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Self-esteem, Self-determination and Behavior Outcomes: Applications for the Secondary School Context

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Final Project
Master of Arts in Liberal Studies
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Skidmore College
November 1996
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ABSTRACT

Self-esteem and self-concept theories are associated with psychological and social well-being as well as specific behavioral outcomes such as academic performance. The theories represent two ideas that are part of a multitude of empirical work stemming from "self-theories" in general. Furthermore, self-esteem and self-concept elements relate in myriad ways to the literature of motivation theory, particularly self-determination theory and perceived control. This paper will begin by examining the literature of self-esteem and self-concept in order to define the constructs and examine their relationships to age and sex differences. Then, a summary of self-determination theory will be necessary in order to understand causal relationships between self-theories, motivation, and academic performance.

In addition to literature research, the paper will include information from a small correlation study which was performed in order to determine the relationship between self-determination orientations and self-esteem scores. The results will be reported and analyzed and, then discussed in relationship to the literature with an interest in articulating theoretical and practical implications especially as they relate to adolescent girls in the secondary school environment.

SELF-ESTEEM AND SELF-CONCEPT: definitions and literature review

Introduction

The terms self-esteem and self-concept are confusing due to their similar use in examining the significant effects of each construct in relationship to identical contexts. In addition, the literature shows an abundant use of the term "self" in some hyphenated form. Rosenberg, Rosenberg, Schoenbach & Schooler (1995) refer to a 1989 examination of the literature (Kitano) which found 6,500 articles with the construction "self-esteem" and over 36,000 pieces with a hyphenated use of "self." In addition, there are numerous measurements in use which add to the difficulty in replicating or correlating studies (Widaman, K. F., MacMillan, D. L., Hemsley, R. E., Little, T. D., and Balow, I. H., 1992), thus differentiating results and undermining the understanding of both concepts.

The most recent research on self-esteem and self-concept seeks to refine concepts and measures as well as discover evidence of causal ordering (Bachman & O'Malley, 1983; Harter, 1990; Marsh, 1986, 1989; Owens, 1993; Rosenberg et al., 1995). The research also examines outcomes related to academic performance (Bachman & O'Malley, 1983; Lui, Kaplan, & Risser, 1992; Marsh, 1986, 1989; Robinson-Awana, Kehle, & Jenson, 1986; Widaman et al., 1992), and associations with age and gender differences (Harter, 1990; Kaplan & Klein, 1985; Lackovic-Grgin, Dekovic, & Opacic, 1994; Lerner, Sorell, & Brackney, 1981; Marsh, 1989; Widaman et al., 1992; Williams & McGee, 1990).

Definitions

Self-concept theory postulates that people are dually motivated to protect and maintain their self-concept. The two motives are self-esteem and self-consistency

(Harter, 1990; Owens, 1993; Rosenberg et al., 1995) with self-esteem inducing an individual to think highly of oneself and self-consistency representing the motivation to authenticate one's self-image.   Each motive, though related, contributes uniquely to person's affective states and behavior.

Self-esteem and self-concept are distinguished in the social psychology literature with "self-concept" referring to the "set of cognitions one holds toward the self" and "self-esteem" meaning the "evaluative connotations of these cognitions" (Lerner and Sorell, 1981, 709). Self-esteem corresponds with (and is often replaced with) terms such as "self-worth" and "self-verification" whereas self-concept is synonymous with "self-image", "self-definition" or "self-view." Though these definitions are relatively consistent there are references to a "positive self-concept" (Marsh, 1990), "poor self-concept" (Rosenberg et al., 1995) or a "high/low self-concept" which orient the reader toward judgment or evaluation rather than description. The use of "self-esteem" to denote self-evaluation and "self-concept" as a means to describe a person's self-view, is generally limited to a "global" sense of self, whereas self-concept and self-esteem are used synonymously in reference to individuals' perceived competence in specific "facets" or "domains" (ie: appearance, academics, athletics, family relationships etc) of self-esteem or self-concept (Rosenberg et al., 1995).

Clarification of the terms and, therefore, their applications, is developing with comparable refinements in both constructs. Three paths of particular interest are: 1) articulation of characteristics associated with "global" (or general) versus specific self-esteem; 2) Owen's (1993) efforts to further understand the significance of both positive and negative aspects of global self-esteem; and 3) the depiction of the "multi-dimensionality" of self-concept (Marsh, 1989). Each model contributes a distinct directive for empirical work promulgating the reciprocal effects of self-esteem and self-concept on psychological states and behavior.

For the purpose of this paper, interest lies in the evaluative nature of both self-esteem and specific self-concepts so for clarification purposes, an effort is made to use the language of self-esteem concepts.

Self-esteem: Global

Most references to self-esteem assume the designation of "global/general self-esteem" which denotes people's evaluation of themselves in totality. Persons with global "high self-esteem have self-respect and feeling of worthiness and yet acknowledge faults and shortcomings" (Owens, 288). In addition, having a high global self-esteem has been correlated with "stress hardiness, effective coping strategies, increased motivation and positive emotional states" (Harter, 354). In contrast, low global self-esteem has been associated with "lack of self-respect, feelings of unworthiness, recognition of only weaknesses" (Owens, 288), and "emotional/behavior disorders such anxiety, depression, lack of motivation or energy" (Harter, 354). Global self-esteem has not been found to be a strong predictor of behavior, but rather has proved to be a reliable predictor of psychological well-being (Harter, 1990; Owens, 1993; Rosenberg et al., 1995). However in certain contexts, global self-esteem has been shown to have a reciprocal relationship with specific outcomes such as academic performance (Liu et al., 1992; Rosenberg et al., 1995; Widaman et al.,1992). These specific effects will be discussed later in the paper.

Bidimensional global self-esteem

Owens (1993) differentiates the elements of global self-esteem with the construct of "bidimensional" general self-esteem. The self-esteem measures generally used in studies (Rosenberg Self-Esteem Scale, Coopersmith Self-Esteem Inventory), combine both negative and positive evaluations of the self (ie: On the whole, I am satisfied with

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myself. I feel I do not have much to be proud of.) and the scores are an accumulation of a persons various judgments. The bidimensional approach to global self-esteem allows for a clearer understanding of the contributions of positive (self-confidence) and negative (self-deprecation) evaluations to the overall motive of positive self-esteem.

The bidimensional construct (or "self-verification theory) of global self-esteem maintains that self-confidence and self-deprecation are associated with self-efficacy - people's sense that they can predict and control outcomes (effects). Owens (1993) says that "an effectance motivation should impel individuals to focus more sharply on attributes of self-confidence" (290) and that "self-deprecation and self-confidence may be distinguished by their differential association with measures of socioemotional well-being linked with self-esteem" (292).

Individuals who are self-confident are aware of their varying degrees of competence and effectance, and their self-confidence is significantly related to indexes of valuing self-control, kindness toward others and desire for self-utilization. In contrast, self-deprecating people focus on their perceptions of ineptness and ineffectiveness with self-deprecation significantly related to worrying about what others think, self-blame, and indexes of trouble with parents and lack of trust in others. Self-deprecation is highly associated with indexes of emotional dependence, negative affect, depression, anxiety, anomie, and resentfulness (Owens, 1993).

