ABSTRACT

Title of Dissertation:	THE ROLE OF ATTACHMENT IN A SOCIAL COGNITIVE MODEL OF SOCIAL DOMAIN SATISFACTION IN COLLEGE STUDENTS
	Matthew Martin Jezzi, Doctor of Philosophy, 2016
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The study examined a modified social cognitive model of domain satisfaction (Lent, 2004). In addition to social cognitive variables and trait positive affect, the model included two aspects of adult attachment, attachment anxiety and avoidance. The study extended recent research on well-being and satisfaction in academic, work, and social domains. The adjusted model was tested in a sample of 454 college students, in order to determine the role of adult attachment variables in explaining social satisfaction, above and beyond the direct and indirect effects of trait positive affect. Confirmatory factor analysis found support for 8 correlated factors in the modified model: social domain satisfaction, positive affect, attachment avoidance, attachment anxiety, social support, social self-efficacy, social outcome expectations, and social goal progress. Three alternative structural models were tested to account for the ways in which attachment anxiety and attachment avoidance might relate to social satisfaction. Results of model

testing provided support for a model in which attachment avoidance produced only an indirect path to social satisfaction via self-efficacy and social support. Positive affect, avoidance, social support, social self-efficacy, and goal progress each produced significant direct or indirect paths to social domain satisfaction, though attachment anxiety and social outcome expectations did not contribute to the predictive model. Implications of the findings regarding the modified social cognitive model of social domain satisfaction were discussed.

THE ROLE OF ATTACHMENT IN A SOCIAL COGNITIVE MODEL OF SOCIAL
DOMAIN SATISFACTION IN COLLEGE STUDENTS

by

Matthew Martin Jezzi

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Advisory Committee:
Professor Robert W. Lent, Chair
Paul Gold, Ph.D.
Clara E. Hill, Ph.D.
Mary Ann Hoffman, Ph.D.
Matthew J. Miller, Ph.D.

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[I]t rests within himself to choose; that the only question which matters is, 'Am I living in a way which is deeply satisfying to me?' This I think is perhaps *the* most important question for the creative individual (Carl Rogers, 1961, p. 119)

Chapter 1: Introduction to the Problem

Imagine two different college students. The first student enters college with a backlog of successful social and academic experiences. She feels positively, most of the time. Moreover, she seeks new relationships and she welcomes bids for friendship from others. As she develops through her college years, she feels a positive sense of belonging with a group of friends; she has begun to secure close relationships. During times of distress or loneliness, she has people in her life to whom she can turn for solace. She feels confident that she will be able to develop and maintain the close relationships that she desires. Overall, she feels happy about her social life, and she judges her social relationships to be fulfilling.

By contrast, the second student arrives at college with pessimistic expectations for his prospects of making friends in the new college milieu. He feels nervous when other new students approach him, and as a strategy to avoid awkward social interactions, he unwittingly shuns their gestures for friendly engagement. He feels ambivalent about forming new social relationships, and he anticipates that others will not like him if he tries. When he reflects on his social life, he feels despondent or irritable, and others tend to notice this. He possesses scant memories of successful social interactions from the past, and he judges that he has few people for support, especially when he feels lonely. This second student interprets himself to be a "social klutz", without the skills or knowledge to form friendships or a sense of community. As he develops throughout

college, he feels negatively about his social life, and he evaluates his college social experiences as empty and dissatisfying (cf. Seligman, 1998).

As depicted in the descriptions of these two students, college represents a unique developmental period—a span involving significant challenges and opportunities relevant to student well-being and life satisfaction. Well-being and satisfaction, both global and in the social domain, are concepts representative of recent trends in the psychological literature.

Positive Functioning, **Well-Being**, **and Social Satisfaction among College Students**

In recent years, psychology has experienced an upsurge in the study of positive constructs and optimal human functioning (Seligman, 2000, 2002; Sheldon & King, 2001). Within counseling psychology, however, a focus on strength-based concepts dates back to the early history of the profession (Gelso & Fassinger, 1992). Yet in response to the recent mission of other mainstream psychologists (see Seligman, 2000), counseling psychologists have redoubled their research efforts to focus on human strengths and positive outcomes (Lopez et al., 2006).

Subjective well-being and domain-specific satisfaction exemplify growing areas of strength-focused research that emerged from social and personality psychology literatures and were merged into lines of research by counseling psychologists (Lent, 2004). Specifically, well-being research, conceptualized as satisfaction in different life domains such as work, academics, and social life, have generated conceptual models and promising lines of inquiry (Lent, 2004; Lent & Brown, 2006, 2008; Lent et al, 2005). Social domain satisfaction per se, however, has received relatively little attention in counseling psychology research.

Extant research findings have implied that satisfaction in the social domain is an important topic of inquiry. For example, a classic study by Campbell, Converse, and Rodgers (1976) found social relationships (e.g., family, marriage, and friendships) to be the most important domain contributing to people's life satisfaction. More recently, Diener and Seligman's (2002) study of "very happy" people identified social activity to be one of their key attributes. Indeed, very happy people tend to be very social. Findings revealed that very happy people spent the most amount of time with friends, family, and romantic partners. By contrast, relative to their less happy peers, these happy individuals spent the least amount of time alone. In addition, very happy people reported the strongest social and romantic relationships (Diener & Seligman, 2002).

In another study conducted with an experience-sampling methodology, findings demonstrated that individuals' short-term fluctuations in extraversion highly corresponded with their reports of sudden changes in positive emotions (also termed positive affect). Moreover, the positive association was found for every participant in the study (Fleeson, Malonos, & Achille, 2002). Similarly, experimental findings supported this extraversion-to-positive affect link: Participants who were randomly assigned to "act extroverted" during a group discussion—in contrast to another condition in which participants were instructed to "act introverted"—reported significantly stronger positive emotions than introverted-acting participants (Fleeson et al., 2002).

In addition to a strength-based focus, the profession of counseling psychology has traditionally emphasized the study of late adolescent and adult populations (Gelso & Fretz, 1992). College is an important social context for a large percentage of late adolescents, and the social aspects of college life compose an important component of

overall college student adjustment (Diener & Diener-McGavran, 2008; Reis & Gable, 2003).

Samples of college students have reported the importance of their social lives. In one study, for example, 96% of college student participants rated the social domain as moderately to highly important to their lives, and 98% rated their social goals as moderately to very important (Lent et al., 2005). In addition, researchers have found the social adjustment of college students to be an important dimension in academic persistence and college retention (Gerdes & Mallinckrodt, 1994; Mallinckrodt, 1988).

The literature on college persistence, retention, and commitment to an academic institution indicates that, above and beyond academic adjustment, students' social adjustment functions as a critical antecedent to these key outcomes (Gerdes & Mallinckrodt, 1994). College social adjustment entails forming social networks, becoming a part of the college milieu, and navigating the lack of social oversight by parents. When novice college students do not adequately master these social elements, they may experience loneliness and feel homesick—the most commonly reported crises for freshman (Bohnert, Aikins, & Edidin, 2007; Houston, 1971; Rich & Scovel, 1987). Social support networks are important for global college adjustment (Hays & Oxley, 1986), and a lack of social support predicts attrition of both black and white students (Mallinckrodt, 1988).

In sum, findings from multiple studies point to peoples' social lives as an important aspect of their well-being, especially during the college years. Happy people socialize frequently, and people who socialize actively report greater happiness. Given the importance of college adjustment as a developmental backdrop of emerging

adulthood for college students, counseling psychologists—with their tradition of work in university departments and counseling centers—have been positioned well to address social domain satisfaction among college students (Gelso & Fretz, 1992; 2001).

Social Satisfaction: Definition

Social domain satisfaction represents a type of domain satisfaction—a correlate of life satisfaction in the subjective well-being literature. For the purpose of the current study, social satisfaction refers to an aspect of well-being and a self-evaluation of one's experience and functioning in the social world, specifically, the degree to which one is happy with one's social life. The concept of social satisfaction represents an indicator of positive functioning, which fits within counseling psychology's tradition of studying human strengths and adaptive functioning (Gelso & Fassinger, 1992; Lent, 2004).

Well-Being

Subjective well-being, a broader concept than satisfaction, refers to overall happiness, the experience of positive emotions, and the relative absence of negative emotions (Eid & Larsen, 2008; Kahneman, Diener, & Schwartz, 1999). A spate of research on subjective well-being (SWB) has emerged during the last forty years, particularly in the social and personality psychology literatures (Diener, Oishi, & Lucas, 2009; Diener, Suh, Lucas, & Smith, 1999). In contrast to subjective well-being, a second broad conceptualization of well-being, psychological well-being (PWB), defines well-being less in terms of personal happiness than in terms of having a sense of purpose, meaning, or self-actualization (Ryan & Deci, 2002).

The two conceptualizations of well-being, SWB and PWB, have diverged into two separate research paradigms. In the subjective well-being paradigm, researchers

have identified three components, or indicators, of SWB: life satisfaction, positive affect, and negative affect (Diener, 1984). Conceptually, subjective well-being refers to people's global evaluations of their emotions and moods, as well as cognitive judgments about their satisfaction with life conditions (Diener et al., 2009). The experience of SWB is indicated by strong and frequent positive emotions, weak and infrequent negative emotions, and high satisfaction with life as a whole (Diener et al., 2009). Well-being research following this conceptualization has received the most attention, and subjective well-being research has generated inquiry on closely related topics and disciplines beyond social and personality psychology (Ryff, 1989). These evaluations involve affective reactions to life events, as well as both positive and negative emotions, moods, and satisfaction judgments (Diener et al., 2009).

Social Cognitive Theory (SCT) and Well-Being

Stemming from the body of research on SWB, Lent's (2004) unifying social cognitive theory of normative well-being and psychosocial adjustment has generated a number of studies (e.g., Lent, Singley et al., 2005; Singley, Lent, & Sheu, 2010). The theory posits that social cognitive variables predict domain-specific and overall life satisfaction, above and beyond personality or other dispositional characteristics. These social cognitive predictors include self-efficacy beliefs, outcome expectations, environmental supports and barriers, and progress toward meaningful goals. Recent tests of the social cognitive well-being model have focused on predicting life satisfaction and satisfaction specifically in academic and work domains (Lent, 2004; Lent & Brown, 2006, 2008).

Empirical support for the SCT model of well-being. Empirical evidence in

support of Lent's social cognitive theory of satisfaction has been found across multiple

life domains, such as academic satisfaction, work satisfaction, and life satisfaction in

university and work settings (Duffy & Lent, 2009; Lent & Brown, 2006; Lent, Nota et al.,

2011; Lent et al., 2005; Lent, Singley, Sheu, Schmidt, & Schmidt, 2007; Ojeda, Flores, &

Navarro, 2011; Singley, Lent, & Sheu, 2010; Verbruggen & Sels, 2010). Much of this

research has been conducted with college student populations. Lent's (2004) social

cognitive theory (SCT) also accounts for the broader concept of adjustment, which

includes satisfaction. College adjustment, or adjustment in other environments and

domains, involves additional indices of functioning such as the absence of distress. To

date, most of the research on the theory has focused on the positive indicators of well-

being (e.g., domain and life satisfaction). In particular, recent studies have demonstrated

support for the normative well-being model in its prediction of academic satisfaction

(Lent et al., 2005; Lent et al., 2007; Ojeda et al., 2011) and social domain satisfaction in

college students (Hui, Lent, & Miller, 2013; Lent et al., 2005, Study 1). While much of

the research has been cross-sectional, a few studies have employed longitudinal designs

(e.g., Singley et al., 2010) and broader conceptions of well-being, for example, including

academic satisfaction and academic stress (Lent, Taveira, & Lobo, 2012; Lent, Taveira,

Sheu, & Singley, 2009).

The social cognitive model of satisfaction and adjustment includes social

cognitive variables (Lent, 2004) as well as dispositional variables (e.g., affective traits) as

predictors of domain and life satisfaction. Various dispositional variables have been

examined, such as trait positive affectivity, negative affectivity, and extraversion (Lent et

al., 2005; Singley et al., 2010). By contrast, researchers have given little attention to attachment security as a dispositional variable in SCT satisfaction models.

Attachment Security and Domain Satisfaction

Within the adjustment and well-being literatures, researchers have made previous attempts to incorporate adult attachment theory in the study of psychosocial adjustment. Attachment theory was developed to explain the emotional bond formed between an infant and his or her primary caregiver (Cassidy & Shaver, 2008). Bowlby (1969/1982) theorized that infants form powerful emotional attachments to their mothers and that infants engage in organized systems of attachment-related behaviors to increase proximity to the mother during times of threat. The attachment bond is biologically adaptive for the infant, serving as (a) a safe haven during times of danger and (b) a secure base from which to explore the environment.

As a result of repeated attachment-related interactions, young children develop internal working models of their primary caregivers as reliable and sensitive, inconsistently sensitive, or dismissive and rejecting (Bowlby, 1969/1982). Ainsworth's Strange-Situation paradigm revealed three discrete categories reflecting the child's quality of attachment to his or her primary caregivers: secure, insecure-anxious (also called anxious/ambivalent), and insecure-avoidant (also called anxious-avoidant). These attachment categories were replicated in observational field research (see Ainsworth, Blehar, Waters, & Wall, 1978). These three categories of attachment security correspond to the child's internal working models (IWMs) of the three types of caregiver responses (i.e., consistent, inconsistent, or rejecting) to the child's attachment-related behaviors (e.g., proximity-seeking). Bowlby explained that attachment security influences multiple

life outcomes across the life span (Bowlby, 1979). Over time, children's internal

working models of attachment figures extend to family members, peers, teachers, and

other important figures (Ainsworth, 1989).

In more recent years, attachment theory has been extended to the attachments of

adult relationships. Corresponding to the attachment categories originally identified in

infants (see Ainsworth et al., 1978; Main, 1990), adult attachment theory has revealed

similar categories of adult attachment security: secure, preoccupied, and avoidant (Hazen

& Shaver, 1987; 1994). In contrast to the categorical perspective of attachment security

from the developmental psychology literature, interpersonal relationship research from

social psychology has conceptualized adult attachment security as a continuous variable.

Brennan, Clark, and Shaver's (1998) factor-analysis demonstrated that adult attachment

security includes two correlated dimensions, attachment anxiety and attachment

avoidance (see Mattanah, Govern, & Lopez, 2011). Hazen and Shaver (1987, 1994)

explained the role of adult attachment security in romantic relationships, along with the

predicted differences in relationship behaviors between romantic partners high in

attachment anxiety and partners high in attachment avoidance. According to Bowlby's

(1969/1982) theory, individual differences in attachment security will extend to the

formation and quality of later relationships. Attachment researchers have since explained

how IWMs and individual differences in attachment security emerge during late

adolescence and adulthood (Freely & Davis, 1997). Recent meta-analytic findings

revealed small-to-medium effect sizes between attachment security and numerous

domains of college student adjustment (Mattanah et al., 2011).

Adult attachment been studied within two distinct traditions. In the first tradition, developmental and clinical psychologists have focused on early childhood attachment and its development, whether observed directly in child samples or classified indirectly via retrospective interviews of "current adult mental representations of childhood attachment relationships" in adult samples (Mikulincer & Shaver, 2007, p. 27). The second tradition, associated with social psychology, has focused on assessing and exploring individual differences in adult attachment characteristics in adolescent and adult samples. The methodological approaches of both traditions have produced comparable effect sizes among theoretically relevant predictors and outcomes (Mikulincer & Shaver, 2007). Unfortunately, the adult attachment classifications generated by retrospective interview methods of childhood attachment (e.g., Adult Attachment Interview; AAI), favored by developmental psychologists, and those generated by self-report methods of adolescent and adult attachment, favored by social psychologists, generally do not intercorrelate highly (see review by Mikulincer & Shaver, 2007).

Adult attachment may be conceptualized and assessed either in terms of discrete categories or as a set of correlated, continuous dimensions. Research has tended to support the view of adult attachment as consisting of continuous dimensions (Lopez, 2009), and Mikulincer and Shaver (2007) have recommended that individual differences in adult attachment be conceptualized as two dimensions of anxiety and avoidance. The current study follows this recommendation, where the anxiety dimension represents a person's perceived threat of rejection and the avoidance dimension represents the extent

to which a person is willing to engage a relationship partner as a safe haven and secure base from which to explore the environment (Mikulincer & Shaver, 2007).

