations with MR ($p < .05$). GESS explains 5.52% which is greater than SSEI's 1.43% explained.

A highly significant discrepancy exists between GESS's

Table 7

CORRELATIONS OF GESS AND SSEI PROBLEM CATEGORIES FOR WHOLE SAMPLE
(N=352)

		GESS			SSEI			
With	HPD	:	-.2695	(p<.02)	-.2501	(p<.02)	t* = .4064	(p>.50)
	FLE	:	-.2249	(p<.05)	-.1261	(p<.20)	t* = 1.7512	(p<.10)
	SRA	:	-.3041	(p<.01)	-.3623	(p<.001)	t* = 1.23	(p<.25)
	CSM	:	-.2446	(p<.02)	-.1805	(p<.10)	t* = 1.1675	(p<.25)
	SPR	:	-.3577	(p<.001)	-.4218	(p<.001)	t* = 1.2756	(p<.25)
	PPR	:	-.3669	(p<.001)	-.2625	(p<.01)	t* = 2.05	(p<.05)
	MR	:	-.2349	(p<.02)	-.1196	(p>.20)	t* = 2.1224	(p<.05)
	HF	:	-.1770	(p<.10)	+.0194	(p>.20)	t* = 3.4729	(p<.001)
	FVE	:	-.2497	(p<.02)	-.1619	(p<.20)	t* = 1.7512	(p<.10)
	ASW	:	-.2926	(p<.01)	-.2457	(p<.02)	t* = .7917	(p<.50)
	CTP	:	-.1637	(p<.20)	-.0607	(p>.95)	t* = 1.9149	(p<.10)
	MPCTOT	:	-.3356	(p<.001)	-.2510	(p<.02)	t* = 1.6112	(p<.20)

t* t-tests (two-tailed)
* for correlated samples.

and SSEI's explanation of HF variance ($p < .001$). GESS accounts for only 3.13% but it is greater than SSEI's 0.38%.

FVE is related to GESS and SSEI ($p < .10$) to a significantly different degree. GESS better explains FVE (6.24%) than does SSEI (2.62%).

There is no difference ($p < .50$) between GESS's and SSEI's correlations with ASW. For CTP, however, a significant difference is found between the correlations ($p < .10$) and, the amount of variance explained by each (GESS=2.68%; SSEI=0.37%). A marginally significant difference ($p < .20$) is exhibited in GESS's and SSEI's correlations with MPCTOT. The variance explained by GESS is 11.26% and, by SSEI, 6.30%.

In general then, problem categories seem to be better related to GESS than to SSEI although many SSEI correlations are significant and, despite the fact that, in absolute terms, there is not much more variance explained by GESS than by SSEI.

The Mediational Hypotheses.

1. Partialling Out GESS from the Problem Magnitude - Social Self-Esteem Co-Relationships

GESS was partialled out of correlations between problem magnitudes and social self-esteem, for the whole sample and

for the appropriate age-splits (see Table 8). Data in each cell -- going downwards -- are for that age-group column, the correlation between the problem category (row title) and SSEI, the partial correlation between the same two variables with the effects of GESS removed, and, the cell n values associated with the analyses.

It is assumed that the strongest effect with GESS removed would occur when the partial correlation is at, or close to, zero.

a) HPD (Health and Physical Development)

For the whole sample, the correlation between HPD and SSEI is $-.25012$ ($p < .001$) and with the effects of GESS removed, the partial correlation is $-.13516$ ($p < .02$) (see Table 8).

In accordance with the appropriate age-split, the 13-16 year old group's correlation between HPD and SSEI is $-.25425$ ($p < .001$) and the partial r is $-.11156$ ($p < .10$). Here too, the partialling out of GESS has decreased the significance level.

For the 17 to 19 year olds, the simple correlation between HPD and SSEI is $-.18013$ ($p < .10$). As in Table 5, there is no significant difference between the simple correlations for the two age groups in HPD. When GESS is removed for 17-19 year olds, the correlation is $-.13516$

Table 8

GESS PARTIALLED OUT OF PROBLEM
MAGNITUDE - SOCIAL SELF-ESTEEM RELATIONSHIPS

	Maximized "F"	13-14	13-15	13-16	15-16	16-19	17-19	13-19
HPD	13-16,			-.25425+++			-.18013+	-.25012+++
r	17-19			-.11156+			-.13129*	-.13516++
p.r.				249			103	352
n=	p<.0003							
FLE	13-16,			-.07998			-.21533**	-.12609++
r	17-19			+.07539			-.18464*	-.01267
p.r.				249			103	352
n=	p<.0063							
SRA	13-16,			-.33408+++			-.42051+++	-.36234+++
r	17-19			-.19430***			-.36984	-.25219+++
p.r.				249			103	352
n=	p<.0243							
CSM	13-16,			-.17932***			-.14084*	-.18050+++
r	17-19			-.04499			-.07409	-.06593
p.r.				249			103	352
n=	p<.0130							
SPR	13-14,	-.24795**			-.47558+++		-.41339+++	-.42182+++
r	15-16,	-.08414			-.32649+++		-.35139+++	-.29715+++
p.r.	17-19	79			170		103	352
n=	p<.0002							
PPR	13-14,	-.08945			-.28217+++		-.33701+++	-.26246+++
r	15-16,	+.09969			-.06574		-.24652++	-.09270+
p.r.	17-19	79			170		103	352
n=	p<.0176							
MR	13-16,			-.10645+			-.10679	-.11960**
r	17-19			+.05168			-.06644	+.00129
p.r.				249			103	352
n=	p<.0016							
HF	13-16,			+.04292			-.00107	+.01940
r	17-19			+.18578***			+.03472	+.13065++
p.r.				249			103	352
n=	p<.0052							
FVE	13-15,		-.12713*			-.19953		-.1690***
r	16-19		-.01532			-.07120		-.04047
p.r.			159			193		352
n=	p<.0476							
ASW	13-14,	-.06927			-.30819+++		-.25095++	-.24569+++
r	15-16,	+.11153			-.16277**		-.18181+	-.11628**
p.r.	17-19	79			170		103	
n=	p<.0394							
CTP	13-16,			-.03179			-.09876	-.06067
r	17-19			+.07850			-.06214	+.02767
p.r.				249			103	352
n=	p<.0027							
MPCTOT	13-16,			-.22607+++			-.29013***	-.25097+++
r	17-19			-.03471			-.21714**	-.09725+
p.r.				249			103	352
n=	p<.0028							

Significance for t (two-tailed)
* p<.20
+ p<.10
** p<.05
++ p<.02
*** p<.01
+++ p<.001

($p < .20$). Again, the significance level has decreased.

b) FLE (Finances, Living Conditions, and Employment)

For N=352, the FLE-SSEI correlation is -.12609 ($p < .02$). With GESS taken out, it falls to -.01267 ($p > .20$). The original correlation disappears. For the complete sample, 99 percent of the original FLE-SSEI association results from the effect of GESS. Only one percent is influenced by FLE.

The FLE-SSEI correlation for the 13-16 group is -.07998 ($p > .20$) and with GESS removed, +.07539 ($p > .20$). Neither correlation is significantly greater than zero.

For the 17 to 19 group, the FLE-SSEI correlation is -.21533 ($p < .05$). The difference between the 13-16 and 17-19 simple correlations is not significant. With GESS extracted for 17-19 year olds, the partial correlation is -.18464 ($p < .10$). The significance of the original association has decreased.

c) SRA (Social-Recreational Activities)

For the entire sample, the correlation between SRA and SSEI ($r=-.36234$; $p < .001$), with GESS removed, does not decease in significance level attained ($r_{12.3}=-.25219$; $p < .001$).

For the 13-16 age group, the significance of the correlation between SRA and SSEI ($r=-.33408$; $p < .001$) does decrease once GESS is partialled out ($r_{12.3}=-.19430$; $p < .01$).

No decrement in significance level is accomplished by extracting GESS from the original relationship ($r=-.42051$; $p < .001$ versus $r_{12.3}=-.36984$; $p < .001$) for 17-19 year olds. There is no significant difference between the two age groups' SRA-SSEI correlations although the 17-19 partial correlation was significantly higher ($p < .20$).

d) CSM (Courtship, Sex and Marriage)

With N=352, the correlation between CSM and SSEI is $-.18050$ ($p < .001$) and with GESS extracted, the partial correlation ($r_{12.3}=-.06593$) is not significant ($p > .20$).

The 13-16 age group's significant correlation for CSM-SSEI ($r=-.17932$; $p < .01$) became insignificant with GESS removed ($r=-.04499$; $p > .20$).

A decrement in significance level is displayed by eliminating GESS's effects within the 17-19 group ($r=-.14084$; $p < .20$ versus $r_{12.3}=-.07409$; $p > .20$). There is no significant difference between the two age groups' CSM-SSEI correlations.

e) SPR (Social-Psychological Relations)

For the entire sample, the correlation between SPR and SSEI ($r=-.42182$; $p < .001$), with GESS removed, does not decrease in significance level attained ($r_{12.3}=-.29715$; $p < .001$) despite an obvious decrement in correlation. For the 13-14 age group, the significance of the correlation between SPR and SSEI ($r=-.24795$; $p < .05$) does decrease when GESS is extracted ($r_{12.3}=-.08414$; $p > .20$). This is the only age group wherein the partial correlation is not significantly greater than zero.

For the 15-16 group, no decrease in significance level occurs as a result of removing GESS ($r_{12.3}=-.32649$; $p < .001$) from the original relationship ($r=-.47558$; $p < .001$). Similarly, within the 17-19 age group, no significant decrease, towards zero, in the relationship ($r=-.41339$; $p < .001$) was obtained ($r_{12.3}=-.29715$; $p < .001$).

The only significant difference between age-group correlations was between 13-14 and 15-16, the latter being more significant ($p < .10$). The significant partial correlational differences were found where the 15-16 and 17-19 groups' partial correlations were greater than the 13-14 year old group's ($p < .10$ and $p < .20$ respectively).

f) PPR (Personal-Psychological Relations)

Taking the entire sample into consideration, the PPR-SSEI correlation ($r=-.26246$; $p < .001$), with GESS removed, decreased in significance ($r_{12.3}=-.09270$; $p < .10$).

Although the 13-14 age group correlation was not significant and the partial correlation was not significantly greater than zero ($r=-.08945$; $p > .20$ versus $r_{12.3}=+.09969$; $p > .20$), significance decrements were obtained for both the 15-16 and 17-19 age groups: respectively, from $r=-.28217$ ($p < .001$) to $r_{12.3}=-.06574$ ($p > .20$), and, $r=-.33701$ ($p < .001$) to $r_{12.3}=-.24652$ ($p < .02$).

Two significant differences between age group correlations are found. Both 15-16 and 17-19 age groups had higher correlations than did the 13-14 age group. Differences were reflected in $p < .20$ and $p < .10$, respectively. No age group differences for the partial correlations were obtained.

g) MR (Morals and Religion)

The partial correlation (with GESS out) for all the subjects decreased in significance ($r_{12.3}=+.00129$; $p > .20$) from the simple MR-SSEI correlation ($r=-.11960$; $p <$

.05). Similarly, in the 13-16 age group, the simple correlation changed from r=-.10645 ($p < .10$) to $r_{12.3}$=+.05168 ($p > .20$) once GESS was eliminated. In the 17-19 group, a nonsignificant correlation (r=-.10679; $p > .20$) became a nonsignificant partial correlation ($r_{12.3}$=-.06644; $p > .20$).

No age group correlational differences were yielded by analysis.

h) HF (Home and Family)

For the entire sample, the correlation between HF and SSEI (r=+.01940; $p > .20$), with GESS removed, increases in significance level attained (r=+.13065; $p < .02$). A similar phenomenon occurs in the 13-16 group (r=+.04292; $p > .20$ to $r_{12.3}$=+.18578; $p < .01$). For the 17-19 group, a nonsignificant correlation remained a nonsignificant partial correlation (r=-.00107; $p > .20$, to $r_{12.3}$=+.03472; $p > .20$). The trend, however insignificant, was evident once more in that the partial correlation yielded a positive HF-SSEI value for the 17-19 group.

No age group correlational differences were obtained although the 13-16 group's partial correlation was significantly greater than the 17-19 group's ($p < .20$).

i) FVE (The Future: Vocational and Educational)

The whole sample's and all age groups' FVE-SSEI correlations decrease in significance once GESS is removed: for n, r=-.16190 ($p < .01$) becomes $r_{12.3}$=-.04047 ($p > .20$); for 13-15, r=-.12713 ($p < .20$) becomes $r_{12.3}$=-.01532 ($p > .20$); and, for 16-19, r=-.19953 ($p < .01$) becomes $r_{12.3}$=-.07120 ($p > .20$).

No age group correlational differences are yielded.

j) ASW (Adjustment to School Work)

For the whole sample, the ASW-SSEI correlation (r=-.24569; $p < .001$, with GESS's effects removed, decreases in significance level attained ($r_{12.3}$=-.11628; $p < .05$).

In the 13-14 age group, the ASW-SSEI correlation (r=-.06927; $p > .20$) remains insignificant when GESS is removed ($r_{12.3}$=+.11153; $p > .20$). For the 15-16 group, the correlation (r=-.30819; $p < .001$) drops when GESS is extracted ($r_{12.3}$=-.16277; $p < .05$). The same occurs for the 17-19 age group (r=-.25095; $p < .02$) to $r_{12.3}$=-.18191; $p < .10$).

The only age group correlational difference shows that the 15-16 simple correlation is significantly greater than the 13-14 group's ($p < .10$).

k) CTP (Curriculum and Teaching Procedure)

All of the possible age groupings (N; 13-16; 17-19) have insignificant CTP-SSEI correlations ($r=-.06067$, $p > .20$; $r=-.03179$; $p > .20$; $r=-.09876$, $p > .20$, respectively). When GESS is removed, their partial correlations are also insignificant ($r_{12.3}=+.07850$, $p > .20$; $r_{12.3}=-.06214$; $p > .20$; and, $r_{12.3}=+.02767$; $p > .20$, respectively).

No age group correlational differences are found.

l) MPCTOT (Total Problems)

For all age groupings there is a decrease in the significance levels associated with the extraction of GESS's effects: for N=352, $r=-.25097$ ($p < .001$) becomes $r_{12.3}=-.09725$ ($p < .10$); for 13-16, $r=-.22607$ ($p < .001$) becomes $r_{12.3}=-.03471$ ($p > .20$); and, for 17-19, $r=-.29013$ ($p < .01$) becomes $r_{12.3}=-.21714$ ($p < .05$).

No age group correlational differences are extant although the 17-19 group's partial correlation is significantly greater than the 13-14 group's ($p < .20$).

2. The Prediction of SSEI

HPD and GESS as Predictors

In Table 9, and for the whole sample, GESS alone -- without HPD's effects removed -- accounts for 26.38 percent (R=.5137) of the variance in SSEI. HPD alone -- without GESS's effects removed -- accounts for 6.26 percent (R=.2501) of SSEI variance. Combined, they account for 27.73 percent (R=.5266), an increase in R^2 of 1.34 percent over GESS's prediction of 26.38 percent. Eliminating the common variance accounted for by the two independent variables, GESS accounts for 21.47 percent of original variance while HPD explains 1.34 percent new variance.

The significance of the differences in prediction at each step is reflected in the significance of the differences between the regression coefficients in the equation at each step (asterisks beside coefficients). Therefore all three equations predict a significant amount of SSEI ($p < .0005$) but the rank of best predictors is: GESS alone ($F=125.44$, $p < .0005$), GESS with HPD variance removed ($F=103.70$; $p < .0005$), GESS plus HPD ($F=66.95$; $p < .0005$), HPD alone ($F=23.36$; $p < .0005$) and then, HPD with GESS variance removed ($F=6.49$; $p < .025$).

The values of F decrease in that rank. Therefore, GESS alone best predicts SSEI. Adding HPD to GESS does not increase SSEI's prediction. In fact, it predicts less

Table 9

HPD, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	HPD=N			GESS			
N=	0	.8334	-1.6433			F=103.70			
352	1	.8334*	-0.7912	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.7807*	-0.7912*	66.95	(.0005)		.5266	.2773	.0134
	3	.7807	-1.6433*	23.36	(.0005)	HPD	.2501	.0626	-.2147
						F=6.49			
						(p<.025)			
			HPD13-16			GESS			
n=	0	.8952	-1.6633			F=79.92			
249	1	.8952*	-0.6487	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.8440*	-0.6487*	51.22	(.0005)		.5422	.2940	.0089
	3	.8440	-1.6633*	17.07	(.0005)	HPD	.2542	.0646	-.2294
						F=3.10			
						(p<.10)			
			HPD17-19			GESS			
n=	0	.6606	-1.2878			F=24.01			
103	1	.6606*	-.8448	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6362*	-.8448*	14.08	(.0005)		.4688	.2198	.0137
	3	.6362	-1.2878*	3.39	(.10)	HPD	.1801	.0324	-.1873
						F=1.75			
						(p<.25)			

* refer to key.

KEY

* in the equation

Step 0 = no variables entered
1 = GESS entered = GESS alone (problem's effects not removed from GESS)
2 = problem category entered and added to GESS
(2a = GESS with problem category removed
2b = problem category with GESS removed)
3 = GESS removed = problem category alone (GESS's effects not removed from the problem category)

R	R^2	Incr. in R^2
	1 =	1
	2=R^2 of GESS+ problem	2b=R^2 above GESS's R^2
	3	2a

(F=66.95) because HPD's novel variance explained is only 1.34 percent. On the other hand, removing HPD from GESS contributes to a prediction of 21.47 percent of SSEI which is less than when the GESS score -- without HPD overlap removed -- predicts SSEI (26.38%).

Based on the two age-groups' (13-16, 17-19) data, GESS alone best predicts SSEI in the younger (13-16) group because of the difference in F-value, despite both significance levels exceeding $p < .0005$: in the 13-16 group, GESS alone predicts 28.51 percent ($F=98.50$; $p < .0005$) while for the 17-19 group it predicts 20.61 percent ($F=26.22$; $p < .0005$). HPD alone also best predicts SSEI in the younger (13-16) group due to the difference in the F-value although both values attain significance levels of $p < .0005$: in the 13-16 group, HPD alone predicts 6.46 percent ($F=17.07$; $p < .0005$) while for the 17-19 group it predicts 3.24 percent ($F=3.39$; $p < .10$). There is a difference in the effectiveness of prediction, with the regression equation of the younger (13-16) group explaining more variance. GESS and HPD together best predict SSEI in the younger (13-16) group due to the difference in F-value: in the 13-16 group, GESS and HPD predict 29.40 percent ($F=51.22$; $p < .0005$) and for the 17-19 group, 21.98 percent ($F=14.08$; $p < .0005$). GESS -- with HPD variance removed -- predicts more SSEI variance for younger (13-16) subjects ($F=79.92$; $p < .0005$; 22.94%) than older (17-19) subjects ($F=24.01$; $p < .0005$; 18.73%). And, HPD -- with GESS removed -- predicts SSEI about equally for

younger subjects ($F=3.10$; $p < .10$; 0.89%) as for older ones ($F=1.75$; $p < .25$; 1.37%). Therefore, even within the age groups, GESS alone best predicts SSEI followed by GESS and HPD, GESS with HPD variance removed, HPD alone, and, HPD with GESS variance removed. In other words, by adding HPD little is gained toward the prediction of SSEI.

FLE and GESS as Predictors

Data for the entire sample (Table 10) shows that GESS alone -- without FLE's variance eliminated -- accounts for 26.38 percent of SSEI variance. FLE alone -- without GESS removed -- explains 1.59 percent ($R=.1261$). Together GESS and FLE account for 26.40 percent ($R=.5138$), an R^2 increment of less than one percent (.01 percent) over GESS's prediction of 26.38 percent. Eliminating the common variance accounted for by the two independent variables, GESS accounts for 24.81 percent of original SSEI variance while FLE explains .01 percent.

In terms of the significance of the differences in prediction, all three equations predict a significant amount of SSEI: GESS alone ($p < .0005$), FLE alone ($p < .025$), and, GESS and FLE ($p < .0005$). The order of best predictors is: GESS alone, GESS with FLE removed ($F=119.62$; $p < .0005$), GESS plus FLE, FLE alone, and, FLE with GESS extracted ($F=0.06$; $p < .90$). Therefore, GESS alone best predicts SSEI. Adding

Table 10

FLE, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	FLE13-19			GESS			
N=	0	.8334	-.7415			F=117.62			
352	1	.8334*	-.0656	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.8293*	-.0656*	62.58	(.0005)		.5138	.2640	.0001
	3	.8293	-.7415*	5.66	(.025)	FLE	.1261	.0159	-.2481
						F=0.06 (p<.90)			
			FLE13-16			GESS			
n=	0	.8952	-.4940			F=97.86			
249	1	.8952*	+.4083	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.9246*	+.4083*	50.04	(.0005)		.5377	.2892	.0041
	3	.9246	-.4940*	1.59	(.25)	FLE	.0800	.0064	-.2828
						F=1.41 (p<.25)			
			FLE17-19			GESS			
n=	0	.6606	-1.1294			F=24.36			
103	1	.6606*	-.8686	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6331*	-.8686*	15.20	(.0005)		.4829	.2332	.0271
	3	.6331	-1.1294*	4.91	(.05)	FLE	.2153	.0464	-.1868
						F=3.53 (p<.10)			

* refer to key.

FLE to GESS does not increase SSEI's prediction; it actually decreases the F-value (62.58) which reflects less of a marked contrast than occurs with GESS alone. Removing FLE from GESS, on the other hand, contributes to the prediction of 24.81 percent of SSEI which is less than when the GESS score -- without FLE removed -- predicts SSEI (26.38%).

Looking at the age-group data, GESS alone best explains SSEI in the younger (13-16) group than in older (17-19) group despite significant F-values ($p < .0005$). As in the HPD-GESS analyses, the 13-16 group's GESS alone predicts 28.51 percent ($F=98.50$; $p < .0005$) while the 17-19 subjects' GESS predicts 20.61 percent ($F=26.22$; $p < .0005$). FLE alone best predicts SSEI in the 17-19 group ($F=4.91$; $p < .05$) than in the 13-16 group ($F=1.59$; $p < .25$). For the 17-19 year olds, FLE alone predicts 4.64 percent while, for 13-16 year olds, it accounts for 0.64 percent. GESS and FLE together best predict SSEI in the 13-16 group ($F=50.04$; $p < .0005$) than in the 17-19 group ($F=15.20$; $p < .0005$). In the younger subjects' group, GESS and FLE predict 28.92 percent; for the older subjects, 23.32 percent of SSEI was accounted for.

GESS -- with FLE variance removed -- predicts more SSEI variance for younger (13-16) subjects ($F=97.86$; $p < .0005$; 28.28%) than older (17-19) subjects ($F=24.36$; $p < .0005$; 18.68%). And, FLE -- with GESS extracted -- predicts SSEI best for older subjects ($F=3.53$; $p < .10$; 2.71%) than for younger ones ($F=1.41$; $p < .25$; 0.41%).

Therefore, across age groups, the rank of best predictors of SSEI is the same. Adding FLE adds little to the prediction of SSEI. GESS alone is the best predictor.

SRA and GESS as Predictors

Table 11 shows that GESS alone accounts for 26.38 percent of SSEI variance. SRA alone explains 13.13 percent (R=.3623). GESS and SRA, together, account for 31.07 percent (R=.5574), an R^2 increment of 4.68 percent over GESS's prediction of 26.38 percent. Eliminating common independent variable variance in predicting SSEI, GESS explains 17.94 percent of original SSEI variance while SRA explains 4.68 percent.