Interestingly, guilt (being punished by one's conscience) was associated with self-confidence and not with self-deprecation. However, self-blame, which Owens (1993) defines as "inward punishment; shame; feelings of unworthiness and weakness", was related to self-deprecation. The explanation Owens (1993) proposes is that because self-confidence is aligned with issues of self-development and pro-social behavior (as opposed to self-deprecation which relates to indicators of diminished psychological and social well-being), guilt may direct individuals toward recognition of their effect on

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others and contribute to understanding and achieving healthier relationships with others. This idea compares with theories of relational psychology which construes personal conflict (ex. children with parents) as an important contributor in helping people understand the predictability of their relationships (Kaplan & Klein, 1985).

Interestingly, a person's motivation for "positive strivings" may be met by negative judgments about the self. Owens (1993) delineates four ways that negative evaluations from others may contribute to an overall sense of positive general self-esteem. The effects on individuals relate to self-efficacy theory and competence in that they function as a means for the individual to predict and control an effect on their environment (Owens, 1993; Rosenberg et al., 1995). Negative evaluations may:

1) Help people identify and rectify problem behavior.

2) Encourage people who view themselves as "worthless" to "win over" the evaluator in order to prove their worth.

3) Validate their sense of self by being with people who share the same beliefs.

4) Be gratifying because those that give the negative feedback are "associates" who are intelligent and perceptive.

Although researchers are examining the strength of positive and negative evaluations within the paradigm of global self-esteem, the literature consistently supports the idea that individuals construct an overall evaluation of themselves as a whole which is not necessarily the sum of individual areas of competence. Studies of specific self-esteem have sought to determine the strength of separate facets of the self to effect general psychological well being or global self-esteem.

Specific self-esteem

The second important framework with regard to self-esteem is "specific self-esteem." Researchers have determined that self-esteem is not unidimensional, but

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that it is situational. Specific self-esteem refers to an individual's evaluation of specific "facets" or "domains" which may be contextual (ie. family, school, work) or referential (academic, social, physical, athletic). Through identification and measuring specific self-esteem, researchers have been able to develop a greater understanding of the relationship between global self-esteem (psychological well-being), specific self-esteem (competence and effectance in a specific domain) and the significance each has in predicting specific outcomes and vice versa (Harter, 1990; Lui et al., 1992; Marsh, 1986, 1989; Owens, 1993, Rosenberg et al. 1995, Widaman et al., 1992).

Specific self-esteem has proven to be a greater predictor of behavior than global self-esteem (Liu et al., 1992; Marsh, 1990; Rosenberg et al., 1995; Widaman et al., 1992). Similarly to the bidimensional global self-esteem construct, Rosenberg et al. (1995) draws a parallel between specific self-esteem and self-efficacy stipulating that a particular self-judgment in a domain is associated with the individual's sense of competence (or self-confidence) in that area. High self-efficacy has proven to be predictive of less judgment and distress and more persistence. In addition, studies of individuals with like ability levels show that high levels of perceived competence relate to high performance ratings (Bandura, 1982). So, specific self-esteem influences both behavioral and affective outcomes.

Since psychologists and educators have shown an interest in developing individuals' global self-esteem and learning ways to facilitate people's success with desirable behavioral outcomes, specific self-esteem becomes the catalyst for understanding the pathways between these elements that are behavioral and affective.

Causal ordering of global and specific self-esteem

Rosenberg et al. (1995) describe self-esteem (both categories) as an attitude with both cognitive and affective characteristics. The cognitive aspects connote thoughts about an object and the affective represents both direction (positive or negative) and intensity of emotion. The extent which specific self-esteem has a predictive effect on behavior depends on how closely it is thought to relate to the given activity. In addition, the attitude toward the activity will determine the predictive characteristics of specific self-esteem on global self-esteem. Therefore, though competence in a particular facet is important to the level of strength that specific self-esteem has in predicting outcomes and effects on global self-esteem, it may not be the only determining component. The affective attitude is also salient.

Rosenberg et al. (1995) sought to determine if the importance or value placed on a specific facet would play a significant role in predicting causal direction. Results showed that global and specific self-esteem had reciprocal effects of a positive nature when a facet was highly valued, but the effect was more powerful in the direction of specific self-esteem leading toward global self-esteem. In contrast, there was an insignificant effect in either direction when there was low value placed on the activity (Rosenberg et al., 1995). The extent which a facet was valued was not determined by self-esteem, but valuing the facet increased the power of specific self-esteem to effect global self-esteem, therefore valuation becomes intregal to the power of specific self-

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esteem to effect psychological well-being.

Valuing has been associated with interpersonal interaction such as feedback, relatedness, and parenting styles (Blanck, Reis & Jackson, 1984; Deci and Ryan, 1987, 1991; Dweck, Davidson, Nelson & Enna, 1978; Harter, 1990; Liu et al., 1992; Ryan & Powelson, 1991; Sansone, 1986). In addition, valuing or devaluing has been related to group membership, with people demonstrating devaluation of a facet where an "in group" has the advantage, and instead preferring to be associated with people of like values and competence in order to maintain a positive global self-esteem.

The power of valuation to influence perceived competence (specific self-esteem) and global self-esteem highlights the salience of interpersonal contexts, including relationships with significant others and socialization, which determine the strength of value in a specific domain. Studies of the relationship between valuing specific domains, self-esteem and achievement have found evidence of variation in valuing by looking at the differences in sex role orientations. From birth our gender informs the implicit and explicit messages of value that significant others impress upon us. Examination of sex differences in self-esteem research most acurrately reveals the effects of valuation on causal pathways between specific and global self-esteem.

Sex differences in self-esteem research

Researchers agree that although global self-esteem measures report few sex differences, comparisons (mostly with school age populations) find that similar levels of global self-esteem for both sexes stem from the valuing of traditional sex role orientations with boys scoring higher in the categories of general, math, emotional, physical ability and physical appearance and girls scoring higher on verbal, honesty, parent relations, and same-sex peer relations (Kaplan et al., 1985; Lerner et al., 1981; Marsh, 1989; Robinson - Awana et al., 1986; Widaman et al., 1992; Williams

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& McGee, 1990). Lerner et al., report indirect evidence which supports the "differences exist in relation to stereotypical traits" (711) with males more associated with "agency" and girls related to "communion."

In Robinson-Awana et al.'s (1986) study of seventh grade girls, both boys and girls rated boys as having higher global self-esteem. The exception was for highly competent girls (as rated by Iowa achievement tests) who rated themselves significantly higher in self-esteem than boys. Possible explanations for highly competent girls rating themselves higher include a changing social climate where girls value "masculine traits" such as achievement positively so that a more androgynous sex role orientation may benefit girls' global self-esteem (Lerner et al., 1981; Robinson-Awana et al., 1986). An additional explanation relates to attributions for success which in people with low self-esteem have been oriented internally for failure and externally for success (Abramson,, 1978). Girls who are achieving may have developed a greater internal attribution for success which may in turn relate to higher global self-esteem (Lerner et al., 1981; Robinson-Awana et al., 1986).