Research on attachment and social cognitive variables. Recently, Wright and Perrone (2008, 2010) proposed and tested a model combining features of attachment theory and social cognitive career theory (SCCT; Lent & Brown, 2006, 2008; Lent, Brown, & Hackett, 1994; Lent, Brown, & Hackett, 2000). Wright and Perrone (2010) adapted Bowlby's explanation of IWMs developed during early childhood, arguing that current adult IWMs develop from repeated attachment-related experiences in work and other adult life domains. In an empirical study of their adapted conceptualization of adult attachment, Wright and Perrone (2010) found a significant positive relationship between attachment style and life satisfaction among university students. Moreover, results supported their hypodissertation that the attachment-to-life satisfaction relationship was partially mediated by social self-efficacy and career-decision self-efficacy. Other researchers demonstrated support for a model of attachment security, loneliness, and depression among college freshman (Wei, Russell, & Zakalik, 2005). In their longitudinal study, Wei et al. found that the relation of attachment anxiety to subsequent depression was mediated by social self-efficacy and loneliness. However, the relation of attachment avoidance to subsequent depression was mediated by comfort with self-disclosure and loneliness.

Purpose of the Study

As described previously, Lent (2004) proposed an integrative social cognitive model of domain and life satisfaction to account for the complex interplay of dispositional, cognitive, behavioral, and environmental variables. Several tests of the

theory have been conducted in the contexts of life satisfaction and satisfaction in academic (Lent & Brown, 2008; Lent et al., 2005; Singley, Lent, & Sheu, 2010) and work (Lent & Brown, 2008) domains. Although initial tests of the social cognitive model in the context of social domain satisfaction have provided promising results (Hui, Lent, & Miller, 2013; Lent et al., 2005, Study 1), additional theory-based research on the antecedents of social well-being is needed, particularly during the formative college years.

The current study builds on preliminary research incorporating attachment security and social cognitive predictors of well-being (Wright & Perrone, 2010). Specifically, it examines attachment security as a key dispositional element within the social cognitive well-being model. Whereas Wright and Perrone had examined attachment style in relation to two aspects of self-efficacy and overall life satisfaction, the current study will include additional social cognitive predictors (e.g., goal progress, social support) and focus on the prediction of social domain as well as overall life satisfaction.

Given the developmental, affective, cognitive, and motivational aspects of adult attachment, assessing the role of attachment security among college students could make an important contribution to the literature. In addition, attachment theory emphasizes the importance of interpersonal relationships for successful life outcomes. Attachment security—referred to as attachment security, attachment style, or attachment patterns interchangeably—is seen as relevant to the social, cognitive, and goal-oriented aspects of Lent's normative theory of satisfaction and well-being. In addition, attachment security primarily develops from environmental and experiential-interpersonal influences during

infancy and early childhood. Once a core attachment pattern (i.e., categorical attachment style, or differing levels of attachment avoidance and anxiety), is established, however, it becomes increasingly stable across the lifespan (Mikulincer & Shaver, 2007). Moreover, this attachment style involves a predictable pattern of profound emotions and motives that activate during interpersonal interactions, across close relationships. Although other dispositional variables (e.g., positive affect, extraversion) have been linked to domain and life satisfaction, adult attachment security should, theoretically, also be relevant to these outcomes. Hence, attachment security will be studied as a dispositional variable that may function along with social cognitive and environmental variables in predicting social domain satisfaction. In sum, the purpose of the current study is to incorporate attachment security within a test of Lent's (2004) model of domain and life satisfaction.

Chapter 2: Literature Review

In this chapter, I provide a review of domain-specific well-being in social life, or social domain, satisfaction. First, I overview the related, and at times, overlapping concepts in the well-being literature, including adjustment and subjective well-being. Next, I review Lent's (2004) social cognitive theory of well-being, along with research extended specifically to satisfaction in the social domain. In the third section, I present a review of the well-being literature that accounts for the criterion of social domain satisfaction. In the fourth section, I review attachment theory and its relevance to the social domain among college students. In the final section, I present a modified SCT model to explain the interrelations of several sources (e.g., social, cognitive, emotional, environmental) of social satisfaction.

Well-Being and Adjustment

The concept of well-being is closely linked to other psychological concepts of positive functioning, such as psychological or psychosocial adjustment. In the development of social cognitive theory of well-being and adjustment, Lent (2004) described *well-being*, *mental health*, *positive adaptation*, and *positive adjustment* as interchangeable terms. That is, all four terms reflect overlapping aspects of positive functioning. For example, well-being pertains to a positive form of mental health (Keyes, 2009; Keyes, 2007), as well as a specific indicator of the affective and cognitive aspects of positive adaptation (Lent, 2004). Positive adaptation is a broader term than well-being or domain-specific satisfaction, and it encompasses additional qualities, such as behavioral indicators of one's level of functioning or performance in salient life domains, environments, and tasks (e.g., developing new friendships at college; Lent, 2004). The

concept of adjustment often includes negative indicators such as stress, loneliness, or depression, with adjustment implied as the absence (or low levels) of such conditions (Baker & Siryk, 1984; Lent, 2004).

College Social Adjustment. The college student development literature has studied college adjustment with a wide array of concepts reflecting effective adjustment. A recent meta-analysis created five overarching domains of college adjustment: academic motivation and competence, interpersonal competencies and relational satisfaction, stressful affects and high-risk behaviors, self-worth, and developmental advances including aspects of identity development as well as separating and individuating from parents (Mattanah et al., 2011). The literature has focused on the developmental tasks inherent in the college transition and college as a stage of "emerging adulthood" (Mattanah et al., 2011).

Concepts in the social domain of college adjustment include a broad list of social cognitive variables, traits, or interpersonal deficits or symptoms (with low scores on the latter indicating better social adjustment). In addition, the adjustment literature has included social variables as one of several domains or aspects of effective adjustment to college. Several common variables of social adjustment and relational satisfaction include social anxiety, shyness, extraversion, empathy, fear of negative social evaluation, social competence, social support, loneliness, social identity, and social avoidance. The approach of the current study is to follow a line of research on well-being and satisfaction (Lent, 2004), especially well-being in the social domain, in which social domain satisfaction has been conceptualized as an indicator of social adjustment.

Two Approaches to the Study of Well-Being

Well-being has traditionally been studied from two distinct perspectives (Ryan & Deci, 2001). Stemming from ancient Greek thinkers, these approaches include hedonic and eudaimonic conceptions of well-being. In the hedonic tradition, well-being was equated with happiness, not only the hedonistic pursuit of physical appetites but also the preferences and pleasures of the mind (Kubovy, 1999). In the eudaimonic tradition, well-being equated originally with the Aristotelian view of developing and expressing one's virtues. By engaging in worthy pursuits rather than physical desires or happiness more broadly, one realizes his or her "daemon", or true human nature. Later, this view evolved to emphasize well-being as optimal living, self-realization, and human growth (Ryan & Deci, 2001).

Hedonic View of Subjective Well-Being. The preponderance of well-being research in psychology has followed the hedonic perspective. In the hedonic view, well-being involves "feeling good" or emotional happiness (Diener et al., 2003), which researchers have recast as subjective well-being (SWB) and its emotional and cognitive components (Diener et al, 1999). Within the literature, Diener's tripartite model of SWB has garnered the most attention. The tripartite model includes positive affectivity and negative affectivity as the empirically distinct emotional components, and life satisfaction serving as one's cognitive appraisal of hedonic well-being (Diener, 1984). Diener and colleagues' (1985) Satisfaction With Life Scale (SWLS) has served as the most common operational measurement of life satisfaction as the cognitive component of SWB (Diener, Emmons, Larsen, & Griffen, 1985). The Positive Affect and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) has served as the primary instrument used to measure the affective components of hedonic well-being, positive affectivity and

negative affectivity (Singley, 2005). This operational definition of SWB holds that higher levels of positive affect, low levels or absence of negative affect, and judgments of one's life as globally satisfying jointly indicate happiness.

Eudaimonic View of Psychological Well-Being. In contrast to the hedonic view, the eudaimonic perspective equates well-being with the good life, one in which human beings can exercise control over their fates by living virtuously (McMahon, 2008). The concept of eudaimonia has been defined as a state reaching "the highest good" and involving "a flourishing life" (McMahon, 2008, p. 82).

The eudaimonic approach is illustrated in the following quote by Viktor Frankl:

To the European, it is a characteristic of the American culture that, again and again, one is commanded and ordered to 'be happy.' But happiness cannot be pursued; it must ensue. One must have a reason to 'be happy.' Once the reason is found, however, one becomes happy automatically. As we see, a human being is not one in pursuit of happiness but rather in search of a reason to become happy, last but not least, through actualizing the potential meaning inherent and dormant in a given situation. (1959/1984, p. 40).

Common definitions from the psychological literature have referred to eudaimonic well-being as a life with meaning, personal expressiveness, purpose, or self-actualization (Lent & Brown, 2008; Ryan & Deci, 2001; Waterman, 1993). Within psychology, the eudaimonic tradition is associated with psychological well-being (PWB; Ryff & Singer, 1998). Measures of the hedonic and eudaimonic approaches have been tested empirically, and factor analytic studies have found that measures aligned with these approaches compose two distinct but related latent dimensions (e.g., McGregor &

Little, 1998). For a more detailed review of the literature on PWB, see Ryan and Deci (2001).

In sum, hedonic and eudaimonic perspectives involve broad conceptualizations of well-being that have diverged into separate lines of research. The social cognitive model employed in the current study represents an effort to integrate features of both perspectives, for example, by including affect and satisfaction variables from the hedonic approach and goal or purpose mechanisms from the eudaimonic approach, and offering hypotheses about how they function together (Lent, 2004).

Top-Down and Bottom-up Perspectives on SWB

There are two prevailing views on the origins and stability of SWB. According to the top-down (or behavior-genetic, trait, or temperament) view of well-being, happiness is a genetically derived trait (Lykken & Tellegen, 1996). Twin studies of personality traits and affectivity have consistently supported the behavior-genetic view of personality and well-being (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990). Results from Tellegen et al.'s (1988) study of twins attributed 40% of the variance in positive affect and 55% of the variance in negative affect to genetic influences. Lykken and Tellegen (1996) claimed that up to 80% of variations in happiness could be accounted for by heritability—a compelling assertion given the stability of personality traits, positive emotionality, and negative emotionality. The behavior-genetic perspective argues that well-being levels revolve around a genetically determined *set-point*, which varies among individuals (Diener & Lucas, 1999). Hence, life events might influence people's emotions in the short-term, but their affective experience typically returns to a baseline or set emotional level.

Whereas research on SWB has often shown happiness to be stable over time, variations in individuals' well-being can and frequently do occur (Heller, Watson, & Ilies, 2004; Heller, Watson, & Ilies, 2006), with situational or environmental conditions having the potential to influence SWB. That is, situational events tend to shift one's positive and negative emotions, at least in the short term (Diener & Lucas, 1999; Heller et al., 2004). Moreover, these situational events have typically shown more influence on positive affect (Tellegen et al., 1988). For example, positive affect was found to be more amenable to situational factors like social and physical activity than was negative affect (Watson, 2000; Watson & Clark 1997a). By contrast,

research has shown that some life events, particularly specific negative events, may influence long-term happiness levels (e.g., death of spouse, job loss, divorce, chronic illness; Diener, 2008; Duffy & Gottfredson, 2008; Lu, 1999; Suh, Diener, & Fujita, 1996). This situational perspective on subjective well-being has been referred to as the bottom-up approach (Lent, 2004).

Global versus Domain Satisfaction

In SWB and satisfaction studies, *satisfaction* can be measured at differing levels of specificity ranging, for example, from global (i.e., overall life satisfaction) to specific life domains (e.g., work, academic, romantic, and social) or life roles (e.g., employee, student, or friend; Diener et al., 1999; Lent, 2004). Meta-analytic findings have shown that global life satisfaction measures correlate moderately-to-strongly with domain satisfaction measures, such as job satisfaction ($\rho = .44$), marital satisfaction ($\rho = .51$), health satisfaction ($\rho = .35$), and social satisfaction ($\rho = .43$; Heller et al., 2004). However, meta-analytic findings have demonstrated the associations between different

domain satisfactions to be relatively small. For example, the meta-analytic association

between job satisfaction and marital satisfaction has been reported as $\rho = .16$ (Heller et

al., 2004). In a study of 177 college students, Lent et al. (2005, Study 1) found a small

correlation between social domain satisfaction and academic-domain satisfaction ($r =$

.25).

The strong associations between different domain satisfactions and life

satisfaction but weaker cross-domain associations may be seen as providing support for

bottom-up approaches to SWB. That is, domain satisfaction may be seen as contributing

to overall life satisfaction. On the other hand, research by Heller and colleagues and

others has found support for both top-down and bottom-up approaches to SWB (Lent,

2004; Heller et al., 2004; Heller et al., 2006), and such a dual influence approach to SWB

has been incorporated within Lent's (2004) model of domain satisfaction and subjective

well-being, which will be described, below. This model provides the overarching

theoretical framework for the current study.

Social Cognitive Theory and Well-Being

Lent's (2004) normative model of well-being and satisfaction posits the prediction

of global life satisfaction and domain-specific satisfaction by both top-down and bottom-

up elements, and both hedonic and eudaimonic perspectives, including (a) affective

variables and personality traits, (b) social cognitive and goal mechanisms, and (c)

environmental supports and barriers (Lent, 2004).

Affective States and Personality traits. Personality traits such as extraversion,

neuroticism, optimism, and self-esteem have been consistently associated with life

satisfaction and satisfaction in different life domains (Eid & Larsen, 2008). These

associations have been demonstrated in testing the social cognitive model of domain and life satisfaction as well (e.g., Lent et al., 2005, Study 1, Study 2; Lent et al., 2009; Singley et al., 2010). Social satisfaction, in particular, has been found to yield small to moderate correlations with several Big 5 traits (ρ = -.22, Neuroticism; ρ = .38, Agreeableness; Heller et al., 2004).

Social cognitive variables. Cognitive, behavioral, and social variables are other key components of the normative model. Several cognitive and contextual variables, included in Bandura's larger social cognitive theory, were later adapted in the social cognitive model of well-being and satisfaction. In both the broader theory, as well as the normative satisfaction model, these variables involve self-efficacy beliefs, outcome expectations, goal mechanisms, and environmental supports and resources (Lent, 2004). These variables are reviewed below.

Self-efficacy. Self-efficacy beliefs involve one's judgments about one's own capabilities to successfully perform tasks, behaviors, or a series of actions in specific life domains. According to self-efficacy theory, an aspect of the broader social cognitive theory, people's beliefs about their capabilities play a critical role in performance-related behaviors. Moreover, people's judgments about their performance abilities largely determine the degree to which they begin, commit to, and persist in various performance-related activities (Bandura, 1977, 1997). These self-evaluations also address people's abilities to regulate their affect and to cope with challenging or adverse performance conditions. Also, self-efficacy judgments are assumed to affect people's capacity for psychological adjustment or dysfunction in different life domains. Self-efficacy expectations influence the effectiveness of therapeutic interventions as well (Maddux,

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1995). Research has demonstrated the role of self-efficacy beliefs in predicting adjustment-related outcomes. For example, low self-efficacy expectations play an important role in depression (Maddux & Meier, 1995) and social or interpersonal anxiety (Leary & Atherton, 1986; Maddux, Norton, & Leary, 1988).

Social self-efficacy, the aspect of self-efficacy that is of interest to the current study, refers to confidence in one's abilities to develop and maintain social relationships (Anderson & Betz, 2001). Significant associations have been found between social self-efficacy and academic performance in college freshman (Ferrari & Parker, 1992), career decision self-efficacy (Niles & Sowa, 1992), and career indecision (Betz, Schifano, & Kaplan, 1999; Temple & Osipow, 1994). Felsman and Blustein (1999) found that adolescents with higher social self-efficacy and secure peer attachments reported greater environmental exploration and career choice commitment. Researchers have also found support for associations between social self-efficacy and indicators of psychological adjustment, such as social anxiety (Connolly, 1989; Sherer & Adams, 1983) and depression (Bandura, Pastorelli, Barbarelli, & Caprara, 1999; Ehrenberg, Cox, & Coopman, 1991; McFarlane, Bellisimo, Norman, & Lange, 1994).

Lent and colleagues (2005, Study 1) tested SCT predictors of global life satisfaction, academic-domain satisfaction, and social domain satisfaction. In the social domain specifically, social self-efficacy explained unique variance in social domain satisfaction, goal progress, and outcome expectations, with path coefficients of .10, .32, and .63 respectively. Social self-efficacy was, itself, predicted by environmental supports (.66) and positive affectivity (.28). Results also showed support for the mediation of the positive affectivity-social satisfaction relationship through social self-efficacy.

Outcome Expectations. Outcome expectations refer to the anticipated outcomes of one's actions (Lent, 2004). Although outcome expectations were found to correlate as expected with the other variables in the social cognitive model, it did not contribute uniquely to the prediction of social satisfaction in the path analysis (Lent et al., 2005, Study 1). Specifically, consistent with hypotheses, outcome expectations were predicted by social support (.19) and social self-efficacy (.68). However, outcome expectations did not contribute uniquely to the prediction of either social goal progress or social domain satisfaction.