All three regression equations predict a significant ($p < .0005$) amount of SSEI: GESS alone, SRA alone, and, the two linearly combined. Including the two independent variance explanations, the best predictors are the GESS alone, GESS with SRA extracted ($F=90.81$, $p < .0005$), GESS plus SRA, SRA alone, and, SRA with GESS extracted ($F=23.70$; $p < .0005$). Adding SRA to GESS actually decreases the F-contrast (78.64, from 125.44). Removing SRA from GESS, on the other hand, contributes to the prediction of 17.94 percent of SSEI which is less than when the GESS score -- without SRA removed -- predicts SSEI (26.38%).

Investigating age-group data, GESS alone best accounts

Table 11

SRA, GESS AND, THE PREDICTION OF SSHT:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	SRA13-19			GESS			
N=	0	.8334	-1.9415			F=90.81			
352	1	.8334*	-1.2170	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.7213*	-1.2170*	78.64	(.0005)		.5574	.3107	.0468
	3	.7213	-1.9415*	52.90	(.0005)	SRA	.3623	.1313	-.1794
						F=23.70 (p<.0005)			
			SRA13-16			GESS			
n=	0	.8952	-1.8768			F=71.69			
249	1	.8952*	-.9798	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.7970*	-.9798*	55.80	(.0005)		.5586	.3121	.0270
	3	.7970	-1.8768*	31.03	(.0005)	SRA	.3341	.1116	-.2005
						F=9.65 (p<.005)			
			SRA17-19			GESS			
n=	0	.6606	-1.9943			F=20.12			
103	1	.6606*	-1.6013	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.5536*	-1.6013*	22.96	(.0005)		.5610	.3147	.1086
	3	.5536	-1.9943*	21.70	(.0005)	SRA	.4205	.1768	-.1379
						F=15.85 (p<.0005)			

* refer to key.

for SSEI in the younger group (13-16) despite both groups' significant p (< .0005): F(13-16)=98.50; F(17-19)=26.22. As in the HPD and FLE analyses, the 13-16 group's GESS alone predicts 28.51 percent and the 17-19 group's GESS alone predicts 20.61 percent. SRA alone best predicts SSEI in the 13-16 group (F=31.03; p < .0005) than in the 17-19 group (F=21.70; p < .0005) but, because of SRA with GESS extracted's greater prediction in the 17-19 group (see below), the 17-19 group's SRA alone predicts more SSEI variance (17.68%) than does the 13-16 group (11.16%).

GESS and SRA together exhibit a greater F-contrast for 13-16 year olds (F=55.80; p < .0005) than for 17-19 year olds (F=22.96; p < .0005). However, the 17-19 group accounts for a similar amount of variance (13-16=31.21%; 17-19=31.47%). This is related to the amount of independent variance accounted for by SRA in the 17-19 group, with GESS's effects removed (17-19: F=15.85, p < .0005), 10.86%; 13-16: F=9.65, p < .0005, 2.70%).

GESS -- with SRA variance eliminated -- predicts more SSEI variance for younger (13-16) subjects (F=71.69; p < .0005; 20.05%) than older (17-19) subjects (F=20.12; p < .0005; 13.79%). And, SRA -- with GESS extracted -- predicts SSEI best for older subjects, as stated above.

The rank of best predictors for the age groups reflects that GESS alone is the best predictor and that SRA is a good predictor of SSEI in older subjects, although it is still not

as strong as GESS.

CSM and GESS as Predictors

Table 12 displays that for N=352, GESS alone accounts for 26.38 percent of SSEI variance. CSM alone explains 3.26 percent (R=.1805). Together GESS and CSM account for 26.70 percent (R=.5168), an R^2 increment of less than one percent (.32%) over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 23.45 percent of original SSEI variance while CSM explains .32 percent.

All three prediction equations account for a significant amount of SSEI: GESS alone ($p < .000$) CSM alone ($p < .001$), and, GESS with CSM ($p < .0005$). The order of best predictors is: GESS alone, GESS with CSM removed ($F=111.64$; $p < .0005$), GESS plus CSM, CSM alone, and, CSM with GESS removed ($F=1.52$; $p < .25$). Therefore, GESS alone best predicts SSEI. Adding CSM to GESS does not substantially increase SSEI's prediction; it actually decreases the F-value (63.58) which reflects less of a marked contrast than occurs with GESS alone. Removing CSM from GESS contributes to the prediction of 23.45 percent of SSEI which is less than when GESS alone predicts SSEI (26.38%).

Assessing age-group data, GESS alone best accounts for SSEI in the younger group (13-16) despite both groups'

Table 12

CSM, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2: F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	CSM13-19			GESS			
N= 352	0	.8334	-.8673			F=111.64 (p<.0005)	.5137	.2638	.2638
	1	.8334*	-.2803	125.44	(.0005)		.5168	.2670	.0032
	2	.8102*	-.2803*	63.58	(.0005)	CSM	.1805	.0326	-.2345
	3	.8102	-.8673*	11.79	(.001)	F=1.52 (p<.25)			
			CSM13-16			GESS			
n= 249	0	.8952	-.8561			F=87.71 (p<.0005)	.5339	.2851	.2851
	1	.8952*	-.1885	98.50	(.0005)		.5353	.2865	.0014
	2	.8975*	-.1885*	49.40	(.0005)	CSM	.1793	.0322	-.2544
	3	.8975	-.8561*	8.21	(.005)	F=0.50 (p<.50)			
			CSM17-19			GESS			
n= 103	0	.6606	-.7074			F=24.14 (p<.0005)	.4540	.2061	.2061
	1	.6606*	-.3363	26.22	(.0005)		.4587	.2104	.0044
	2	.6444*	-.3363*	13.33	(.0005)	CSM	.1408	.0198	-.1906
	3	.6444	-.7074*	2.04	(.25)	F=0.55 (p<.50)			

* refer to key.

significant level ($p < .0005$): $F(13\text{-}16)=98.50$; $F(17\text{-}19)=26.22$). The 13-16 group's GESS alone predicts 28.51 percent while the 17-19 group's GESS alone predicts 20.61 percent. CSM alone best accounts for SSEI in the 13-16 group ($F=8.21$; $p < .005$) than in the 17-19 group ($F=2.04$; $p < .25$). For the 13-16 group, CSM alone predicts 3.22 percent while the 17-19 group's CSM alone predicts 1.98 percent. GESS and CSM together exhibit a greater F-contrast for 13-16 year olds ($F=49.40$; $p < .0005$) than for 17-19 year olds ($F=13.33$; $p < .0005$). In the younger subject group, GESS and CSM predict 28.65 percent; for the older subjects, 21.04 percent of SSEI was accountd for.

GESS -- with CSM variance removed -- predicts more SSEI variance for younger (13-16) subjects ($F=87.71$; $p < .0005$; 25.44%) than older (17-19) subjects ($F=24.14$; $p < .0005$; 19.06%). And, CSM -- with GESS extracted -- predicts SSEI equally as poorly for older subjects ($F=0.55$; $p < .50$; 0.44%) as for younger ones ($F=0.50$; $p < .50$; 0.14%).

Therefore, across age groups, the rank of best predictors of SSEI is the same. Adding CSM adds little to the prediction of SSEI. GESS alone is the best and most parsimonious predictor.

SPR and GESS as Predictors

In Table 13, the data for the complete sample is

Table 13

SPR, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	SPR13-19			GESS			
N= 352	0	.8334	-1.7878			F=78.47 (p<.0005)	.5137	.2638	.2638
	1	.8334*	-1.1571	125.44	(.0005)		.5735	.3288	.0650
	2	.6749*	-1.1571*	85.50	(.0005)		.4218	.1779	-.1509
	3	.6749	-1.7878*	75.76	(.0005)	SPR			
						F-33.80 (p<.0005)			
			SPR13-14			GESS			
n= 79	0	.8247	-1.0764			F=19.12 (p<.0005)	.4948	.2448	.2448
	1	.8247*	-.3407	24.96	(.0005)		.5001	.2501	.0053
	2	.7771*	-.3407*	12.68	(.0005)		.2479	.0615	-.1886
	3	.7771	-1.0764*	5.04	(.05)	SPR			
						F=0.54 (p<.50)			
			SPR15-16			GESS			
n= 170	0	.9224	-2.0510			F=40.20 (p<.0005)	.5495	.3019	.3019
	1	.9224*	-1.2921	72.65	(.0005)		.6134	.3763	.0744
	2	.7160*	-1.2921*	50.38	(.0005)		.4756	.2262	-.1501
	3	.7160	-2.0510*	49.10	(.0005)	SPR			
						F=14.92 (p<.0005)			
			SPR17-19			GESS			
n= 103	0	.6606	-1.7283			F=19.15 (p<.0005)	.4540	.2061	.2061
	1	.6606*	-1.3489	26.22	(.0005)		.5515	.3041	.0980
	2	.5473*	-1.3489*	21.85	(.0005)		.4134	.1709	-.1332
	3	.5473	-1.7283*	20.82	(.0005)	SPR			
						F=15.09 (p<.0005)			

* refer to key.

represented. GESS alone explains 26.38 percent of SSEI variance. SPR alone explains 17.79 percent (R=.4218). Together GESS and SPR account for 32.88 percent (R=.5735), an R^2 increase of 6.5 percent over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 15.09 percent of original SSEI variance while SPR explains 6.5 percent.

All three prediction equations account for a significant amount of SSEI: GESS alone, SPR alone, and, GESS with SPR (all $p < .0005$). The decrements in F-values once SPR is introduced into the equation or when it, alone, predicts SSEI, are not as marked as those in other problem categories' entrance. The order of best predictors is: GESS alone, GESS plus SPR, GESS with SPR removed ($F=78.47$; $p < .0005$), SPR alone, and, SPR with GESS removed ($F=33.80$; $p < .0005$). GESS alone is the most efficient predictor. Adding SPR to GESS decreases the F-contrast value to 85.50 and this reflects less of a marked contrast than occurs with GESS alone. Removing SPR from GESS contributes to the prediction of 15.09 percent of SSEI which is less than when GESS alone predicts SSEI (26.38%).

Contrasting age-group data, GESS alone best predicts SSEI in the 15-16 group despite all groups' significant p-values (.0005): F(15-16)=72.65; F(13-14)=24.96; F(17-19)=26.22. The 15-16 group's GESS alone predicts 30.19 percent, the 13-14 group 24.48 percent, and the 17-19 group 20.61 percent.

SPR alone better accounts for SSEI in the 15-16 group ($F=49.10$; $p < .0005$) than in either of the 17-19 ($F=20.82$; $p < .0005$) or 13-14 groups ($F=5.04$; $p < .05$). For the 15-16 group, SPR alone predicts 22.62 percent; for the 17-19 group, 17.09 percent; and, for the 13-14 group, 6.15 percent.

GESS and SPR combined exhibit a greater F-contrast for 15-16 year olds ($F=50.38$; $p < .0005$) than for 17-19 year olds ($F=20.82$; $p < .0005$) or 13-14 year olds ($F=5.04$; $p < .05$). In the middle-age group (15-16), the combined predictor variables account for 37.63 percent of SSEI variance while the corresponding percentages for the 17-19 and 13-14 groups are 30.41 and 25.01 percent, respectively.

GESS -- with SPR variance eliminated -- predicts SSEI better for the middle (15-16) group ($F=40.20$; $p < .0005$) than the 13-14 ($F=19.12$; $p < .0005$) or, 17-19 ($F=19.15$; $p < .0005$) groups. However, the percent of SSEI explained is 13-14=18.86%, 15-16=15.01, and 17-19=13.32%. Percentages decrease with age. Therefore, despite the higher F for 15-16, the trend is for GESS to explain less SSEI variance as age increases. SPR is beginning to explain more.

And, for SPR with GESS extracted, prediction of SSEI increases with age (13-14=0.54, $p < .50$, 0.53%; 15-16=14.92, $p < .0005$, 7.44%; and, 17-19=15.09, $p < .0005$, 9.80%).

The best predictor is still GESS; adding SPR adds to the explanation of variance but mostly in the 15-16 group.

PPR and GESS as Predictors

From Table 14, and for N=352, GESS alone explains 26.38 percent of SSEI variance. PPR alone explains 6.89 percent (R=.2625). Together, GESS and PPR account for 27.02 percent (R=.5198), an R^2 increment of 0.63 percent over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 20.13 percent of original SSEI variance while PPR explains 0.63 percent.

All three prediction equations account for a significant amount of SSEI: GESS alone, PPR alone, and, GESS with PPR (all $p < .0005$). The order of best predictors is: GESS alone, GESS with PPR removed ($F=96.25$; $p < .0005$), GESS plus PPR, PPR alone and, PPR with GESS eliminated ($F=13.03$; $p < .10$). GESS alone is the most efficient predictor. Adding PPR to GESS decreases the F-contrast value to 64.60, and this indicates less of a marked contrast than occurs with GESS alone. Removing PPR from GESS contributes to the prediction of 20.13 percent of SSEI, which is less than when GESS alone, predicts SSEI (26.38%).

Looking at age-group data, GESS alone best predicts SSEI in the 15-16 group despite all groups' significant p-values (.0005): F(15-16=72.65; F(17-19=24.22; and, F(13-14)=24.96. The 15-16 group's GESS alone predicts 30.19 percent, the 13-14 group 24.48 percent, and, the 17-19 group 20.61 percent.

Table 14

PPR, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	PPR13-19			GESS			
N=	0	.8334	-1.1736			F=96.25			
352	1	.8334*	-.3823	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.7825*	-.3823*	64.60	(.0005)		.5198	.2702	.0063
	3	.7825	-1.1736*	25.89	(.0005)	PPR	.2625	.0689	-.2013
						F=3.03 (p<.10)			
			PPR13-14			GESS			
n=	0	.8247	-.4072			F=24.83			
79	1	.8247*	+.4202	24.96	(.0005)	(p<.0005)	.4948	.2448	.2448
	2	.8778*	+.4202*	12.82	(.0005)		.5023	.2523	.0075
	3	.8778	-.4072*	0.62	(.50)	PPR	.0895	.0080	-.2443
						F=0.76 (p<.50)			
			PPR15-16			GESS			
n=	0	.9244	-1.2909			F=54.13			
170	1	.9244*	-.2773	72.65	(.0005)	(p<.0005)	.5495	.3019	.3019
	2	.8813*	-.2773*	36.63	(.0005)		.5522	.3049	.0030
	3	.8813	-1.2909*	11.53	(.0005)	PPR	.2822	.0796	-.2253
						F=0.72 (p<.50)			
			PPR17-19			GESS			
n=	0	.6606	-1.4250			F=18.88			
103	1	.6606*	-.9668	24.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.5683*	-.9668*	17.05	(.0005)		.5043	.2543	.0482
	3	.5683	-1.4250*	12.94	(.001)	PPR	.3370	.1136	-.1408
						F=6.47 (p<.025)			

* refer to key.

PPR alone better accounts for SSEI in the 17-19 group ($F=12.94$; $p < .0005$) than in either of the 15-16 ($F=11.53$; $p < .001$) or 13-14 ($F=0.62$; $p < .50$) groups. For the 15-16 group, PPR alone predicts 7.96 percent; for the 17-19 group, 11.36 percent; and, for the 13-14 group, 8.95 percent. With an increase in age, PPR alone's prediction of SSEI increases.

GESS and PPR combined exhibit a greater F-contrast for 15-16 year olds ($F=36.63$; $p < .0005$) than for 17-19 year olds ($F=12.94$; $p < .0005$) or 13-14 year olds ($F=12.82$; $p < .0005$). In the 15-16 group, the combined predictor variables account for 30.49 percent of SSEI variance while the corresponding percentages for the 17-19 and 13-14 groups are 25.43 and 25.23 percent, respectively.

GESS -- wth PPR variance removed -- predicts more variance for the middle (15-16) group ($F=54.13$; $p < .0005$) than the 13-14 ($F=24.83$; $p < .0005$) or 17-19 group ($F=18.88$; $p < .0005$). However, the percent of SSEI explained is 13-14=24.43%, 15-16=22.53% and, 17-19=14.08%). This is not consistent with the F-values although the difference in percentages between 13-14 and 15-16 is quite small ($< 2\%$). And, PPR -- with GESS removed -- predicts SSEI more efficiently for older subjects (17-19: $F=6.47$; $p < .025$; 4.82%) than for younger ones: (15-16: $F=0.72$; $p < .50$; 0.30%), (13-14: $F=0.76$; $p < .50$; 0.75%).

The best predictor is GESS.

MR and GESS as Predictors

Table 15 shows that for the complete sample, GESS alone accounts for 26.38 percent of SSEI variance. MR alone explains 1.43 percent (R=.1196). Together GESS and MR account for 26.38 percent, a zero percent increment in R^2 over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 24.95 percent of original SSEI variance while MR explains zero percent.

All three prediction equations account for a significant amount of SSEI: GESS alone ($p < .0005$), MR alone ($p < .025$), and, GESS and MR ($p < .0005$). The order of best predictors is: GESS alone, GESS with MR removed ($F=118.31$, $p < .0005$), GESS plus MR and MR alone. MR with GESS removed predicts zero percent. Therefore, GESS alone best predicts SSEI. Adding MR to GESS does not substantially increase SSEI's prediction; it actually decreases the F-value to 62.54 which reflects less of a marked contrast than occurs with GESS alone. Removing MR from GESS contributes to the prediction of 24.95 percent of SSEI which is less than when GESS alone predicts SSEI (26.38%).

In terms of age-group data, GESS alone best accounts for SSEI in the younger group (13-16) despite both groups' significant level ($p < .0005$): $F(13-16)=98.50$; $F(17-19)=26.22$. The 13-16 group's GESS alone predicts 28.51

Table 15

MR, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	MR13-19			GESS			
N=	0	.8334	-.5748			F=118.31			
352	1	.8334*	+.0055	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.8338*	+.0055*	62.54	(.0005)		.5137	.2638	.0000
	3	.8338	-.5748*	5.08	(.025)	MR	.1196	.0143	-.2495
						F=0 (p<.9999)			
			MR13-16			GESS			
n=	0	.8952	-.5247			F=95.12			
249	1	.8952*	+.2242	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.9164*	+.2242*	49.51	(.0005)		.5357	.2870	.0019
	3	.9164	-.5247*	2.83	(.10)	MR	.1065	.0113	-.2757
						F=0.66 (p<.50)			
			MR17-19			GESS			
n=	0	.6606	-.4942			F=25.08			
103	1	.6606*	-.2756	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6515*	-.2756*	13.26	(.0005)		.4578	.2096	.0035
	3	.6515	-.4942*	1.16	(.50)	MR	.1068	.0114	-.1982
						F=0.44 (p<.75)			

n= * refer to key.

percent while the 17-19 group's GESS alone predicts 20.61 percent. MR alone best accounts for SSEI in the 13-16 group ($F=2.83$; $p < .10$) than in the 17-19 group ($F=1.16$; $p < .50$). For the 13-16 group, MR alone predicts 1.13 percent while the 17-19 group's CSM alone predicts 1.14 percent. These are not different. GESS and MR together exhibit a greater F-contrast for 13-16 year olds ($F=49.51$; $p < .0005$) than for 17-19 year olds ($F=13.26$; $p < .0005$). In the younger subjects' group, GESS and MR predict 28.70 percent; for the older subjects, 20.96 percent of SSEI was accounted for.

GESS -- with MR variance removed -- predicts more SSEI variance for younger (13-16) subjects ($F=95.12$; $p < .0005$; 27.57%) than older (17-19) subjects ($F=25.08$; $p < .0005$; 19.82%). And, MR -- with GESS extracted -- predicts SSEI equally poorly for older subjects ($F=0.44$; $p < .75$; 0.35%) than for younger ones ($F=0.66$; $p < .50$; 0.19%).

GESS is the best predictor of SSEI and, adding MR adds little to the prediction of the dependent variable.

HF and GESS as Predictors

Table 16, reflecting all subjects, shows that GESS alone accounts for 26.38 percent of SSEI variance. HF alone explains 0.04 percent ($R=.0194$). Together GESS and HF account for 27.64 percent, a 1.26 percent increment in R^2, over GESS's prediction of 26.38 percent. Eliminating the

Table 16

HF, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

Step		Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	HF13-19			GESS			
N=	0	.8334	.0852			F=133.14			
352	1	.8334*	.5004	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.8661*	.5004*	66.66	(.0005)		.5257	.2764	.0126
	3	.8661	.0852*	0.13	(.75)	HF	.0194	.0004	-.2760
						F=6.06 (p<.025)			
			HF13-16			GESS			
n=	0	.8952	.1877			F=109.75			
249	1	.8952*	.7025	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.9510*	.7025*	55.20	(.0005)		.5566	.3098	.0247
	3	.9510	.1877*	0.46	(.50)	HF	.0425	.0018	-.3079
						F=8.79 (p<.005)			
			HF17-19			GESS			
n=	0	.6606	-.0049			F=26.11			
103	1	.6606*	+.1430	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6638*	+.1430*	13.06	(.0005)		.4550	.2070	.0010
	3	.6638	-.0049*	0.00	(.9999)	HF	.0013	.0000	-.2070
						F=0.12 (p<.75)			

* refer to key.

independent variables' common variance, GESS accounts for 27.60 percent of original SSEI variance while HF explains 1.26 percent.

Only two prediction equations account for a significant amount of SSEI: GESS alone ($p < .0005$) and GESS with HF ($p < .0005$). HF alone predicts less than one percent, and so, achieves a significance level of $p < .75$. The best predictors, in order, are GESS with HF removed ($F=133.14$; $p < .0005$), GESS alone, GESS plus HF, HF with GESS removed ($F=6.06$; $p < .025$), and HF alone. Therefore, GESS with HF out best predicts SSEI. Adding HF to GESS does not substantially increase SSEI's prediction; it actually decreases the F-value (66.66) which reflects less of a marked contrast than occurs with GESS alone. Removing HF contributes to the prediction of 27.60 percent of original SSEI which is less than when GESS alone predicts SSEI (26.38%).

In terms of age-related data, GESS alone best accounts for SSEI in the younger group (13-16) despite both groups' significant level ($p < .0005$): $F(13-16)=98.50$; $F(17-19)=26.22$. The 13-16 group's GESS alone predicts 28.51 percent while the 17-19 group's GESS alone predicts 20.61 percent. HF alone accounts for little of SSEI in the 13-16 group ($F=0.46$; $p < .50$; 0.18%) and nothing of SSEI in the 17-19 group ($F=0$; $p < .9999$; 0.0%). GESS and HF together exhibit a greater F-contrast for 13-16 year olds ($F=55.20$;

$p < .0005$) than for 17-19 year olds ($F=13.06$; $p < .0005$). In the younger group, GESS and HF predict 30.98 percent; for the older subjects, 20.70 percent of the variance was accounted for.

GESS -- with HF variance removed -- predicts more SSEI variance for younger (13-16) subjects ($F=109.75$; $p < .0005$; 30.79%) than older (17-19) ones ($F=26.11$; $p < .0005$; 20.70%). And, HF -- with GESS partialled out -- predicts SSEI best for younger subjects ($F=8.79$; $p < .0005$; 2.47%) than for younger subjects ($F=0.12$; $p < .75$; 0.10%).

GESS is the best predictor of SSEI and, including HF adds little to the prediction of SSEI.