Furthermore, while Blanck et al. (1984) propose the increased saliency of effectance for women, Sadker & Sadker (1994) report that teachers' feedback to girls is sex linked with girls being praised for cooperativeness, neatness, effort and form when boys are given feedback on intellectual ideas. Interestingly, they report that the one area in which girls are given more recognition than boys is in physical appearance. Teachers also tended to explain how to "do things" for boys, but to do things for the girls, eventually leading to girls learning to stand back, be helpless, and "play dumb." Likewise, teacher feedback revealed praise for girls' effort when they did well, but an assumption of lack of ability when they did not perform well, while boys' feedback exhibited the opposite attributions. This valuing of non-academic elements undermines girls' valuation of intellectual goals and sense of effectance as it

relates to academic achievement.

In addition to stereotypical valuation differences, in a study of sex differences of adolescents' specific self-esteem, Williams and McGee (1990) found "significant differences between adolescent boys and girls, both in the nature of their perceived strengths and in the predictors of their strengths" (335). Boys generally saw their strengths as relating to activities whereas girls' were associated with personal qualities. In addition predictive elements for boys were varied including strong attachments to parents, peers and school. Part-time work (only if less than 10 hours) and the number of physical activities they were involved in (rather than the amount of time spent on physical activity) predicted self-perceived strengths as well. Girls only had strong predictions based on parental support (less so for peers and school) and the number of physical activities (Williams & McGee, 1990).

This study adds to research which support the strength and predictive nature of parental connections through adolescence, especially for girls, by maintaining and enhancing both global self-esteem and facets related to specific self-esteem including, paradoxically, development of an independent identity (Entwistle, 1990; Harter, 1990; Hodgins, Koestner, and Duncan, 1996; Kaplan & Klein, 1985, Lackovic-Grgin et al., 1994; Ryan & Lynch, 1989). Of particular interest is Lackovic-Grgin et al.'s (1994) finding that parenting styles for girls change as they mature physically with parents displaying more control and less intimacy with maturation. In addition, they found a high correlation between self-esteem and parental intimacy (high) and control/punishment (low).

Interestingly, researchers (Brown & Gilligan, 1992; Jordan,Kaplan, Miller, Stiver, Surrey,1991; Kaplan & Klein, 1985) report that conflict between girls and their parents can be construed as a means to strengthen appropriate attachments rather than as evidence of separation. For girls in Kaplan and Klein's (1985) study, conflict was a

means of establishing autonomy within connection and led to higher self-esteem as opposed to other girls' self-reports which attribute emotional separation (and decreased global self-esteem) to a lack of honest conflict with parents which included intimate discussion and disagreement. This researcher conflicts with the traditional interpretation of adolescent "autonomy" or independence which is construed as "emotional autonomy" and defined as the breaking of ties with family. This detachment is considered an important step to adolescent identity formation in many theories of adolescent development (Muus, 1988). This model of psychological development has been criticized by "relational psychologists" and others who claim that it is based on a stereotypical male experience of independence (Harter, 1990; Jordon et al., 1991). The self-reports from Kaplan and Klein's (1985) study correlate with Ryan & Lynch's (1989) examination of the negative effects of detachment, which has they say has been miscontrued as emotional autonomy, and the contrasting age appropriate attachment to parents which is associated with parental support for independence and positive developmental processes in adolescence for both genders.

Negative effects of girls' high valuation of the relational domain

Although the research supports the idea that girls' high valuation of relational domains has positive effects on global self-esteem, there is also evidence that girls' "relational" orientation (socialization) may have negative effects on specific facets of self-esteem. For girls, the value of competence in relationships is so strong that girls may compromise their behavior in other important domains in order to achieve relationally.

The most significant sex difference in specific self-esteem appears in the facet related to physical appearance with girls placing high importance on this facet and with a large discrepancy occurring for girls between expectations for appearance and

with a large discrepancy occurring for girls between expectations for appearance and sense of adequacy in meeting those expectations. Lackovic-Grgin et al. (1994) found that as girls' bodies change with puberty they develop an increasingly negative view of themselves physically, whereas boys' development has the opposite effect. These evaluations are connected with self-esteem facets that place girls in a position of questioning the effect their physical appearance will have on their relationships while boys positively view their bodies as more capable athletically. Likewise, Kaplan & Klein (1985) report that girls' (and women's) compulsion with dieting is related to their need to gain approval from others, and notes that dieting is one example of girls' detrimental angle on agency which becomes associated with the ability to control oneself - in this case the ability to control food intake. They contend that effectance in this domain becomes a highly valued facet for young women which induces toward global self-esteem. Similarly, it represents a more general orientation toward controlling oneself, rather than expressing oneself, in order to please others and maintain relationships.

Sexuality represents a comparable facet with girls in conflict over their increasing awareness of sexual feelings on one hand, and the strong message they receive to control sexual "power" on the other. In fact, even recognition of sexual feelings may be perceived as shameful so that controlling sexual feelings altogether becomes part of maintaining relationships by giving boys the control to stimulate sexual feelings. At the same time, this lack of control may contribute to a girl's feelings of being out of relationship (Kaplan & Klein, 1985) thus negatively affecting a significant contributor to her self-esteem.

This "silencing" of girls in their adolescence is observed in the academic setting as well, with girls holding back their opinions and displaying a non-competitive, non-achievement oriented demeanor (Brown & Gilligan, 1992; Kaplan & Klein, 1985;

Jordan et al., 1991; Sadker & Sadker, 1994). Girls have a conflict between being smart and being popular. The outspoken form of communication which is associated with academic success and the individual competitiveness that is perceived as a characteristic of intellectually achieving people are in contention with more passive traits that girls consider important to the development and maintenance of connections (Kaplan & Klein, 1985) and that "boys desire and expect" (Sadker & Sadker, 101). Girls report that they would rather "stay connected" than "be good at something" (Sadker & Sadker, 1994).

It is important not to misconstrue these "sacrifices" as poor choices or morally superior decisions about relationships. In contrast with male based models of the ideal self that espouse separation and independence as the catalyst for individuation, relational theory contends that girls develop their sense of self and achieve global self-esteem in their relationship to others. Being related to another enhances one's self rather than being a threat to the self. For girls, it is a goal to be in connection - a motivation in itself - to pick up the feelings of the other and attend to the interaction between people (Jordan et al., 1991). Boys' self-motivation comes in the opposite order - independence, identity then relationship (Harter, 1990). However, girls motivation for connection can be in direct conflict with individual goals and environments such a traditional academic settings which foster individual competition.

Kaplan & Klein (1985) report a drop in global self-esteem with girls' academic success. (A conflict with the findings of Robinson-Awana.) In addition, they found that girls with higher grade point averages exhibited more depression than boys with lower or similar grade point averages and they make the assumption that individual competitive achievement is in conflict with girls' motivation toward a relational context. Unfortunately, "when girls shy away from academic success, they relinquish the very behavior - the achievement orientation - that leads to high self-esteem" (Sadker &

Sadker, 102). In contrast, academic achievement contributes to the self-esteem facet of relationship with parents because girls feel they are giving something to their parents when they do well academically (Kaplan & Klein, 1985).

In addition to the affective characteristics of self-esteem, represented here by relationships and the bestowing of values inherent in those significant connections, cognitive aspects of self-esteem are particularly relevant when examining developmental changes in cognition such as those that are apparent during adolescence.