Goals and goal progress. Goal mechanisms represent a third type of cognitive variable that influences subjective well-being. Goals can lead to increased well-being when created and valued by the individual achieving them, when goals are realistic, and when they are moderately challenging (Locke & Latham, 1990). Brunstein (1993) demonstrated that having goals, and especially experiencing progress toward one's goals, leads to greater levels of well-being. Sheldon and Kasser (1998) found support for the relationship of perceived goal progress and happiness. Specifically, goal progress predicted higher SWB and lower levels of depression. Consistent with the social cognitive well-being model, Lent et al. (2005, Study 1) found that goal progress was predictive of both social domain satisfaction and overall life satisfaction. The literature contains additional evidence of the relationship of goals to well-being outcomes (see Brunstein, 1993; Brunstein, Dangelmayer, & Shultheiss, 1996; Cantor & Blanton, 1996; Elliot, Sheldon, & Church, 1997; Emmons, 1991; Emmons, 1996; Emmons & McAdams, 1991; Locke & Latham, 1990, 2002).

Social support and environmental resources. Environmental supports provide

resources to individuals that can increase well-being, in part by facilitating the attainment

of important goals (Lent, 2004). Social support is a type of environmental support, which

has been studied extensively in relation to well-being, stress, and mental health outcomes.

Social support can involve instrumental (e.g., physically assisting, role modeling,

influencing others), material, or emotional (e.g., companionship) assistance, or some

combination of those functions. The material and psychological functions of these

support networks help individuals maintain or increase well-being, or attain specific goals

(Argyle, 1999). In several recent cross-sectional studies, researchers have found support

for the inclusion of environmental supports in the social cognitive model of domain and

life satisfaction, in college student samples (Lent et al., 2005; Lent et al., 2007; Ojeda,

Flores, & Navarro, 2011). For example, Lent et al. (2005, Study 1) found significant

paths leading from environmental social supports to goal progress and domain

satisfaction in both academic and social domains.

Attachment Theory and Individual Differences in Attachment

Different trait variables, such as extraversion, positive affectivity, and negative

affectivity, have been used to test the SCT satisfaction model. Attachment theory offers

another personological construct, adult attachment style or attachment security, which

could be used to test this aspect of the satisfaction model. In addition, attachment

security was formulated within a cognitive, developmental, and evolutionary framework,

which can add explanatory value to integrative top-down and bottom-up social cognitive

models of adjustment and well-being, especially integrative models that aim to explain

functioning in social relationships. To define the concept of attachment security, a brief

explanation of attachment theory is warranted, along with a description of its extension to

adults.

Bowlby (1969/1982) formulated attachment theory to explain the powerful

affiliative ties formed between infants and their primary caregivers. Accordingly, infants

form an attachment bond with their primary caregivers, typically the mother, to attain the

set goal of increased proximity to their mothers and the safe haven she provides during

times of perceived threat (real or imagined) or distress. This primary drive serves the

biological function of protection from danger, and consequently, increases reproductive

fitness. Bowlby posited that infants develop attachment-related behaviors, which form a

coherent, organized system of behaviors; the behaviors that encompass this *attachment*

behavior system are *goal-corrected* and flexible in nature, so as to enable infants or

young children to successfully increase proximity to their primary caregivers across

varying contexts and maternal responses. That is, the attachment behavior system allows

the child to identify targeted goals and then make corrective behavioral or physiological

responses to achieve those attachment goals. The goal corrected behavior distinguishes

attachment behaviors from simple reflexive responses.

Attachment behaviors and internal working models. Bowlby (1969/1982) also

explained that attachment behaviors (e.g., crying, calling, reaching) evolve as infants

develop increasing physical and cognitive abilities, giving way to more mature

attachment behaviors (e.g., running, speaking, imagining a supportive attachment figure).

Over time, toddlers acquire hundreds of repeated attachment-related experiences with the

primary caregiver. These accumulated experiences serve an instrumental role in the

development of complex cognitive structures.

From the formation and repeated experiencing of these early attachment patterns,

Bowlby (1973) posited that young children use their increasing cognitive capacities for

symbolic thought to form mental representations, or *Internal Working Models* (IWMs), of

attachment experiences. These cognitive models enable children to predict future

attachment-related experiences, based on previous attachment experiences with their

mother. Moreover, the IWMs organize children's past and future attachment-related

interactions to adaptively increase proximity-seeking behaviors, regardless of the

mother's actual quality of care (Bowlby, 1973). Over time, young children generalize

their accumulated, attachment-related experiences to form experiential representations of

themselves in new and future close relationships (e.g., with extended relatives, coaches,

pastors, and teachers; Ainsworth, 1989). Specifically, these IWMs represent attachment-

related beliefs about themselves (i.e., IWMs of self) as worthwhile, competent, and

lovable—along with attachment-related beliefs about close others as reliable, responsive,

and sensitive (Bowlby, 1973). In the case of sub-optimal care by the mother, the child's

once-adaptive IWMs, formed to manage adverse child-rearing situations, result in rigid

interpersonal behavior patterns that prove maladaptive in later childhood, adolescent, and

adult relationships (Berlin, Cassidy, & Appleyard, 2008; Weinfield, Sroufe, Egeland, &

Carlson, 2008).

Individual differences in attachment security. Ainsworth observed three

patterns of behavior, which infants and toddlers demonstrate when reuniting with their

mothers: secure, insecure-anxious-resistant, and insecure-avoidant (Ainsworth et al.,

1978). These patterns were observed in infants, both in observed interactions with

mothers in their homes (Ainsworth et al., 1978), and in the lab setting of Ainsworth's

Strange Situation paradigm, in which infant and toddler response-patterns were observed after reuniting with mother and following an undesired separation (Ainsworth et al., 1978).

Given Bowlby's early observations that almost all infants form an attachment bond with a primary caregiver (Bowlby, 1956; 1969/1982), Ainsworth et al. (1978) categorized attachment bonds as secure or insecure, in contrast to strong or weak. As such, attachment theory indicates that both secure and insecure patterns of attachment security (i.e., secure, insecure-anxious, insecure-avoidant) successfully increase infants and toddlers' proximity with mother, during a time of distress (Ainsworth et al., 1978; Bowlby, 1973). Later, Main and Solomon (1990) identified a fourth category of attachment security, insecure-disorganized, after observing that a small percentage of young children (from 8-13%) failed to demonstrate a consistent pattern of secure, avoidant, or resistant/ambivalent behaviors. Instead of engaging in an organized pattern of attachment behaviors, this sub-group of toddlers demonstrated arbitrary combinations of anxious/resistant, avoidant behaviors, or other uncommon responses to toddler-mother reunions (e.g., crying loudly and then freezing all movement, approaching with face averted, or lying face-down on the floor after an aborted approach; Main & Hesse, 1990). Researchers have observed that the vast majority of toddlers (i.e., 82-90%) who displayed the insecure-disorganized/disoriented pattern had mothers who were mentally ill, abusive, or negligent (Carlson, Cicchetti, Barnett, & Braunfald, 1989; Cicchetti, Rogosch, & Toth, 2006).

Attachment theory: The control component. Another aspect of attachment theory is relevant to the current study. According to Bowlby's (1969/1982) normative

theory, the attachment system involves a control component. Similar to a thermostat, the attachment system is activated and deactivated, depending on the child's perceived level of threat or distress (Cassidy, 2008). Later, Bowlby indicated that the attachment system is never turned-off completely (Bowlby, 1969/1982). The attachment system interacts in a coordinated manner with other biologically based behavior systems, including exploratory, sociability, caretaking, fear, sexual-mating, and feeding behavior systems (Cassidy, 2008). Bowlby maintained that the attachment behavior system is the primary behavior system in young children, which activates and deactivates in tandem with other behavior systems, such as the fear system, and in opposition to other behavior systems (e.g., the exploratory, sociability, and caretaking systems; Bowlby, 1969/1982; Cassidy, 2008; Mikulincer & Shaver, 2007). After the attachment system, the exploratory behavior system received the most theoretical attention from Bowlby. The successful regulation of the attachment system requires the child to (a) seek proximity during times of distress, (b) engage the mother as a safe haven, and subsequently (c) use the mother as a secure base from which to explore.

The sociable behavior system. Bowlby's sociable behavior system warrants special consideration for the current study of social domain satisfaction among college students. Bowlby (1969/1982) described the sociable or *affiliative* system as including "all manifestations of friendliness and goodwill, of the desire to do things in company with others" (p. 229). Hence, the sociable system represents a broader social concept, and Bowlby described it as distinct from the attachment system's focus—during infancy and young childhood—on one or two attachment figures (1969/1982). Cassidy (2008) provided another definition of the sociable system as "the organization of the biologically

based survival promoting tendency to be sociable with others" (p. 9). Accordingly, the predictable outcome of activation of the sociable system involves the desire to spend time in the company of others (Cassidy, 2008).

According to attachment theory, people evolved to spend time in enjoyment of each other's company (Cassidy, 2008); for children, this involves playing and socializing. Similar to the attachment system, the sociable system evolved for the biological function of increased reproductive fitness; the sociable system enables safety in numbers (Cassidy, 2008). Bowlby conceptualized the sociable system to operate inversely with the attachment system. Until the broader relationship representations of IWMs have been formed, the "sociable system is most likely to be activated when the attachment system in not activated" (Cassidy, 2008, p. 9). Hence, the sociable behavior system of the child becomes activated when the child experiences *felt security* and the attachment system is deactivated.

Whereas Bowlby's original formulation of attachment did not emphasize attachment processes in adulthood, both Bowlby and Ainsworth posited the role of attachment across the lifespan, "from the cradle to the grave" (Bowlby, 1979, p. 129). In subsequent years, researchers from both developmental psychology and social psychology extended attachment theory from young children to adolescents (Benson, McWey, & Ross, 2006; Fraley, 2002; Fraley & Davis, 1997) and adults (Fraley, 2002; Fraley & Davis, 1997; Mikulincer & Shaver, 2007).

Transfer of attachment to adult relationships. Fraley and Davis (1997) studied the transfer of attachment needs from parents to close friends and romantic relationships in a sample of college students. Results revealed that important aspects of relationships

for forming secure attachments to a close friend or romantic relationship partner during

college are similar to the relationship predictors that are important during infant-to-

caregiver attachment formation. For example, caregiving, trust, and intimate contact

predicted attachment security with a close college friend or romantic partner. Fraley and

Davis's study also provided support for the role of IWMs in forming adult attachments

with friends. More specifically, both secure IWMs of others and perceived security of

the peer were associated with the formation of attachment to close friends. The duration

of the college relationship significantly predicted the extent of transfer of proximity-

seeking, safe-haven use, and secure-base use for both close friends and romantic partners.

Still, sixty percent of the students rated their parents as their primary attachment figure,

indicating the remaining importance of parents as attachment figures during emerging

adulthood and college.

Activation of the attachment system during adulthood. The attachment

system of late adolescence operates with established IWMs of attachment relationships,

which filter the perceived threats during life vicissitudes. The control component of

attachment theory proposed for early childhood continues to function as the onset of

adulthood approaches. Mikulincer and Shaver (2007) extended earlier models of control

systems to explain the activation and operation of the adult attachment system.

Mikulincer and Shaver's model of adult attachment functioning explains the proximity

and security seeking dynamics of adults with attachment figures. The model describes

the primary and secondary strategies adults employ when the attachment system is

activated and when they are seeking security from perceived threats. Specifically, when

the attachment system is activated, adults seek proximity with an attachment figure—

either a real adult figure or an internalized attachment figure developed throughout childhood.

Similar to the attachment system of childhood, if proximity or felt security is achieved, the attachment system of the securely attached will deactivate, and he or she will resume secure exploration or socialization with others. If a real or internalized attachment figure fails to provide a sense of felt security, adults engage in two secondary strategies: (a) anxious hyperactivating strategies or (b) avoidant deactivating strategies. Hyperactivating strategies aim to ensure that the inconsistent or unavailable attachment figure becomes aware of the dependent adult's distress and responds with the level of care necessary to provide comfort or protection. By contrast, avoidant adults will engage in a secondary deactivating attachment strategy, in which they distance themselves from perceived (or real) threats, as well as the potentially rejecting attachment figure (Main, 1990; Mikulincer & Shaver, 2007).

Attachment Security, College Adjustment, and Counseling Psychology

In a special issue of *The Counseling Psychologist*, F. Lopez (1995) proposed attachment theory as an overarching *metaperspective* to conceptualize the interactions between person-focused and environmental variables on psychological adjustment. F. Lopez presented this metaperspective within the profession's historical tradition of studying strength-based concepts (Gelso & Fretz, 1992). Also, the special issue provided a review of attachment theory and its role with adjustment themes in late adolescence and adulthood. Specifically, F. Lopez focused his review to address (a) associations between adult attachment style and variations in affect regulation and social competence, and (b)

the degree of stability and continuity in attachment style and its organization from early childhood to adulthood.

According to F. Lopez (1995), studies have found a consistent link between adult attachment style and social competence in college students (Bartholomew & Horowitz, 1991; Koback & Sceery, 1988[1]), dating couples (Simpson, 1990), intimate relationships (Mikulincer & Nachshon, 1991; Pistole, 1989, 1993), and married couples (Koback & Hazan, 1991). Similarly, research has demonstrated an association between attachment security and adult affect regulation (Dozier & Koback, 1992), including affect regulation in intimate relationships (Feeney & Noller, 1990, 1991; Hazen & Shaver, 1987; Levy & Davis, 1988; Mikulincer & Erev, 1991; Pistole, 1989, 1993; Simpson, Rholes, & Nelligan, 1992[2]). Within these studies, researchers have found consistent associations linking attachment security to reports of higher interpersonal trust and overall relationship satisfaction. Moreover, adult attachment style has accounted for more variance in relationship outcomes, over 8-month intervals, than traditional personality and affective variables (e.g., negative affectivity; F. Lopez, 1995).

Attachment and college student adjustment. More recent meta-analytic reviews (e.g., Mattanah, Lopez, & Govern, 2011) have evaluated the relations between parental attachment and college student adjustment. For example, Mattanah and colleagues (2011) employed meta-analysis to review 156 studies conducted between 1987 and 2009. Attachment theory (Bowlby, 1969, 1973, 1980, 1988) served as a conceptual framework to describe the role of "security-regulating features" of the parent-

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[1] Securely attached college students reported less distress and higher levels of social support.
[2] Competent affect regulation strategies resulted in lower levels of distress and problematic relationship functioning; Secure IWMs of one's intimate partner results in more adaptive relationship beliefs, and consequently, more effective communication and problem-solving.

child relationship in shaping later indicators of personal adjustment across the lifespan (Mattanah et al., 2011). Attachment theory has garnered substantial research across several life stages, including adolescence (Benson, McWey, & Ross, 2006) and adulthood (Shaver & Mikulincer, 2007).   Mattanah and colleagues (2011) included studies of college adjustment that "included an extremely wide range of adjustment measures" (p. 570).

In addition to Mattanah and colleagues' study, there have been three prior meta-analyses: (a) Benson et al. (2006), (b) Rice (1990), and (c) Schneider, Atkinson, and Tardif (2001). The Mattanah et al. (2011) meta-analytic review addressed limitations of the previous meta-analyses. Specifically, Benson et al. (2006) only studied a single domain of adjustment, peer competence among ten to nineteen year olds. Rice (1990) looked at the attachment-adjustment link in college students—although the study is now dated, with over 100 articles published on the topic since Rice's review. Schneider et al.'s (2001) study focused solely on attachment-adjustment associations among populations of children and young adolescents. Hence, gaps in the literature warranted an updated review of associations of parental attachment and multiple adjustment outcomes (Mattanah et al., 2011).

Relations of attachment with college adjustment. The recent meta-analytic findings by Mattanah and colleagues (2011) demonstrated small-to-moderate relations between the attachment style of college students and college adjustment ($r = .23$), in which college adjustment was operationalized as any of five "megadomains": academic competence, social competence, stressful affects, self-worth, and developmental advances in identity. This association replicated previous meta-analytic findings on the relation of

attachment to college adjustment (e.g., .22, Rice, 1990; .26, Benson et al., 2006). The

small effect sizes might imply a distal role of parental attachment in the adjustment of

college students (Mattanah et al., 2011). Their results also supported the contention that,

with the onset of adolescence, close friends and romantic partners assume increasingly

important roles in meeting attachment-related needs.

Attachment Security and Social Cognitive Theory

The interplay of attachment and social cognitive variables is not a new area of

study within the psychological literature. Attachment theory was derived, in part, from

an information-processing and cognitive perspective, and some researchers have explored

the similarities, differences, and relationships of attachment variables within social

cognitive theory. For instance, Baldwin and colleagues (1996) described individual

differences in attachment security from a contemporary social cognitive perspective,

arguing that individual differences in attachment security stem from social cognitive

heuristics such as the cognitive availability and accessibility of attachment-related figures

and experiences (Baldwin et al., 1996). Hence, attachment style may be compatible with

social cognitive theory.