FVE and GESS as Predictors

Table 17 (N=352) indicates that GESS alone accounts for 26.38 percent of SSEI variance. FVE alone explains 2.62 percent ($R=.1619$). Together FVE and GESS account for 26.51 percent, an increment of 0.12 percent in R^2, over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 23.88 percent of original SSEI variance while FVE explains 0.12 percent.

All three prediction equations account for a significant amount of SSEI: GESS alone ($p < .0005$), FVE alone ($p < .005$), and, FVE with GESS ($p < .0005$). The best predictors are in order: GESS alone, GESS with FVE removed ($F=113.42$;

Table 17

FVE, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	FVE13-19			GESS			
N=	0	.8334	-.7964			F=113.42			
352	1	.8334*	-.1764	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.8188*	-.1764*	62.93	(.0005)		.5148	.2651	.0012
	3	.8188	-.7964*	9.42	(.005)	FVE	.1619	.0262	-.2388
						F=0.57 (p<.50)			
			FVE13-15			GESS			
n=	0	.8351	-.6666			F=42.40			
159	1	.8351*	-.0728	45.90	(.0005)	(p<.0005)	.4756	.2262	.2262
	2	.8293*	-.0728*	22.83	(.0005)		.4758	.2264	.0002
	3	.8293	-.6666*	2.58	(.25)	FVE	.1271	.0162	-.2102
						F=0.04 (p<.90)			
			FVE16-19			GESS			
n=	0	.8325	-.9375			F=72.38			
193	1	.8325*	-.2895	82.30	(.0005)	(p<.0005)	.5488	.3011	.3011
	2	.8083*	-.2895*	41.63	(.0005)		.5520	.3047	.0035
	3	.8083	-.9375*	7.92	(.005)	FVE	.1995	.0398	-.2649
						F=0.97 (p<.90)			

* refer to key.

$p < .0005$), FVE plus GESS, FVE alone, and, FVE with GESS removed ($F=0.57$; $p < .50$). Therefore, GESS alone best predicts SSEI. Adding FVE to GESS does not substantially increase SSEI's prediction; it actually decreases the F-value (62.93) which indicates a less marked contrast than occurs with GESS alone. Removing FVE contributes to the prediction of 23.88 percent of original SSEI variance which is less than when GESS alone predicts SSEI (26.38%).

For age-groups, GESS alone best predicts SSEI in the older group (16-19) despite both groups' significant level ($p < .0005$): $F(16-19)=82.30$; $F(13-15)=45.90$. The 16-19 group's GESS alone predicts 30.11 percent while the 13-15 group's GESS alone predicts 22.62 percent. FVE alone better accounts for SSEI in the older group (16-19: $F=7.92$; $p < .005$) than in the 13-15 group ($F=2.58$; $p < .25$). For the 16-19 group, FVE alone predicts 3.98 percent while the 13-15 subjects' FVE alone predicts 1.62 percent. GESS and FVE together exhibit a greater F-contrast for 16-19 year olds ($F=41.63$; $p < .0005$) than for 13-15 year olds ($F=22.83$; $p < .0005$). In the older group, GESS and FVE predict 30.47 percent; for the younger group, 22.64 percent of the variance was accounted for.

GESS -- with FVE variance extracted -- predicts more SSEI variance for older (16-19) subjects ($F=72.38$; $p < .0005$; 26.49%) than for younger ones ($F=42.40$; $p < .0005$; 21.02%). And FVE -- with GESS partialled out -- predicts SSEI equally poorly for older subjects ($F=0.97$; $p < .90$; 0.35%) and for

younger subjects ($F=0.04$; $p < .90$; 0.02%).

GESS is the best predictor of SSEI. FVE adds virtually nothing to the prediction of SSEI.

ASW and GESS as Predictors

Table 18 (N=352) reflects that GESS alone explains 26.38 percent of SSEI variance. ASW alone explains 6.04 percent ($R=.2457$). Together, GESS and ASW account for 27.38 percent, an increment of one percent in R^2 over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 21.34 percent of original SSEI variance while ASW explains one percent.

All three prediction equations account for a significant ($p < .0005$) amount of SSEI: GESS alone, ASW alone, GESS and ASW. The order of best predictors is: GESS alone, GESS with ASW removed ($F=102.57$; $p < .0005$), GESS plus ASW, ASW alone, and, ASW with GESS removed ($F=4.78$; $p < .05$). GESS alone is the most efficient predictor. Adding ASW to GESS decreases the F-contrast value to 65.79 and this indicates less of a marked contrast than occurs with GESS alone. Removing ASW from GESS contributes to the prediction of 21.34 percent of SSEI, which is less than when GESS alone predicts SSE (26.38%).

For age-groups, GESS alone best predicts SSEI in the 15-16 group despite all three groups' significant p-values

Table 18

ASW, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	ASW13-19			GESS			
N=	0	.8334	-1.0193			F=102.57			
352	1	.8334*	-.4328	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.7838*	-.4328*	65.79	(.0005)		.5233	.2738	.0100
	3	.7838	-1.0193*	22.48	(.0005)	ASW	.2457	.0604	-.2134
						F=4.78 (p<.05)			
			ASW13-14			GESS			
n=	0	.8247	-.2631			F=25.41			
79	1	.8247*	+.3893	24.96	(.0005)	(p<.0005)	.4948	.2448	.2448
	2	.8803*	+.3893*	12.95	(.0005)		.5042	.2542	.0094
	3	.8803	-.2631*	0.37	(.75)	ASW	.0693	.0048	-.2494
						F=0.96 (p<.90)			
			ASW15-16			GESS			
n=	0	.9244	-1.3395			F=55.39			
170	1	.9244*	-.6255	72.65	(.0005)	(p<.0005)	.5495	.3019	.3019
	2	.8453*	-.6255*	39.37	(.0005)		.5660	.3204	.0185
	3	.8453	-1.3395*	17.63	(.0005)	ASW	.3082	.0950	-.2254
						F=4.54 (p<.05)			
			ASW17-19			GESS			
n=	0	.6606	-1.0258			F=22.07			
103	1	.6606*	-.6767	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6117*	-.6767*	15.13	(.0005)		.4820	.2324	.0263
	3	.6117	-1.0258*	6.79	(.025)	ASW	.2510	.0630	-.1694
						F=3.42 (p<.10)			

* refer to key.

(.0005): F(15-16)=72.65; F(17-19)=26.22; and, F(13-14)=24.96. The 15-16 group's GESS alone predicts 30.19 percent; the 13-14 group 24.48 percent, and, the 17-19 group 20.61 percent. The shift in rank, although a small value difference between 13-14 and 17-19 from the F-values to percent predicted is due to higher ASW variance overlap in 13-14 year olds.

ASW alone better accounts for SSEI in the 15-16 group ($F=17.63$; $p < .0005$) than in either of the 17-19 ($F=6.79$, p .025) or 13-14 ($F=0.37$; $p < .75$) groups. For the 15-16 group, ASW alone predicts 9.50 percent, for the 17-19 group, 6.30 percent; and, for the 13-14 group, 0.48 percent.

GESS and ASW combined exhibit a greater F-contrast for 15-16 year olds ($F=39.37$; $p < .0005$) than for 17-19 year olds ($F=15.13$; $p < .0005$) or 13-14 year olds ($F=12.95$; $p < .0005$). In the 15-16 year old group, the combined predictor variables account for 32.04 percent of SSEI variance while the corresponding percentages for the 17-19 and 13-14 groups are 23.24 and 25.42 percent, respectively.

GESS -- with ASW removed -- best predicts SSEI for the middle (15-16) group ($F=55.39$; $p < .0005$; 22.54%), and less for 13-14 ($F=25.41$; $p < .0005$; 24.94%) or 17-19 ($F=22.07$; $p <$ .0005; 16.94%) subjects. This trend decreases as age increases. And, ASW -- with GESS removed -- predicts SSEI best for 15-16 subjects ($F=4.54$; $p < .05$; 1.85%) than the 17-19 group ($F=3.42$; $p < .10$; 2.63%) and the 13-14 ($F=0.96$;

$p < .90$; 0.94%) group.

The discrepancy between F-values for GESS, with ASW removed, and percent of SSEI explained indicate that despite being a better predictor for 15-16 year olds, it decreases in effectiveness as age increases. For ASW with GESS removed, no large differences in SSEI's percent explained are actually found in the already low percentages.

CTP and GESS as Predictors

In Table 19, data for the whole sample indicates that GESS alone accounts for 26.38 percent of SSEI variance. CTP alone explains 0.37 percent. Together CTP and GESS account for 26.44 percent, an increment of 0.06 in R^2, over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 26.07 percent of original SSEI variance while CTP explains 0.06 percent.

Only two prediction equations account for a significant amount of SSEI: GESS alone ($p < .0005$) and, GESS plus CTP ($p < .0005$). CTP alone is far from significant ($p < .50$). The best predictors are: GESS alone, GESS with CTP removed ($F = 123.70$; $p < .0005$) and GESS plus CTP. Therefore, GESS alone best predicts SSEI. Adding CTP to GESS does not substantially increase SSEI's prediction; it actually decreases the F-value (62.72) which reflects a less marked contrast than occurs with GESS alone. Removing CTP

Table 19

CTP, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	CTP13-19			GESS			
N=	0	.8334	-.2491			F=123.70			
352	1	.8334*	+.0988	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.8398*	+.0988*	62.72	(.0005)		.5142	.2644	.0006
	3	.8398	-.2491*	1.29	(.50)	CTP	.0607	.0037	-.2607
						F=0.27 (p<.75)			
			CTP13-16			GESS			
n=	0	.8952	-.1318			F=.99.89			
249	1	.8952*	+.2798	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.9158*	+.2798*	50.12	(.0005)		.5381	.2895	.0044
	3	.9158	-.1318*	0.25	(.75)	CTP	.0318	.0010	-.2885
						F=1.53 (p<.25)			
			CTP17-19			GESS			
n=	0	.6606	-.4084			F=25.21			
103	1	.6606*	-.2300	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.6528*	-.2300*	13.22	(.0005)		.4573	.2092	.0031
	3	.6528	-.4084*	1.00	(.50)	CTP	.0988	.0098	-.1994
						F=0.39 (p<.75)			

* refer to key.

contributes to the prediction of 26.07 of original SSEI variance which is less than when GESS alone predicts SSEI (26.38%).

Looking at age-groups, GESS alone best predicts SSEI in the younger group (13-16) despite both groups' significant p-levels (.0005): F(13-16)=98.90; F(17-19)=26.22. The 13-16 group's GESS alone predicts 28.51 percent while the 17-19 group's GESS alone predicts 20.61 percent. CTP alone better accounts for SSEI in the older group although neither group's F-value is significant (13-16: F=0.25; $p < .75$; 17-19: F=1.00; $p < .50$). For the 13-16 group, CTP alone predicts 0.10 percent while the 17-19 subjects' CTP alone predicts 0.98 percent. GESS and CTP together exhibit a greater F-contrast for 13-16 year olds (F=50.12; $p < .0005$) than for 17-19 year olds (F=13.22; $p < .0005$). In the younger group, GESS and CTP predict 28.95 percent, for the older group, 20.92 percent of the SSEI variance was accounted for.

GESS -- with CTP removed -- predicts more SSEI variance for younger (13-16) subjects (F=99.89; $p < .0005$; 28.85%) than for older (17-19) subjects (F=25.21; $p < .0005$; 19.94%). And, CTP -- with GESS partialled out -- predicts SSEI best for neither of the two groups (13-16=0.44%; 17-19=0.31%).

GESS is easily the best predictor for SSEI.

MPCTOT and GESS as Predictors

In Table 20, the whole sample's data indicates that GESS alone accounts for 26.38 percent of SSEI variance. MPCTOT alone explains 6.30 percent. Together MPCTOT and GESS account for 27.08 percent, an increment of 0.70 percent in R^2, over GESS's prediction of 26.38 percent. Eliminating the independent variables' common variance, GESS accounts for 20.78 percent of original SSEI variance while MPCTOT explains 0.70 percent of original variance.

All three prediction equations account for a significant amount of SSEI: GESS alone, GESS plus MPCTOT, and, MPCTOT alone (all $p < .0005$). The best predictors are: GESS alone, GESS with MPCTOT removed ($F=99.47$; $p < .0005$), GESS plus MPCTOT, MPCTOT alone and, MPCTOT with GESS removed ($F=3.33$; $p < .10$). GESS alone best predicts SSEI. Adding MPCTOT to GESS does not substantially increase SSEI's prediction; it actually decreases the F-values (64.81) which indicates a less marked contrast than occurs with GESS alone. Removing MPCTOT contributes to the prediction of 20.78 percent of original SSEI variance which is less than when GESS alone predicts SSEI (26.38%).

Age-group data shows that GESS alone best predicts SSEI in the younger group (13-16) despite both groups' significant p-levels (.0005): $F(13-16)=98.50$; $F(17-19)=26.22$. The 13-16 group's GESS alone predicts 28.51 percent while the 17-19

Table 20

MPCTOT, GESS AND, THE PREDICTION OF SSEI:
N AND, AGE-SPLIT DATA

	Step	Regression Coefficients		F-ratio	p< (signif)	Step 2:F= Variables' Relative Importance	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	MPCTOT13-19			GESS			
N=	0	.8334	-.1398			F=99.47			
352	1	.8334*	-.0493	125.44	(.0005)	(p<.0005)	.5137	.2638	.2638
	2	.7851*	-.0493*	64.81	(.0005)		.5204	.2708	.0070
	3	.7851	-.1398*	23.53	(.0005)	MPCTOT	.2510	.0630	-.2078
						F=3.33 (p<.10)			
			MPCTOT13-16			GESS			
n=	0	.8952	-.1270			F=80.91			
249	1	.8952*	-.0178	98.50	(.0005)	(p<.0005)	.5339	.2851	.2851
	2	.8754*	-.0178*	49.26	(.0005)		.5348	.2860	.0009
	3	.8754	-.1270*	13.50	(.0005)	MPCTOT	.2261	.0511	-.2349
						F=0.30 (p<.75)			
			MPCTOT17-19			GESS			
n=	0	.6606	-.1628			F=21.06			
103	1	.6606*	-.1114	26.22	(.0005)	(p<.0005)	.4540	.2061	.2061
	2	.5960*	-.1114*	16.10	(.0005)		.4935	.2435	.0374
	3	.5960	-.1628*	9.28	(.005)	MPCTOT	.2901	.0842	-.1593
						F=4.95 (p<.05)			

* refer to key.

group's GESS alone predicts 20.61 percent. MPCTOT alone better accounts for SSEI in the younger group ($F=13.30$; $p < .0005$) than in the older group ($F=9.28$; $p < .005$). For the 13-16 group, MPCTOT alone predicts 5.11 percent while the 17-19 subjects' MPCTOT alone predicts 8.42 percent. GESS and MPCTOT together exhibit a greater F-contrast for 13-16 year olds ($F=49.26$; $p < .0005$) than for 17-19 year olds ($F=16.10$; $p < .0005$). In the younger group, GESS and MPCTOT predict 28.60 percent; for the older group, 24.35 percent of the SSEI variance was accounted for.

GESS -- with MPCTOT removed -- predicts more SSEI variance for younger (13-16) subjects ($F=80.91$; $p < .0005$; 23.49%) than for older (17-19) subjects ($F=21.06$; $p < .0005$; 15.93%). And, MPCTOT -- with GESS partialled out -- predicts SSEI better in the older group (3.74%) than in the younger group (0.09%).

GESS is the most proficient predictor of SSEI.

Multiple Regression with all Variables

MPCTOT was not included because, being a composite score, redundant variance would confound the results. The first analysis -- with all eleven problem categories predicting SSEI -- yielded the SPR score as the best predictor (regression coefficient=-1.788) when it, alone, attempted to predict SSEI ($F=75.76$; $p < .0005$). Adding

any other variables causes more variance to be explained but prediction is less parsimonious. Once SPR is removed from all the variables in the equation, the regression F-ratio decreases to 13.63 ($p < .0005$). SPR alone (without the other variables removed from it) predicts 17.79 percent of SSEI variance while the next highest contributions to SSEI explanation come from HF (6.12%) and MR (5.0%). Next are CTP (2.37%), CSM (1.09%) and, FLE (1.02%). The other categories add less than one percent each.

Once SPR, the best predictor of SSEI variance, is removed from the equation it extracts only 7.31% of SSEI variance which is independent of any other variables' effects. Therefore, SPR is actually a better predictor when other variables' effects are not extracted from it. When SRA is removed and other variables' common variance is removed, it accounts for 8.29 percent or, one percent more than SPR does. The high correlation between variables accounts for this change in variables explaining the most variance. And, whereas HF alone had been the third strongest predictive and additive variable, ASW -- with other variables extracted -- is the now third ranked variable, with 5.81 percent explained. PPR (4.65%) is fourth. All other variables explain 3 percent or less.

The second analysis -- with all eleven categories, plus GESS, predicting SSEI -- reveals that GESS alone (without other variables common variance extracted) is the best

predictor of SSEI ($F=125.44$; $p < .0005$; 26.38%). Adding even SPR and SRA to the prediction equation increases variance explained by only 6.8 percent. Removing the variables in order to assess each independent variance explained. GESS explains 11.34 percent, SRA 8.29 percent and, SPR 7.31 percent. ASW (5.81%) and PPR (4.65%) are the next ordered variables. All others explain 3 percent or less.

In sum, SPR alone and GESS alone are the best predictors in the respective analyses. However, once variance overlaps are eliminated, SRA (no overlap) and GESS (no overlap) are the best predictors in the respective prediction equations. Overall, one finding seems clear -- for this sample, the best predictor is GESS score, followed by SRA and SPR. These latter two variables are also the problem categories which, not combined with any other variables except GESS, best predict SSEI. And, this is most true for older (17-19 and 15-16-17-19, respectively) adolescents. Therefore, next to GESS, SRA and SPR are the best predictors of SSEI.

Part III

Investigation of the GESS-SSEI Relationship

1. Partialling Problem Category Magnitudes Out of the GES-SSE Relationship and, the Prediction of SSE

For all problem categories, in neither the whole sample (N=352) nor in any of the age groups for any of the problem

Table 21

PARTIALLING OUT PROBLEM CATEGORY MAGNITUDES
FROM THE GESS-SSEI CORRELATION(S)

GESS:r: SSE	13-19	"F" Maximized	13-14	13-15	13-16	15-16	16-19	17-19
HPD								
r	.51366*	13-16,			.53395*			.45397*
partial	.47861*	17-19			.49518*			.44001*
n	352				249			103
		p<.0003						
FLE	.51366*	13-16,			.53395*			.45397*
r	.50207*	17-19			.53347*			.44257*
partial	352				249			103
n		p<.0063						
SRA	.51366*	13-16,			.53395*			.45397*
r	.45440*	17-19			.47504*			.40923*
partial	352				249			103
n		p<.0243						
CSM	.51366*	13-16,			.53395*			.45397*
r	.49230*	17-19			.51268*			.44099*
partial	352				249			103
n		p<.0130						
SPR	.51366*	13-14,	.49475*			.54946*		.45397*
r	.42845*	15-16,	.44834*			.44048*		.40086*
partial	352	17-19	79			170		103
n		p<.0002						
PPR	.51366*	13-14,	.49475*			.54946*		.45397*
r	.46495*	15-16,	.4962*			.49476*		.39849*
partial	352	17-19	79			170		103
n		p<.0176						
MR	.51366*	13-16,			.53395*			.45397*
r	.50315*	17-19			.52805*			.44775*
partial	352				249			103
n		p<.0016						
HF	.51366*	13-16,			.53395*			.45397*
r	.5255*	17-19			.5554*			*F=0.00
partial	352				249			103
n		p<.0052						
FVE	.51366*	13-15		.47563*			.54876*	
r	.49525*	16-19		.46228*			.52521*	
partial	352			159			193	
n		p<.0476						
ASW	.51366*	13-14,	.49475*			.54946*		.45397*
r	.47660*	15-16,	.5006*			.49907*		.42517
partial	352	17-19	79			170		103
n		p<.0394						
CTP	.51366*	13-16,			.53395*			.45397*
r	.51156*	17-19			.5374*			.4487*
partial	352				249			103
n		p<.0027						
MPCTOT	.51366*	13-16,			.53395*			.45397*
r	.47095*	17-19			.49750*			.41712*
partial	352				249			103
n		p<.0028						

*F = too small to be entered into the regression equation; adds 0% σ^2 to the prediction of SSE.

r = simple correlation between GESS and SSEI.

partial = partial correlation with problem category removed.

* p<.001.

types, did the simple GESS-SSEI correlation ($p < .001$) decrease in significance level when any problem category magnitude -- for any age group -- was partialled out (see Table 21). No significant differences, in the simple or partial correlations between age-groups -- within any of the problem categories -- was found ($p > .20$).

In HF for 17-19 year olds, the F-value needed to enter this problem category into the regression equation was equal to zero. Consequently, no partial correlation was calculated. It is expected that the partial correlation would not have provided a significance level less than .001, the equivalent of the simple GESS-SSEI correlation for HF in 17-19 year olds.

The specific multiple stepwise regression data is reflected in Tables 9 through 20. As seen in the presentation of the GESS-as-mediator results, only in SRA for 17-19 year olds (10.86%) and SPR for 17-19 year olds (9.80%) did any problem category predict a substantial amount of SSEI variance. Even in these two age-groups, however, GESS with SRA and SPR eliminated, respectively, still predicted more SSEI variance (13.79%; 13.32%, respectively). GESS alone -- without SRA or SPR eliminated -- also predicted more SSEI variance (20.61%) for both problems' 17-19 age groups.

In sum, GESS alone and, GESS with the problem category eliminated are the best predictors of SSEI and, manipulating problem categories' magnitudes does not cause any significant

decrements to occur in the GESS-SSEI relationship.

2. Problem Category Magnitude (Score) Increments, and, The GESS-SSEI Relationship: The Prediction of SSEI by the Whole Sample (N=352)

a) HPD

With an increase in HPD score (magnitude) from 8 to 13 (Q3 to 2 S.D.+ above the mean) (Table 22 in Appendix 2) for the original 352 subjects, the n at each step decreses from 100 to 13. Within each step for each cutpoint score -- as well as at the sample mean -- the F-values increase and the significance levels increase as HPD and then GESS are entered; and finally, as HPD is removed. Overall though, across cutpoint groups this data indicates that as the HPD score (magnitude) increases to 9, GESS's F-value decreases in significance, the amount of SSEI variance predicted by GESS decreases -- even in conjunction with HPD -- and, most importantly, HPD with GESS extracted begins to account for more SSEI variance: mean score (N=352)=1.34 percent; score 8 (n=100)=1.14%; score 9 (n=73)=1.34 percent. Despite accounting for 11.59 percent at score 13 (2 S.D.+), the n of 13 must temper any enthusiasm. In fact, the trend to score 9 (1 S.D.+) must be seen in light of a potential instability of the data stemming from the increasingly lower number of subjects, as HPD score increases.

b) FLE

With FLE score increasing from 8 to 14 (Table 23) for N=352, the n at each step decreases from 98 to 18. Within each step at each cutpoint score, the F-values and p-levels increase as FLE and then GESS are entered; and, as FLE is removed. Looking at the trends for SSEI prediction, FLE as well as GESS predict little as FLE score is increased. GESS alone (without FLE extracted) is the best predictor of SSEI variance (eg, FLE score 8 (n=98)=14.83 percent; score 9 (n=76)=18.27 percent).

c) SRA

With an SRA score increase from 8 to 15 (Table 24) for N=352, the n at each step decreases from 117 to 18. Within each step for each cutpoint score, F(p) increases and, the overall data reflects that SRA predicts little SSEI variance as SRA score increases. And, although GESS alone's explanations of SSEI variance decrease with SRA score increments, it remains the best predictor of SSEI. The GESS-SSEI relationship is weakened only slightly.

d) CSM

As CSM score increases from 9 to 17 (Table 25) for

N=352, the n at each step decreases from 106 to 15. Within each step for each cutpoint score, besides scores 14 and 17 (1.5 S.D.+ and 2 S.D.+), F-contrast values and p-levels increase as the variables are entered into the regression equations. For score=17 (2 S.D.+), an opposite trend occurs where F decreases across steps; the highest F-value is related to CSM alone's prediction of SSEI (21.90%). This percentage value is only slightly higher than CSM-with-GESS-extracted's percentage of original SSEI variance accounted for (21.84%). In fact, despite small n's as CSM score rises, CSM with GESS extracted -- and CSM alone to a lesser extent -- predicts more SSEI variance as cutpoints are elevated. (Score 9=2.18%; score 12=4.55%; score 14=7.78%; score 17=21.84%). And, simultaneously, GESS alone's ability to predict SSEI decreases (score 9=25.60%; score 12=24.78%; score 14=11.04%; score 17=0.07%).