Adolescence and self-esteem

The developmental stage of adolescence contributes particular challenges to young adults' self-esteem. Although people of all ages are motivated to develop a consistent sense of self (Deci & Ryan, 1991; Harter, 1990; Owens, 1993) adolescents' cognitive and social development present road blocks which have direct implications for self-esteem.   Adolescents are preoccupied with the need to differentiate and integrate their self-concepts. They perceive a significant conflict between their actual, ideal and possible selves (Harter, 1990). Because of their lack of ability to think abstractly, it is difficult for adolescence to conceptualize higher order abstractions. Harter (1990) explains that to an adolescent being happy, sad, and melancholy are understood as separate and conflicting reflections of the self through middle adolescence. As they develop more abstract cognitive abilities, adolescents are able to integrate a variety of traits under one category (ie. moody). However, during early (11-12 years old) and especially middle adolescence (13 -15), the conflict over opposing attributes of the self stimulates a significant amount of internal judging and preoccupation. In addition, the inability to differentiate also conduces adolescents to think that other people are equally preoccupied with understanding, evaluating and

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defining them. The sense of "imaginary audience" adds to the conflict over the "true self." This cognitive characteristic is compounded by adolescents' particular sensitivity to the abundance of feedback presented to them in a variety of social contexts which may or may not be consistent. The salience of pressure and evaluation undermine perceived control and competence which are necessary for self-esteem.

The challenge of adolescence is to achieve an integrated sense of self which remains a consistent foundation across domains (academic, friends, family etc.), in a myriad of social environments, in the present context, and as a reliable predictor for future success (Harter, 1990). So, although people of all ages are motivated by the need for a consistent sense of self, adolescents' cognitive development and dependence on feedback as evidence of effectance (Marsh, 1989), means that they have an additional challenge in meeting that need. In addition, because low global self-esteem is associated with conflict over opposing attributes and negative evaluations of specific facets which are valued, adolescents are in a unique position to be both highly focused on the motivation to achieve a consistent sense of self, and to suffer from lower self-esteem until they do. Researchers (Harter, 1990; Owens, 1993) confirm that the inability to internalize a consistent and realistic sense of self "may result in a distorted or unrealistic self-description, failure to integrate the self across multiple roles, conflict over seeming contradictions within the self, maladaptive or distressing displays of false selves, and definition of self that rely primarily on the standards and desires of others" (Harter, 354). Likewise, Harter (1990) states that low global self-esteem in adolescence is associated with psychological distress and behavioral outcomes which reflect a turn against the self (suicidal and depressive behavior) or against society (delinquency).

Research indicates important differences for girls in adolescence which relate to their development of a true self and the effects of that challenge on global self-esteem.

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Owens (1993) reports that girls' psychological distress tends to be more individualized and internally directed which may explain the higher reports of depression in adolescent girls (Harter, 1990; Sadker & Sadker, 1994) In addition, although the distress over opposing attributes is generally understood to decline in late adolescence (Marsh, 1989; O'Malley & Bachman, 1983), work focusing on girls reflects a continuation of conflict through late adolescence which is often attributed to relational reasons (Brown and Gilligan, 1992; Harter, 1990; Jordan et al., 1991; Kaplan & Klein, 1985; Sadker & Sadker, 1994).

Causal effects of global and specific self-esteem and academic achievement

Research about the causal ordering of specific and global self-esteem and outcomes reveals that high specific self-esteem and desired outcomes can predict high global self-esteem, but the reverse is not true (Rosenberg et al., 1995). However, global self-esteem has been proven to have an effect on a specific outcome indirectly by influencing specific self-esteem and/or psychological/motivational states which induce behavior (Liu et al., 1992; Rosenberg et al., 1995).

The effects of outcomes on global self-esteem and specific self-esteem reveals the importance of valuation. Similar to the relationship between specific self-esteem and global self-esteem, outcomes only effect specific self-esteem if high performance is valued in that domain. Marsh (1989) found that people's specific self-esteem varied across "dimensions" and that achievement in school had little effect on specific self-esteem in facets outside of the academic domain, though numerous studies report a positive correlation between levels of global self-esteem and academic achievement (Robinson-Awana et al., 1986; Widaman et al., 1992) which is likely due to a high valuation of academic self-esteem and a causal path leading from achievement to global self-esteem.

Conversely, Liu et al. (1992) in a study seeking to define the contributions of several variables in the causal path between global self-esteem and academic achievement found a "direct negative effect leading from academic achievement to general self-esteem net of its other effects through academic self-concept and perception of teachers' responses" (141). They propose that poorly achieving students learn to value and develop skills in other domains in response to the motivation to protect their global self-esteem. "In this way, positively valued performances will mediate the relationship between academic performance and general self-feelings" (Liu et al., 1992). In addition, Liu et al. (1992) determined an indirect path leading from global self-esteem to academic achievement through a motivational variable. Links to motivation theory are discussed later.

Studies of causal ordering provide an important framework for efforts which seek to understand and develop ways to enhance academic achievement. Rather than focusing primarily on facilitating global self-esteem with the belief that an increased global self-esteem will in and of itself improve performance, researchers and educators are likely to find more predictable effects on behavior by concentrating academic self-esteem and motivational processes. Specifically, studies relating to 1) students self-efficacy, learning strategies and competence beliefs which contribute to a positive academic self-esteem and valuation of learning (Liu et al., 1992; Marsh, 1990; Rosenberg et al., 1995) and 2) global self-esteem as it relates to motivational and psychological states associated with academic achievement and learning will provide more tangible foundations for programs and philosophy to enhance performance.

Sex and age differences in academic self-esteem

Although a drop in academic self-esteem during the junior high school years has

been reported for both sexes (Zimmerman & Martinez-Pons, 1990), there are reports of significant sex differences within the academic domain. In a 1990 survey by the American Association of University Women (AAUW) showed that girls confidence in math ability plunged from 31% in elementary school to 18% in middle school, and foreshadowed a drop in math achievement. While girls were 10 points behind the boys in their sense of overall competence in elementary school with 45% of girls responding positively to the statement that they were "good at a lot of things," girls' rate of confidence fell to only 23% by high school. Although boys confidence also dropped by high school it was to 42% (Sadker & Sadker, 1994, 79-80). Zimmerman and Martinez-Pons (1990) report that boys had higher self-efficacy in verbal and the same in math. Interestingly, though girls demonstrated a greater use of learning strategies such as self-monitoring and goal setting, they were less self-efficacious that boys. This lack of connection between girls' effort and their perceived control is alarming, due to the negative effects that this conflict has on perceived competence, motivation and self-esteem.

CONNECTIONS TO MOTIVATION THEORY

Academic self-esteem (perceived academic competence) and global self-esteem are both associated with motivational properties (Deci & Ryan, 1987; Fortier, Vallerand, and Guay, 1995; Liu et al., 1992; Marsh, 1990; Owens, 1993; Rosenberg et al., 1995; Sansone, 1986). Self-efficacy theory - whether a person believes she is competent to perform the actions needed for a specific outcome (Bandura, 1982; Zimmerman & Martinez-Pons, 1990) and contingency theories - a persons sense that outcomes are reliably linked (contingent) to her behaviors (Deci & Ryan, 1991; Pintrich & DeGroot, 1990) both contribute to the sense of competence and perceived control which are intregal to academic self-esteem.