Attachment security as a dispositional variable. Attachment researchers have

studied the stability of attachment security from childhood to adulthood, which has

demonstrated evidence of a pattern of increasing stability throughout adulthood

(Mikulincer & Shaver, 2007). Bowlby (1973) proposed that the attachment processes

eventuating in stable personality traits are environmentally influenced and particularly

sensitive during early childhood, especially to the family environment. Further, this

sensitivity to environmental influences diminishes throughout childhood and becomes

very limited by late adolescence. Accordingly, the development of adult attachment

patterns is constrained by forces that maintain childhood working models indicative of a

"prototype model" of core attachment patterns that endure across the lifespan. During

adulthood, these core patterns act as relational filters or biases, "part of a 'top-down'

process by which a personal's chronic attachment style (i.e., dominant attachment-related

schemas and associated mental and behavioral strategies) shapes the functioning of the

attachment system" (Mikulincer & Shaver, 2007, p. 31).

In this prototype model of adult attachment, the development of adult attachment

patterns also encounter forces that destabilize and challenge earlier IWMs. These

destabilizing forces involve powerful attachment-related events experienced during

adolescence and throughout adulthood (e.g., death of a parent, marriage, divorce,

successful psychotherapy) that lead to revision of core attachment representations

(Bowlby, 1973; Mikulincer & Shaver, 2007). Similar to affective variables, self-reported

attachment security shows moderate stability correlations when retested at several

different life stages, and these stability coefficients become stronger after adulthood

(Mikulincer & Shaver, 2007). In particular, in a meta-analysis of 36 studies, Mikulincer

and Shaver (2007) evaluated stability coefficients in continuous measures and

concordance rates in categorical attachment classifications, typically in traditional college

age samples. The majority of studies evaluated the stability of attachment patterns over

time periods ranging from one week to one year. However, several of the reviewed

studies estimated adult attachment stability over 2, 4, or 6 years, and one noteworthy

study assessed women college students' attachment patterns over a subsequent 27-year

period, with stability coefficients over 16 years (.58 from age 27 to 43) and 25 years (.55 from age 27 to 55; Klonen & Bera, 1998).

Across the 36 studies, stability coefficients of adult attachment patterns were moderate to large, with an average stability coefficient estimate of .56. In addition, the test-retest correlations for continuous measures of adult attachment style or dimensions ranged from .47 to .70. The test-retest concordance rates of categorical assessments ranged between 44% and 90%, with an average of 70% of participants who were classified or chose the same adult attachment style. Mikulincer and Shaver (2007, p. 141) concluded,

> [a]dult attachment patterns tend to be well-formed personality structures that remain relatively stable over time and across different relationships. At the same time, the adaptive accommodation and updating of working models in response to new attachment-relevant experiences continue to occur during adulthood, or else adults would not be able to continue to make accurate appraisal of their changing selves and changing life circumstances.

SCT variables, attachment security, and college student social satisfaction. Several studies have examined the relation of attachment styles and social cognitive variables, in particular social self-efficacy (Mallinckrodt & Wei, 2005; Wei, Russell, & Zakalik, 2005). For example, Wei et al. (2005) examined the role of social self-efficacy as a possible mediator of the relationship between adult attachment anxiety and loneliness, and as a mediator between adult attachment anxiety and depression in a sample of first year college students. Findings demonstrated positive associations between attachment style and loneliness during the first month of college students'

freshman year, and between loneliness and depression reported toward the end of their freshman year. However, whereas social self-efficacy alone mediated the link between attachment anxiety and feelings of loneliness and subsequent depression, only self-disclosure mediated the pathway from attachment avoidance to loneliness and depression.

In a related study, Mallinckrodt and Wei (2005) found partial support for their social competencies and interpersonal processes model in a sample of college students. Specifically, the two attachment dimensions (i.e., anxiety and avoidance)—as well as social self-efficacy and emotional awareness—were significantly related to the outcome variables of perceived social support and psychological distress. Moreover, social self-efficacy was found to mediate the relationships between (a) attachment anxiety and social support, and (b) attachment avoidance and social support (Mallinckrodt & Wei, 2005).

Wright and Perrone (2010) studied the relationships among attachment, social self-efficacy, career decision-making self-efficacy, and life satisfaction. These researchers adapted Bowlby's explanation of IWMs developed during early childhood, suggesting that current adult IWMs develop from repeated attachment-related experiences in work and other adult life domains. In an empirical study of their adapted conceptualization of adult attachment, Wright and Perrone found a positive relationship between attachment style and life satisfaction among college students. Moreover, results supported their hypodissertation that the attachment-to-life satisfaction relationship was partially mediated by social self-efficacy and career-decision self-efficacy.

Finally, Mattanah et al.'s (2011) meta-analysis reported weak average correlations over three studies relating adult attachment style (i.e., attachment to parents) to social

self-efficacy ($r = .12-.22^3$). Although the literature on adult attachment style, SCT

variables, and positive aspects of college social satisfaction is limited, Mattanah et al.'s

(2011) review reported that the average correlation between attachment style and global

college life satisfaction ranged between .14 and .41 in two studies. Twelve studies

reported positive associations between parental attachment and social support, ranging

between .10 and .35 (Mattanah et al., 2011).

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[3] Refers to overall effect size across all outcome domains coded in the study

Chapter 3: Statement of the Problem

The purpose of the current study is to extend Lent's (2004) social cognitive model of well-being and Wright and Perrone's (2008, 2010) integrative SCCT-attachment framework by testing the relationships among attachment security dimensions, social cognitive predictors, and social domain satisfaction in university students. As of now, few studies have tested the satisfaction model in the social domain (see Hui et al., 2013; Lent et al., 2005), and no studies have assessed the relations of attachment variables and social domain satisfaction within the framework of the social cognitive model of well-being. The current study aims to test the variation in college students' social satisfaction attributable to attachment anxiety and avoidance, positive affect, social self-efficacy beliefs, social outcome expectations, perceived social support, and social goal progress. The research questions and hypotheses to be tested are listed below.

SCT Social Satisfaction Model: Hypotheses and Pathways

Similar to previous research on Lent's (2004) social cognitive model of domain satisfaction, the model to be tested in the current study specifies the pathways by which social domain satisfaction is predicted by dispositional, social cognitive, and environmental support variables. The application of this framework in the current study emphasizes dispositional and social cognitive variables posited to be particularly relevant to social domain outcomes, such as making progress toward social goals and subsequent domain satisfaction in the college milieu. Given that many students enter college environments far from their friends and families-of-origin, the formation of friendships, a sense of belonging, and social networks become central issues for many individuals.

Therefore, extension of the social cognitive model to the social domain warrants further empirical attention.

The primary contribution of the current study lies in its inclusion of attachment security as a representation of disposition within the social cognitive model. This study is intended to emphasize variables related to personal agency or environmental influence, with direct applicability to counseling or educational interventions. At the same time, a model of domain satisfaction ought to account for the robust evidence of top-down, dispositional influences. In light of findings that indicate the responsiveness of attachment security to therapeutic intervention (Daly & Mallinckrodt, 2009; Mikulincer & Shaver, 2007), the current study will include the attachment-related dimensions of anxiety and avoidance, along with the personality trait of positive affect, which has previously been linked to social and life satisfaction (Lent et al., 2005). The enumerated paths in Figure 1 specify the predicted links between the two dimensions of adult attachment security and social domain satisfaction. These paths are explained further through the interplay of environmental social supports, social self-efficacy, social outcome expectations, and social goal progress.

Direct relations of attachment security to social domain satisfaction. Whereas previous studies of the domain satisfaction model have assessed personality or affective traits with Big 5 variables, positive affect, or negative affect, the version of the model to be tested in this study posits that representations of adult attachment security can also serve the top-down function of personality traits (Mikulincer & Shaver, 2007). Hence, social domain satisfaction is expected to be associated directly with attachment anxiety (Path 1) and attachment avoidance (Path 2). That is, by virtue of their affective features

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and trait-like motives, young adults who are more anxious or avoidant about close relationships are likely to feel less satisfied in social settings.

Direct relations of environmental supports and social cognitive variables to social domain satisfaction. In keeping with the social cognitive model of domain satisfaction, it is expected that social support, social self-efficacy, social outcome expectations, and social goal progress will jointly relate to social domain satisfaction. Specifically, satisfaction in the social domain will be predicted with direct paths from progress toward social goals (Path 3), social self-efficacy beliefs (Path 4), and social supports (Path 5).   Evidence for each of these direct paths has been found in previous studies. For example, evidence for the relation of goal progress to domain-specific satisfaction in Path 3 has been demonstrated in the academic domain (Ojeda, Navarro, & Flores, 2011; Singley et al., 2010) as well as in the social domain (Hui et al., 2013; Lent et al., 2005, Study 1). Social self-efficacy beliefs are also expected to produce a direct path to social domain satisfaction (Path 4), because socially efficacious individuals are likely to enjoy their social interactions (Lent et al., 2005). Also, students are expected to feel more satisfied in the social domain if they perceive social supports are available to aid their efforts in pursuit of social goals (Path 5). Previous studies have provided evidence directly linking social support to social domain satisfaction (Hui et al., 2013; Lent et al., 2005, Study 1).

Indirect relations of attachment security to social domain satisfaction via social cognitive variables. In addition to these direct relations, attachment security may also be linked to social domain satisfaction indirectly through environmental social supports and social cognitive mechanisms. Consistent with prior tests of a social

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cognitive model of domain satisfaction (e.g., Hui et al., 2013; Lent et al., 2005, Study 1), social self-efficacy beliefs are expected to lead to domain satisfaction indirectly through goal mechanisms. That is, those with greater social self-efficacy are more likely to pursue and succeed at their goals in the social domain. Hence, social self-efficacy beliefs are expected to relate to social domain satisfaction indirectly through social goal progress (Path 6).

In addition to the direct paths of goal progress (Path 3) and social support (Path 5) to social domain satisfaction, social supports should relate to social satisfaction indirectly through social goal mechanisms (Path 7). Previous research has revealed moderate-to-strong path coefficients between perceived social support and social goal progress (Lent et al., 2005, Study 1). Thus, it is predicted that higher perceived social support is associated with higher ratings of progress toward valued social goals (Path 7). In other words, social supports should enable people to reach their social goals.

Research has also found that perceived social support is positively associated with social self-efficacy expectations (Lent et al., 2005, Study 1; Mallinckrodt & Wei, 2005). Although the satisfaction model technically predicts a bidirectional link between social support and social self-efficacy (Lent, 2004), the current cross-sectional study will specify a path from support to self-efficacy (Path 8), with perceptions of greater social supports for friendships and social life modeled as precursors of higher self-efficacy beliefs for developing and maintaining social relationships in college.

Adult attachment patterns are also expected to relate to social domain satisfaction through the social cognitive belief of social self-efficacy. Empirical evidence has linked adult attachment security and self-efficacy beliefs (see Mikulincer & Shaver, 2007). A

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consistent finding across studies is that attachment security—indexed by lower levels of attachment anxiety and avoidance—is associated with "greater self-assessed competence or efficacy" (Mikulincer & Shaver, 2007, p. 158). In the case of college student satisfaction in the social domain, students high in attachment anxiety have been found to experience low expectations for their abilities to develop satisfying social relationships (i.e., social self-efficacy; Mallinckrodt & Wei, 2005). Given (a) IWMs of themselves as ineffective and unworthy in close relationships, and (b) IWMs of others as inconsistently responsive to their efforts to develop satisfying social relationships, it is posited that higher levels of attachment anxiety will be associated with lower social self-efficacy expectations among college students (Path 9). A similar association has been demonstrated between attachment avoidance and social-self-efficacy (Mallinckrodt & Wei, 2005). College students who demonstrate attachment avoidance harbor (a) IWMs of self as incompetent in maintaining social relationships and (b) IWMs of others as dismissive or rejecting. Hence, higher reported levels of attachment avoidance will be associated with lower self-efficacy in the social domain (Path 10).

Attachment anxiety (Path 11) and attachment avoidance (Path 12) are expected to be associated with perceived social support. Attachment anxiety and avoidance can influence social support levels through several routes. First, the IWMs of attachment security act as a cognitive filter, with predisposed expectations and social motives. These IWMs influence students' perceptions of the availability of social supports in the college environment or from home. Second, depending on the security of adult attachment, students may access social supports with different levels of success (e.g., highly avoidant individuals may be less adept at support seeking). In either case, higher levels of anxiety

or avoidance may be associated with lower levels of perceived social support (Mallinckrodt & Wei, 2005). As noted above, social support is, in turn, expected to be directly associated with levels of social domain satisfaction (Path 5), with those receiving more social support reporting higher levels of social domain satisfaction (e.g., see Lent et al., 2005, Study 1; Siewert, Antoniw, Kubiak, & Weber, 2011).

The roles of positive affect and outcome expectations vis-à-vis social satisfaction. In addition to the paths described above, the current study aims to account for the direct and indirect effects of adult attachment patterns on social domain satisfaction relative to the effects of dispositional variables studied previously. In particular, previous studies have demonstrated consistent evidence of the direct and indirect effects of positive affect on satisfaction in the academic domain (Lent et al., 2005, Study 1; Lent et al., 2009; Lent et al., 2012) and social domain (Lent et al., 2005, Study 1). Consistent with previous research, it is expected that domain satisfaction is related to positive affect through both direct and indirect paths. Specifically, social domain satisfaction should be predicted directly from positive affect (Path 13), as well as indirectly through social self-efficacy (Path 15) and social support (Path 16).

As described above, the current model predicts satisfaction in the social domain through direct paths from social cognitive variables. The joint effects of these social cognitive variables include social outcome expectations. However, available model tests have not found evidence for the direct path of social outcome expectations leading to satisfaction in the social domain (Lent et al., 2005, Study 1), and subsequent studies have omitted social outcome expectations from model tests altogether (see Hui et al., 2013). By contrast, the normative model of domain satisfaction assumes a nomothetic net of

social cognitive variables that includes outcome expectations. In line with the normative

model, the current study posits a direct path from social outcome expectations to social

domain satisfaction (Path 14) as well as an indirect path via social goal progress (Path

17). In addition, social outcome expectations are expected to stem partly from social

self-efficacy beliefs (Path 18) and social support (Path 19).

Chapter 4: Method

Participants

Participants were 454 university students at a large mid-Atlantic university. Participants responded to the survey either via a study listserv ($n = 282$) or via the SONA system ($n = 172$). The study listserv, provided by the university registrar, included 5,000 randomly selected undergraduate students who were eighteen years old or older. They were offered a chance of winning one of ten $20 gift cards to Amazon.com for their participation. An item at the end of the survey enabled participants to enter their email address in order to participate in the gift card raffle. When data collection ended, winning participants were sent an email with an electronic link to the gift card, and all email addresses were deleted from the data set. Only completed surveys were considered as responses, with a response rate of 5.64% ($N = 454$). Participants within the SONA system were recruited from every psychology course offered during spring 2015 semester. These participants were informed they would receive extra course credit equivalent to thirty minutes of participation in a SONA system research study.

With regard to Listserv participants, 282 responded to age and sex items, and 226 of those participants completed the other demographic items. Among SONA participants, all 172 responded to age and sex items, with 135 of them responding to the other demographic items. In sum, for the two samples combined, all 454 participants responded to the demographic items on age and sex, and 361 of them responded to the remaining demographic items. The variation in response rates to the demographic items was likely attributable to the researcher's decision to apply the forced-response option in qualtrics.com only for the age and sex demographic items; for all other demographic

items, participants were not required to respond in order to continue to the end of the survey. This methodological option was selected to reduce the likelihood of participant dropout due to privacy concerns or discomfort about responding to demographic items that were not part of the study's hypotheses and analyses.