In CSM for the whole sample, then, as CSM magnitude increases, CSM becomes a better predictor of SSEI than GESS is, which reverses the earlier trend found in this study.

e) SPR

With an increase in SPR score from 11 to 19 for N=352, the n at each step decreases from 98 to 14 (Table 26). Within each step for each cutpoint score -- except for score 19 (2 S.D.+) -- the F-values and p-levels increase as the

independent variables are entered. In all cutpoint increment groups, GESS alone best predicts SSEI. However, these F-values decrease as SPR score increases and, the significance of GESS alone's percent of SSEI explained decreases (score 11 (n=98)=21.10%; score 13(n=68)=25.74%; score 16 (n=32)=11.29%; score 19 (n=14)=3.54%). At the same time, SPR-with-GESS-extracted's ability to predict SSEI increases (score 11=0.48%; score 13=1.36%; score 16=3.32%; and, score 19=12.10%).

Thus, it seems that with SPR increases, SPR eventually becomes at least as good a predictor of SSEI as GESS is. However, small n's detract from the importance of this trend.

f) PPR

As PPR score increass from 11 to 18 for all subjects regardless of age, the n for each increasingly higher cutpoint score decreases, from 91 to 18 (Table 27). Within the steps for each cutpoint score -- except for score 18(2 S.D.+) where n is 18 -- F-values and p-levels increase as the independent variables are entered (PPR, then GESS added) and PPR is removed. GESS alone decreases in the prediction of SSEI variance (score 11 (n=91)=13.02%; score 13 (n=66)=12.17%; score 16 (n=33)=5.41%; score 18 (n=18)=1.33%) while GESS-with-PPR-extracted decreases similarly (score 11 =11.37%; score 13=9.85%; score 16=4.36%; score 18=0.41%). In

the meantime, there is a slight trend for PPR with GESS extracted to better predict SSEI (score 11=0.14%; score 13=0.65%; score 16=0.39%; score 18=3.91%) and, for PPR alone to better predict SSEI (score 11=1.79%; score 13=2.97%; score 16=1.43%; score 18=4.84%).

However, as the number of PPR problems increases, PPR remains a poorer predictor of SSEI than is GESS.

g) MR

As MR scores for the whole sample increase from 9 to 16 (Table 28), n at each level decreases from 111 to 25. As variables (MR, then GESS, then MR removed) are entered and removed, F-values increase in significance in all cutpoint score groups except at score 16 (2 S.D.+) group where no differences are found. Overall (across cutpoint groups), GESS with MR extracted decreases in SSEI accounted for, as MR magnitude increases (14.57% to 12.22% to 7.98% to 1.18%). The same downward trend occurs for GESS alone (without MR removed: 15.60 percent to 15.79 percent to 12.10 percent to 1.35 percent). At the same time, MR with GESS removed increases as MR score increases (0.01 percent to 0.42 percent to 4.25 percent and back to 1.80 percent). By score 14 (1.5 S.D.+), GESS with MR extracted only slightly better predicts SSEI variance than does MR with GESS extracted. After score 12 (1 S.D.+), little difference is found in their relative

predictive abilities. This finding also occurs in the GESS alone and MR alone data, but only after score 14.

Therefore, GESS decreases as a good predictor of SSEI while MR, although not increasing greatly in the explanation of SSEI, is comparable to GESS by score 14.

h) HF

No trends are found for HF score (Table 29) increments (10 to 17) in the whole sample except for GESS alone's sudden decrease in SSEI prediction after score 12 (1 S.D.+) and at score 15. GESS remains the best predictor of SSEI variance while HF does not increase its predictive ability.

i) FVE

With increases in FVE for the whole sample -- scores from 8 to 15 (Table 30) -- n at each level decreases from 94 to 20. As variables are entered (FVE, then GESS) and removed (FVE), F-values increase in significance in all cutpoint score groups. Overall, across cutpoint groups, FVE alone increases with FVE increments (1.59 percent to 0.02 percent to 5.48 percent to 10.03 percent) while FVE with GESS removed also increases (0.13 percent to 0.61 percent to 5.65 percent to 6.21 percent). No trends for GESS alone or, for GESS with FVE extracted are found.

FVE may increase in predicting SSEI variance but, neither of its forms predicts as much as GESS does.

j) ASW

As ASW scores increase for the whole sample -- from 12 to 19 (Table 31) -- n at each cutpoint level decreases from 90 to 17. As variables are entered (ASW, then GESS) and removed (ASW), F-values increase in significance in all cutpoint score groups except at scores 17 and 19 (1.5 S.D.+ and 2 S.D.+) where no differences are found. Overall (across cutpoint groups), both GESS alone and GESS with ASW out decrease as ASW score increases. And, at the same time, both ASW alone and ASW with GESS extracted, increase. The levels of percentage of SSEI predicted for both ASW alone and ASW with GESS extracted are greater than GESS alone and GESS with ASW extracted, respectively.

It seems that with ASW magnitude increments, ASW begins to, and eventually does, surpass GESS in the prediction of SSEI. However, small N's at each step of the ASW magnitude increments must temper the strong trend.

k) CTP

As CTP score increases, for N=352, from 10 to 18 (Table 32), n at each level decreases from 98 to 19. As variables

are entered (CTP, then GESS) and removed, F-values for all cutpoint groups increase in significance. Across all cutpoint groups' results, GESS alone (25.63 percent to 27.69 percent to 15.73 percent to 16.28 percent) and GESS with CTP removed, decrease in the prediction of SSEI (23.41 percent to 27.45 percent to 15.23 percent to 13.81 percent). At the same time, CTP alone (2.41 percent to 0.69 percent to 2.22 percent to 7.61 percent) and CTP with GESS removed increase in SSEI variance explained (0.20 percent to 0.45 percent to 1.73 percent to 5.13 percent).

However, regardless of the increase in CTP's ability to predict SSEI and GESS's decrease in SSEI explained, GESS still better predicts SSEI.

4) MPCTOT

As MPCTOT scores increase, for N=352, from 97 to 157, the n at each cutpoint level decreases from 92 to 18 (Table 33). As MPCTOT and then GESS are entered and, MPCTOT is removed, F-values increase in significance in all cutpoint score groups except at score 137 and above where a decrease in F is found. Looking at the general trends of the data, GESS alone (15.06 percent to 12.76 percent to 7.79 percent to 0 percent) and GESS with MPCTOT removed, decrease in SSEI prediction (14.15 percent to 10.33 percent to 2.82 percent to 0 percent) with an increase in MPCTOT magnitude. Simultaneous

with these trends is an increase in SSEI variance explained by MPCTOT alone (1.02 percent to 3.47 percent to 10.38 percent to 9.12 percent).

By MPCTOT score 137, MPCTOT is as good a predictor of SSEI as is GESS.

Summary

The major difficulty in interpreting the trends in the data is the disruptive factor of small n's. In general, trends reflect that despite GESS's decrease in predicting SSEI it still better predicts SSEI than most problem categories do. The problem categories which exhibit weak predictive trends are HPD, FLE and FVE; those which are as good as GESS as a predictor of SSEI: SPR AND MPCTOT; and, CSM and ASW, once the cutpoint scores increase enough, better predict SSEI variance than does GESS. Now, age-group split data for problem categories will be presented.

3. Problem Category Magnitude (Score) Increments, and, the GESS-SSEI Relationship: the Prediction of SSEI by Age Groups

a) HPD: 13-16 Versus 17-19.

In Tables 34 and 35 (Appendix 2), each age group has been subjected to HPD magnitude (score) increments so that the GESS-SSEI relationship can be investigated. For the

younger (13-16) group, GESS alone increases in SSEI prediction as does GESS with HPD removed. In addition, HPD alone and HPD with GESS extracted also increase in SSEI prediction.

For the older group, HPD alone and GESS alone, as separate predictors, increase as HPD score increases. And, HPD with GESS extracted and, GESS with HPD removed both decrease in SSEI variance explanation.

Therefore, in light of HPD with GESS extracted's increased variance explained for the entire sample (Table 22), this trend seems to be supported in the younger (13-16), and not the older (17-19), group. In fact, HPD alone's prediction of SSEI (without GESS effect removed) increases within both age groups.

Also, GESS's decrease in predicted SSEI for the whole sample appears to be coming mostly from the decrease in SSEI accounted for by GESS with HPD extracted, in the older (17-19) group and not in the younger (13-16) group. GESS alone in either age group actually increases SSEI prediction.

b) FLE: 13-16 Versus 17-19.

In Tables 36 and 37 (Appendix 2), the younger (13-16) group shows no trends for FLE predictors (alone or with GESS extracted) but slight decrements for GESS predictors (alone

and with FLE removed). This age group's results stand in contrast to the 17-19 group wherein the slight increase in GESS predictors offsets the younger groups' decrements and thusly, this contributes to a decrement in SSEI prediction, within the whole sample (Table 23) for GESS predictors. The increments in both FLE predictors (alone and with GESS removed) contributes to an increment in FLE as a predictor of SSEI but that shows as weak a predictive trend as GESS's has become due to increases in FLE cutpoints (for whole sample).

c) SRA: 13-16 Versus 17-19.

As seen in Tables 38 and 39 (Appendix 2), for the younger (13-16) group, both SRA alone and with GESS extracted increase in the predition of SSEI. And, GESS alone and GESS with SRA extracted both decrease in their predictive abilities. In the older (17-19) subjects, slight incremental prediction of variance trends are found for both SRA predictors while very strong trends are found for the two GESS predictors.

In general then, GESS remains a better predictor of SSEI (Table 24) and this relationship is maintained by the older (17-19) subjects' strong GESS predictive trends. This tends to nullify both the decremental GESS trends in younger (13-16) subjects as well as the weak incremental SRA trends in the older (17-19) group. SRA is generally a weak predictor of SSEI.

d) CSM: 13-16 Versus 17-19.

In the younger (13-16) subjects (Table 40), there are strong incremental trends for CSM alone and CSM (with GESS extracted) to predict SSEI. And, there are decremental trends for GESS alone and GESS with CSM removed, in predicting SSEI. In the 17-19 group (Table 41), while CSM alone tends to decrease in predicting SSEI as CSM magnitude (score) increases, both forms of GESS as predictor (alone and with CSM removed) exhibit strong increases in SSEI variance accounted for.

The overall sample trend (Table 25) for the two forms of CSM to eventually supplant GESS forms in predicting SSEI is therefore drawing upon the strong decrement in GESS forms in older subjects while CSM is increasing between ages 17 and 19.

e) SPR: 13-14 Versus 15-16 Versus 17-19.

As can be seen in Table 42 and 43 and 44, for age groups 13-14, 15-16 and 17-19, an increasing trend of SSEI explanation occurs in SPR but only for age groups 13-14 and 17-19. These offset slight decreasing trends in the 15-16 group. These results stand in contrast with age 13-14 and

15-16's decreasing GESS trends of SSEI prediction and 17-19's unstable status (fluctuations).

In light of overall findings for the 352 subjects (Table 26), that with increasing SPR scores, SPR becomes as good a predictor of SSEI as GESS is, this trend finds its greatest source in two age-related trends: that SPR prediction forms (alone and with GESS extracted) increase in SSEI variance explained for ages 13-14 and 17-19; and, that GESS forms (alone and with SPR extracted) become weaker predictors of SSEI in ages 13-14 and 15-16. The unstable fluctuations of GESS predicting SSEI at age 17-19 does not preclude GESS's overall decrement in ability to predict SSEI.

f) PPR: 13-14 Versus 15-16 Versus 17-19.

Based on Tables 45, 46 and 47, incremental trends are found for ages 13-14 and 15-16 for all four predictive varibles (PPR alone and with GESS extracted, and, GESS alone and with PPR extracted). Great instability (fluctuations) characterize ages 17-19. In light of the fact that for N=352 (Table 27) GESS decreases and PPR increases slightly in SSEI prediction, the effect of age 17-19 must nullify all other increments and, the upward trends of GESS predictors at ages 13-14 and 15-16 probably counterbalance PPR increments in SSEI prediction. In any case, GESS remains a better predictor of SSEI.

g) MR: 13-16 Versus 17-19.

Tables 48 and 49 reflect that the decremental trend in GESS predictors and little change in MR predictors for the younger (13-16) adolescents best parallels the overall (Table 28) trend for GESS to decrease in SSEI explanation and eventually becomes comparable to MR predictors. The decrement in GESS prediction in younger (13-16) adolescents offsets some increments in GESS's prediction of SSEI in older subjects.

h) HF: 13-16 Versus 17-19.

From Tables 50 and 51 (Appendix 2), no trends for any predictors are found in the younger (13-16) group. For the older (17-19) subjects, both HF (alone and with GESS removed) and GESS (alone and with HF removed) predictors show increments as HF score increases.

The overall trend for the whole sample (Table 29) reflects that GESS remains the best predictor of SSEI despite an increment; and, that HF shows no signs of better predicting SSEI regardless of HF score/magnitude increments.

i) FVE: 13-15 Versus 16-19.

Tables 52 and 53 indicate that for younger (13-15)

subjects, increments in GESS alone and GESS with FVE extracted are accompanied by an increment in FVE alone's prediction of SSEI. Both of these trends, however, are tempered by instability (fluctuations) in GESS predictors and little, if no incremental trend in FVE predictors for older (16-19) subjects.

For the whole sample (Table 30), there are no incremental GESS trends yet the incremental FVE trend does not bring FVE to the point where it predicts SSEI as well as GESS does.

j) ASW: 13-14 Versus 15-16 Versus 17-19.

Tables 54, 55 and 56 reveal that the major source of GESS-as-predictor decrement in the whole sample (Table 31) comes from strong decrements in GESS predictors (alone and with ASW extracted) in the 15-16 group. And, the source of ASW increment appears to be a weak upward trend in ASW with GESS removed for 13-14 year olds and, some increments in the unstable ASW predictor (alone, and with GESS extracted) in the 15-16 group.

k) CTP: 13-16 Versus 17-19.

What maintains GESS's status as a better predictor of SSEI (Tables 57 and 58; Table 32) than is CTP, is the

incremental prediction trend for GESs with CTP removed in 17-19 year olds. Otherwise, the decrements in GESS predictors (alone, and with CTP out) for the 13-16 group and the increments in CTP predictors (alone, and with GESS out) would have made CTP the better predictor of SSEI. In the meantime, GESS is the better predictor of SSEI.

1) MPCTOT: 13-16 Versus 17-19.

As extrapolated from Tables 59 and 60, the major contributor to the decrement in GESS's predictive ability comes from the GESS decrements in younger (13-16) subjects. And, despite increments in GESS's ability to predict SSEI in 17-19 year olds, increments in 17-19 year olds' MPCTOT alone and some upward predictive trends in MPCTOT predictors in the 13-14 group, yield this result: as MPCTOT magnitude increases, MPCTOT becomes as good a predictor of SSEI as is GESS.

Summary

Despite certain trends for problem categories' equal, or greater, predictive ability in contrast with GESS's ability, two things remain clear: small n's at incremental cutpoints within problem categories confound and preclude any major interpretations. However, in many problem categories GESS

remains the best predictor of SSEI and this adds some strength to the notion that the GESS-SSEI relationship is a strong one which is relatively impervious to manipulation of problem category magnitudes.

CHAPTER IV

DISCUSSION

Adolescent problem types, as described in the literature, are represented in the sample and, in support of Hypothesis I (Part I), for all problem categories including Total problems an age split occurs after the age of 16. This allows the sample to be conceptualized as having two major stages which correspond to Malmquist's (1978) and Kagan and Coles' (1972) writings on early to mid-adolescence (to age 16) and, youthhood (after age 16). Certain problems are significantly more prevalent in specific age groups: Health and physical development (HPD), finances, living conditions and employment (FLE) concerns, social-recreational activities (SRA), courtship, sex and marriage (CSM), moral and religious issues (MR), home and family difficulties (HF), curriculum and teaching procedure concerns (CTP), and, total problems (MPCTOT) are all split 13 to 16 and 17 to 19 years of age. For each of these eight categories, the highest mean level of problems is in the younger (13-16) group. For social-psychological relations (SPR), personal-psychological relations (PPR) and, adjustment to school work (ASW), problem mean levels are highest in the 15-16 group, with the other two age groups being 13 to 14 years and, 17 to 19 years. Despite the fact that the 13-14 year group is a distinct age group, it is more similar in terms of problem magnitudes, to

age group 15-16 than to the 17-19 year group. These findings confirm Hypothesis II (Part I).

For future vocational and educational concerns (FVE), the split is 13 to 15 years and 16 to 19 years, with the highest mean level occurring in the older (16-19) adolescents. This nevertheless supports an age-split notion around age 16. The age group with the greatest problem saturation is 16 to 19 years. This follows from the empirical, clinical, and theoretical literature (Malmquist, 1978; Manaster, 1977; Rice, 1978). From a phenomenological point of view, problems (except FVE) begin early in adolescence and build in magnitude to about 16 years of age. Age 16 seems to be the single most problematic age group. Then, with adolescents older than 16, problem magnitudes begin to decrease. It is at this age of 16 that FVE issues emerge as possible sources of concern and problems.

Some problems change in 'rank of importance' in an obvious manner: CTP and MR decrease in rank as age increases while FVE and CSM both increase in rank. These support theoretical and empirical writings (Malmquist, 1978; Manaster, 1977; Rice, 1978). PPR, SPR and ASW remain a concern for adolescents across all ages although they are most prevalent in their respective 15-16 year age groups. The existence of all these problem types reflects difficulties in dealing with those stage-characteristic, developmental tasks wherein adolescents are vulnerable to

stress and problems (Malmquist, 1978; Manaster, 1977).

The most problem saturated age and age range are sixteen and, fourteen to sixteen, respectively. This is the time of ego identity development and a quasi-crystallization of a group identity (Malmquist, 1978). HPD issues are full-blown, and all the attempts to individuate as well as find peers for 'comfort' are beset with difficulties. Social and psychological disturbances are more the rule rather than the exception. And, difficulties are reflected in the rejection of school, authority-figures, and moral-religious oriented dicta. It is towards the end of this 14-16 year period that future-oriented issues emerge.

In support of an adaptation - adjustment hypothesis (Hypothesis I, Part II), the older (17 to 19 years) adolescents do actually self-report a significantly lower number of total problems than do the younger (13 to 16 years) ones. This supports Luborsky and Schimek's (1964) contention that adjustment will occur later in adolescence. By late adolescence many items once considered problematic do not qualify as such anymore. This realization probably stems from the adolescent's experience with problems as well as their resolution and, from another realization: that future-oriented needs and concerns are more pressing. In light of these ontological issues many other problem types appear less disruptive. This finding that older adolescents generally report fewer total problems may reflect that the

psychological mechanism (GES) needed to ensure self-adjustment (SSE) for younger adolescents is needed less by older adolescents. This data will be discussed later on.

The generalized expectancy for success (GES), as measured by the GESS, matches the female normative mean, standard deviation and range of scores as described by Fibel and Hale (1978). Similarly, social self-esteem (SSE), as reflected in the SSEI, corroborates Lawson et al's (1979) normative mean, standard deviation and range of scores.

GES and SSE are highly and positively related for the whole sample as well as for each of the individual age groupings. This supports Hypothesis II (Part II) and both Fibel and Hale's and Motowidlo's (1979) contention that GES and SSE should be highly related because both constructs are based on, at least in part, the development of feelings of personal competence or, self-efficacy. This construct of self-efficacy is congruent with Bandura's (1977) and White's (1959; 1963) notions of self-efficacy and competence. As a further indication of the consistency of the GES-SSE relationship, the age-split groups yielded by the maximization of mean problem differnces for GES and SSE (13 to 16 years, 17 to 19 years) both exhibit significant ($p < .001$) GESS-SSEI correlations.

All problem categories, except CTP, are related to GESS, some highly related: SPR, PPR and MPCTOT. Many problem categories are related to SSEI while MR, HF and CTP are not.

SRA and SPR are the two problem categories which are the most highly related to SSEI. This is not surprising considering their common 'social' base. In general, the problem category age groups with the highest problem means are not more highly related to SSEI. Problem magnitudes for the whole sample are more negatively correlated with GESS than with SSEI. The latter relationship is the reported one (Wylie, 1974; 1979). Problems, then, are more closely related to GES than to SSE. The only two exceptions are SPR and SRA where, because of their social bent, the converse holds true. In order to present a clear synopsis of the GES's mediating role in specific problem categoring - SSE relationships, problem types with the same age-split groups will be discussed together.

For five of the eight problem categories split 13 to 16 years and 17 to 19 years (HPD, SRA, CSM, MR and, MPCTOT), a common trend is evident. In all five the greatest mean level of problems is in the younger (13-16 years) group which supports the literature reviewed (eg. Eme et al, 1979; Hemming, 1967; House et al 1979; Malmquist, 1978; Rice, 1978). And, in general, with an increase in age, these problems decrease in endorsement by adolescents. For these problem types' age splits, there is no difference in the mean level of GESS between the 13-16 year and 17-19 year groups.

When GESS is partialled out for the whole sample's data, the original simple correlationship between each of the

problem categories and SSEI either disappears (to zero: HPD, CSM, MR), decreases toward zero (MPCTOT) or, decreases, in magnitude although not in significance level (SRA). This latter category's original SRA-SSEI correlated was so high that partialling GESS out did little to cause a decrement in significance level. Nevertheless, GESS appears to mediate these five relationships where age is split into 13-16 years and 17-19 years.

The age group wherein this mediating effect is the strongest and influences the trend in the whole sample to the greatest degree is the younger (13-16 years) group. For HPD and CSM, the problem - SSEI correlation is lower in the 17-19 year group. In SRA, the low mediating effect in the whole sample results from a lack of decrease in significance level, with GESS partialled out, for older (17-19 years) adolescents. Therefore, GES mediates most in the age group (13-16 years) wherein certain problem types (HPD, CSM, SRA, MR and, MPCTOT) are significantly more prevalent. Yet, in this 13-16 years group, adolescents do not have a higher mean level of GESS than adolescents in the 17-19 years group.