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Patrick et al. (1993) conceptualize perceived control in the academic setting as a related bidimensional contruct referred to as strategy beliefs - what behaviors are attributed to success or failure and capacity beliefs - whether the individual can access the needed attributes. These beliefs have been an effective model for understanding perceived control in the academic domain and are related to predictable effects on behavior which relates to academic self-esteem, and emotion which relates to global self-esteem. Studies of perceived control correlate with specific self-esteem studies which relate a person's beliefs about competence to performance outcomes (Bandura & Schunk, 1981; Patrick, Skinner & Connell, 1990, 1993; Pintrich & DeGroot, 1990; Schommer, 1993).

Self-Determination Theory

In another motivational construct, self-determination theory focuses on locus of "causality", rather than "control", and examines the extent of agency, the feeling that behavior is emanating from the true self, individuals perceive as they initiate and regulate behavior. The motivational processes within self-determination theory are associated with academic self-esteem, academic motivation, school performance, and global self-esteem (Deci & Ryan 1987, 1991; Fortier et al., 1995; Ryan & Powelson, 1991). A more detailed look at relevant aspects of self-determination theory is important at this point.

Intrinsic, extrinsic, and amotivated behaviors

Self-determination theory suggests that behaviors can be either intrinsically motivated, extrinsically motivated or amotivated. Intrinsically motivated behaviors are initiated (caused) for their own pleasure and enjoyment and are void of any sense of pressure either internal or external. They are experienced as freely chosen for their

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own sake. Csikszentmihalyi (1990) describes the intrinsically motivated experience of "flow" as the state when a person is completely and freely absorbed in an activity such as playing an instrument or climbing a mountain for pure pleasure.

On the other hand, extrinsically motivated behaviors are instrumental activities, in that they are actions that are engaged in for a specifc purpose related to outcomes. Deci and Ryan (1985) differentiate four categories of extrinsically motivated (initiated and regulated) behaviors to define levels of autonomy as they exist on a continuum. The extent to which a behavior is autonomous (freely chosen) determines its place on the continuum with behaviors being more or less autonomous. Thus, though they define three specific levels of autonomy within extrinsically motivated behaviors they are not severed, but rather fluid denotations.

The least autonomous behaviors are refered to as "externally regulated" and are analogous to the generally accepted interpretation of extrinsically motivated behaviors which are perceived as pressured toward a specific outcome in order to obtain positive consequences or avoid negative ones. Praise from a parent, reprimand from a teacher, a bad grade or a prize are all examples of "controlling" external events which can conduce toward externally regulated behavior.

The next level, moving up on the continuum, is behavior that is "introjected." These behaviors are still contiguous to consequences, but the individual has come to view the consequences as her own judgment and evaluation of herself. There is still the sense of pressure (guilt would be an example), but it is perceived as self-imposed. For example, an individual practices the piano because she would feel too guilty during her lesson if she didn't.

Next on the continuum is "identified" regulation. When individuals have internalized the values or goals of the activity, even behaviors that are required and have specific outcome connections can be perceived as more autonomous because the activity has

become important to the individual. (Ex. "I will practice the piano, because learning to play well is important to me.") However, there may be conflict between several identified behaviors which result in tension concerning priorities and valuing of numerous activities. Therefore, the final step on the continuum for autonomy encompasses behaviors that are integrated. Behaviors are freely chosen and prioritized without pressure and with a sense of meaningful juxtaposition. (Ex. "I'll play some piano now and then I'll get to my homework next.")

In addition to intrinsic and extrinsic motivations, Deci & Ryan (1985) articulate the third construct of "amotivated" behaviors which correspond with "learned helplessness" (Abramson et al., 1978) and are characterized by a person's lack of perceived control. These individuals don't perceive that their behaviors are initiated or regulated from within for either autonomous or controlled reasons, but that their behaviors are "caused by forces out of their own control" (Fortier et al., 260)

Numerous studies have supported the findings that "autonomy supportive" environments, which meet the needs of autonomy, competence and relatedness (support for autonomy and informational feedback from significant others), are significantly associated with more creativity, conceptual learning, intrinsic motivation, a positive emotional tone, more trust, greater persistence, more honesty and higher self-esteem (Deci & Ryan, 1987; Fortier et al., 1995; Hodgins et al., 1996; Koestner & Zuckerman, 1993; Ryan & Powelson, 1991).

Orientations and predictions

In a related construct, Deci and Ryan (1985) propose that "people have general orientations regarding what they attend to and how they initiate and regulate their behavior" (Deci and Ryan, 9, 1987). The internal orientations toward autonomy, control and impersonal (amotivated) motivation influence the extent to which "inputs

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are perceived as autonomy supportive or controlling" (Deci and Ryan, 9, 1987). Measures such as Deci and Ryan's General Causality Orientation Scale (GCOS) measure the strength of each orientation. Koestner and Zuckerman (1993) summarize the orientations in the following way: autonomous individuals correlate with intrinsic, identified behaviors and are "hypothesized to seek out choice and to experience their behavior as self-initiated"; controlled individuals (extrinsic, introjected) "seek out controls" and "interpret their environment as controlling"; and finally people who are oriented toward impersonal are "likely to believe they cannot control their behavior and consequently cannot obtain desired outcomes" (3).

In an examination of internal orientations, Plant & Ryan (1985) distinguish the relationship of public and private self-consciousness to controlling orientations and their correlation to intrinsic motivation. Public self-consciousness, which has the evaluative and judgmental characteristics analogous to the "imaginary audience" phenomenon in adolescence, was associated with internally controlling styles and found to have a negative impact on intrinsic motivation. Private self-consciousness, specified as an awareness of internal processes, but free of evaluation and controlling elements, was not found to impact intrinsic motivation. However, Plant & Ryan (1985) suggest that "in conditions of high private self-consciousness there is evidence that the attentional focus is more on one's own motives and perceptions, thus suggesting that regulation of behavior is more highly influenced by internal values interests, and feelings" (436). Thus, for adolescents in particular, their developmental stage may add to the frequency and saliency of internally controlling styles.

Though individuals are oriented toward being more or less autonomous, the events and interpersonal contexts of an environment can contribute significantly toward inducing individuals toward more autonomous reasons for behavior. According to Deci & Ryan (1987; 1991) environments which meet the needs for autonomy,

competence, and relatedness are perceived as "autonomy supportive." Self-determination literature correlates with research associated with perceived control and self-esteem that reveals that important influence of significant others in shaping developing perceptions. Through feedback and support (contributions of time, energy, money and other resources), individuals can develop their perceived competence and autonomy. Informational feedback and limit setting, as well as mastery learning versus performance goals, are some of the specific elements which researchers have shown to conduce toward perceptions of autonomy support (Deci & Ryan, 1987; Koestner, Ryan, Bernieri & Holt, 1985; Ryan & Powelson, 1991). Furthermore, relatedness is especially important to internalizing values which in turn allows an individual to feel more autonomous in his or her actions (Deci & Ryan, 1991; Ryan & Powelson, 1991) and strengthens reciprocal effects of global and specific self-esteem.

Antecedents - motivation - outcome

Fortier et al. (1995) studied effects of the antecedents of both academic self-esteem and perceived academic self-determination on autonomous academic motivation and school performance. The study confirmed the hypotheses for a model of ordering as follows: 1) students with higher levels of academic self-esteem will demonstrate higher levels of autonomous academic motivation; 2) the more students feel self-determined in the academic context the higher they will be on the autonomy scale for motivation with regard to academic behaviors; and 3) the more students exhibit autonomous motivational reasons in the academic context the better their performance will be (in this case - school marks). "Thus, it seems that students who feel competent and self-determined in the school context develop an autonomous motivational profile toward education which in turn leads them to obtain higher school grades" (268).