One hundred sixty three participants (35.9%; $n = 163$) identified as male and 291 as female (64.1%). The combined sample ($n = 454$) was representative of traditionally aged college students: One half of participants (50.0%) were 18-19 years old ($n = 227$); 44.9% were aged 20-22; 2.9% were aged 23-24 ($n = 13$); and 2.2% ($n = 10$) of respondents were 25-32 years old. The average age was 19.92 years ($SD = 1.82$). As noted previously, demographic data about race/ethnicity, sexual identity, college year/tenure, romantic relationship status, and housing situation involved the 361 participants who responded to those demographic items. Specifically, with regard to race, 62.9% of respondents identified as European-American/White, 11.9% as Asian American or Pacific Islander, 8.6% as African American/African Descent/Black, 7.5% as Latino(a)/Hispanic, and 5.8% as Multiracial. An additional 1.5% of respondents identified specifically as Asian or Chinese, and 0.4% as Middle Eastern. In terms of sexual orientation or identity, 92.8% ($n = 335$) identified as heterosexual; 2.8% identified as lesbian or gay; and 3.5% identified as bisexual or polyamorous. With respect to year in college, 16.3% identified as freshmen, 35.5% as sophomore, 26.3% as junior, 20.5% as senior, and 1.4% as either an exchange student or a fifth year or sixth year senior. In terms of relationship status, 57.3% identified as single, 41.3% were in an exclusive romantic relationship, and 1.4% were married. Responding to a question about their

housing situation, 55.1% *(n = 199)* reported living on campus; the other 44.9% reported living in off-campus housing.

Demographic difference between SONA and Listserv participants. Differences in demographic representation between the two sources of survey were not found by age (χ^2 (6) = 3.98, *p* = .41), sex (χ^2 (1) = 1.86, *p* = .17), race (χ^2 (6) = 4.08, *p* = .67), sexual identity (χ^2 (3) = 2.66, *p* = .45), or on-campus versus off-campus living status (χ^2 (1) = 1.97, *p* = .16). In sum, significant differences were not found in various demographic categories by survey source. In addition, these sample characteristics were generally comparable in age and academic status to previous studies of social domain satisfaction (Hui et al., 2013; Lent et al., 2005).

Measures

Measures included (a) social domain satisfaction, (b) positive affect (c) social domain specific scales of self-efficacy, outcome expectations, goal progress, and support, (d) attachment anxiety and attachment avoidance, and (e) demographic and academic status information.

Social Domain Satisfaction. Social satisfaction was measured with Lent et al.'s (2005) adapted version of the Social Relationships Scale of the Quality of Life Enjoyment and Satisfaction Questionnaire (Endicott, Nee, Harrison, & Blumenthal, 1993). The adapted scale includes 6 items that assess the frequency with which participants enjoyed social activities during the past week (e.g., "…talking with or being with friends or relatives"; "… talking with other students, coworkers, or neighbors"). Lent et al. (2005) incorporated five of the six items from Endicott et al.'s original

measure; adjustment-related items apart from satisfaction were omitted and one new item was created (see Appendix C).

The scale includes a 5-point Likert-type response scale with 1 (*Not at all or never*) to 5 (*Frequently or all the time*). A previous 11-item version of the scale demonstrated adequate internal reliability (Endicott et al., 1993). Endicott et al.'s study also provided correlational evidence for construct validity, revealed through associations with clinical indices of depression in an outpatient sample. In addition, Lent et al. (2005) produced adequate internal consistency reliability coefficients in both their pilot sample (.90) and main sample (.80), which was replicated in the current sample (.85). Further evidence for construct validity was demonstrated by moderate-to-strong correlations with SCT predicted social cognitive variables in the social domain (correlations ranged from .58 to .67). A small cross-domain correlation between social domain satisfaction and academic domain satisfaction (.25) provided discriminant evidence that experiences in each domain reflect distinct cognitive appraisals (Lent et al., 2005). The social satisfaction scale garnered criterion-related evidence of validity with a moderate relation between social domain satisfaction and life satisfaction (.45).

Positive Affectivity. Positive affect was measured using the 5-item Positive Affect scale of the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988). The Positive Affect scale was used to assess the inclination to experience positive emotions. Respondents are asked to indicate the extent to which they "*generally feel*" each of the instrument's five positive emotions (e.g., "inspired") along a 5-point likert-type response scale using the anchors, 1 = very slightly or not at all to 5 = extremely (Lent et al., 2005). The Positive Affect scale (see Appendix D) has demonstrated

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adequate evidence of internal reliability and test-retest stability over time (Lent et al., 2009; Watson et al., 1988; Watson & Naragon, 2009), including internal consistency in the current sample of .75. In addition, it has consistently correlated with other measures of theoretically related emotional states and personality traits (Lent et al, 2005). Positive affect was selected as a trait predictor of social domain satisfaction in this study because of its consistent inclusion as a trait predictor in Lent's integrative model of domain and life satisfaction model.

Adult Attachment Security. The Experiences in Close Relationships Scale (ECRS; Brennan, Clark, & Shaver, 1998) is a 36-item measure developed to assess attachment security in close relationships, based on the three types of attachment quality found by Ainsworth et al.'s (1978) discriminant analysis study (see Appendix E). Participants respond to the items along a 7-point response scale, with the anchors of 1 (*Disagree Strongly*) to 7 (*Agree Strongly*). The measure consists of two distinct dimensions, anxiety and avoidance, which emerged from Brennan and colleagues' factor analysis. The Anxiety subscale assesses fears of abandonment, neglect, or rejection, excessive desire for closeness, and reassurance (e.g., "I need a lot of reassurance that close relationship partners really care about me"). The Avoidance subscale assesses discomfort with closeness or dependence on close others, and preferences for emotional distance and self-reliance (e.g., "I prefer not to show others how I feel deep down" and "I find it difficult to allow myself to depend on close relationship partners"). Inter-scale correlations often approach zero. Brennan and colleagues' factor analysis included all existing self-report attachment measures, with a sample of over 900 university students. Higher scores on avoidance items reflect higher avoidance, while higher scores on the

anxiety items represent higher levels of attachment anxiety. Low scores on both sub-scales indicate attachment security.

The ECRS is considered the gold standard for measuring adult attachment security (Shaver & Mikulincer, 2007). The measure has been used in hundreds of studies and generally yields alpha coefficients over .90. Test-retest coefficients range between .50 and .75, depending on sample characteristics and the duration of time between administrations. Several studies have demonstrated adequate validity estimates. The ECRS has been criticized for its over-emphasis on attachment insecurity (i.e., anxiety and avoidance; Fraley, Waller, & Brennan, 2000). Fraley et al. (2000) developed a new measure that substituted several items from Brennan et al.'s (1998) item pool, to form the ECR-R (i.e., Experiences in Close Romantic Relationships. The old and new parallel scales consistently demonstrate inter-correlations around .95. Due to the high inter-measure correlations, along with consistently high reliability coefficients, the original ECRS is considered adequate (Mikulincer & Shaver, 2007). Cronbach alpha coefficients were .91 for attachment avoidance and .91 for attachment anxiety in the current sample.

Social Self-Efficacy. Social Self-Efficacy (SSE) was measured with the Social Self-Efficacy scale (see Appendix F; Lent et al., 2005). The SSE scale is a 12-item measure (e.g., "Disclose information about yourself to a new acquaintance"). Respondents were provided a 10-point, Likert-type response scale of confidence, with anchors from 0 (*No Confidence at all*) to 9 (*Complete Confidence*). A Cronbach alpha reliability coefficient of .92 was found for this scale by Lent et al. (2005); the alpha in the current sample was .90. This scale also produced moderate-to-strong correlations with other social cognitive and adjustment variables (correlations ranged from .35 to .68).

Further support for construct validity was provided by Lent et al. (2005) with a small cross-domain correlation between the social self-efficacy scale and a measure of academic self-efficacy (.24).

Social Outcome Expectations. Social outcome expectations were measured using a 10-item scale developed by Lent et al. (2005) as an extension of the previously developed scale of outcome expectations in the academic domain (see Appendix G). Respondents are presented with several possible positive outcomes of socializing (e.g., "meet new and interesting people"). Participants responded with their level of agreement to a 10-point, Likert-type response scale from strongly disagree (0) to strongly agree (9). A Cronbach alpha reliability coefficient was found for Lent et al.'s (2005) scale (.85), and a coefficient of .94 was found in the current sample. This scale also produced moderate-to-strong correlations with other social cognitive and adjustment variables (correlations ranged from .34 to .69). Evidence of construct validity was provided by a cross-domain correlation between the social outcome expectations scale and a measure of academic outcome expectations (.41).

Social support. Environmental supports and resources in the social domain were assessed with a 10-item instrument developed by Lent et al. (2005). Lent et al.'s social domain support scale assesses the perceived access individuals have to other people, both individuals and groups, for the purpose of socializing and establishing social connections. For example, "I have friends nearby who share my interests and concerns" (see Appendix H). Instructions for the scale direct participants to rate their level of agreement on a 5-point, Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). In Lent et al.'s (2005) pilot sample and main sample, the scale produced internal reliability

coefficients of .92 and .88, respectively. The internal reliability coefficient was .90 in the current sample. In terms of validity, Lent et al., (2005) found moderate-to-strong correlations with the other social cognitive predictors and with social domain satisfaction (.64) and life satisfaction (.57). By contrast, the support scale's correlation with the cross-domain variable of academic environmental resources and supports was more modest (.34; Lent et al., 2005).

Social Goal Progress. Social domain goal progress was measured with a 7-item instrument developed by Lent et al. (2005). The measure assesses how much progress respondents are making at the present time in meeting different social goals (e.g., "Developing a satisfying social life"; see Appendix I). The scale provides ratings on a 5-point Likert type response scale ranging from 1 (*No Progress At All*) to 5 (*Excellent Progress*). Lent and colleagues (2005) found strong internal reliability coefficients for goal progress in both their pilot (.92) and main samples (.88), which were replicated in the current sample (.90). In addition, the scale yielded a small cross-domain correlation with academic domain goal progress (.16) but moderate-to-strong correlations with other social cognitive and adjustment variables (correlations ranged from .32 to .72; Lent et al., 2005).

Procedure

Data were collected online from university students at a large mid-Atlantic university, during the Spring 2014 semester. Participants were recruited through the research subject pool of the Psychology Department (i.e., SONA System), which encompasses students from several lower division psychology courses (e.g., *Introduction to Psychology*). The psychology research participant pool provided a convenient data

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collection source because of the accessibility of student participants, for whom participation in research is a course requirement.

The survey was uploaded to the SONA System website and administered online. Students who participated in the SONA research pool were required to create an account for the website, which gave them access to web links to several ongoing research studies for participation. In addition to use of the departmental research website, the researcher recruited students for participation by email through the university registrar (see Appendix A). Completion of the measures was preceded by informed consent procedures (see Appendix B).

All participant data were treated as confidential and were identified only by a student University Identification Number (UID). Data were stored on secured computers and the only person with access to these data was the researcher. The researcher maintained a list of participant email addresses in order to contact subjects. However, no other identifying information was obtained. Email addresses were not linked to any data. Once the survey data were collected, the email addresses were destroyed. The participants were informed that data will be retained for 10 years after the completion of the study and will then be destroyed, according to the university's policy on research with human subjects.

The participants were informed that they were participating in a survey about their social experiences while at college. There was no deception involved in this study. After reading the informed consent document online and providing consent, participants were given access to the survey. Participants needed to complete each item before continuing to the next item. This forced-response strategy was implemented because it prevents

missing data. However, participants were informed that they could close their browsers at any time if they did not wish to complete the entire survey. As noted earlier, certain demographic items could also be skipped, if participants chose not to complete them.

Data Analyses

To test the current model, several steps of analyses were performed. First, data cleaning and preliminary analyses were used to evaluate sample characteristics, evaluate means in relation to norms of previous studies, and evaluate the data for linearity and normality. In addition, exploratory factor analyses were performed to create three item parcels per construct. With the generated item parcels, the measurement model was tested using confirmatory factor analysis. The measurement model test assessed the tenability of an eight-factor model that included positive affect, attachment anxiety, attachment avoidance, social support, social self-efficacy, social outcome expectations, social goal progress, and social domain satisfaction. After the factor structure was confirmed, structural equation modeling (SEM) was employed to test three alternative structural models of social domain satisfaction (these models are described in the next Results section). Bootstrapping procedures were also used to test the significance of indirect effects in the best-fitting model.

Chapter 5: Results

Preliminary Analyses

Of the 470 completed cases, eight Listserv respondents who selected "Yes" to completing the survey previously via SONA were deleted from the Listserv data set. Five subjects were identified by matching emails as completing the survey twice and were removed from the data set. Finally, three participants reported only part-time enrollment at the university (i.e., one of the criteria for eligibility in the study was full-time enrollment); they were therefore deleted from the data set. These initial steps for checking subject eligibility resulted in a total sample size of 454.

Descriptive Statistics

Subsequent to initial data cleaning steps, means, standard deviations, skewness, and kurtosis were computed at the item and variable level to assess for outliers and univariate normality (see Table 1). Univariate normality was also evaluated visually with histograms, at the item level and at the composite variable level. Visual assessment of histograms showed the variables did not depart substantially from univariate normality: The social support variable appeared slightly skewed and kurtotic. Social outcome expectations items and scale scores revealed a pattern of mild negative skewness. In addition, social self-efficacy and social satisfaction items demonstrated a pattern of mild negative skewness. Last, all item-level and composite variable scores demonstrated acceptable absolute skewness values below 3.0 and kurtosis values below 10.0 (Weston & Gore, 2006).

A preliminary comparison of means and standard deviation indicated that the current sample was largely comparable to prior college student and other samples in

terms of scores on the social domain satisfaction, environmental social supports, social

cognitive, positive affect, and attachment constructs (see Table 2).

Bivariate Correlations among the Observed Variables

Bivariate correlations were computed among the eight observed variables in the

current study (see Table 3). Overall, the variables demonstrated moderate to large

bivariate correlations using Cohen's (1988) conventions for effect size. By contrast, the

relations between attachment anxiety and the other seven variables were in the small

range ($r = -.14$ to .23). Only one bivariate correlation, the relation between outcome

expectations and attachment anxiety, was found to be nonsignificant ($r = -.002$, $p = ns$).

In regard to the personality variables, attachment avoidance and attachment

anxiety revealed a small intercorrelation ($r = .19$, $p < .05$), providing partial support for

the assumption that these two variables represent related but distinct aspects of

attachment. Small-to-moderate relations were also found between positive affect and

attachment avoidance ($r = -.29$, $p < .05$) and between positive affect and attachment

anxiety ($r = -.20$, $p < .05$). The social cognitive variables demonstrated large

intercorrelations ($r = .48$ to .68). The primary criterion variable, social domain

satisfaction, was highly related to the social cognitive predictors ($r = .42$ to .67). In

addition, the relation of social domain satisfaction to the personality variables was

moderate to strong with positive affect ($r = .49$, $p < .05$) and attachment avoidance ($r = -$

.46, $p < .05$) but small with attachment anxiety ($r = -.23$, $p < .05$).

Item Parceling

In order to control for measurement error, preliminary factor analyses were

performed prior to the primary analyses of the study. Specifically, item parcels were

created to provide multiple observed indicators that represented each of the underlying

latent factors of the model. Exploratory factor analyses (EFA) were conducted on the

items of each of the measured scales using principal axis factoring with oblique rotation

in SPSS Version 22 (2013). Employing a *balancing* strategy (Little, Rhemtulla, Gibson,

& Shoemann, 2013), the factor loadings of the items of each measured (or observed)

variable were used to create three item parcels per latent variable: The item with the

variable's highest factor loading and the item with the lowest factor loading were paired

and assigned to the first parcel; the two items with the next highest and lowest factor

loadings were paired and assigned to the second parcel; the third highest loading item

was paired with the third lowest item and assigned to the third parcel. This process was

repeated until all of the scale's items were paired and assigned to one of the three parcels

(Little et al., 2013). The advantages of the balancing approach are that "an item with a

high loading would provide strong support for the construct to match with a weaker item,

and it attempts to create replicates of the overall factor structure in each of the parcels"

(Little et al., 2013, p. 296). Descriptive statistics for item parcels are presented in Table

4.

Test of the Measurement Model

Prior to testing the structural models presented in Figure 1, a confirmatory factor

analysis (CFA) was conducted using Mplus 7 (Muthen & Muthen, 2012) to test whether

the item parcels loaded on their corresponding latent constructs and whether the latent

constructs covaried as posited in the structural model. The process of confirmatory factor

analysis is sometimes called the *measurement model*, which describes the relationships of

the measured variables (i.e., item parcels) to the latent constructs (i.e., factors;

Tabachnick & Fidell, 2001). The purpose of testing the measurement model is to confirm

the factor structure of the latent constructs. In addition, the hypothesized eight-factor

structure of the current study can then be included in the *structural model* to test the

structural paths as posited in the current study.

An eight-factor model was tested to confirm the factor structure of the model

described in Figure 1. Using the default for Mplus 7, one factor loading for each

construct was fixed to 1, and all other loadings and paths were freely estimated for the

factors. Given indications of multivariate non-normality (Mardia's normalized estimate

= 37.70), robust maximum likelihood (MLM) was employed, which estimates a chi-

square statistic that is robust to multivariate nonnormality (Muthén & Muthén, 2012;

Satorra & Bentler, 2001; Satorra & Bentler, 2010).