The best predictor of SSEI in the whole sample for these five categories, is GESS. Despite GESS's decreasing ability to explain SSEI variance as age increases, only MPCTOT and SRA actually increase in predicting SSEI for these older adolescents. HPD, CSM and MR do not show marked increments in SSEI prediction as age increases and despite GESS's

decreasing predictive ability. These latter three problem types add very little to GESS in the prediction of SSEI. Actually, SRA becomes almost as good a predictor of SSEI as GESS is but this is due to GESS's decrement in SSEI prediction percentage more so than SRA's increment. Amongst all eleven problem types, excluding total (MPCTOT) problems, SRA is the best predictor of SSEI. GESS, however, still better predicts SSEI.

In attempting to investigate the strength of the GES-SSE relationship in light of these five (HPD, CSM, MR, SRA and, MPCTOT) problem categories, increasing any of these problem magnitudes yields that, in general, GESS still better predicts SSEI. And, if a problem type (eg. MR, SRA, CSM, MPCTOT) actually becomes as good, or a better predictor of SSEI, it results mainly from a decrement in GESS's ability to account for SSEI variance than the problems' increased ability to predict SSEI. The decrement in GESS prediction usually occurs in the younger (13-16 years) subjects (for SRA, MR, CSM and MPCTOT).

In the older group, though, GESS appears to mediate the problem - SSEI relationship to a lesser extent than in the younger group. It may be that, because these problems are more prevalent in the younger (13-16) subjects, older subjects, having fewer problems, do not need GESS to mediate as much. Or, GESS plays a less important mediating role in older subjects, for these five problem types: HPD, SRA, CSM,

MR and, MPCTOT.

The three remaining 13-16 year and 17-19 year age-split problem categories (CTP, FLE and, HF) do not conform to this trend, and for different reasons. CTP is not related to SSEI in this sample and so, it adds little possible support, or contradictory evidence, for CTP's relationship to SSEI. From the literature (Hemming, 1967; House et al, 1979), SSEI would seem to be more highly related to school adjustment (eg. ASW) problems than to items such as 'lunch hours (being) too short'. In other words, it is not surprising that CTP is not related to SSEI. CTP reflects satisfaction with concrete elements of the educational process eg. books, lunch periods, etc. Consequently, GESS is a much stronger predictor of SSEI.

FLE (Finances, Living Conditions and, Employment) is another atypical category. Like the five categories described earlier, the highest problem mean (prevalence) is for the younger (13-16 years) adolescents. This has been put forth as a concern of younger adolescents because of its implications in terms of satisfaction with the home, the home's strong symbolic link to the parents and the attempts to 'break away' or individuate (Malmquist, 1978). A crucial issue or concern for younger adolescents is with money and its procurement from parents or from working. There is no apparent GESS mediation in the younger (13-16 years) group because the initial simple FLE-SSEI relationship is not

significant. There is, however, some mediation in the older group, albeit minimal. GESS's mediating effect (once again there is no difference between the age groups' mean GESS levels) is weak and it may be that FLE is moderately related to SSEI in the older (17-19 years) group but GES does a poor job in maintaining SSE in light of FLE problems. The fact that GESS is not the best predictor of SSEI in the older group, while FLE is, gives some support to the notion that GES does not act as a buffering factor in maintaining SSEI for older adolescents. In fact, despite GESS not mediating in the younger group, GESS still better predicts SSEI in the 13-16 year group than in the older (17-19 years) group. It seems then, that GESS does little to 'protect' SSEI in older adolescents while it tends to do so very minimally in younger adolescents.

For HF problems, initially there was no relationship for the whole sample or for either of the 13-16 years or 17-19 years age groups. However, partialling out GESS's effect, the initial insignificant correlation became significant for the 352 subjects. And, this is linked to a similar significance level found for the younger subjects. The reason for this result is not known.

For all three of the problem categories age-split at 13-14 years, 15-16 years and, 17-19 years, one trend reflects the data: SPR, PPR and, ASW. For each of these, the greatest mean level of problems is in the middle (15-16)

group which falls within the developmental task and problem framework called early or midadolescence (Malmquist, 1978; Manaster, 1977). All three problem types, despite their prevalance in the 15-16 group, are extent in all age groups. They are always a concern. For example, adolescence, generally, is a call to task involving personal-psychological adjustment in response to qualitatively different cognitive growth and, physical or physiological changes.

As in the problems split 13-16 yers and 17-19 years, the age group where GESS mediates most effectively (greatest decrease in r) for these three problem types, is also the age group where the problems are significantly more prevalent: ages 15-16. However, as in the 13-16 and 17-19 split, there is no difference in GESS mean levels between the three age groups for PPR, ASW and SPR. In ASW and PPR, partialling out GESS yields a correlation which is close to zero. For SPR, the SPR-SSEI relationship does not disappear but it decreases. Thus, there is a trend for GESS removed to effect a decrement in the SPR-SSEI relationship. In SPR, the original simple correlation was high enough such that the partial correlation was lowered, although it attained the same level of significance.

Again, GESS is the best predictor of the whole sample's SSEI yet it decreases in its effectiveness as age increases. PPR, despite an increment in the prediction of SSEI as age increases, actually adds little to the prediction of SSEI

despite GESS's decreasing predictive ability in older adolescents. For ASW, GESS is also the best predictor even in light of ASW's increment in SSEI explained. As in the problem types age-split at 13-16 years and 17-19 years, the effect of ASW's increased predictive ability is more related to GESS's decreasing ability.

For SPR, the age groups which maintains the significant SPR-SSEI partial correlation are the 15-16 years and 17-19 years groups. It appears that GESS mediates the 13-14 years group's SPR-SSEI relationship so that this relationship disappears. Accordingly, GESS seems to mediate more effectively in the age group which does not have the highest mean level of SPR problems. Yet, in terms of the mean level of SPR problems, the 15-16 years group is less different from the 13-14 years group than the 17-19 years group. Therefore, collapsing the two younger groups (13-14 years, where GESS mediates more effectively; and, 15-16 years, where GESS lowers the significance of the SPR-SSEI relationship more so than in the 17-19 years group) could hypothetically yield a trend: that GESS would mediate better in the younger (13-14 plus 15-16 years) group than in the older (17-19 years) group, the former collapsed group having the highest mean level of SPR problems. However, this only being speculative and not consonant with maximized mean age group differences, this step would be irrelevant.

The relationship between SPR and SSEI is significantly

higher in the 15-16 years group that in the 13-14 years group and this 15-16 years group is where GESS best predicts SSEI variance. This is inconsistent with the finding that GESS best mediates the SPR-SSEI relationship for 13-14 year olds. However, this may be reconciled when it is recognized that the initial correlation between SPR and SSEI is significantly lower for 13-14 year olds than for 15-16 year olds. Therefore, the relative decrease in the correlation for the 15-16 years group is greater than for the 13-14 years group and, despite the former group's lack of decrement in significance level. It seems, then, that GESS actually mediates more effectively in the 15-16 years group than in the 13-14 years group, which is consistent with the major trend in the data.

SPR best predicts SSEI in the older (17-19 years) group while SPR alone's increased explanation of SSEI variance results from the overlap with GESS. Adding SPR produces little increment in the percentage of SSEI variance explained. GESS is still the best predictor. In light of all the variables being entered into the prediction equation, SPR is the third best predictor of SSEI, behind GESS and SRA. It better predicts SSEI for the older (17-19 years) adolescents.

The investigation of the strength of the GES-SSE relationship was undertaken by way of increasing the problem magnitudes (scores) and then by examining how these

increments affect the differential prediction of SSE by GES and problem categories. Increasing the problem magnitudes (scores), ASW increases such that it actually surpasses GESS in the prediction of SSEI, SPR increases such that it becomes as good a predictor of SSEI and, PPR does little to predict SSEI. PPR's increment is attenuated by GESS's simultaneous increment. The trend in SPR results mostly from the younger (13-14 years), more vulnerable, group. Coupled with a decrement in GESS's prediction of SSEI in 13-14 year olds, the effect of SPR on SSEI increases to the point that it becomes as good a predictor of SSEI as GESS is. For ASW, its increment in SSEI variance explanation comes from a strong decrement in GESS's predictive ability at age 15-16 and, a simultaneous increment in SSEI prediction, by ASW, at 15-16.

Thus, GESS decrements in prediction tend to permit problems' increased SSEI prediction. And, where problems are least prevalent, GESS has a weaker mediating effect.

For the problem category FVE, age-split at 13-15 years and 16-19 years, the 16-19 years group displays both the significantly higher mean level of FVE problems and GESS's strongest mediating effect. In spite of this trend occurring in the older (16-19 years) group, FVE conforms to the overall trend in the data: GESS's greatest mediating effect occurs in the age group wherein problems are more prevalent. The affinity for ontological and future-oriented vocational/educational issues is characteristic of older

adolescents having, at least, a modicum of ego stability. That is, a continuity of self and its projection into the future is necessary for propriate striving (Allport, 1961; Erikson, 1968; Malmquist, 1978).

The best predictor of SSEI for the whole sample, is GESS. GESS increases as the best predictor of SSEI as adolescents grow older. No difference in SSEI variance explained is found across age groups with FVE as a predictor. FVE adds very little to the prediction of SSEI.

Increasing FVE's score (magnitude), it begins to predict more SSEI variance but it remains a poorer SSEI predictor than GESS is.

Following from these results, GES does mediate -- and best predict SSEI in -- the relationships between the following problem categories and SSE: for all subjects, HPD, FLE, SRA, CSM and SPR (although not significantly), PPR, MR, FVE, ASW and, MPCTOT. Insignificant initial relationships between SSE and both HF and CTP preclude GES's mediational role. Interestingly enough, for each of the ten problem categories (except HF and CTP), the age group with the significantly greater problem magnitude also exhibited the greatest mediational effect by GES. FLE is included in this group because GESS best predicts SSEI in the younger group. No age group differences in GESS mean level were found. So, this yielded an interpretation that, at whatever age problem

magnitudes seem most potentially damaging to SSE, GES will play the most important mediating role in moderating impinging external phenomena and protecting SSE. The trend of this data supports Hypothesis III (Part II).

Investigating how the strong GES-SSE relationship could be weakened, problems were introduced into this relationship for the sample as a whole and then for the appropriate age groups for each problem category. The general finding is that this GES-SSE link is quite impervious to the introduction of problem magnitudes. GES still best explains and predicts SSE. Small group numbers (n's) preclude any strong conclusions however. A second question was forwarded: at which score or magnitude, then, in a particular problem category, will the GES-SSE relationship break down or disappear? Unfortunately, small subject group numbers at each magnitude increment step must temper the findings that: with increased scores in problem categories, GES's ability to predict SSE decreases. However, only in CSM, SPR, MR, ASW, and for total (MPCTOT) problems do these categories actually increase to, or beyond, GES's decreased ability to predict SSE. It seems that GES is still, in general, the best predictor of SSE. Despite score (magnitude) increments, GES is able to maintain SSE in light of impinging female adolescents' self-reported problems.

How and Why GES Works

The data-based mechanics by which GES mediates these problem - SSE relationships is as follows: GES actually shares more common variance (Table 7) with FLE, CSM, SPR, PPR, MR, FVE, ASW, CTP and MPCTOT, than SSE shares with these problem types. The only problem types which overlap more with SSEI variance are SRA and SPR, the two most socially-oriented scales. However, the only significant differences occur in FLE, PPR, MR, HF, FVE and CTP, with GESS explaining more variance than SSEI does. One thing to note is that the three lowest problem - GESS correlations involve FLE, HF and CTP, these being three of the lowest correlates of SSEI. Therefore, when GESS is partialled out of problem - SSEI relationships, it not only removes variance from SSEI but also from the problem categories. Hence, considering the weak correlations involving FLE, HF and CTP it is not surprising that GESS plays little, if any, part in 'maintaining' the problem - SSEI correlation despite its strong relationship with SSEI. These are the three problem types (FLE, HF, CTP) for which the major trend, for the GES to mediate, is not found.

When problems are introduced into the GES-SSE relationship, this relationship is hardly disrupted. This finding substantiates the mechanics by which removing GES from the problem - SSE relationship will disrupt the correlation significantly. More variance is directly

controlled by GES than by any of the problem type magnitudes. GES is stronger related to SSEI than problem magnitudes are related to SSEI, the latter being the purported relationship (Wylie, 1974; 1979). With many problem types being higher related to GES than to SSE, it becomes apparent that GES is geometrically closer to SSE than problems are, while problems are geometrically closer to GES than to SSE.

Problem endorsement seems to be more closely related to a generalized expectancy for success than to feelings of social self-esteem. The GES is, on the other hand, more closely linked to social self-esteem because both are based on present self-perceived efficacy feelings (Bandura, 1977; Fibel & Hale, 1978). Self-efficacy feelings, in turn, are highly related to precursor success-to-attempt personal mastery ratios (Dickstein, 1977; James, 1890), presumably represented in causal attributions for success or failure outcomes (Jones, 1977; Weiner et al, 1976). The GES is not only based on success experiences tasks or in situations. It may be seen as one of the generalized expectancies for problem-solving, thereby including success experiences in personal problem-solving (Rotter, 1978). "One variable in social learning theory which relates to the general problem of adjustment is generalized expectancies for problem solving" (Rotter, 1978, p. 1). As stated in Chapter 1, a behavior's potential occurrence in any particular psychological situation is a function of the expectancy that this behavior will inevitably lead to a well-defined

reinforcement in that context and, the self-perceived value of that reinforcement. Stable personality aspects develop because of the constant abstracting and generalizing so that similarities develop in an individual's responses to classes of situations. Expectancies generalize across situations, behaviors attain a functional equivalence and, the values of different types of reinforcement become similar. Behavior in any one particular context will depend not only upon previous context-bound experience but also upon generalizations from other contexts and behaviors (Rotter, 1978). Therefore, the GES may be related to those other generalized expectancies: internal-external locus of control, looking for alternatives, interpersonal trust, self-perceived interpersonal efficacy based on understanding dyadic partners' motives, long-term planning and, situation discrimination (Rotter, 1966; 1978; 1980). Thusly, the GES may be related to problem endorsement such that GES reflects an expectancy for success in personal problem-solving which contributes, by way of success outcomes, to feeings of self-competence (White, 1963).

Inherent in an adolescent's endorsement of a problem as troubling her now is the implication that this problem is not being resolved now. However, depending upon the individual's expectancy for resolving it, this problem's prognosis is determined.

The generalized expectancy for success influences behavior which contributes to maintaining feelings of

self-efficacy as well as feelings of self-esteem. This GES, reflecting the common underpinnings of all specific expectancies (Jones, 1977), is so highly related to social self-esteem that it mediates the relationships between problem types' magnitudes and, social self-esteem. Based on these findings, a two part process for explaining the problems-GES-SSE relationships is forwarded. A problem magnitude is more closely related to the expectancy for its resolution (the source may be defined in terms of past stability of factors and, locus of control: Jones, 1977; Weiner et al, 1976) than it is to social self-esteem. The generalized expectancy for success in personal problem-solving is closer to social self-esteem and, fluctuations in the former will likely greater influence the latter more than problem magnitude fluctuations would. Since the generalized expectancy for success and social self-esteem are based on past mastery experiences, it is expected that the adolescent's handling of, or dealing or coping with, this problem will: first be encoded in terms of causal attributions for particular outcomes, then in terms of an expectancy for its successful resolution in the future (based on these past experiences) and then, in terms of how the adolescent feels about herself now that the problem has disappeared (its negative effects gone) and how she has contributed to its resolution (causal attribution in terms of internal stable or unstable factors). Therefore, since the

GES and SSE develop based on the same process of perceived self-efficacy (based on the determination on locus and source of behavior leading to success outcomes), social self-esteem seems to extend positive expectancies into positive evaluations about the self and to extend the self's effectiveness into, for example, the social context. The first part of the process is the recording of experience in the terms of causal attributions for outcomes and, the second part is the development of expectancies and self-esteem feelings which reflect the self-efficacy feelings from these experiences as well as all earlier experiences.

From a geometrical point of view, then, it is not surprising that GES is closer to problem magnitudes than SSE is to problem magnitudes. It is as if SSE develops by way of personal mastery experiences as manifest in GES (Coopersmith, 1967; Lawler, 1973). In fact, the GES may be the more primary manifestation, or index, of personal mastery experiences while SSE reflects the secondary index whereby positive future expectancies (a personal future orientation) reflect back on the self. Intuitively one might predict that feeling positive about one's self would influence, by way of feelings of self-confidence, how one strives propriately and deals with personal difficulties. The notion of causality will be discussed later on.

The psychological mechanism by which GES mediates more effectively in these problem category age groups with the

highest mean levels of problem magnitudes (with no difference in GESS mean levels across age groups) is linked to GESS's relationship to the problems (HPD, SRA, CSM, SPR, PPR, MR, ASW, FVE, MPCTOT) and SSE. For none of the problem categories does the problem category better explain SSE variance in the same group wherein the level of problem magnitude is the highest. Those where no difference exists in predicting SSE, for different age groups, are HPD, MR, CSM, FVE, HF, FLE and CTP. ASW, having the highest level of problems for ages 15-16, better predicts SSE in the younger (13-14 years) adolescents while SRA and MPCTOT better predict SSE in older (17-19 years) adolescents. For SRA and MPCTOT, the highest problem magnitude occurs in the younger (13-16 years) group. SPR and PPR better predict SSE in these same older (17-19 years) adolescents while highest problem magnitudes occur in 15-16 year olds.

Thus, it appears that where GESS has its least mediating effect, problem magnitudes are more strongly related to social self-esteem. This occurs despite GESS not having a lower mean level in these low GESS-mediating age groups. For adolescent age groups where lower problem magnitudes are extant, GESS is not lower, it just works less effectively.

The GES acts like a security factor; it is needed to maintain social self-esteem and the equilibrium of the self-system so that impinging negative events can be buffered and a morbid internal preoccupation with those problems will not

result from the emergence of these developmental task difficulties (Manaster, 1977). The age groups wherein problems are more prevalent need a psychological mechanism in order to cope or deal with these difficulties. It is GES's effect, not necessarily its absolute level, which does just that. In fact, GES reflects a type of motivation to behave in such a way as to maintain the congruence of self-perceptions (Rogers, 1961; Malmquist, 1978; Wylie, 1974).

The reason GES plays a less important mediating role outside of the problem's prevalence age-group is that these problems are less of a concern to these adolescents. Therefore, if perchance due to a lagging developmental difficulty these problems arise outside of the high GES-mediating age-group, it is clear that these problem magnitudes should affect SEE more. This is supported by the data which does exhibit that outside of the age-group where problem magnitude and GES effectiveness are the greatest, problem magnitudes are closer related to, and better predict, SSE.

Thus, it is not enough to say that problem magnitudes affect social self-esteem. It is the way in which an adolescent expects to, and usually does (Jones, 1977; Malmquist, 1978), deal or cope with ~~them~~ that affects (decreases/increases/sustains) social self-esteem. The generalized expectancy for success reflects this expectancy.

It is a personal future orientation (Meldman, Stein & Calsyn, 1978), a time projection of self-efficacy in personal problem-solving or coping. The GES, as hypothesized earlier, represents a cognitive process of self: holding a representation of expected future consequences and outcomes of behavior (based on past outcomes) will generate 'current motivators of behavior' (Bandura, 1977). Being a generalized life-stance, the GES reflects an adaptation process: the sameness and relative consistency of behavior and thought which characterizes ego identity (Erikson, 1968). GES places the past, present and future on a continuum such that, ideally, past coping with personal problems will be manifest in present and future adaptation to developmental phenomena and inevitable developmental problems. The GES moderates impinging external problems and insures a stability in light of developmental difficulties (Luborsky & Schimek, 1964). It facilitates developmental adaptation to difficulties in developmental tasks (Manaster, 1977). As described earlier, a failure of this adaptation process results in heterosocial, social and psychological problems which reflect an inner entanglement of representations of personal problems and their real or imagined repercussions (Coopersmith, 1967).

The GES's effects are to produce behavior which would ensure the maintenance of congruent self-perceptions and, to prevent the processing of subsequent experience in light of a preoccupation with the self and its failings ie. a low

self-concept (Coopersmith, 1967).

GES as a Personal Future Orientation and, as Hope

Returning to the relationship between the GES and SSE and the possible developmental primacy of the former over the latter, Melges, Anderson, Kraemer, Tinklenberg, and Weisz (1971) have presented evidence that a client's sense of self-worth is highly correlated positively with his degree of optimism about his personal future. The GES may be considered a personal future orientation (Stotland, 1969). Atchley (1975) and Trommsdorff et al (1979) have reported that some aspects of future orientation undergo change as a result of changes in the social environment (eg. finishing school and entering work) and after related social roles have taken place. This change may occur not only in response to concrete experiences but also as a result of anticipation of role changes in this social arena. A future orientation, or GES, can thus be a product of social conditions (Trommsdorf et al, 1979). On the other hand, it can contribute to the adolescent's adaptation to changes in the social environment (Atchley, 1975). In their discussion of the implications of their results for therapy, Melges et al (1971) implied that it would probably be easier to first change an individual's future outlook through therapy than to initially work directly on self-esteem. Hence, this seems to imply that

these authors believed the normal causal sequence between these variables to be that changes in personal future orientation will lead to changes in self-esteem. The converse, of course, is equally possible (Meldman, Stein & Calsyn, 1978). Meldman et al found that only outcomes of situations' (eg. successful-unsuccessful, depressed-happy) appeared to be causally predominant over self-esteem; these findings are based on cross-lagged panel correlations linking these variables across three distinct therapy situations. No causal predominance was found for personal future orientation and self-esteem, however, and, it was suggested (based on factor analysis) that the relationship between these two variables is reciprocal and/or due to some unmeasured variable (Meldman et al, 1978). The fact that situational outcomes (eg. success-failing) seem to influence self-esteem is not surprising (Weiner et al, 1976).

If the generalized expectancy for success actually measures hope (Fibel & Hale, 1978; Stotland, 1969) -- a special kind of personal future orientation -- the implications of this data are great, especially considering the close relationship between self-esteem in the social context and depression (Beck, 1967; Coopersmith, 1967; Lawson et al, 1979; Wells & Marwell, 1976). Hope, like the GES's apparent mediating effect, is a 'comfort' or sustaining, factor. Its presence, if effectively utilized or deployed, allows an individual to 'go on' despite being inundated by

personal problems and problems' tendency to be mentally preoccupying. Hope is a time projection of a generalized set of expectancies which tends to preclude feelings of hopelessness and helplessness, suicidal ideation, suicide itself, and, the typical umbrella concept: depression. Many models of depression rely on the foundation of the depressive's cognitive set: learned helplessness (Seligman, 1975), social learning (Phares, 1972) and Beck's (1967; 1976). The GES, like hope, is significantly and negatively correlated with depression (Fibel & Hale, 1978), one of the likely psychological effects of adolescent problems of adjustment (see Chapter 1). However, as has been demonstrated, the effect of self-perceived personal problems will only be manifest in social self-esteem if the GES (or hope) is not effective in moderating their negative effects. GES, or hope, precludes feeling overwhelmed by personal problems. It maintains social self-esteem and, because of social self-esteem's negative relationship to depression, it precludes developmental, or 'normal', adolescent depression (Anthony, 1970; Mezzich & Mezzich, 1978).