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Sample statements posed to students will help clarify the distinctness of each contruct. Perceived academic competence is synonomous with academic self-esteem and measures how students feel about their competence in the academic domain. An example of high perceived competence in academics would be.. "In general, I believe I am a good student." Perceived academic self-determination reflects the extent which students feel able to choose behavior related to the educational context and would be represent by a statement such as.. "At school, I feel like I'm in prison." or "I go to school out of personal choice." Lastly, autonomous academic motivation assessed students' level of autonomy including intrinsic motivation, the continuum of autonomous reasons for behavior, and amotivated behavior. For example in the category of reasons for going to school, statement choices included.. "In order to get a more prestigious job later." (external regulation) or "Because I think that a high school education will help me better prepare for the career I have chosen." (internalized) (Fortier et al., 262-263).

The work of Fortier et al. is consistent with past research which supports joint, yet unique, effects of perceived control and autonomy as they relate to academic performance (Patrick et al., 1993). Likewise, Patrick et al. (1993) examined emotional and behavioral responses from students as they related to their perceived autonomy and control. Their findings correlate with self-esteem studies which compare specific self-esteem (perceived competence) with behavioral outcomes. In addition, their findings which associate autonomy with emotional states and pychological well-being, support the view that global self-esteem is influenced by an individual's perception of his or her autonomy. Therefore, a combination of both perceived competence (specific self-esteem) and autonomy (relating to global self-esteem) positively impacts motivation (Owens, 1993; Patrick et al., 1993).

A SMALL CORRELATION STUDY

Stimulated by an interest in both self-esteem and self-determination research and concerned about the low levels of self-esteem in adolescents, particularly in the low achieving girls like those I work with, a small study was conducted to determine if there were any correlations between general self-determination and global self-esteem.

Predictions

Since adolescents have an increased motivation toward developing a consistent sense of self and yet their cognitive abilities can induce toward a controlling orientation, it was hypothesized that self-esteem and causality orientations would be significantly correlated for adolescents, and, in addition, would reflect their evolving developmental stage. Specifically, it was hypothesized that 1) students with a greater sense of autonomy would also demonstrate higher global self-esteem; 2) there would be a correlation between low self-esteem and more controlling aspects of motivation or impersonal orientations; and 3) older students would exhibit both higher self-esteem and a stronger orientation toward autonomy. In addition, based on self-esteem research it was predicted that 4) African-American students would score higher on self-esteem and my prediction that they would also score higher on autonomous reasons for behavior. Finally, it was predicted that 5) the number of years that students attended the school would correlate with self-esteem and autonomy.

The study population

The group used in the study was comprised of 94 girls in grades 9 through 12 who attend an all girls, all boarding high school. There are no new students accepted in the grade 12. The girls who attend the school have generally not done well academically in their previous school experience for a variety of reasons. Most

students are of average ability, some have mild learning disabilities or psychological issues, and many come to the school with self reports of low self-esteem and the desire for a "second chance." The students are from all over the United States and several foreign countries. The school espouses a belief in developing self-esteem through adult support and opportunities for achievement in the various domains of academics, arts and athletics. Classes are very small (4-15) and students are encouraged, even expected, to seek extra help from the teachers in the evenings. There is an assumption made by the school that being cared about (as defined by relatedness) will result in caring about academics, people, community and other responsibilities and that this caring will be manifest in psychological well-being and greater perceived competence, and, therefore, achievement in one or more educational domain. The school's intuitive, yet unarticulated, understanding of self-esteem and it's causal paths contributes to my interest in examining empirical data which clarifies the causal ordering of self-esteem, pyschological well-being and educational achievement.

Method

Students were given two questionaires to complete during their weekly morning class meeting. The setting was very informal, but there was a time constraint of 30 minutes to complete both surveys. Four different faculty members explained and distributed the materials. The students were asked to put their names on the questionaires and to indicate how many years they had been at the school. Unfortunately, there was miscommunication concerning identification of the subject, so there was no way to compare the two surveys for the students in the 9th and 10th grades. However, the results from these classes were used for the examination of age, race, and number of years (9th only). There were 51 subjects whose materials

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could be examined in all areas, and a total of 115 cases listed that could be used partially. Participation in completing the questionaires was not an option, but students did not exhibit behavior which demonstrated opposition to the process.

The girls completed two questionaires. The first is entitled "Individual Styles Questionaire" and is the General Causality Orientation Scale (GCOS) of Deci and Ryan. The questionaire is comprised of 17 vignettes which represent the 3 subscales to measure the strength of each of the three motivational orientations (autonomy, control, impersonal). Each vignette asks the individual to say how likely (1-7) they are to respond as stated in the three responses to each given situation with 1 representing "unlikely" and 7 connoting "very likely". For example: "When you and your friend are making plans for Saturday night, it is likely that you would: a) Leave it up to your friend; he (she) probably wouldn't want to do what you suggest. b) Each make suggestions and then decide together on something that you both feel like doing. c) Talk your friend into doing what you want to do."

The second questionaire, labelled Self Description Survey, is the Rosenberg Self-Esteem Scale. The scale is a measure of global self-esteem with both self-confident and self-deprecating questions (reverse scored). Individuals are asked to indicate their level of agreement (strongly agree, agree, disagree, strongly disagree) with each of the ten statements presented. The following are two examples from the questionaire: "On the whole, I am satisfied with myself." "At times I think I am no good at all."

Results

Correlations were examined between self-esteem, autonomy, control, impersonal, individuals' overall causality orientation, and the number of years at the school, class (estimated age), and race. As predicted, autonomy was associated with higher self-

esteem, r=.34, p<.02. In contrast, impersonal was negatively correlated with self-esteem, r= -.39, p<.005. There was not a correlation between control and self-esteem, r=.04, p<.75

With regard to class, there was a positive correlation for both autonomy, r= .37, p<.001, and self-esteem, r= .27, p< .01, as predicted. Similarly, the number of years at the school was associated with self-esteem, r=28, p<.01, and causality orientation, r= .24, p< .02. There was also a correlation for the non-caucasion races and control, r= .35, p< .01. When isolated and evaluated with a T test, African-American girls, as predicted, had higher self-esteem than their Causcasion counterparts, $F (1, 61) = 7.20$, p<.01 (means = 34.91 and 30.67 respectively). Interestingly, there was not a significant difference between Caucasion and African-American mean orientation types (Mottype3: autonomy =1, control =2, impersonal =3) or means for each individual measure of motivational level (a maximum possible score of 7 in each case).

	Means			
Race	Autonomy	Control	Impersonal	Mottype3
Caucasion	5.26	4.02	3.38	1.37
African-American	5.42	4.46	3.14	1.45

Discussion

The most significant findings in this small study are those that relate to research documented earlier which stresses a significant relationship between autonomy and self-esteem. Because the 51 subjects whose two questionaires could be compared were mostly 11th and 12th graders (4 ninth graders could be used), the questions regarding associations of self-determination and self-esteem could not be examined

for the younger age groups.   However, the significant correlation between class and both self-esteem and autonomous reasons for behavior can serve as a reliable foundation for predicting that self-esteem and autonomy are mutually associated with adolescent development. It is interesting to note the relationship between the number of years at the school and more autonomous motivation orientation. Though this may be a function of age, the results also raise questions concerning the extent which the environmental context of this school conduces toward more autonomous orientations over time.   A long term study and comparisons with other schools would allow for more understanding of specific variables involved which contribute to the increase in global self-esteem and autonomous orientations over time.