Confirmatory factor analysis of the measurement model, similar to structural

equation modeling more generally, yields statistics of model-data fit. Goodness of fit

indices reflect the plausibility of the network of relationships in the proposed model (Lei

& Wu, 2007). Specifically, three indices were employed to test the goodness of model-

data fit: (a) the comparative fit index (CFI; CFIs equal to or greater than .95 indicate

adequate fit), (b) the standardized root-mean-square residual (SRMR; an SRMR less than

or equal to .08 implies adequate fit), and the (c) root mean-square-error of approximation

(RMSEA; acceptable values are less than or equal to .06; Hu & Bentler, 1999; Quintana

& Maxwell, 1999).

Fit indices for the eight-factor CFA are shown in Table 5. The model produced

the following fit values: CFI (.97), SRMR (.04), and RMSEA (.05), suggesting good fit

of the measurement model to the data. The Satorra-Bentler (S-B) χ^2 statistic was 495.88,

df = 224, *p* < .05). The loadings of the latent factors on the item parcels are presented in

Table 6. As can be seen, all of the loadings were substantial.

Table 7 provides the correlations among the latent factors. Social domain

satisfaction was correlated positively with goal progress (.76), outcome expectations

(.47), and social self-efficacy (.65), as well as social support (.68). Moreover, social

satisfaction was correlated with the personality constructs as predicted, including high

correlations with attachment avoidance (-.51) and positive affect (.59), and a moderate

correlation with attachment anxiety (-.26). The social cognitive latent constructs were

also correlated as predicted, with the lowest correlation between goal progress and

outcome expectations (.52) and the highest correlation between goal progress and social

support (.75). Social self-efficacy also produced relatively high latent factor correlations

with social support (.71) and goal progress (.73). Although the relatively high

correlations among social support, social self-efficacy, and goal progress raise some

concerns about construct overlap, the fit of the measurement model suggests that these

constructs may be seen as reasonably distinct though highly related.

The correlations among the personality constructs provided partial support for the

predicted relationships. For example, small to moderate relations were found between

positive affect and the two attachment constructs (-.34 with attachment avoidance and -

.24 with attachment anxiety). Moreover, attachment avoidance and attachment anxiety

revealed a small relationship (.20). The relationship between positive affect and the other

factors ranged from .39 (with social support) to .55 (with goal progress).

A different pattern emerged between the two attachment constructs with the other

constructs in the model. Specifically, high negative relationships were found between

attachment avoidance and the other factors in the model (-.47 to -.68, with outcome

expectations and social self-efficacy, respectively). By contrast, the relations between

attachment anxiety and the social cognitive factors were small, ranging from .00 with

outcome expectations (the only nonsignificant correlation among factors in the model) to

-.19 with goal progress.

Test of the Structural Model

Using Mplus 7, structural equation modeling was next employed to test the

structural model shown in Figure 1. For the structural models, maximum likelihood

estimation robust to non-normality (MLM)[4] was used to estimate the goodness of fit

indices and covariance structures among the model's paths. As in the measurement

model test, adequacy of model-data fit was assessed with the comparative fit index (CFI),

the standardized root-mean-square residual (SRMR), and the root mean-square-error of

approximation (RMSEA).

Three structural model variations were tested to examine the ways in which the

attachment variables relate to the other predictors in the social cognitive model and

whether they contribute uniquely to the explanation of social domain satisfaction. In the

first model (see Figure 2), attachment avoidance and attachment anxiety were only

included as covariates of positive affectivity, without structural linkages to the other

predictors or to social satisfaction. This might be termed an "inert attachment" model

because it portrayed the attachment variables as not contributing to model fit in a

substantive way. This model test yielded less than adequate fit to the data, CFI (.94),

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[4] Analyses were also computed using Maximum Likelihood Robust (MLR) estimator with very similar
Scaled χ^2 values and estimates of non-normality.

SRMR (.10), and RMSEA (.07, 90% confidence interval = .06, .07), S-B χ^2 (236) = 685.66, $p < .05$).

The second model variation included indirect paths from the attachment variables to social satisfaction via social self-efficacy and social support. This model, which can be labeled "indirect attachment" (see Figure 3), yielded good values of CFI (.96), SRMR (.05), and RMSEA (.05, 90% confidence interval = .05, .06), S-B χ^2 (232) = 534.36, $p <$ .05. Comparison of the inert and indirect attachment models using the S-B χ^2 difference test indicated that the addition of the indirect paths from the two attachment constructs improved model fit significantly beyond the inert model, S-B $\Delta\chi^2$ (4) = 162.65, $p < .05$.

The third model variation included the indirect paths from the second model and added direct paths from attachment avoidance and attachment anxiety to social domain satisfaction (see Figure 4). This variation, which may be labeled the "direct plus indirect attachment model," yielded a S-B χ^2 (230) = 528.68, $p < .05$) and good values of CFI (.96), SRMR (.05), and RMSEA (.05, 90% confidence interval = .05, .06). Comparison of the second and third models with the S-B χ^2 difference test indicated that the addition of the direct paths from the two attachment constructs to social domain satisfaction improved on the fit of the more parsimonious indirect effects only model in a statistical sense, S-B $\Delta\chi^2$ (2) = 6.05, $p < .05$. However, the difference was not practically significant, given that the difference in CFI values between the second and third models did not exceed .01 (Cheung & Rensvold, 2002), indicating no meaningful improvement in model fit. In addition, no improvement was observed in the other model fit indices (i.e., RMSEA, SRMR; Weston & Gore, 2006), and the additions of the direct paths from attachment anxiety (-.08, $p <$ ns) and attachment avoidance (-.05, $p <$ ns) to social

satisfaction were not statistically significant. Therefore, Model 2 (i.e., the Indirect

Attachment Model Variation) was judged to be the best fitting of the three contrasting

models.

With regard to the hypothesized paths in the Indirect Attachment Model shown in

Figure 3, significant direct paths to social domain satisfaction were found from goal

progress (.41, *p* < .05), social support, (.24, *p* < .05), and positive affect (.26, *p* < .05);

although, a significant direct path from social self-efficacy (06, p < .05) was not found.

Significant paths leading to goal progress were found from the social cognitive constructs

of social self-efficacy (.46) and social support (.46). A significant path leading to social

outcome expectations was found from social self-efficacy (.60, p < .05), as predicted.

Limited support was found for the association between social support and outcome

expectations, with a small and nonsignificant path from social support to outcome

expectations (.14, *p = ns*). Social self-efficacy had significant paths from social support

(.39), positive affect (.27), and attachment avoidance (-.39), but not from attachment

anxiety (.08, p < .10). Last, the model revealed support for the paths leading from

positive affect (.24) and attachment avoidance (-.48) to social support.

Test of Indirect Effects. In order to test the indirect effects (i.e., mediating

paths) of Model 2, bootstrapped estimates were computed with 5,000 iterations and bias-

corrected confidence intervals using Mplus 7. Maximum likelihood was selected as the

default estimator; MLM and MLR are not available in Mplus 7, because using

bootstrapped estimates with maximum likelihood computes parameter estimates that are

similar to MLR estimation.

Significant total indirect effects (B) were found between attachment avoidance and social domain satisfaction via the mediating pathways of social support (-.24, $p < .05$; see Table 8)[5]. Specifically, significant mediation effects were found from attachment avoidance to social domain satisfaction through (a) social support alone (-.11, $p < .05$), (b) social support and then through goal progress (-.09, $p < .05$), and (c) social support to social self-efficacy and then through goal progress (-.04, $p < .05$). Moreover, significant total indirect effects were found between attachment avoidance and social domain satisfaction via the mediation of social self-efficacy (-.13, $p < .05$). Specifically, significant mediation effects were found from attachment avoidance to social domain satisfaction through social self-efficacy and then through goal progress (-.07, $p < .05$), and similar indirect effects were found through social support, to social self-efficacy, and then through goal progress (-.04, $p < .05$). By contrast, no significant indirect effects were found between attachment anxiety and social domain satisfaction with either social support or social self-efficacy serving as mediators.

Significant total indirect effects were also found from positive affectivity to social domain satisfaction via the mediation of social support (.12, $p < .05$). Specifically, significant mediating paths were found from positive affectivity to social domain satisfaction via (a) social support and then through goal progress (.05, $p < .05$), and (b) social support to social self-efficacy and then through goal progress (.02, $p < .05$). In addition, a specific significant indirect effect was found between positive affect and social domain satisfaction mediated via social self-efficacy and then through goal progress (.05, $p < .05$). Last, a small but significant indirect effect was found between

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[5] Note. All reported path coefficients are standardized coefficients.

positive affectivity and social domain satisfaction via the mediation of social support, to

social self-efficacy, and then through goal progress (.02, $p < .05$).

Chapter 6: Discussion

The current study tested the plausibility of a modified social cognitive model of social domain satisfaction. The model added the constructs of attachment avoidance and attachment anxiety to the existing predictors of domain satisfaction in the social cognitive model of well-being (Lent, 2004). The results of the measurement model provided support for an eight-factor model of social domain satisfaction that included positive affect, attachment anxiety, attachment avoidance, social support, social self-efficacy, social outcome expectations, social goal progress, and social domain satisfaction. In addition, structural model tests provided partial support for a model portraying an indirect pathway from attachment avoidance (but not from attachment anxiety) to social domain satisfaction via its links to social support and social self-efficacy.

Consistent with previous SCT-satisfaction studies in the social domain (e.g., Lent et al., 2005, Study 1), the structural models generally provided good support for expectations that social domain satisfaction would be predicted by trait positive affect both directly and indirectly, through environmental social supports and social cognitive variables. However, nonsignificant direct paths to social domain satisfaction were observed from attachment anxiety and attachment avoidance. Support was found instead for a modified model, which portrays an indirect pathway from attachment avoidance (but not from attachment anxiety) to social domain satisfaction via its links to social support and social self-efficacy. Overall, attachment anxiety did not produce any of the significant paths posited in the current model, whereas attachment avoidance produced significant indirect paths through the social cognitive constructs.

Direct Paths from Social Cognitive Constructs to Social Domain Satisfaction

Consistent with previous findings (e.g., Hui et al., 2013; Lent et al., 2005, Study 1), several direct paths were found from the social cognitive constructs to social domain satisfaction. In particular, social goal progress was the most consistent predictor of social domain satisfaction across all three model tests. In addition, a direct path to social domain satisfaction was found from social support, which generally replicated the effect sizes found in previous studies within the social domain (e.g., Hui et al., 2013; Lent et al., 2005, Study 1). Contrary to expectations of the current model, but consistent with previous findings, direct paths to social satisfaction were not found either from self-efficacy or outcome expectations (Hui et al., 2013; Lent et al., 2005).

Relations Among Personality and Social Cognitive Constructs

Similar to prior findings, this study yielded evidence of direct paths to social self-efficacy from social support (Hui et al., 2013; Lent et al., 2005) and positive affect (Lent et al., 2005, Study 1). The model also provided evidence of a significant path leading to social support from positive affect and from self-efficacy to outcome expectations (Lent et al., 2005, Study 1). As expected, the current study found evidence for significant direct paths from attachment avoidance to social support and social self-efficacy, replicating previous findings (Mallinckrodt & Wei, 2005; Vogel & Wei, 2005). Contrary to expectations and prior findings, however, the direct path to social self-efficacy from attachment anxiety was not significant (Mallinckrodt & Wei, 2005); neither was the path leading to social support from attachment anxiety (Mallinckrodt & Wei, 2005; Vogel & Wei, 2005). With regard to social outcome expectations, the path to goal progress was not significant, which replicated previous findings (Lent et al., 2005, Study 1), though the

non-significant path from social support to outcome expectations was at variance with the findings of Lent et al. (2005, Study 1).

Indirect Effects on Social Domain Satisfaction

Consistent with expectations, indirect effects were found between the personality constructs and social domain satisfaction, which were mediated by environmental social supports and social cognitive constructs. Specifically, social support mediated the paths between (a) positive affect and social domain satisfaction, which was consistent with previous findings (Lent et al., 2005, Study 1), and (b) attachment avoidance and social domain satisfaction. Social support did not, however, mediate the path between attachment anxiety and social domain satisfaction. Positive affect was also linked to social domain satisfaction indirectly via the self-efficacy to goal progress pathway, which extended previous findings (Lent et al., 2005, Study 1). Social support was linked to domain satisfaction indirectly via goal progress and the self-efficacy/goal progress pathway, which was consistent with previous findings in the social domain (Hui et al., 2013; Lent et al., 2005). Finally, self-efficacy, though not outcome expectations, produced a significant indirect path to social domain satisfaction via goal progress, which replicated previous findings (Lent et al., 2005, Study 1, Hui et al., 2013).

Implications for the Top-Down View of Social Domain Satisfaction

Relative to the top-down (personality) view, positive affect was associated with social domain satisfaction directly and indirectly through environmental social supports and the social cognitive constructs of social self-efficacy and goal progress. These findings replicate those of prior studies on the social cognitive model of social domain satisfaction (Lent et al., 2005, Study 1) and add to a body of research demonstrating the

role of positive affect in fostering perceptions of social supports (Lent et al., 2001; Singley et al., 2010) and self-efficacy (Lent et al., 2011; Lent et al., 2012; Lent et al., 2009; Ojeda et al., 2011). Contrary to expectations, the other two personality constructs yielded a somewhat different pattern of findings and neither played as prominent role in the model as did positive affect. Attachment anxiety was not linked to social domain satisfaction either directly or indirectly, while attachment avoidance was related to social domain satisfaction only indirectly through its linkages to social supports and self-efficacy.

The divergent pattern of findings for the attachment constructs was contrary to expectations and inconsistent with previous findings of adult attachment dimensions and self-efficacy beliefs. Attachment avoidance and anxiety have been associated negatively with self-efficacy in several previous studies, across various life domains; six studies have shown this association in the social domain, with three of those studies employing the ECR (see Mikulincer & Shaver, 2007). In the few studies that found nonsignificant associations between attachment dimensions and self-efficacy beliefs, attachment avoidance was the dimension that was not supported by the evidence (Mikulincer & Shaver, 2007).

Several previous studies also provide evidence of associations between both attachment dimensions and perceptions of social support (see Mikulincer & Shaver). Very few of those studies, however, have evaluated associations with social support in the social domain, with peers, or with friends. Rather, studies tended to focus on social support from close relationship partners. Moreover, only a few of those studies evaluated the attachment dimensions using the ECR (e.g., Mallinckrodt & Wei, 2005; Vogel &

Wei, 2005). Given the importance of goal progress in the current model, the lack of evidence found for attachment anxiety might be attributable to goal importance or salience. Specifically, attachment anxiety is characterized by ambivalence toward interpersonal goals and dispositions. For example, two studies found that undergraduates high in attachment anxiety reported stronger positive *and* negative attitudes toward romantic partners and parents (Mikulincer, Shaver, Bar-On, & Ein-Dor (2010); Maio, Fincham, & Lycett, 2000).

Implications for the Bottom-Up View of Social Domain Satisfaction

Relevant to the bottom-up (situational) view, environmental social supports and goal progress were directly related to social domain satisfaction, and social self-efficacy was linked to domain satisfaction through perceptions of goal progress. This general pattern of findings were generally consistent with those found in previous studies of the social domain (Hui et al., 2013; Lent et al., 2005, Study 1) and in other domains (Brunstein, 1993; Sheldon & Kasser, 1998). Across studies of domain satisfaction, goal progress has generally been found to be the most useful predictor of domain satisfaction in college student samples in the social domain, the academic domain, and other central life domains (Hui et al., 2013; Lent et al., 2005).

The nonsignificant direct path from social self-efficacy to social domain satisfaction replicated previous findings (Hui et al., 2013; Lent et al., 2005). The accumulating evidence suggests that in the social domain, self-efficacy beliefs predict domain satisfaction indirectly through perceptions of social goal progress. It may be that social self-efficacy does not lead to social domain satisfaction directly in college students; rather it may play a less direct role, helping students to achieve their social

goals which, in turn, promotes social satisfaction. Interestingly, this pattern does not hold

for academic domain satisfaction, with evidence found for the indirect and direct path

from academic self-efficacy to academic domain satisfaction in previous college student

samples (Lent et al., 2005, Study 1). Contrary to hypotheses but consistent with some

prior findings in the social domain (Lent et al., 2005, Study 1), outcome expectations did

not relate to domain satisfaction either directly or indirectly through goal progress (Lent

et al., 2005, Study 1).