An adolescent with problems (eg. a younger one with HPD, SRA or CSM problems, for example) will admit to these problems (especially females -- Hemming, 1967) as bothering or troubling her now but, with an adaptive GES -- or, with hope -- she will 'know' or 'expect' that these problems can, or will, be resolved. She, herself, will cause their

dissipation. She will also know that problems will emerge in the future but she will expect to deal with them successfully. She will not, or does not, feel helpless, hopeless or fatalistic in light of personal problems' impinging effects. In fact, expecting their resolution will ease her mind and the burden of the internal representations of these problems will not be as troublesome. Hope, or GES then, should also preclude the genre of suicide related to intense periods of depression (Schulterbrandt & Raskin, 1977).

Fibel (1976) and Fibel and Hale (1978) have shown that individuals with the most effective generalized expectancies for success are less likely to report themselves as depressed. This present study shows no difference in GES magnitude across age groups yet GES does exhibit a difference in its mediating ability. GES mediates more in the age group where levels of problems are the highest. And, in the groups where problems are least prevalent, problems and social self-esteem (depression) are closer related. GES, or hope, is needed less or is less effective in these latter age-groups because these problems are less characteristic, developmentally, of these adolescents. However, considering the close relationship with social self-esteem, having enough of these problems where GES is less effective, will probably result in lower social self-esteem (depression), GES (hope), though, is much more than just a comfort or security factor.

It is a motivating factor -- like Bandura's (1977) notion of self-efficacy which underlies the GES -- which pushes the adolescent to 'go on' in life despite having self-perceived multiple problems or concerns. Of course, the extent to which expectancies are translated into behavior depends on the stability of causal attributions of past success or failure outcomes. One limitation of this study is the inability to describe the expectancy process in light of causal attributions' effects on future behavior. Knowing these data would answer these questions: from which source, or locus, does the female adolescent expect personal problem-solving behavior to emerge?; and, how stable will these factors be? Knowledge in these areas would reflect the adolescent's perception as to where hope comes from: from within or without; and, how stable or variable it will be (Weiner et al, 1976). And, it would also address the issue of whether this adolescent will actually act in order to preclude depression via the mechanism of personal problem-solving.

For HPD, SRA, CSM, MR, and total problems, a more effective hope -- not a greater level necessarily -- is needed in order to maintain social self-esteem (and preclude depression) for younger adolescents. For ASW, SPR and PPR, an effective hope factor is needed in the 15-16 year olds while for FVE, it is logically most needed in those older (16-19) adolescents who are experiencing their first real

thrust into 'a future' and its uncertainties.

Seligman's (1975) learned helplessness model, which shows that depression is caused by uncontrollable situations, has incorporated research focussing on cognitive factors which could mediate in both the etiology and treatment of depression. Beck (1967) has claimed that the cognitive aspects of depression are seen in terms of the misinterpretation of experiences which necessarily produce a negative self-image, and a negative orientation to the world and the future. Therefore, this loss of reinforcers or reinforcer effectiveness results in both a distortion of the self-concept and the projection of the self's effectivensss in the social environment and in the future. The depressed individual's perception of his responses' ability to change the environment is distorted. And, situations where reinforcement is response-dependent, they tend to see reinforcement as more response independent than nondepressives. This phenomenon is highly related to the research delving into differential skill versus chance-determined successes as well as expectancies for future success (Jones, 1977). This negative cognitive set reflects one's GES, or hope. Thusly, depression is not only linked to a poor self-image but also to a poor self-extension in social interactions and a poor or self-limiting self-projection into the future. Hope, or the projection of a positive future orientation, is based on past experience

with success in personal problem-solving. This success is perceived as personal-response dependent. And, hope necessarily precludes this genre of depression.

Following from Fibel and Hale's (1978) and Stotland's (1969) position that the GES actually reflects hope, Rie (1966) claims that depression involving hopelessness cannot occur prior to adolescence because of certain developmentally necessary conditions: time projection, probability-setting (Piaget, 1972). Hopefulness is a positive feeling state with "an implied dimension of future time, involving either a projection of the past onto the future or a restructuring of a potential future" (Siomopoulos & Inamdar, 1979, p. 233). According to Joffe and Sandler (1968), "the regulatory basis of the psychological control system ... (is) based on the maintenance of a dynamic feeling homeostasis" (p. 452); and shifts in feeling states are both the motivators of behavior and the 'impetus' for the development of psychological structures (Siomopoulos & Inamdar, 1979). 'The ideal state' refers to a feeling state of well-being which is a concomitant of adaptive psychological functioning. This feeling state of well-being is embodied in, what Joffe and Sandler call, 'the ideal shapes of the self'; and, the discrepancy between the actual shape of the self at any given moment and the corresponding or appropriate ideal self is experienced as mentally disruptive. Thus, "(the) aim of all ego functioning is to reduce conscious or unconscious

representational discrepancy and through this to attain or maintain a basic feeling of well being" (Joffe & Sandler, 1968, p. 451). This aptly describes the adolescent process of propriate striving in order to reconcile the real with the ideal self, thereby increasing self-acceptance.

Hopelessness then, can be viewed as an ubiquitous negative feeling determined by the adolescent's "appraisal of the absence of any probability of approximating in the future the actual shape of the self to the ideal shape of the self for a state of well being to ensue" (Siomopoulos & Inamdar, 1979, p. 234). Hopelessness is consequently a result of the adolescent's inability to time project a generalized expectancy for success in reconciling his real or actual self with his ideal self. In adolescents, this hopelessness seems to be related to low self-esteem: a high discrepancy between the real and ideal self-representations (Wylie, 1974; 1979) as well as having no expectancy for the discrepancy's dimunition.

Hopelessness, with its distorted components of time conception and probability setting (Piaget, 1972), may reflect Sandler and Joffe's (1965, p. 92) notion of "resignation in the face of painful situation" which precedes the affective response of depression. These painful situations are the developmental difficulties experienced by adolescents. If no hope is extant 'in the face of' these problems, adolescents resign themselves to their 'fate' and,

dysphoric feelings, or depression, results. This is so typical of younger adolescents' feeling-states whereby helplessness/hopelessness paralyzes them. They feel overwhelmed by personal problems. Alienation, or anomie, ensues. A typical scenario entails the individuating adolescent's need for friendship as a comfort-source yet, she is unsuccessful in achieving stable peer relationships. Once fighting to isolate herself from her parents, she is now completely isolated, depressed, and feeling ambivalent about relying on her parents (Malmquist, 1978). In older adolescents, disillusionment with 'the system' and the oportunities it affords and promotes -- especially via parental instruction eg. school will lead you somewhere; does it? -- will lead to feeling hopeless and depressed. And, a lack of hope will not 'protect' the integrity of this individual in the face of emerging developmental difficulties.

Conclusion

In concluson, the GES -- or hope -- mediates problem category magnitudes and social self-esteem. It contributes to the maintenance of an optimal social self-esteem level in light of impinging adolescent developmental task difficulties via the GES's effects on behavior which both signals the potential resolution of problems and, buffers or filters

problems' effects on social self-esteem.

The implications of these findings for psychotherapy are evident. As posited earlier (see Chapter 1), therapy orientations involving a focus on action-oriented personal mastery activities probably would eventuate self-esteem increments by way of bolstering feelings of personal mastery. These mastery feelings would result from client-perceived success experiences in producing change in themselves. This stands in contrast with those therapies, although not necessarily professing to increase self-esteem, wherein personal problem disappearance is a by-product of relationship-oriented therapy. Personal problem-solving is not a primary focus and thusly, it is not surprising that most of the past psychotherapy outcome researches' results have exhibited that the dissipation of a self-reported personal problem does not necessarily manifest itself in a self-esteem increase. Being personally involved in problem-solving, therefore, would be a necessary condition for an increment in self-esteem to occur. However, single success experiences may not necessarily change a history of failure experiences encoded as a negative expectancy for success (Fibel & Hale, 1978; Jones, 1977; Weiner et al, 1976).

In conducting psychotherapy and its evaluation, it can be useful for many patients to have the therapist teach and reinforce generalized expectancies for problem-solving

(Rotter, 1978). Applying social learning theory to the problems of psychotherapy, considerable stress is placed on the development of social problem solving skills and, on expectancies that certain behaviors will produce satisfaction or lead to problem resolution. "Sometimes particular cases may involve changing of specific expectancies or fears, changing the values placed on various reinforcements or needs, or learning new and more effective behaviors" (Rotter, 1978, p. 2). The idea that a patient can be taught to solve his own problems is highly related to increasing self-esteem feelings via mastery and self-efficacy experiences in psychotherapy (Bandura, 1977; Rotter, 1978). With success experiences in action-oriented problem-solving therapy contingent upon the patient's involvement, self-esteem should increase (Parrott & Hewitt, 1978).

One factor which would have provided this study with results which would have appeared stronger is a concurrent validity measure which could have validatd the Social Self-Esteem Inventory as a global measure of self-esteem. The fact that SSEI is highly correlated with a global expectancy for success is evidence of the SSEI's overlap with a more general, psychological self-process. Also, the SSEI's significant correlation with PPR ($p < .01$) is reasonably good evidence of a variance overlap.

Much future research could logically springboard from the present study. Assessing the causal attributional

antecedents of the GES would be the first area. While a specific expectancy for success for each problem's resolution could be assessed for problems endorsed in the present, past causal attributions of success or failure could be investigated for each particular problems' relevant stability and locus of control dimensions. This causal attribution data would elucidate the process of expectancy development and, this in turn could reflect upon the generalized expectancy for success. Thus, the relationship between causal attributions and expectancies would be studied. In addition, they could be related to self-ratings of each problem's negative effects on the individual. Predictions concerning particular attribution biases, specific expectancies, the GES and, intensity of the present problems' effects could be generated. These indices would dilate the research area presented in this study.

In addition, considering sex differences in causal attributional biases, (Weiner et al, 1976) this should also be a focus of a future research project.

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APPENDIX 1

PREVIOUSLY COPYRIGHTED MATERIAL

IN APPENDIX 1, LEAVES 258 to 264,

NOT MICROFILMED

257 - 260 - Social Self-Esteem Inventory, devised by Lawson, Marshall, McGrath, 1979.

261 - 264 - Mooney Problem Checklist (High School Form). New York, Psychological Corporation.

APPENDIX 2

KEY

* in the equation

Step 0 = no variables entered
1 = problem entered = problem category alone (GESS's effects not removed from problem)
(2a = problem category with GESS removed
2b = GESS with problem category removed)
3 = problem category removed = GESS alone (problem category's effects not removed from GESS)

R	R^2	Incr. in R^2
1	= 1	
	2=R^2 of problem plus GESS	2b=R^2 above problem's R^2
	3	2a

Q3 = top quartile score
SD+ = one standard deviation above the mean
1.5SD+ = one and a half standard deviations above the mean
2SD+ = two standard deviations above the mean

Table 22

HPD SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	HPD13-19					
N=	0	.8334	-1.6433					
352	1	.7807	-1.6433*	23.36	(.0005)	.2501	.0626	.0626
	2	.7807*	- .7912*	66.95	(.0005)	.5266	.2773	.2147
	3	.8334*	- .7912	125.44	(.0005)	.5137	.2638	.0134
			HPDQ3	Score = 8				
n=	0	.7485	-2.1056					
100	1	.7156	-2.1056*	3.89	(.10)	.1954	.0382	.0382
	2	.7156*	-1.1699*	14.94	(.0005)	.4853	.2355	.1973
	3	.7458*	-1.1699	28.31	(.0005)	.4734	.2241	-.0114
			HPDSD+	Score = 9				
n=	0	.5815	-2.8535					
73	1	.5117	-2.8535*	5.74	(.025)	.2735	.0748	.0748
	2	.5117*	-1.9779*	7.91	(.001)	.4294	.1844	.1096
	3	.5815*	-1.9779	12.59	(.005)	.3881	.1506	-.0338
			HPD1.5SD+	Score = 11				
n=	0	.5128	-1.1856					
40	1	.5090	-1.1856*	0.34	(.975)	.0940	.0088	.0088
	2	.5090*	-1.1124*	1.54	(.25)	.2769	.0767	.0678
	3	.5128*	-1.1124	2.81	(.25)	.2625	.0689	-.0078
			HPD2SD+	Score = 13				
n=	0	.7338	-5.1310					
13	1	.7729	-5.1310*	1.25	(.50)	.3192	.1019	.1019
	2	.7729*	-5.4824*	1.65	(.25)	.4987	.2487	.1468
	3	.7338*	-5.4824	1.68	(.25)	.3643	.1327	-.1159

* refer to key.

Table 23

FLE SCORE INCREMENTS AND THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

Step		Regression Coefficients		F-ratio	p< (signif)	Multiple R		Increase in R^2
						R	R^2	
		GESS	FLE13-19					
N= 352	0	.8334	-.7415					
	1	.8293	-.7415*	5.65	(.025)	.1261	.0159	.0159
	2	.8293*	-.0656*	62.58	(.0005)	.5138	.2640	.2481
	3	.8334*	-.0656	125.44	(.0005)	.5137	.2638	-.0001
			FLEQ3	Score = 8				
n= 98	0	.5894	-.2987					
	1	.5908	-.2987*	0.14	(.75)	.0365	.0015	.0015
	2	.5908*	.0609*	8.27	(.0005)	.3852	.1483	.1469
	3	.5894*	.0609	16.71	(.0005)	.3851	.1483	-.0001
			FLESD+	Score = 9				
n= 76	0	.6329	+.0358					
	1	.6375	+.0358*	0.00	(1.0)	.0044	.0000	.0000
	2	.6375*	+.3157*	8.24	(.001)	.4292	.1842	.1842
	3	.6329*	+.3157	16.54	(.0005)	.4274	.1827	-.0015
			FLE1.5SD+	Score = 12				
n= 35	0	.5602	1.2177					
	1	.5455	1.2177*	0.36	(.75)	.1038	.0108	.0108
	2	.5455*	0.5512*	1.91	(.25)	.3269	.1069	.0961
	3	.5602*	.5512	3.86	(.10)	.3236	.1047	-.0021
			FLE2SD+	Score = 14				
n= 18	0	.6284	.9610					
	1	.6253	.9610*	.05	(.90)	.0577	.0033	.0033
	2	.6253*	.6606*	1.28	(.50)	.3816	.1456	.1423
	3	.6284*	.6606	2.69	(.25)	.3795	.1440	-.0016

* refer to key.

Table 24

SRA SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	SRA13-19					
N=	0	.8334	-1.9415					
352	1	.7213	-1.9415*	52.90	(.0005)	.3623	.1313	.1313
	2	.7213*	-1.2170*	78.64	(.0005)	.5574	.3107	.1794
	3	.8334*	-1.2170	125.44	(.0005)	.5137	.2638	-.0468
			SRAQ3	Score = 8				
n=	0	.6356	-.4626					
117	1	.6374	-.4626*	0.41	(.75)	.0597	.0036	.0036
	2	.6374*	.0446*	8.22	(.0005)	.3550	.1260	.1225
	3	.6356*	.0446	16.58	(.0005)	.3550	.1260	-.0000
			SRASD+	Score = 11				
n=	0	.6486	-.1124					
58	1	.6536	-.1124*	.01	(.95)	.0132	.0002	.0002
	2	.6536*	.2687*	6.20	(.005)	.4289	.1839	.1837
	3	.6486*	.2687	12.54	(.001)	.4277	.1829	-.0010
			SRASD+	Score = 13				
n=	0	.8409	.1831					
32	1	.8427	.1831*	.01	(.95)	.0165	.0003	.0003
	2	.8427*	.3908*	6.42	(.005)	.5539	.3068	.3065
	3	.8409*	.3908	13.20	(.005)	.5528	.3055	-.0012
			SRA2SD +	Score = 15				
n=	0	.5652	-2.5001					
18	1	.5311	-2.5001*	0.44	(.75)	.1630	.0266	.0266
	2	.5311*	-1.1494*	1.04	(.50)	.3485	.1215	.0949
	3	.5652*	-1.1494	2.11	(.25)	.3410	.1163	-.0052

* refer to key.

Table 25

CSM SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	CSM13-19					
N= 352	0	.8334	-.8673					
	1	.8102	-.8673*	11.79	(.001)	.1805	.0326	.0326
	2	.8102*	-.2803*	63.58	(.0005)	.5168	.2670	.2345
	3	.8334*	-.2803	125.44	(.0005)	.5137	.2638	-.0032
			CSMQ3	Score = 9				
n= 106	0	.7539	-1.8150					
	1	.6707	-1.8150*	11.63	(.001)	.3171	.1005	.1005
	2	.6707*	-.9044*	19.81	(.0005)	.5271	.2778	.1773
	3	.7539*	-.9044	35.78	(.0005)	.5059	.2560	-.0218
			CSMSD+	Score = 12				
n= 50	0	.7650	-2.2819					
	1	.6574	-2.2819*	7.05	(.025)	.3578	.1280	.1280
	2	.6574*	-1.4314*	9.95	(.0005)	.5415	.2932	.1652
	3	.7650*	-1.4314	15.81	(.0005)	.4978	.2478	-.0455
			CSM1.5SD+	Score = 14				
n= 33	0	.5053	-2.0864					
	1	.4543	-2.0864*	3.45	(.10)	.3166	.1002	.1002
	2	.4543*	-1.8515*	3.48	(.05)	.4338	.1882	.0879
	3	.5053*	-1.8515	3.85	(.10)	.3322	.1104	-.0778
			CSM2SD+	Score = 17				
n= 15	0	-.0494	-3.6923					
	1	-.0206	-3.6923*	3.65	(.10)	.4680	.2190	.2190
	2	-.0206*	-3.6895*	1.68	(.25)	.4681	.2191	.2191
	3	-.0494*	-3.6895	.01	(.95)	.0263	.0007	-.2184

* refer to key.

Table 26

SPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R	Multiple R^2	Increase in R^2
		GESS	SPR13-19					
N= 352	0	.8334	-1.7878					
	1	.6749	-1.7878*	75.76	(.0005)	.4218	.1779	.1779
	2	.6749*	-1.1571*	85.50	(.0005)	.5734	.3288	.1509
	3	.8334*	-1.1571	125.44	(.0005)	.5137	.2638	-.0650
			SPRQ3	Score = 11				
n= 98	0	.8970	-1.2476					
	1	.8593	-1.2476*	3.59	(.10)	.1899	.0361	.0361
	2	.8593*	-.4734*	13.07	(.0005)	.4646	.2158	.1798
	3	.8970*	-.4734	25.67	(.0005)	.4594	.2110	-.0048
			SPRSD+	Score = 13				
n= 68	0	.9710	-1.6017					
	1	.9181	-1.6017*	3.71	(.10)	.2306	.0532	.0532
	2	.9181*	-.8340*	12.08	(.0005)	.5206	.2710	.2179
	3	.9710*	-.8340	22.88	(.0005)	.5073	.2574	-.0136
			SPR1.5SD+	Score = 16				
n= 32	0	.6984	-1.5560					
	1	.6772	-1.5560*	1.26	(.50)	.2007	.0403	.0403
	2	.6772*	-1.4144*	2.48	(.25)	.3822	.1460	.1058
	3	.6984*	-1.4144	3.82	(.10)	.3360	.1129	-.0332
			SPR2SD+	Score = 19				
n= 14	0	.4241	-2.9629					
	1	.8278	-2.9629*	0.63	(.50)	.2230	.0497	.0497
	2	.8278*	-5.1979*	1.02	(.50)	.3954	.1564	.1066
	3	.4241*	-5.1979	0.44	(.75)	.1882	.0354	-.1210

* refer to key.

Table 27

PPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	PPR13-19					
N=	0	.8334	-1.1736					
352	1	.7825	-1.1736*	25.89	(.0005)	.2625	.0689	.0689
	2	.7825*	-.3823*	64.60	(.0005)	.5198	.2702	.2013
	3	.8334*	-.3823	125.44	(.0005)	.5137	.2638	-.0063
			PPRQ3	Score = 11				
n=	0	.6303	-.9132					
91	1	.6119	-.9132*	1.63	(.25)	.1339	.0179	.0179
	2	.6119*	-.2654*	6.67	(.005)	.3628	.1316	.1137
	3	.6303*	-.2654	13.32	(.0005)	.3608	.1302	-.0014
			PPRSD+	Score = 13				
n=	0	.7011	-1.3206					
66	1	.6554	-1.3206*	1.96	(.25)	.1723	.0297	.0297
	2	.6554*	-.6411*	4.63	(.025)	.3580	.1282	.0985
	3	.7011*	-.6411	8.87	(.005)	.3488	.1217	-.0065
			PPR1.5SD+	Score = 16				
n=	0	.4178	-.8487					
33	1	.3882	-.8487*	0.45	(.75)	.1198	.0143	.0143
	2	.3882*	-.4557*	0.92	(.50)	.2407	.0579	.0436
	3	.4178*	-.4557	1.77	(.25)	.2325	.0541	-.0039
			PPR2SD+	Score = 18				
n=	0	.2056	-1.7507					
18	1	.1174	-1.7507*	0.81	(.50)	.2199	.0484	.0484
	2	.1174*	-1.6234*	0.42	(.75)	.2290	.0524	.0041
	3	.2056*	-1.6234	0.22	(.75)	.1154	.0133	-.0391

* refer to key.

Table 28

MR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	MR13-19					
N=	0	.8334	-.5748					
352	1	.8338	-.5748*	5.08	(.025)	.1196	.0143	.0143
	2	.8338*	+.0055*	62.54	(.0005)	.5137	.2638	.2495
	3	.8334*	+.0055	125.44	(.0005)	.5137	.2638	-.0000
			MRQ3	Score = 9				
n=	0	.6036	-.6092					
111	1	.6003	-.6092*	1.14	(.50)	.1019	.0104	.0104
	2	.6003*	-.0542*	9.98	(.0005)	.3950	.1560	.1457
	3	.6036*	-.0542	20.14	(.0005)	.3949	.1560	-.0001
			MRSD+	Score = 12				
n=	0	.6440	-1.4156					
56	1	.6048	-1.4156*	2.24	(.25)	.1997	.0399	.0399
	2	.6048*	-.4902*	5.13	(.01)	.4026	.1621	.1222
	3	.6440*	-.4902	10.12	(.005)	.3973	.1579	-.0042
			MR1.5SD+	Score = 14				
n=	0	.5695	-2.5621					
34	1	.4787	-2.5621*	2.93	(.10)	.2895	.0838	.0838
	2	.4787*	-1.8904*	3.03	(.10)	.4044	.1636	.0798
	3	.5695*	-1.8904	4.41	(.05)	.3479	.1210	-.0425
			MR2SD+	Score = 16				
n=	0	.1942	-1.3674					
25	1	.1817	-1.3674*	0.46	(.75)	.1404	.0197	.0197
	2	.1817*	-1.3087*	0.36	(.75)	.1774	.0315	.0118
	3	.1942*	-1.3087	0.31	(.75)	.1160	.0135	-.0180

* refer to key.