The association between race and control, in addition to the higher self-esteem of African-American students, is cause for speculation that a controlling orientation may contribute to a sense of perceived competence and therefore specific self-esteem. However, the lack of correlation between race and self-esteem raises the question whether both competence and self-determination are necessary for high global self-esteem. Because "controlled" individuals experience pressure toward specific outcomes their behavior is not perceived as choiceful, and this may effect the global self-esteem for these individuals.   Examination of the variables of specific races, and subscales for specific self-esteem, global self-esteem and self-determination would inform the idea that both competence and self-determination are important for a high global self-esteem.

The strong negative correlation between an impersonal orientation and low self-esteem in addition to the the positive association between high self-esteem and autonomy orientations supports the connection between motivation orientations and self-esteem.   The significant impact of lacking a sense of both competence and choicefulness in impersonal individuals adds to support of the unique and joint effects

of these separate entities.

 None of the tenth grade questionaires were marked in terms of number of years at the school which could have provided some important information, especially in light of the fact that 50% of students in this class scored high enough to warrant an impersonal orientation score. It can be assumed that scores for these students would have shown a correlation between low self-esteem and an impersonal orientation.

Theoretical implications

 Though global self-esteem and global self-determination are significantly associated, the research on self-esteem would conduce toward an understanding of outcomes which relates these contructs to general well-being rather than specific self-esteem and self-determination in a concise domain. The later have been hypothesized to have a more direct impact on isolated behavior outcomes. In order to more fully understand the relationship between global and specific aspects of both contructs and the causal ordering between self-esteem, self-determination and outcomes, studies involving both specific and global scales are needed.

 In addition, because of the impact of group context on specific self-esteem, research would be strengthened by clearer distinctions between performance measures based on grade point average and standardized tests as well reciprocal effects of academic self-concept, context and performance (Conflicting research results exist in: Marsh, 1987, 1990; Bachman & O'Malley, 1986; Widaman et al., 1992).   For instance, does perceived academic confidence relate to school marks, but not standardized tests; and are reciprocal effects evidenced within a variety of contexts or in a consistent population?

 In addition, different motivational processes are involved in daily school work and testing, than in taking standardized test (Owens, 1993). Furthermore, standardized

tests vary in their purpose or use and, therefore, in their functional significance to the student. Clarifying the significance of outcome meausures would elucidate the predictions and implications of research.

Lastly, researchers agree that self-esteem measures neglect to determine sex differences because of sex stereotyping within the scales. Therefore, using global scales in order to determine relationships to other contructs would not effectively illustrate sex differences which may be critical to understanding reciprocal effects between general well-being, perceived competence, and behavioral outcomes.

Likewise, adolescents' fluctuation in self-esteem, and evidence of lower self-esteem during adolescence for girls, juxtaposed with the association of self-esteem and self-determination, raises possible research pathways for age and sex differences in self-determination theories as well. Of particular interest would be an examination of adolescents likely predisposition for an internally controlling orientation due to cognitive evaluations in conjunction with testing to determine if the imaginary audience viewpoint has any predictable effects on self-esteem and self-determination as cognitive abilities evolve.

Practical implications

Given the work of Fortier et al. (1995) and other studies mentioned earlier which document the causal path from academic self-esteem and self-determination toward academic achievement, and the effects that valuation of domains has on global self-esteem, teachers can justifiably concentrate efforts on developing competence and autonomy in an autonomy supportive environment in order to create a reciprocal relationship between academic self-esteem, global self-esteem, self-determination and behavior outcomes in the academic setting.

DISCUSSION

Autonomy Supportive Environments

Autonomy supportive environments conduce toward meeting the needs for self-determination through contexts and events which facilitate a sense of autonomy, competence and relatedness. Although there are structural and content components which contribute to the creation of an autonomy supportive environment, shifting from a controlling stance to a supportive one begins with a change of attitude within significant others. Teachers, in this case, can be educated about the powerful undermining effects on motivation and behavior of their pressure toward specific outcomes and exclusion of choicefulness in the classroom. Fortunately, teachers will discover that their agenda for invested student behavior and improving quality of academic work will inadvertently be met by providing autonomy support for their students.

Autonomy

Significant others can promote autonomy or agency, which Deci & Ryan (1991) define as "an inherent tendency to originate, assimilate and relate to events, and to gain a sense of effectance" (23). Support for autonomy is realized through actions which respect and promulgate the individual's perceptions and needs. In the academic setting, students often feel that their work doesn't relate to them. Any opportunity for students to pursue their own course of study and design their assessment methods will conduce toward the perception that their interests and learning styles are being respected, considered and valued. In addition, when students are allowed to self-design their work, they are more likely to adopt learning goals and become less ego involved than in situations where there are uniform assignments and evaluations which promote comparison and pressure, and therefore,

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undermine the sense of autonomy (Henderson & Dweck, 1990; Deci & Ryan, 1991).

An example from the classroom, is one self-report from a teacher which recounts significant increases in motivation and performance by giving students a choice of assessment methods for each section of work. Students choose each method eventually, but they determine the material and timing for their test, paper, or presentation. In addition, by putting the control back with the students, they not only increase their sense of agency, but learn about their effectance as well by focusing awareness on the connection between their learning and assessment - behavior and outcome. This doesn't mean teachers throw out their content, but rather they find the ways to lead students to the content, or even give them choice within a very specific content, in ways that facilitate the students' need for autonomy.

Competence

In addition to support of individual agency, autonomy supportive environments help people meet the need for competence, and therefore specific self-esteem, self-efficacy and perceived control, through adequate structure with predictable and consistent behavior-outcome contingencies that are clear to individuals. Informational feedback, which illustrates the connection between behavior and outcome, is intregal to the development of perceived competence. Focus on feedback in the past has been on postive and negative feedback, but self-determination theory clarifies the importance of expanding the feedback model to include the informational aspects. For example, positive feedback can have coercive properties equal to negative feeback (Deci & Ryan, 1987) and, for girls especially, can be perceived as pressured and controlling (Blanck et al., 1984) whereas information about specific behavior is more likely to be perceived as supportive of the individual and useful to achieving effectance.

Studies of learned helplessness and feedback confirm the importance of feedback

relative to learning and intellectual ability, and reveal that competence feedback for girls especially becomes ambiguous when too much value is placed on behavior that is irrelevant to intellectual ideas (Dweck et al., 1978). Therefore, there may be an increased benefit for girls in receiving informational feedback. Boys, interestingly, are more likely to perceive positive feedback as autonomy supportive and informational , perhaps because it is in contrast to the large percentage of negative feedback they normally receive and the fact that the feedback directed toward boys is usually associated directly with valued intellectual outcomes (Blanck et al., 1984; Dweck et al., 1978).