Measurement Considerations

The *principle of compatibility* suggests that predictive associations will be

stronger among predictors and criterion variables that more closely match each other in

relevant domains, measures, or dimensions (Ajzen, 1988; Bandura, 1986). In line with

this principle, it should be noted that the social cognitive predictors more clearly matched

the (social) domain of the criterion variable. By contrast, the adult attachment constructs

of anxiety and avoidance have generally been defined, measured, and validated within a

somewhat different, more focused domain (i.e., close relationships; Mikulincer & Shaver,

2007). This relative mismatch of predictors to criteria could help to explain the lack of

predictive utility of attachment anxiety or the limited utility of attachment avoidance in

predicting social domain satisfaction. This possibility suggests that, in future research, it

may be fruitful to link all predictors (both social cognitive and attachment) to a criterion

that reflects a common domain of functioning and level of specificity. For example, all

predictors and criteria could be conceptualized and measured in relation to functioning in

close relationships (e.g., romantic relationships, parental relationships, or close

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friendships) rather than in relation to more general social functioning. Such research

would entail use, for example, of measures of relationship-specific self-efficacy.

The measurement of attachment anxiety and avoidance might further explain the

divergent findings of the attachment constructs in the current study. The ECRS is an

explicit self-report measure of attachment anxiety and avoidance that was developed in

research by social psychologists on adult attachment and interpersonal relationships.

While the ECRS is described as the gold standard of adult attachment self-report

measures, it is possible that it fails to tap adequately into the chronic unconscious

attachment working models underlying individual differences in attachment security in

relation to social domain satisfaction. For example, the ECRS might be vulnerable to the

implicit biases and self-distortions of efficacy judgments and social goal preferences that

anxious and avoidant individuals have been found to demonstrate (see Mikulincer &

Shaver, 2007). Given this possible measurement limitation, some of the path coefficients

found in the current study could be underestimated or deflated. This measurement

limitation implies that the Adult Attachment Inventory (AAI) or other more implicit

attachment methods might be needed to tap into students' attachment working models, as

argued by developmental psychologists (Mikulincer & Shaver, 2007). On the other hand,

this speculation may be at odds with other research that has found significant associations

between the adult attachment dimensions and perceptions of social support, self-efficacy

beliefs, and social goals (Mikulincer & Shaver, 2007).

Possible measurement limitations involving social outcome expectations should

also be considered. Specifically, the items on the social outcome expectations scale may

not adequately represent outcome expectations in the social domain. For example, many

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of the items of the social outcome expectations scale refer to self-focused outcomes, such as "feel excited," that could result from "Spending time socializing," without reference to a specific social target. It is possible that modifying these items to match their content more closely to the social domain could strengthen their associations with social goal progress and social domain satisfaction.

Directions for Future Research

The present findings suggest several directions for future research. First, it may be that attachment anxiety serves as a secondary *hyperactivating* strategy that causes individuals to focus narrowly on close attachment relationships (e.g., a parent, romantic partner, or best friend) rather than the less intimate social networks of the social domain that were assessed in the current model. This possibility suggests that it may be useful to study attachment anxiety in relation to satisfaction with particular relationships rather than one's overall social life. The inconsistent evidence for the interplay of attachment dimensions with social supports and social self-efficacy warrants further study. A second direction for future research could be to examine the conditions under which attachment anxiety relates to social supports and social self-efficacy. Third, it could be useful to supplement the social cognitive model with additional contextual and behavioral variables that may help explain additional variance in social domain satisfaction or that may explain the ways in which particular predictors function. Such variables might include availability of time and money to engage in social activities, extent of participation in various college social activities (e.g., clubs, intramural sports, Greek life), and demonstrated social skills.

Fourth, future research on the role of the attachment variables relative to the social cognitive model of well-being might include life satisfaction as well as domain satisfaction as a well-being criterion. The omission of life satisfaction from the current model test did not allow examination of the possible linkage of the attachment variables to life satisfaction via the social cognitive predictors (e.g., see Wright & Perrone, 2010), and previous findings have suggested social domain satisfaction to be a strong predictor of global life satisfaction (Lent et al., 2005). A fifth direction for future research would be to conduct additional scale validation studies of social outcome expectations. By adding or revising existing items in the social outcome expectations scale, future research may better establish the role of outcome expectations within the domain satisfaction model. Finally, as suggested earlier, it may be useful to test the model using predictors and criterion variables that better match one another, for example, within the context of satisfaction with close relationships, such as romantic relationships.

Tentative Implications for Practice

The current findings may offer a few tentative implications for practice, assuming that they replicate in future research. These implications are most relevant when clients present at counseling for specific problems in the social domain while at college. For example, given the consistent evidence regarding social goal progress as a predictor of social domain satisfaction, counselors might help clients to identify which social goals are most important to them. The findings also demonstrated the direct and indirect role of social supports relative to students' evaluations of their progress toward social goals as well as their satisfaction with their social lives. Hence, counselors can assist clients with exploration of social resources to aid in identifying social opportunities and establishing

social networks. For example, counselors can assist clients to identify social clubs or organizations on campus, or to use social networking sites to connect with resident life activities, resources, or more generally, other students on campus.

Counselors can also aid clients to accurately assess progress toward their social goals. Given the importance of social self-efficacy in current and previous findings, counselors can enable social goal progress through enhancing self-efficacy beliefs (cf., Lent et al., 2005). Self-efficacy beliefs can be enhanced, for example, by assessing and developing clients' social skills or by modeling methods of effective social coping. Counseling methods for intervening at social-cognitive and goal mechanisms seem most amenable to brief therapies and working with clients who present with short-term developmental or situational problems with social adjustment and satisfaction.

The current findings provide additional tentative implications for counselors who work with clients lacking a history of social skills or insufficient social supports (e.g., self-efficacy beliefs are accurately low, or clients lack close friendships on campus, off campus, or other close relationships for support). Based on the current findings linking attachment avoidance and social support, counselors working with clients who present with low social skills and lack of supports might assess clients for high attachment avoidance. Counselors can use the therapeutic relationship to adjust clients' internal working models of attachment relationships—especially avoidant attachment models of *self* as indifferent to close relationships or uncomfortable with emotional intimacy, and *others* as unreliable or rejecting. A couple of sources can be consulted for guidance on how to reduce attachment avoidance, or more generally, increase attachment security (see Bowlby, 1988; Hazan & Shaver, 2007).

Daly and Mallinckrodt (2009) offered a useful source of ideas for addressing attachment insecurity within therapeutic relationships. Their qualitative study identified therapists who were considered to be experts in working with clients with attachment issues. The therapists indicated that they initially provide greater therapeutic distance (e.g., less frequent meetings, less focus on the here-and-now, less emotional intensity, and less intimacy in sessions) with clients who are high in attachment avoidance. The expert therapists also recommended decreasing therapeutic distance over time by pushing appropriate boundaries (i.e., from the client's perspective) and increasing session intensity, mutual self-disclosure and transparency, and here-and-now focus. According to the therapists' reports, the stated effects of decreased therapeutic distance are client's willingness to depend on the therapist, as well as corrective relationship experiences that might translate into clients' increased capacity to trust and seek support from others, which might, in turn, enable clients to form social networks, develop close social supports, and make progress toward social goals on campus.

Limitations

The study's findings should also be considered with regard to its limitations. One limitation involved the omission of life satisfaction from the models tested in the current study, thus precluding a test of the full normative model of well-being (Lent, 2004). A second limitation of the study involved the use of mono-method and mono-source (self-report only) survey data, which can inflate parameter estimates. A third limitation involved the study's cross-sectional design, which cannot support cause-effect or directional inferences. Although structural equation modeling allowed a test of the modified social cognitive model's tenability, only longitudinal research designs permit

inferences of temporal precedence, and only experimental manipulation enables causal inferences. Fourth, as noted by others (e.g., Lent et al., 2005), the nomothetic framework of the current study could limit the generalizability of findings to the counseling setting, in which client may present with more specific, idiographic goals of varying importance compared to the more general social goals presented in the current study.

Conclusions

The current study contributes to the literature on college student social well-being by testing a modified social cognitive model in a large sample of traditional undergraduate students. The adjusted model allowed examination of the ways in which attachment variables might operate in the context of social cognitive and other personality predictors (i.e., positive affect). These findings replicate and extend those of a relatively small number of studies that have tested the social cognitive model of well-being in relation to social domain satisfaction (Hui et al., 2013; Lent et al., 2005, Study 1).

The design of the current study also enabled testing of the measurement model, which demonstrated the empirical distinctness of the attachment constructs from each other and also from positive affect, social self-efficacy, perceptions of social support resources, and social outcome expectations. This evidence suggests that attachment anxiety and attachment avoidance represent distinct personality constructs that produce somewhat differing relations to the social cognitive variables and to satisfaction with social relationships in college. It may, therefore, be valuable to continue to "unpack" attachment security by examining attachment anxiety and attachment avoidance as separate predictors of social well-being in future research.

Table 1. Descriptive statistics

Variables.	Minimum	Maximum	M	SD	Skewness	Kurtosis
1. Social Support	1.1	5	4.24	.64	-1.02	1.22
2. Self-Efficacy	1.5	9	6.05	1.48	-.47	-.09
3. Outcome Expectations	1.7	9	6.88	1.44	-.75	.65
4. Goal Progress	1.14	5	3.71	.81	-.54	-.01
5. Social Satisfaction	1	5	3.94	.74	-.62	.39
6. Positive Affect	1	5	3.63	.64	-.47	.60
7. Attachment Avoidance	1.06	6.5	3.47	1.05	.01	.46
8. Attachment Anxiety	1	6.5	3.89	1.15	-.17	-.51
$N = 454$						

Table 2. Means and Standard Deviations for Model Variables Across Studies

Variables.	Current Sample M (SD)	Lent et al. (2005; Pilot Sample) M (SD)	Lent et al. (2005; Main Sample) M (SD)	Singley et al. (2010) M (SD)	Hui et al. (2013) M (SD)
Supports	4.24 (.64)	4.14 (.74)			4.10 (.66)
SSE	6.05 (1.48)	6.64 (1.70)	6.76 (1.24)		7.25 (1.74)
SOE	6.88 (1.44)	7.20 (1.85)	7.35 (1.28		
Goal Progress	3.71 (.81)	3.56 (.92)	3.83 (.67)		3.69 (.91)
Social Sat	3.94 (.74)	3.99 (.83)	4.19 (.56)		3.96 (.72)
Positive Affect	3.63 (.64)	3.58 (.73)	3.54 (.58)	3.44 (.71)	

Variables.	Current Sample M (SD)	Mallinckrodt & Wei (2005) M (SD)	Hill et al. (2014) M (SD)	Marmarosh et al. (2009) M (SD)
Avoidance	3.47 (1.05)	2.87 (1.17)	2.89 (1.03)	3.27 (1.37)
Anxiety	3.89 (1.15)	3.72 (1.16)	3.93 (1.27)	3.91 (1.32)

Note. Supports = Social Supports; SSE = Social Self-Efficacy; SOE = Social Outcome Expectations;
     Social Sat = Social Domain Satisfaction

Table 3. Bivariate correlations and scale reliabilities for the observed variables

Variable.	1	2	3	4	5	6	7	8
1. Social Support	**.90**							
2. Self-Efficacy	.64	**.90**						
3. Outcome Expectations	.52	.64	**.94**					
4. Goal Progress	.68	.68	.48	**.90**				
5. Social Satisfaction	.59	.58	.42	.67	**.84**			
6. Positive Affect	.34	.46	.37	.48	.49	**.75**		
7. Attachment Avoidance	-.50	-.62	-.43	-.52	-.46	-.29	**.92**	
8. Attachment Anxiety	-.16	-.14	.00	-.19	-.23	-.20	.19	**.93**
$N = 454$								

Note. Scale reliabilities are reported in bold on the diagonal.
Only the correlation between outcome expectations and attachment anxiety was not significantly related at the .05 level.
Attachment anxiety and social self-efficacy were significant at the .01 level.
All other bivariate correlations were significant at the .001 level.
Attachment Avoidance and Attachment Anxiety revealed a low significant correlation.

Table 4. Skewness and kurtosis of item parcels

	Mean	Skewness	Std. Error	Kurtosis	Std. Error
Parcel:					
Support Parcel 1	4.14	-1.04	.12	1.32	.23
Support Parcel 2	4.21	-1.06	.12	1.02	.23
Support Parcel 3	4.41	-1.27	.12	2.15	.23
SSE Parcel 1	5.68	-.41	.12	-0.16	.23
SSE Parcel 2	6.24	-.69	.12	0.29	.23
SSE Parcel 3	6.24	-.45	.12	-0.23	.23
OE Parcel 1	6.99	-.82	.12	0.68	.23
OE Parcel 2	6.87	-.77	.12	0.83	.23
OE Parcel 3	6.73	-.72	.12	0.43	.23
GP Parcel 1	3.75	-.64	.12	0.42	.23
GP Parcel 2	3.56	-.48	.12	-0.47	.23
GP Parcel 3	3.78	-.61	.12	0.01	.23
Social Sat Parcel 1	3.98	-.69	.12	0.21	.23
Social Sat Parcel 2	3.87	-.53	.12	-0.21	.23
Social Sat Parcel 3	3.97	-.81	.12	0.50	.23
PA Parcel 1	3.61	-.49	.12	0.59	.23
PA Parcel 2	3.63	-.45	.12	-0.19	.23
PA Parcel 3	3.67	-.38	.12	-0.02	.23
Avoidance Parcel 1	3.39	.10	.12	-0.41	.23
Avoidance Parcel 2	3.58	.21	.12	-0.35	.23
Avoidance Parcel 3	3.45	-.01	.12	-0.64	.23
Anxiety Parcel 1	3.81	-.14	.12	-0.61	.23
Anxiety Parcel 2	3.97	-.19	.12	-0.46	.23
Anxiety Parcel 3	3.88	-.10	.12	-0.49	.23

Table 5. Fit indices for the measurement and structural models

Model	S-B χ2	df	ΔS-B χ^2	CFI	SRMR	RMSEA
Measurement:						
1. 8-factor Model	495.88*	224		.97	.04	.05 (.05, .06)
Structural:						
1. Inert Attachment Model	685.66*	236		.939	.10	.07 (.06, .07)
2. Indirect Attachment Model Variation	534.36*	232	162.65*	.96	.05	.05 (.05, .06)
3. Indirect Plus Direct Attachment Model Variation	528.68*	230	6.05*	.96	.05	.05 (.05, .06)

Note. $N = 454$. S-B = Satorra-Bentler. CFI = Comparative Fit Index. SRMR = Standard Root Mean Residual, RMSEA = Root Mean Square Estimate of Approximation.
*$p < .05$.

Table 6. Factor loadings for the hypothesized model

Variable	Social Support	Social Self-Efficacy	Outcome Expectations	Goal Progress	Social Satisfaction	Positive Affect	Attachment Avoidance	Attachment Anxiety
Support Parcel 1	.89							
Support Parcel 2	.88							
Support Parcel 3	.83							
SSE Parcel 1		.89						
SSE Parcel 2		.94						
SSE Parcel 3		.82						
OE Parcel 1			.95					
OE Parcel 2			.92					
OE Parcel 3			.93					
GP Parcel 1				.91				
GP Parcel 2				.87				
GP Parcel 3				.84				
SocSat Parcel 1					.75			
SocSat Parcel 2					.83			
SocSat Parcel 3					.90			
PA Parcel 1						.86		
PA Parcel 2						.63		
PA Parcel 3						.61		
Avoidance Parcel 1							.94	
Avoidance Parcel 2							.87	
Avoidance Parcel 3							.89	
Anxiety Parcel 1								.90
Anxiety Parcel 2								.92
Anxiety Parcel 3								.93

Note. Factor loadings reported are standardized estimates. Support = Social Support. SSE = Social Self-Efficacy. OE = Outcome Expectations. GP = Goal Progress. SocSat = Social domain Satisfaction. PA = Positive Affect. Avoidance = Attachment Avoidance. Anxiety = Attachment Anxiety.

Table 7. Correlations among the eight latent factors

Variable	1	2	3	4	5	6	7
1. Social Support							
2. Social Self-Efficacy	.71**						
3. Outcome Expectations	.56**	.69**					
4. Goal Progress	.75**	.73**	.52**				
5. Social Satisfaction	.68**	.65**	.47**	.76**			
6. Positive Affect	.39**	.52**	.41**	.55**	.59**		
7. Attachment Avoidance	-.56**	-.68**	-.47**	-.56**	-.51**	-.34**	
8. Attachment Anxiety	-.16**	-.14*	.00*ns*	-.19**	-.26**	-.24**	.20**

Note. *$p < .01$; **$p < .00001$. Scores are standardized covariances.