Table 29

HF SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	HF13-19					
N=	0	.8334	.0852					
352	1	.8661	.0852*	0.13	(.75)	.0194	.0004	.0004
	2	.8661*	.5004*	66.66	(.0005)	.5257	.2764	.2760
	3	.8334*	.5004	125.44	(.0005)	.5137	.2638	-.0126
			HFQ3	Score = 10				
n=	0	.6744	.3310					
96	1	.6871	.3310*	0.26	(.75)	.0523	.0027	.0027
	2	.6871*	.5700*	10.67	(.0005)	.4320	.1866	.1839
	3	.6744*	.5700	20.44	(.0005)	.4226	.1786	-.0081
			HFSD+	Score = 12				
n=	0	.7292	.3831					
67	1	.7267	.3831*	0.20	(.75)	.0554	.0031	.0031
	2	.7267*	.1910*	9.37	(.0005)	.4759	.2264	.2234
	3	.7292*	.1910	18.95	(.0005)	.4751	.2257	-.0008
			HF1.5SD+	Score = 15				
n=	0	.6486	.7155					
33	1	.6450	.7155*	0.19	(.75)	.0777	.0060	.0060
	2	.6450*	.6329*	2.00	(.25)	.3431	.1177	.1117
	3	.6486*	.6329	3.95	(.10)	.3361	.1130	-.0047
			HF2SD+	Score = 17				
n=	0	.7417	-.5711					
17	1	.7480	-.5711*	0.02	(.90)	.0366	.0013	.0013
	2	.7480*	-.8894*	1.14	(.50)	.3739	.1398	.1385
	3	.7417*	-.8894	2.37	(.25)	.3696	.1366	-.0032

* Refer to key.

Table 30

FVE SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

Step		Regression Coefficients		F-ratio	p< (signif)	Multiple R R	Multiple R R^2	Increase R^2
		GESS	FVE13-19					
N=	0	.8334	-.7964					
352	1	.8188	-.7964*	9.42	(.005)	.1619	.0262	.0262
	2	.8188*	-.1764*	62.93	(.0005)	.5148	.2651	.2388
	3	.8334*	-.1764	125.44	(.0005)	.5157	.2638	-.0012
			FVEQ3	Score = 8				
n=	0	.6042	-.6959					
94	1	.5889	-.6959*	1.48	(.25)	.1260	.0159	.0159
	2	.5889*	-.2054*	7.11	(.005)	.3677	.1352	.1193
	3	.6042*	-.2054	14.22	(.0005)	.3659	.1339	-.0013
			FVESD+	Score = 10				
n=	0	.3496	.0592					
55	1	.3777	.0592*	0.01	(.95)	.0127	.0002	.0002
	2	.3777*	.3757*	1.92	(.25)	.2620	.0686	.0685
	3	.3496*	.3757	3.54	(.10)	.2502	.0626	-.0061
			FVE1.5SD+	Score = 13				
n=	0	.3835	1.0508					
29	1	.3867	1.0508*	1.56	(.25)	.2340	.0548	.0548
	2	.3867*	1.0672*	2.47	(.25)	.3996	.1597	.1049
	3	.3835*	1.0672	3.11	(.10)	.3213	.1032	-.0565
			FVE2SD+	Score = 15				
n=	0	.5790	1.7139					
20	1	.5215	1.7139*	2.01	(.25)	.3167	.1003	.1003
	2	.5215*	1.3674*	2.73	(.10)	.4929	.2430	.1427
	3	.5790*	1.3674	3.98	(.10)	.4254	.1809	-.0621

* refer to key.

Table 31

ASW SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R		Increase in R^2
						R	R^2	
		GESS	ASW13-19					
N=	0	.8334	-1.0193					
352	1	.7838	-1.0193*	22.48	(.0005)	.2457	.0604	.0604
	2	.7838*	-.4328*	65.79	(.0005)	.5233	.2738	.2134
	3	.8334*	-.4328	125.44	(.0005)	.5137	.2638	-.0100
			ASWQ3	Score = 12				
n=	0	.7665	-1.0021					
90	1	.7506	-1.0021*	1.49	(.25)	.1291	.0167	.0167
	2	.7506*	-.3991*	10.77	(.0005)	.4455	.1984	.1818
	3	.7665*	-.3991	21.44	(.0005)	.4426	.1959	-.0026
			ASWSD+	Score = 14				
n=	0	.7351	-.6362					
67	1	.7349	-.6362*	0.37	(.75)	.0754	.0057	.0057
	2	.7349*	-.0066*	8.95	(.0005)	.4676	.2186	.2129
	3	.7351*	-.0066	18.18	(.0005)	.4676	.2186	-.0000
			ASW1.5SD+	Score = 17				
n=	0	.5157	-2.5205					
32	1	.4538	-2.5205*	2.11	(.25)	.2565	.0658	.0658
	2	.4538*	-2.2435*	1.83	(.25)	.3349	.1122	.0463
	3	.5157*	-2.2435	1.95	(.25)	.2468	.0609	-.0513
			ASW2SD+	Score = 19				
n=	0	.4596	-4.6698					
17	1	.4538	-4.6698*	2.33	(.25)	.3664	.1342	.1342
	2	.4538*	-4.6440*	1.66	(.25)	.4383	.1921	.0579
	3	.4596*	-4.6440	0.95	(.50)	.2436	.0593	-.1328

* refer to key.

Table 32

CTP SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY THE WHOLE SAMPLE
(N=352)

	Step	Regression Coefficients		F-ratio	p<, (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	CTP13-19					
N=	0	.8334	-.2491					
352	1	.8398	-.2491*	1.29	(.50)	.0607	.0037	.0037
	2	.8398*	.0988*	62.72	(.0005)	.5142	.2644	.2607
	3	.8334*	.0988	125.44	(.0005)	.5137	.2638	-.0006
			CTPQ3	Score = 10				
n=	0	.7427	-.8547					
98	1	.7279	-.8547*	2.37	(.25)	.1554	.0241	.0241
	2	.7279*	-.2493*	16.54	(.0005)	.5082	.2583	.2341
	3	.7427*	-.2493	33.08	(.0005)	.5063	.2563	-.0020
			CTPSD+	Score = 13				
n=	0	.8414	-.5632					
64	1	.8382	-.5632*	0.43	(.75)	.0831	.0069	.0069
	2	.8382*	-.4559*	11.95	(.0005)	.5305	.2814	.2745
	3	.8414*	-.4559	23.74	(.0005)	.5262	.2769	-.0045
			CTP1.5SD+	Score = 15				
n=	0	.6661	-1.1190					
40	1	.6562	-1.1190*	0.86	(.50)	.1491	.0222	.0222
	2	.6562*	-.9880*	3.91	(.05)	.4178	.1746	.1523
	3	.6661*	-.9880	7.09	(.025)	.3966	.1573	-.0173
			CTP2SD+	Score = 18				
n=	0	.6773	-2.9625					
19	1	.6288	-2.9625*	1.40	(.50)	.2759	.0761	.0761
	2	.6288*	-2.4545*	2.18	(.25)	.4628	.2142	.1381
	3	.6773*	-2.4545	3.31	(.10)	.4035	.1628	-.0514

* refer to key.

Table 33

MPCTOT SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP: THE PREDICTION OF SSEI BY THE WHOLE SAMPLE (N=352)

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R		Increase in R^2
						R	R^2	
		GESS	MPCTOT13-19					
N=	0	.8334	-.1398					
352	1	.7851	-.1398*	23.53	(.0005)	.2510	.0630	.0630
	2	.7851*	-.0493*	64.81	(.0005)	.5204	.2708	.2078
	3	.8334*	-.0493	125.44	(.0005)	.5137	.2638	-.0070
			MPCTOT=Q3	Score = 97				
n=	0	.6331	-.0742					
92	1	.6234	-.0742*	0.93	(.50)	.1012	.0102	.0102
	2	.6234*	-.0244*	7.96	(.001)	.3895	.1517	.1415
	3	.6331*	-.0244	15.96	(.0005)	.3881	.1506	-.0011
			MPCTOT=SD+	Score = 116				
n=	0	.5869	-.1466					
52	1	.5447	-.1466*	1.79	(.25)	.1861	.0347	.0347
	2	.5447*	-.0826*	3.92	(.025)	.3714	.1379	.1033
	3	.5869*	-.0826	7.31	(.01)	.3572	.1276	-.0103
			MPCTOT=1.5SD+	Score = 137				
n=	0	.4589	-.2876					
33	1	.2994	-.2876*	3.59	(.10)	.3221	.1038	.1038
	2	.2994*	-.2250*	2.28	(.25)	.3633	.1320	.0282
	3	.4589*	-.2250	2.62	(.25)	.2791	.0779	-.0541
			MPCTOT=2SD+	Score = 157				
n=	0	.0954	-.3461					
18	1	-.0008	-.3461*	1.61	(.25)	.3019	.0912	.0912
	2			F=0	( )			
	3			F=0	( )			

* refer to key.

Table 34

HPD SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R	R^2	Increase in R^2
		GESS	HPD13-16					
N=	0	.8952	-1.6633					
249	1	.8440	-1.6633*	17.07	(.0005)	.2542	.0646	.0646
	2	.8440*	- .6487*	51.22	(.0005)	.5422	.2940	.2294
	3	.8952*	- .6487	98.50	(.0005)	.5339	.2851	-.0089
			HPD13-16SD+	Score = 10				
n=	0	.3298	-1.0447					
46	1	.3316	-1.0447*	0.40	(.75)	.0949	.0090	.0090
	2	.3316*	-1.0653*	0.96	(.50)	.2067	.0427	.0337
	3	.3298*	-1.0653	1.52	(.25)	.1827	.0334	-.0094
			HPD13-16 1.5SD+	Score = 12				
n=	0	.6284	-2.2825					
27	1	.6561	-2.2825*	0.63	(.50)	.1566	.0245	.0245
	2	.6561*	-2.5925	1.54	(.25)	.3371	.1136	.0891
	3	.6284*	-2.5925	2.24	(.25)	.2866	.0821	-.0315
			HPD13-16 2SD+	Score = 14				
n=	0	.7260	-6.2046					
10	1	.9285	-6.2046*	0.87	(.50)	.3136	.0984	.0984
	2	.9285*	-8.1355*	1.31	(.50)	.5223	.2728	.1745
	3	.7260*	-8.1355	1.01	(.50)	.3354	.1125	-.1603

* refer to key.

Table 35

HPD SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	HPD17-19					
N=	0	.6606	-1.2878					
103	1	.6362	-1.2878*	3.39	(.10)	.1801	.0324	.0324
	2	.6362*	- .8448*	14.08	(.0005)	.4688	.2198	.1873
	3	.6606*	- .8448	26.22	(.0005)	.4540	.2061	-.0137
			HPD17-19SD+	Score = 8				
n=	0	.5898	-5.7970					
19	1	.4874	-5.7970*	3.48	(.10)	.4123	.1700	.1700
	2	.4874*	-5.0016*	2.85	(.10)	.5125	.2626	.0926
	3	.5898*	-5.0016	2.77	(.25)	.3745	.1403	-.1223
			HPD17-19 1.5SD+	Score = 9				
n=	0	.4543	-5.3000					
14	1	.4557	-5.3000*	1.23	(.50)	.3047	.0928	.0928
	2	.4557*	-4.8215*	1.22	(.50)	.4267	.1821	.0893
	3	.4543*	-4.8215	1.42	(.50)	.3255	.1059	-.0762
			HPD17-19 2SD+	Score = 10				
n=	0	.9112**	.0526					
8	1	.9112*	3.5366*	2.14	(.25)	.5124	.2626	.2626
	2	.9880*	3.5366*	1.00	(.50)	.5339	.2850	.0225
	3	.9112*	3.5366	2.14	(.25)	.5124	.2626	-.0225

* refer to key.
** analysis necessitated entering GESS at Step 1, HPD at Step 2, and HPD removed at Step 3.

Table 36

FLE SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	FLE13-16					
N=	0	.8952	- .4940					
249	1	.9246	- .4940*	1.59	(.25)	.0800	.0064	.0064
	2	.9246*	.4083*	50.04	(.0005)	.5377	.2892	.2828
	3	.8952*	.4083	98.50	(.0005)	.5339	.2851	-.0041
			FLE13-16SD+	Score = 10				
n=	0	.5920	.4693					
47	1	.5893	.4693*	0.11	(.75)	.0494	.0024	.0024
	2	.5893*	.2596*	3.47	(.05)	.3692	.1363	.1339
	3	.5920*	.2596	7.06	(.025)	.3682	.1355	-.0007
			FLE13-16 1.5SD+	Score = 12				
n=	0	.4440	1.5861					
28	1	.4137	1.5861*	0.48	(.50)	.1345	.0181	.0181
	2	.4136*	1.0256*	0.97	(.50)	.2688	.0722	.0542
	3	.4440*	1.0256	1.81	(.25)	.2549	.0650	-.0073
			FLE13-16 2SD+	Score = 14				
n=	0	.4662	-1.2808					
13	1	.4684*	-1.2808*	0.07	(.90)	.0801	.0064	.0064
	2	.4684*	-1.3512*	0.48	(.75)	.2968	.0881	.0817
	3	.4662*	-1.3512	0.97	(.50)	.2845	.0810	-.0071

* refer to key.

Table 37

FLE SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	FLE17-19					
N=	0	.6606	-1.1294					
103	1	.6331	-1.1294*	4.91	(.05)	.2153	.0464	.0464
	2	.6331*	- .8686*	15.20	(.0005)	.4829	.2332	.1868
	3	.6606*	- .8686	26.22	(.0005)	.4540	.2061	-.0271
			FLE17-19SD+	Score = 9				
n=	0	.6135	-1.4319					
16	1	.5683	-1.4319*	0.82	(.50)	.2350	.0552	.0552
	2	.5683*	- .8217*	1.78	(.25)	.4638	.2151	.1599
	3	.6135*	- .8217	3.46	(.10)	.4449	.1980	-.0171
			FLE17-19 1.5SD+	Score = 11				
n=	0	1.3110	- .3684					
8	1	1.3146	- .3684*	0.01	(.95)	.0375	.0014	.0014
	2	1.3146*	+ .2436*	3.27	(.25)	.7527	.5666	.5652
	3	1.3110*	+ .2436	7.82	(.05)	.7523	.5660	-.0006
			FLE17-19 2SD+	Score = 13				
n=	0	1.1729	6.5000					
6	1	1.0849	6.5000*	1.15	(.50)	.4720	.2228	.2228
	2	1.0849*	5.0535*	3.29	(.25)	.8289	.6871	.4642
	3	1.1729*	5.0535	5.00	(.10)	.7453	.5555	-.1316

* refer to key.

Table 38

SRA SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	SRA13-16					
N=	0	.8952	-1.8768					
249	1	.7970	- .9798*	31.03	(.0005)	.3341	.1116	.1116
	2	.7970*	- .9798*	55.80	(.0005)	.5586	.3121	.2005
	3	.8952*	- .9798	98.50	(.0005)	.5339	.2851	-.0270
			SRA13-16SD+	Score = 11				
n=	0	.6890	.0526					
45	1	.6978	.0526*	0.00	(.9999)	.0060	.0000	.0000
	2	.6978*	.4872*	5.80	(.01)	.4652	.2164	.2163
	3	.6890*	.4872	11.66	(.005)	.4619	.2133	-.0031
			SRA13-16 1.5SD+	Score = 13				
n=	0	.8552	.4921					
24	1	.8664	.4921*	0.04	(.90)	.0422	.0018	.0018
	2	.8664*	.9598*	4.69	(.025)	.5555	.3086	.3068
	3	.8552*	.9598	9.51	(.01)	.5494	.3018	-.0067
			SRA13-16 2SD+	Score = 15				
n=	0	.5278	-3.3783					
13	1	.4513	-3.3783*	0.60	(.50)	.2275	.0517	.0517
	2	.4513*	-2.0103*	0.66	(.75)	.3417	.1168	.0651
	3	.5278*	-2.0103	1.23	(.50)	.3172	.1006	-.0162

* refer to key.

Table 39

SRA SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	SRA17-19					
N=	0	.6606	-1.9943					
103	1	.5536	-1.9943*	21.70	(.0005)	.4205	.1768	.1768
	2	.5536*	-1.6013*	22.96	(.0005)	.5610	.3147	.1379
	3	.6606*	-1.6013	26.22	(.0005)	.4540	.2061	-.1086
			SRA17-19SD+	Score = 10				
n=	0	.4412	- .9758					
17	1	.4056	- .9758*	0.35	(.75)	.1510	.0228	.0228
	2	.4056*	- .6751*	0.58	(.75)	.2757	.0760	.0532
	3	.4412*	- .6751	1.05	(.50)	.2560	.0655	-.0105
			SRA17-19 1.5SD+	Score = 12				
n=	0	.7134	-3.2374					
10	1	.9036	-2.1275*	2.08	(.25)	.4544	.2065	.2065
	2	.9036*	-4.1776*	4.40	(.10)	.7462	.5568	.3503
	3	.7134*	-4.1776	2.38	(.25)	.4788	.2292	-.3276
			SRA17-19 2SD+	Score = 14				
n=	0	1.1024	- .7547					
6	1	1.1978	- .7547*	0.02	(.90)	.0613	.0038	-.0038
	2	1.1978*	-3.0825*	1.93	(.50)	.7499	.5624	.5586
	3	1.1024*	-3.0825	4.06	(.25)	.7096	.5035	-.0589

* refer to key.

Table 40

CSM SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R	R^2	Increase in R^2
		GESS	CSM13-16					
N=	0	.8952	- .8561					
249	1	.8775	- .8561*	8.21	(.005)	.1793	.0322	.0322
	2	.8775*	- .1885*	49.40	(.0005)	.5353	.2865	.2544
	3	.8952*	- .1885	98.50	(.0005)	.5339	.2851	-.0014
			CSM13-16SD+	Score = 12				
n=	0	.7892	-2.1445					
41	1	.7003	-2.1445*	4.72	(.05)	.3286	.1080	.1080
	2	.7003*	-1.4809*	7.37	(.005)	.5287	.2795	.1715
	3	.7892*	-1.4809	11.71	(.005)	.4806	.2310	-.0486
			CSM13-16 1.5SD+	Score = 15				
n=	0	.4247	-3.4052					
22	1	.4810	-3.4052*	4.97	(.05)	.4461	.1990	.1990
	2	.4810*	-3.5572*	3.66	(.05)	.5271	.2779	.0789
	3	.4247*	-3.5572	1.32	(.50)	.2486	.0618	-.2161
			CSM13-16 2SD+	Score = 17				
n=	0	-.0554	-3.7785					
14	1	-.0824	-3.7785*	3.44	(.10)	.4720	.2228	-.2228
	2			F=0				
	3			F=0				

* refer to key.

Table 41

CSM SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	CSM17-19					
N=	0	.6606	- .7074					
103	1	.5444	- .7074*	2.04	(.25)	.1408	.0198	.0198
	2	.6444*	- .3363*	13.33	(.0005)	.4587	.2104	.1906
	3	.6606*	- .3363	26.22	(.0005)	.4540	.2061	-.0044
			CSM17-19SD+	Score = 10				
n=	0	.7980	-2.9221					
14	1	.4958	-2.9221*	6.32	(.05)	.5872	.3448	.3448
	2	.4958*	-1.9654*	4.19	(.05)	.6577	.4325	.0877
	3	.7980*	-1.9654	5.72	(.05)	.5681	.3228	-.1097
			CSM17-19 1.5SD+	Score = 12				
n=	0	.7099	-2.9868					
9	1	.5051	-2.9868*	3.07	(.25)	.5519	.3046	.3046
	2	.5051*	-1.5005*	2.14	(.25)	.6457	.4169	.1123
	3	.7099*	-1.5005	4.13	(.10)	.6090	.3709	-.0460
			CSM17-19 2SD+	Score = 14				
n=	0	.9758	-2.2087					
5	1	1.4176	-2.2087*	0.91	(.50)	.4829	.2332	.2332
	2	1.4176*	+2.4158*	12.18	(.10)	.9613	.9241	.6910
	3	.9758*	+2.4158	12.93	(.05)	.9009	.8116	-.1125

* refer to key.

Table 42

SPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-14

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	SPR13-14					
N=	0	.8247	-1.0764					
79	1	.7771	-1.0764*	5.04	(.05)	.2479	.0615	.0615
	2	.7771*	- .3407*	12.68	(.0005)	.5001	.2501	.1886
	3	.8247*	- .3407	24.96	(.0005)	.4948	.2448	-.0053
			SPR13-14SD+	Score = 13				
n=	0	.5077	1.6028					
21	1	.8158	1.6028*	0.35	(.75)	.1354	.0183	.0183
	2	.8158*	3.9882*	1.68	(.25)	.3968	.1575	.1392
	3	.5077*	3.9882	1.42	(.25)	.2639	.0696	-.0878
			SPR13-14 1.5SD+	Score = 16				
n=	0	.0299	7.5574					
7	1	.6723	7.5575*	1.89	(.25)	.5233	.2739	.2739
	2	.6723*	9.5191*	1.07	(.50)	.5909	.3491	.0753
	3	.0299*	9.5191	0.00	(.9999)	.0137	.0002	-.3489
			SPR13-14 2SD+	Score = 18				
n=	0	-2.0308	20.0					
3	1	-4.7692	20.0*	1.25	(.50)	.7452	.5553	.5553
	2			F=0				
	3			F=0				

* refer to key.

Table 43

SPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 15-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	SPR15-16					
N=	0	.9244	-2.0510					
170	1	.7160	-2.0510*	49.19	(.0005)	.4756	.2262	.2262
	2	.7160*	-1.2921*	50.38	(.0005)	.6134	.3763	.1501
	3	.9244*	-1.2921	72.65	(.0005)	.5495	.3019	-.0744
			SPR15-16SD+	Score = 16				
n=	0	.7191	-1.3395					
21	1	.7417	-1.3395*	0.59	(.50)	.1733	.0300	.0300
	2	.7417*	-1.4915*	1.64	(.25)	.3925	.1541	.1240
	3	.7191*	-1.4915	2.52	(.25)	.3420	.1169	-.0371
			SPR15-16 1.5SD+	Score = 19				
n=	0	.6133	.7794					
10	1	.7637	.7794*	0.03	(.90)	.0568	.0032	.0032
	2	.7637*	-1.8104*	0.36	(.75)	.3065	.0939	.0907
	3	.6133*	-1.8104	0.71	(.50)	.2854	.0814	-.0125
			SPR15-16 2SD+	Score = 22				
n=	0	.2956	.4732					
7	1	.2956	.4732*	0.00	(.9999)	.0232	.0005	.0005
	2	.2926*	.4030*	0.01	(.99)	.0844	.0071	.0066
	3	.2926*	.4030	0.03	(.90)	.0821	.0067	-.0004

* refer to key.

Table 44

SPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R	R^2	Increase in R^2
		GESS	SPR17-19					
N=	0	.6606	-1.7283					
103	1	.5473	-1.7283*	20.82	(.0005)	.4134	.1709	.1709
	2	.5473*	-1.3489*	21.85	(.0005)	.5515	.3041	.1332
	3	.6606*	-1.3489	26.22	(.0005)	.4540	.2061	-.0980
			SPR17-19SD+	Score = 11				
n=	0	.5258	.2589					
21	1	.5394	.2589*	0.04	(.90)	.0452	.0020	.0020
	2	.5394*	.4034*	0.70	(.75)	.2683	.0720	.0699
	3	.5258*	.4034	1.37	(.50)	.2590	.0671	-.0049
			SPR17-19 1.5SD+	Score = 14				
n=	0	1.2122	- .5126					
9	1	1.2102	- .5126*	0.11	(.75)	.1271	.0161	.0161
	2	1.2102*	-. 0417*	8.64	(.025)	.8616	.7423	.7261
	3	1.2122*	-. 0417	20.15	(.005)	.8615	.7422	-.0001
			SPR17-19 2SD+	Score = 16				
n=	0	.8814	-2.8529					
4	1	.4060	-2.8529*	3.52	(.25)	.7987	.6379	.6379
	2	.4060*	-2.0132*	1.14	(.75)	.8341	.6958	.0479
	3	.8814*	-2.0132	2.29	(.50)	.7303	.5333	-.1625

* refer to key.