Since specific self-esteem is associated with behavioral outcomes, meeting the need for competence is likely to have a predictable effect on academic self-esteem and achievement. In addition, global self-esteem will be enhanced by competence feedback in areas that are highly valued by the individual. "The highest levels of self-esteem are found in individuals who are perfoming competently in domains that are important to the self. Thus programs designed to aid individual adolescents to identify as well as value areas of competence will be the most likely to foster self-esteem" (Harter, 385).

Relatedness

Studies have consistently reported the importance of interpersonal involvement in influencing autonomous reasons for motivation (Deci & Ryan,1987, 1991; Ryan & Powelson, 1991). Though intrinsic motivation does not require the involvement of a significant other, the interpersonal contexts surrounding activities has tremendous potential to undermine intrinsic motivation through controlling events and an equally strong capacity to create environments that maintain intrinsic motivation or conduce toward more autonomous reasons for behavior in a structured setting.

Perhaps most importantly involvement or relatedness, which connotes "significant others devoting psychological and material resources to a target person through interactions with him or her" (Deci & Ryan, 1991, 52), serves as the catalyst for internalizing the values of the environment.   When people come to value the goals and models of behavior in a certain environmental context, they experience the culture's expected or desired behavior as more autonomous. In both parenting and teaching research, studies show the importance of modeling by significant others (Gardner, 1992; Harter, 1990; Sizer, 1992). The sanctioning of values, illustration of strategies such as self-regulatory processes and persistence are "invisibles" that significant others can "make visible" in order to provide essential information for adolescents as they seek knowledge about behavior-outcome contingencies and ways to access of the adult world.   Since valuation is associated not only with self-determination, but also with empowering the effects of specific self-esteem to enhance global self-esteem and behavioar outcomes, relatedness acquires a prominent role in the development of optimal environments for self-esteem, self-determination, and achievement.

Autonomy supportive environments which meet the needs for autonomy, competence and relatedness are important for all people, but become a priority for adolescents and girls because of their propensity to orient toward control and the significance that relatedness has in providing feedback about competence and autonomy during a developmental stage which has a heightened motivation to meet these needs.

Controlling environments in secondary school

Studies of adolescents in secondary school have consistently reported the abundance of controlling contexts in school with students having few opportunities to

make meaningful choices about content, methods and assessment (Bacon, 1993; Csikzentmihalyi and Lawson, 1984; Coleman, 1980; Goodlad, 1984; Kohn, 1996; Muus, 1980; Shor, 1992). In addition, the reports correlate with self-esteem and motivation research which shows that the controlling environments which students contend with in the secondary school are associated with negative effects on learning such as inefficient cognitive states and debilitating boredom (Csikzentmihalyi and Lawson, 1984; Goodland, 1984). These controlling environments represent the norm for secondary school education and are dependent on the destructive characteristics which undermine autonomy such as little personal knowledge of the student, performance goals, evaluative rather than informational feedback, uniform classroom goals and assessment methods, and teacher-as-expert methodology (Coleman, 1980; Csikzentmihalyi and Lawson, 1984; Elkind, 1984; Gardner, 1992; Goodlad, 1984; Kohn, 1996; Sizer, 1992).

Though American society promulgates the value of creative, motivated scholars and citizens, teachers are pressured to produce high test standardized test score from their classrooms and to be "in control" of the students' behavior. Furthermore, many teachers are ill prepared to teach in ways that conduce toward autonomy support which requires higher order thinking skills, relevance to daily experience and more conceptual learning (Bacon, 1993; Csikszentmihalyi and Lawson, 1984; Goodlad, 1984; Kimmel and Weiner, 1985; Gardner, 1992). Goodlad (1984) reports the lack of student participation in the classroom with 70% of instruction time taken by teacher-talk. Barely 5% of instruction time was designed to initiate a student response and not even 1% of the student responses involved the need to reason or give an opinion. In addition, students' responses were rarely given direct feedback from the teacher.

Autonomy supportive environments in secondary school

Learning that conduces toward autonomy will be focused on process and genuine inquiry, with students learning about problem solving and solution designing that can then be applied to personalized goals and result in varied personal outcomes. Although quality performance is still a valued goal of learning, the ability to learn, understand, and control one's own learning process becomes recognizable as an essential foundation for learning which engenders increases in motivation, academic self-esteem, and performance quality (Ames & Archer, 1988; Bandura & Schunk, 1981; Bacon, 1993; Henderson & Dweck, 1990; Schommer, 1993; Sizer, 1992).

Sex and age differences in the autonomy supportive environment

Autonomy supportive educational environments for adolescents need to attend to adolescents' developmental need to access the adult world and experience the effects of their agency in an educational context. Juxtaposed with opportunities for authentic choice and inquiry, prompt informational feedback, and personal support from significant others are the opportunities to succeed and to fail. The pressure on teachers to assure student success results in controlling behaviors from teachers that interfere with students' opportunities to learn important effectance information through consequences. In addition, students need opportunities to understand these consequences with "real world" - to adolescents the "adult world" - events.

Adolescents are well aware when they are being bestowed with contrived responsibility and guaranteed success. When adults' fear of the ramifications of failure on adolescent global self-esteem results in overprotective care that is inappropriate for adolescents' age, adults actually undermine adolescents' effectance and, therefore, specific self-esteem and probably global self-esteem, because the adolescent is denied "adult" challenges which would be highly valued. Studies in schools have

shown that adolescents' reported a positive difference in their learning profile when they 1) had adult responsibilities; 2) perceived opportunities to make important decisions; 3) could do things themselves instead of observing; and 4) had the freedom to develop their own ideas (Sprinthall and Collins, 1988).

The increased saliency of autonomy for adolescents is adjoined by the increase need for effectance experience for girls. The epidemic of girls "silencing" as represented by their expertise at "not knowing" and "not doing", should serve as a directive for secondary school educators to promote autonomy supportive environments when girls are involved. In addition, the valuing of the academic domain must be induced through the interpersonal contexts which allow girls to adopt this value which is so important to their future both in terms of their sense of competence and in regard to their overall psychological well-being.

Finally, adolescent cognitive stage promotes internally controlling styles, and must be confronted through development of self-awareness within valued domains. Competence feedback and meta-cognitive strategies will help within the academic domain, but adolescents would benefit from implicit exploration of the imaginary audience concept across domains as well. Discussions and activities that increase self-awareness concerning relationships, physical activities and appearance will diminish the powerful undermining effects of a controlling orientation in these domains which are associated with specific and global self-esteem in adolescents.

CONCLUSION

The effects on specific self-esteem, global self-esteem and performance will all be stimulated in a positive direction by creating autonomy supportive environments. In addition, part of the informational feedback and support that secondary students need must involve help in identifying and pursuing areas of value to them (Harter, 1990) and cultivativing educational values through interpersonal relationships so education can be a domain that positively enhances both specific and global self-esteem.

In order for autonomy supportive environments to become the norm in education, teachers need training in how to give feedback and provide meaningful choices in the classroom. In addition, new measures of academic performance need to be developed which test for mastery and conceptual thinking in a variety of academic domains, rather than evaluating limited content objectives as evidence of scholarship ability and knowledge. Finally, autonomy supportive environments are all but impossible to facilitate with classrooms of 25-35 students, so class size must be limited if educators want to play an integral role in developing learners and well adjusted human beings that will graduate to become motivated, creative and emotionally healthy adults.

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