Table 45

PPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-14

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R	R^2	Increase in R^2
		GESS	PPR13-14					
N=	0	.8247	- .4072					
79	1	.8778	- .4072*	0.62	(.50)	.0894	.0080	.0080
	2	.8778*	- .4202*	12.82	(.0005)	.5023	.2523	.2443
	3	.8247*	-.4202	24.96	(.0005)	.4948	.2448	-.0075
			PPR13-14SD+	Score = 13				
n=	0	.2115	-1.1275					
16	1	.1528	-1.127*	0.17	(.75)	.1093	.0119	.0119
	2	.1528*	- .8584*	0.11	(.90)	.1300	.0169	.0050
	3	.2115*	- .8485	0.15	(.75)	.1040	.0108	-.0061
			PPR13-14 1.5SD+	Score = 15				
n=	0	.1764	3.4536					
12	1	.3448	3.4536*	0.82	(.50)	.2760	.0761	.0761
	2	.3448*	4.0934*	0.54	(.95)	.3283	.1078	.0316
	3	.1764*	4.0934	0.09	(.90)	.0947	.0090	-.0988
			PPR13-14 2SD+	Score = 18				
n=	0	-.4412	-14.9998					
4	1	-.5692	-14.9998*	4.25	(.25)	.8245	.6797	.6797
	2	-.5992*	-16.4226*	39.63	(.25)	.9938	.9875	.3078
	3	-.4412*	-16.4226	0.46	(.75)	.4343	.1886	-.7989

* refer to key.

Table 46

PPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 15-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R	R^2	Increase in R^2
		GESS	PPR15-16					
N=	0	.9244	-1.2909					
170	1	.8813	-1.2909*	14.53	(.0005)	.2822	.0796	.0796
	2	.8813*	- .2773*	36.63	(.0005)	.5522	.3049	.2253
	3	.9244*	- .2773	72.65	(.0005)	.5495	.3019	-.0030
			PPR15-16SD+	Score = 15				
n=	0	.5213	-1.1978					
26	1	.4560	-1.1978*	0.70	(.50)	.1679	.0282	.0282
	2	.4560*	- .7721*	0.86	(.50)	.2640	.0697	.0415
	3	.5213*	- .7721	1.50	(.25)	.2427	.0589	-.0108
			PPR15-16 1.5SD+	Score = 18				
n=	0	.3377	-1.7136					
10	1	.2817	-1.7136*	0.32	(.75)	.1968	.0387	.0387
	2	.2817*	-1.4914*	0.22	(.90)	.2450	.0600	.0213
	3	.3377*	-1.4914	0.26	(.75)	.1777	.0316	-.0285
			PPR15-16 2SD+	Score = 21				
n=	0	-.9117	2.8812					
4	1	-.7784	2.8812*	0.48	(.75)	.3270	.1069	.1069
	2	-.7784*	1.9812*	0.45	(.75)	.4803	.2306	.1237
	3	-.9117*	1.9812	0.90	(.50)	.4290	.1840	-.0466

* refer to key.

Table 47

PPR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	Multiple R R^2	Increase in R^2
		GESS	PPR17-19					
N=	0	.6606	-1.4250					
103	1	.5683	-1.4250*	12.94	(.0005)	.3370	.1136	.1136
	2	.5683*	- .9668*	17.05	(.0005)	.5043	.2543	.1408
	3	.6606*	- .9668	26.22	(.0005)	.4540	.2061	-.0482
			PPR17-19SD+	Score = 12				
n=	0	.3313	-1.9997					
19	1	.2801	-1.9997*	2.70	(.25)	.3700	.1369	.1369
	2	.2801*	-1.8314*	1.92	(.25)	.4400	.1936	.0567
	3	.3313*	-1.8314	1.49	(.25)	.2841	.0807	-.1129
			PPR17-19 1.5SD+	Score = 14				
n=	0	.7105	-2.6885					
11	1	.5065	-2.6885*	2.00	(.25)	.4268	.1821	.1821
	2	.5065*	-1.9465*	1.40	(.50)	.5085	.2586	.0765
	3	.7105*	-1.9465	1.95	(.25)	.4217	.1778	-.0808
			PPR17-19 2SD+	Score = 17				
n=	0	.5099	.5075					
4	1	3.8500	.5075*	0.01	(.95)	.0720	.0052	.0052
	2	3.8500*	5.8500*	4.94	(.50)	.9530	.9082	.9030
	3	.5099*	15.8500	0.22	(.75)	.3144	.0989	-.8093

* refer to key.

Table 48

MR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R	R^2	Increase in R^2
		GESS	MR13-16					
N=	0	.8952	- .5247					
249	1	.9164	- .5247*	2.83	(.10)	.1065	.0113	.0113
	2	.9164*	.2242*	49.51	(.0005)	.5357	.2870	.2757
	3	.8952*	.2242	98.50	(.0005)	.5339	.2851	-.0019
			MR13-16SD+	Score = 12				
n=	0	.5336	-1.1109					
45	1	.5088	-1.1109*	1.16	(.50)	.1622	.0263	.0263
	2	.5088*	- .2871*	2.74	(.10)	.3395	.1152	.0889
	3	.5336*	- .2871	5.52	(.025)	.3372	.1137	-.0015
			MR13-16 1.5SD+	Score = 15				
n=	0	.5216	-3.1169					
23	1	.3994	-3.1169*	1.75	(.25)	.3152	.0994	.0994
	2	.3994*	-2.4602*	1.75	(.25)	.3860	.1490	.0496
	3	.5216*	-2.4602	2.13	(.25)	.3035	.0921	-.0569
			MR13-16 2SD+	Score = 17				
n=	0	-.2592	- .3920					
14	1	-.2723	- .3920*	0.01	(.95)	.0326	.0011	.0011
	2	-.2723*	- .5930*	0.10	(.95)	.1340	.0180	.0169
	3	-.2592*	- .5930	0.19	(.75)	.1248	.0156	-.0024

* refer to key.

Table 49

MR SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	MR17-19					
N=	0	.6606	- .4942					
103	1	.6515	- .4942*	1.16	(.50)	.1068	.0114	.0114
	2	.6515*	- .2756*	13.26	(.0005)	.4578	.2096	.1982
	3	.6606*	- .2726	26.22	(.0005)	.4540	.2061	-.0035
			MR17-19SD+	Score = 10				
n=	0	.7446	+ .4682					
16	1	.8399	+ .4682*	0.08	(.90)	.0741	.0055	.0055
	2	.8399*	-1.3308*	2.06	(.25)	.4903	.2404	.2349
	3	.7446*	-1.3308	3.48	(.10)	.4464	.1993	-.0411
			MR17-19 1.5SD+	Score = 12				
n=	0	1.3703	-3.6478					
11	1	1.2726	-3.6478*	2.41	(.25)	.4595	.2112	.2112
	2	1.2726*	-2.9678*	6.54	(.025)	.7878	.6207	.4099
	3	1.3703*	-2.9678	8.42	(.025)	.6952	.4834	-.1373
			MR17-19 2SD+	Score = 14				
n=	0	1.1998	-3.1797					
8	1	1.2028	-3.1797*	0.59	(.50)	.3002	.0901	.0901
	2	1.2028*	-3.2299*	3.69	(.25)	.7722	.5963	.5062
	3	1.1998*	-3.2229	6.09	(.05)	.7098	.5037	-.0926

* refer to key.

Table 50

HF SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	HF13-16					
N=	0	.8952	.1877					
249	1	.9510	.1877*	0.46	(.50)	.0429	.0018	.0018
	2	.9510*	.7025*	55.20	(.0005)	.5566	.3098	.3079
	3	.8952*	.7025	98.50	(.0005)	.5339	.2851	-.0247
			HF13-16SD+	Score = 13				
n=	0	.7138	.1645					
48	1	.7137	.1645*	0.02	(.90)	.0214	.0005	.0005
	2	.7137*	.0075*	5.35	(.01)	.4383	.1921	.1916
	3	.7138*	.0075	10.94	(.005)	.4383	.1921	-.0000
			HF13-16 1.5SD+	Score = 15				
n=	0	.6752	.6196					
30	1	.6718	.6196*	0.12	(.75)	.0664	.0044	.0044
	2	.6718*	.6185*	1.94	(.25)	.3542	.1254	.1210
	3	.6752*	.5185	3.90	(.10)	.3498	.1224	-.0031
			HF13-16 2SD+	Score = 18				
n=	0	1.1490	.5872					
13	1	1.1630	.5872*	0.01	(.95)	.0286	.0008	.0008
	2	1.1630*	1.3687*	1.34	(.50)	.4592	.2108	.2100
	3	1.1490*	1.3687	2.86	(.25)	.4543	.2064	-.0044

* refer to key.

Table 51

HF SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	HF17-19					
N=	0	.6606**	- .0049					
103	1	.6606*	.1430	26.22	(.0005)	.4540	.2061	.2061
	2	.6638*	.1430*	13.06	(.0005)	.4550	.2070	.0010
	3	.6606*	.1430	26.22	(.0005)	.4540	.2061	-.0010
			HF17-19SD+	Score = 10				
n=	0	.2163	.3701					
22	1	.2069	.3701*	0.07	(.90)	.0580	.0034	.0034
	2	.2069*	.2121*	0.20	(.90)	.1446	.0209	.0175
	3	.2163*	.2121	0.40	(.75)	.1409	.0198	-.0011
			HF17-19 1.5SD+	Score = 12				
n=	0	.2142	2.0760					
10	1	.1406	2.0760*	2.16	(.25)	.4610	.2126	.2126
	2	.1406*	2.0109*	1.01	(.50)	.4740	.2247	.0121
	3	.2142*	2.0109	0.24	(.75)	.1692	.0286	-.1960
			HF17-19 2SD+	Score = 14				
n=	0	- .5926	2.5769					
4	1	-1.2475	2.5769*	0.64	(.75)	.4917	.2418	.2418
	2	-1.2475*	3.5365*	0.40	(.75)	.6661	.4437	.2019
	3	- .5926*	3.5365	0.11	(.90)	.2305	.0531	-.3906

* refer to key.
** analysis necessitated entering GESS at Step 1, HF at Step 2, and HF removed at Step 3.

Table 52

FVE SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-15

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	FVE13-15					
N=	0	.8351	- .6666					
159	1	.8293	- .6666*	2.58	(.25)	.1271	.0162	.0162
	2	.8293*	- .0728*	22.83	(.0005)	.4758	.2264	.2102
	3	.8361*	- .0728	45.90	(.0005)	.4756	.2262	-.0002
			FVE13-15 SD+	Score = 10				
n=	0	.4738**	- .0135					
22	1	.4738	- .1886*	1.11	(.50)	.2288	.0524	.0524
	2	.4844*	- .1886*	0.54	(.75)	.2316	.0536	.0013
	3	.4738*	- .1886	1.11	(.50)	.2288	.0524	-.0013
			FVE13-15 1.5SD+	Score = 12				
n=	0	.6501	2.0885					
15	1	.5467	2.0885*	2.32	(.25)	.3893	.1515	.1515
	2	.5467*	1.8351*	1.84	(.25)	.4844	.2346	.0831
	3	.6501*	1.8351	1.78	(.25)	.3474	.1207	-.1139
			FVE13-15 2SD+	Score = 14				
n=	0	.9770	3.5994					
4	1	.7037	3.5994*	3.83	(.10)	.5949	.3539	.3539
	2	.7037*	1.8073*	2.93	(.25)	.7028	.4939	.1400
	3	.9770*	1.8073	5.48	(.10)	.6626	.4391	-.0549

* refer to key.
** analysis necessitated entering GESS at Step 1, FVE at Step 2, and FVE out at Step 3.

Table 53

FVE SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 16-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	FVE16-19					
N=	0	.8325	- .9375					
193	1	.8083	- .9375*	7.92	(.005)	.1995	.0398	.0398
	2	.8083*	- .2895*	41.63	(.0005)	.5520	.3047	.2649
	3	.8325*	- .2895	82.30	(.0005)	.5488	.3011	-.0035
			FVE16-19 SD+	Score = 11				
n=	0	.3894	- .4332					
26	1	.4324	- .4332*	0.20	(.75)	.0918	.0084	.0084
	2	.4324*	.3571*	1.39	(.50)	.3282	.1077	.0993
	3	.3894*	.3571	2.76	(.25)	.3213	.1032	-.0045
			FVE16-19 1.5SD+	Score = 13				
n=	0	.2675	.2058					
17	1	.2874	.2058*	0.04	(.90)	.0507	.0026	.0026
	2	.2874*	.4121*	0.56	(.75)	.2732	.0746	.0720
	3	.2675*	.4121	1.04	(.50)	.2543	.0647	-.0100
			FVE16-19 2SD+	Score = 16				
n=	0	.5337	.6447					
8	1	.6155	.6447*	0.07	(.90)	.1088	.0118	.0118
	2	.6155*	1.1550*	0.38	(.75)	.3615	.1307	.1189
	3	.5337*	1.1550	0.63	(.50)	.3081	.0949	-.0358

* refer to key.

Table 54

ASW SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-14

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	ASW13-14					
N=	0	.8247	- .2631					
79	1	.8803	- .2631*	0.37	(.75)	.0693	.0048	.0048
	2	.8803*	.3893*	12.95	(.0005)	.5042	.2542	.2494
	3	.8247*	.3893	24.96	(.0005)	.4948	.2448	-.0094
			ASW13-14 SD+	Score = 14				
n=	0	.2585	1.9639					
14	1	.2097	1.9639*	0.68	(.50)	.2309	.0533	.0533
	2	.2097*	1.8219*	0.40	(.75)	.2615	.0684	.0151
	3	.2585*	1.8219	0.29	(.75)	.1528	.0234	-.0450
			ASW13-14 1.5SD+	Score = 17				
n=	0	.1296	- .7795					
11	1	.1326	- .7795*	0.05	(.90)	.0736	.0054	.0054
	2	.1326*	- .7960*	0.04	(-.975)	.1030	.0106	.0052
	3	.1296*	- .7960	0.04	(.90)	.0705	.0050	-.0056
			ASW13-14 2SD+	Score = 20				
n=	0	.4506	1.8749					
5	1	.1074	1.8749*	0.03	(.90)	.1056	.0112	.0112
	2	.1074*	14.7827*	0.34	(.75)	.5025	.2525	.2414
	3	.4506*	14.7827	0.11	(.90)	.1876	.0352	-.2173

* refer to key.

Table 55

ASW SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 15-16

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R R	R^2	Increase in R^2
		GESS	ASW15-16					
N=	0	.9244	-1.3395					
170	1	.8453	-1.3395*	17.63	(.0005)	.3082	.0950	.0950
	2	.8453*	- .6255*	39.37	(.0005)	.5660	.3204	.2254
	3	.9244*	- .6255	72.65	(.0005)	.5495	.3019	-.0185
			ASW15-16 SD+	Score = 15				
n=	0	.7755	-2.4007					
32	1	.7342	-2.4007*	2.09	(.25)	.2551	.0651	.0651
	2	.7342*	-1.8646*	5.16	(.025)	.5124	.2625	.1974
	3	.7755*	-1.8645	8.66	(.01)	.4732	.2239	-.0386
			ASW15-16 1.5SD+	Score = 18				
n=	0	.7619	-5.3759					
10	1	.7593	-5.3759*	2.58	(.25)	.4936	.2436	.2436
	2	.7593*	-5.3654*	2.18	(.25)	.6196	.3839	.1402
	3	.7619*	-5.3654	1.32	(.50)	.3758	.1412	-.2427
			ASW15-16 2SD+	Score = 20				
n=	0	- .7330	-2.7647					
6	1	-1.6990	-2.7647*	0.22	(.75)	.2295	.0527	.0527
	2	-1.6990*	+6.0300*	0.29	(.90)	.4030	.1624	.1097
	3	- .7330*	+6.0300	0.54	(.75)	.3458	.1196	-.0428

* refer to key.

Table 56

ASW SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	ASW17-19					
N=	0	.6606	-1.0258					
103	1	.6117	-1.0258*	6.79	(.025)	.2510	.0630	.0630
	2	.6117*	- .6767*	15.13	(.0005)	.4820	.2324	.1694
	3	.6606*	- .6767	26.22	(.0005)	.4540	.2061	-.0263
			ASW17-19 SD+	Score = 12				
n=	0	.3782	-1.8959					
18	1	.0476	-1.8959*	3.80	(.10)	.4380	.1919	.1919
	2	.0476*	-1.7725*	1.79	(.25)	.4390	.1928	.0009
	3	.3782*	-1.7725	1.90	(.25)	.3258	.1062	-.0866
			ASW17-19 1.5SD+	Score = 15				
n=	0	.4664	-1.6243					
10	1	.3809	-1.6243*	0.81	(.50)	.3076	.0916	.0916
	2	.3809*	- .5627*	0.59	(.75)	.3805	.1448	.0532
	3	.4664*	- .5627	1.29	(.50)	.3720	.1384	-.0063
			ASW17-19 2SD+	Score = 17				
n=	0	.4317	-2.1053					
6	1	.3334	-2.1053*	0.21	(.75)	.2577	.0664	.0664
	2	.3334*	-1.7953*	0.10	(.95)	.3053	.0932	.0268
	3	.4317*	-1.7953	0.15	(.75)	.2177	.0474	-.0458

* refer to key.

Table 57

CTP SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	CTP13-16					
N=	0	.8952	- .1318					
249	1	.9158	- .1318*	0.25	(.75)	.0318	.0010	.0010
	2	.9158*	.2798*	50.12	(.0005)	.5381	.2895	.2885
	3	.8952*	.2798	98.50	(.0005)	.5339	.2851	-.0044
			CTP13-16 SD+	Score = 13				
n=	0	.9114	- .4142					
53	1	.9139	- .4142*	0.20	(.75)	.0622	.0039	.0039
	2	.9139*	- .4898*	10.93	(.0005)	.5515	.3042	.3003
	3	.9114*	- .4898	21.73	(.0005)	.5466	.2988	-.0054
			CTP13-16 1.5SD+	Score = 16				
n=	0	.7667	-2.0192					
30	1	.7185	-2.0192*	1.91	(.25)	.2527	.0638	.0638
	2	.7185	-1.6946*	3.18	(.10)	.4367	.1907	.1269
	3	.7667*	-1.6946	4.80	(.05)	.3825	.1463	-.0444
			CTP13-16 2SD+	Score = 19				
n=	0	.8003	-4.8763					
15	1	.6246	-4.8763*	2.16	(.25)	.3774	.1424	.1424
	2	.6246*	-3.4726*	1.84	(.25)	.4841	.2344	.0920
	3	.8003*	-3.4726	2.67	(.25)	.4127	.1704	-.0640

* refer to key.

Table 58

CTP SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	CTP17-19					
N=	0	.6606	- .4084					
103	1	.6528	- .4084*	0.99	(.50)	.0988	.0098	.0098
	2	.6528*	- .2300*	13.22	(.0005)	.4573	.2092	.1994
	3	.6606*	- .2300	26.22	(.0005)	.45.40	.2061	-.0031
			CTP17-19 SD+	Score = 11				
n=	0	.7085	-3.7625					
18	1	.5341	-3.7625*	4.87	(.05)	.4832	.2335	.2335
	2	.5341*	-2.6819*	4.23	(.05)	.6005	.3606	.1271
	3	.7085*	-2.6819	5.55	(.05)	.5075	.2576	-.1030
			CTP17-19 1.5SD+	Score = 13				
n=	0	.5721	-2.3489					
11	1	.5109	-2.3489*	0.72	(.50)	.2715	.0737	.0737
	2	.5109	-1.1611*	1.06	(.50)	.4570	.2088	.1351
	3	.5721*	-1.1611	2.15	(.25)	.4393	.1930	-.0158
			CTP17-19 2SD+	Score = 15				
n=	0	.3889	9.5					
5	1	.3714	9.5*	0.40	(.75)	.3420	.1170	.1170
	2	.3714*	8.4785*	0.55	(.75)	.5958	.3550	.2380
	3	.3889*	8.4785	1.07	(.50)	.5122	.2624	-.0926

* refer to key.

Table 59

MPCTOT SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 13-16

	Step	Regression Coefficients		F-ratio	p < (signif)	Multiple R R	R^2	Increase in R^2
		GESS	MPCTOT13-16					
N=	0	.8952	- .1270					
249	1	.8754	- .1270*	13.30	(.0005)	.2261	.0511	.0511
	2	.8754*	- .0178*	49.26	(.0005)	.5348	.2860	.2349
	3	.8952*	- .0178	98.50	(.0005)	.53390	.2851	-.0009
			MPCTOT13-16 SD+	Score = 122				
n=	0	.5895	- .2079					
38	1	.5346	- .2079*	2.18	(.25)	.2388	.0570	.0570
	2	.5346*	- .1569*	3.24	(.10)	.3954	.1563	.0993
	3	.5895*	- .1569	5.14	(.05)	.3534	.1249	-.0314
			MPCTOT13-16 1.5SD+	Score = 143				
n=	0	.4455	- .4978					
22	1	.1314	- .4978*	4.93	(.05)	.4447	.1978	.1978
	2	.1314	- .4629*	2.41	(.25)	.4497	.2022	.0044
	3	.4455*	- .4629	1.32	(.50)	.2490	.0620	-.1402
			MPCTOT13-16 2SD+	Score = 164				
n=	0	.0388	- .2173					
13	1	-.0219	- .2173*	0.40	(.75)	.1865	.0348	.0348
	2	-.0219*	- .2197*	0.18	(.90)	.1869	.0349	.0001
	3	.0388*	- .2197	0.00	(.9999)	.0211	.0004	-.0345

* refer to key.

Table 60

MPCTOT SCORE INCREMENTS AND, THE GESS-SSEI RELATIONSHIP:
THE PREDICTION OF SSEI BY AGE GROUP 17-19

	Step	Regression Coefficients		F-ratio	p< (signif)	Multiple R	R^2	Increase in R^2
		GESS	MPCTOT17-19					
N=	0	.6606	- .1628					
103	1	.5960	- .1628*	9.28	(.005)	.2901	.0842	.0842
	2	.5960*	- .1114*	16.10	(.0005)	.4935	.2435	.1593
	3	.6606*	- .1114	26.22	(.0005)	.45400	.2061	-.0374
			MPCTOT17-19 1SD+ Score = 101					
n=	0	.1669	- .0482					
16	1	.1593	- .0482*	0.10	(.90)	.0854	.0073	.0073
	2	.1593*	- .0366*	0.23	(.90)	.1866	.0348	.0275
	3	.1669*	- .0366	0.44	(.75)	.1752	.0307	-.0041
			MPCTOT17-19 1.5SD+ Score = 119					
n=	0	.8021	- .4761					
8	1	.3912	- .4761*	12.83	(.025)	.8255	.6814	.6814
	2	.3912	- .3298*	7.71	(.05)	.8690	.7552	.0738
	3	.8021*	- .3298	8.30	(.05)	.7619	.5806	-.1746
			MPCTOT17-19 2SD+ Score = 137					
n=	0	.6545	- .4264					
6	1	.5706	- .4264*	9.78	(.05)	.8425	.7098	.7098
	2	.5706*	- .0781*	34.94	(.01)	.9792	.9588	.2490
	3	.6545*	- .0781	77.03	(.001)	.9750	.9506	-.0082

* refer to key.