Table 8. Model 2--Standardized Coefficients and Confidence Intervals of
           Standardized Total, Total Indirect, Specific Indirect, and Direct Effects

| Independent variable	Mediator variable	Dependent Variable	Specific Indirect Paths	β	Sum indirect effect (B)	SE of mean	95% C.I.	
Avoidance	Social Support	Social Satisfaction						
					-.24	.05	-.34	-.15
			12, 5	-.11		.05	-.21	-.02
			12, 7, 3	-.09		.02	-.14	-.05
			12, 8, 6, 3	-.04		.01	-.06	-.01
PA	Social Support	Social Satisfaction						
					.12	.04	.05	.20
			16, 7, 3	.05		.02	.01	.08
			16, 8, 4	.02		.01	.01	.03
Avoidance	Social Self-Efficacy	Social Satisfaction						
					-.13	.06	-.24	-.02
			10, 6, 3	-.07		.03	-.13	-.02
			12, 8, 6, 3	-.04		.01	-.06	-.01
PA	Social Self-Efficacy	Social Satisfaction						
					.08	.04	.01	.15
			15, 6, 3	.05		.02	.01	.09
			16, 8, 6, 3	.02		.01	.01	.03

Note. PA = Positive Affect; All reported path coefficients were significant at the .05 level.
     Nonsignificant indirect paths are not reported or presented.
     β = Standardized path coefficient.
     Compare path numbers to Figure 1.

Figure 1. Social Cognitive Model of Social-Domain Satisfaction
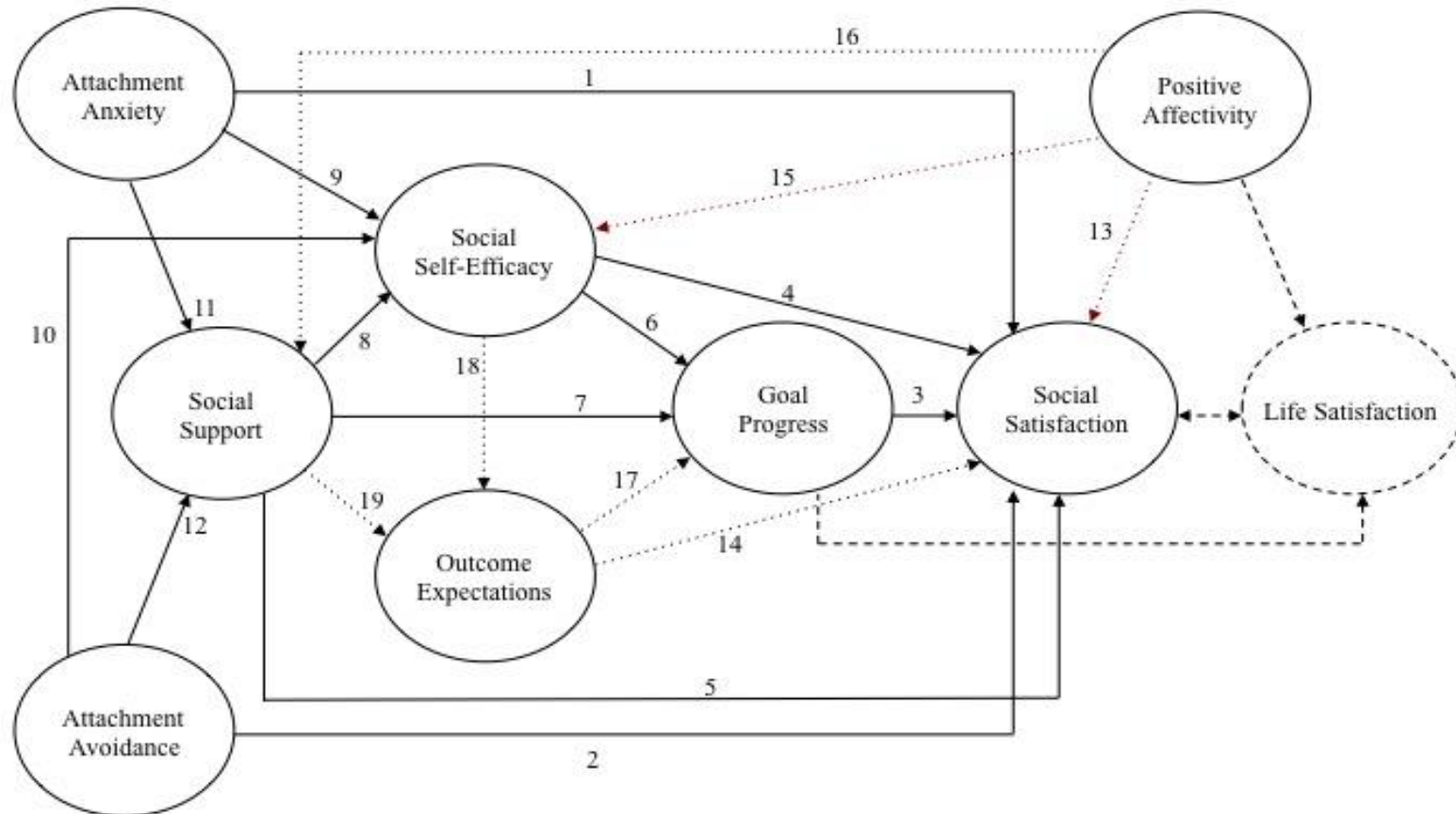
Note. Paths (in dashes) Leading to Life Satisfaction will not be tested in the adjusted model.
Paths (in dotted paths) will be tested as alternative models to the primary hypothesized model (in solid paths).

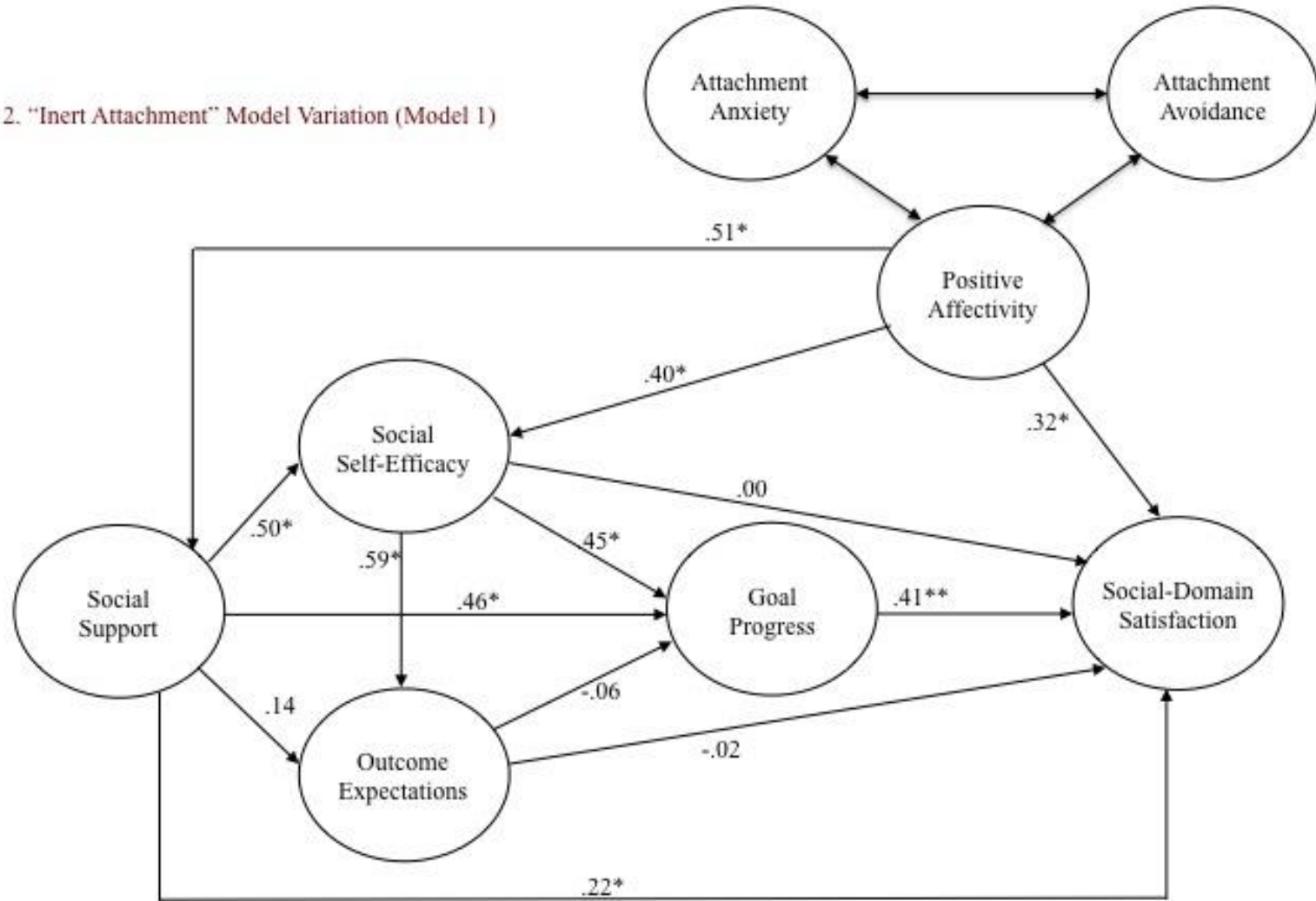Figure 2. "Inert Attachment" Model Variation (Model 1)

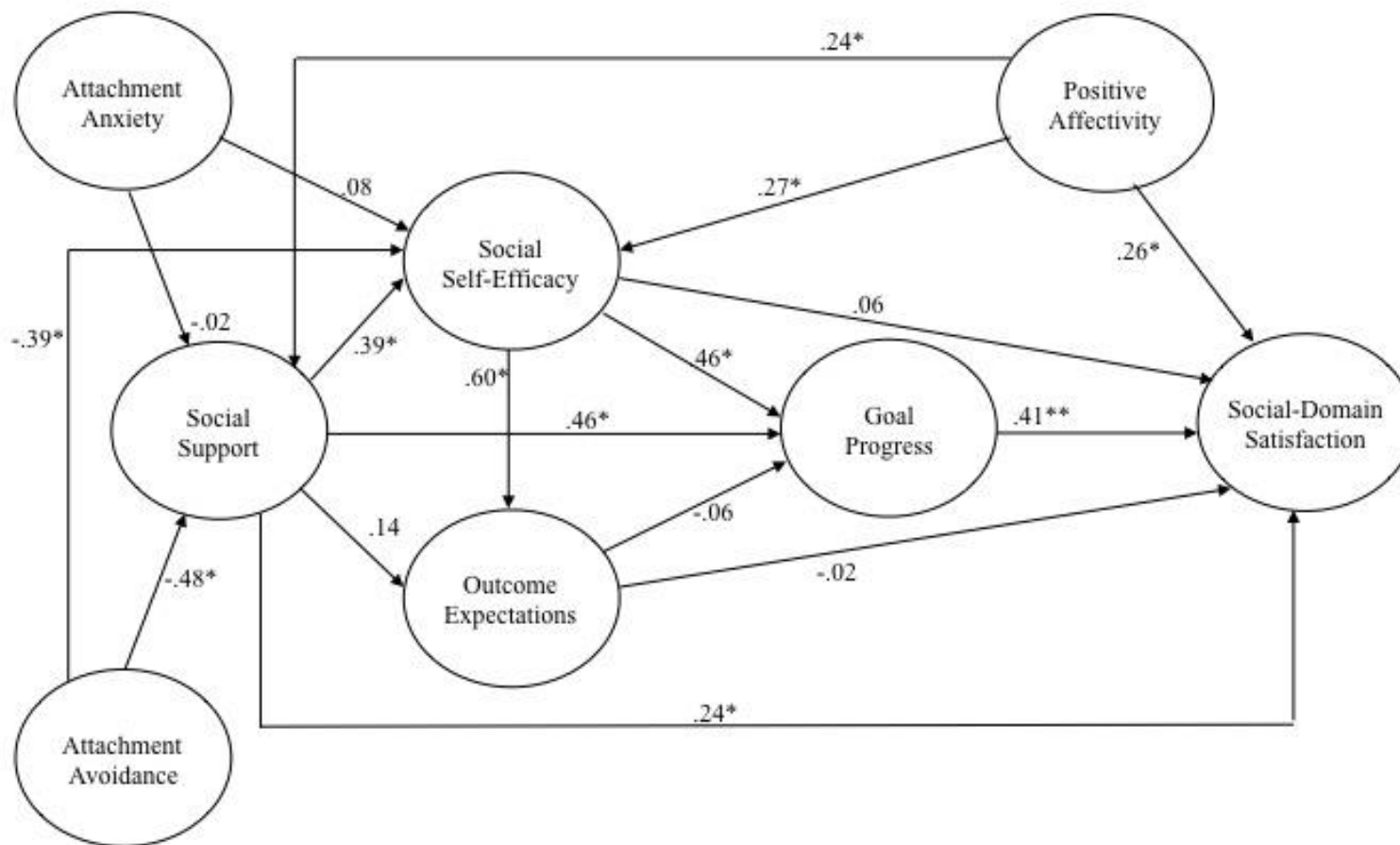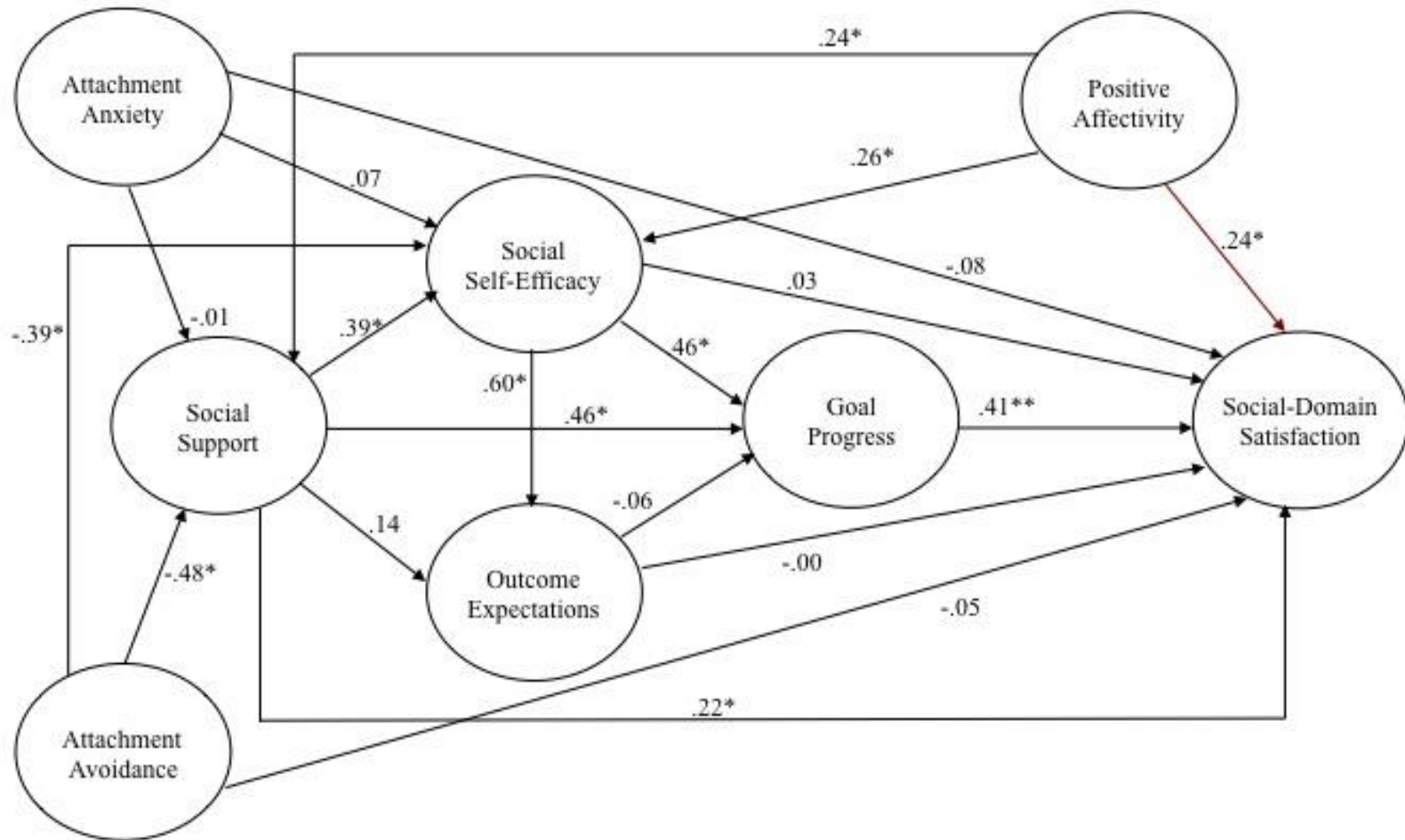Figure 3. "Indirect Attachment" Model Variation (Model 2)

Figure 4. "Indirect Plus Direct Attachment" Model Variation (Model 3)

Appendices

Appendix A.

Are you an undergraduate student at UMD?

You are eligible to participate in a study of social relationships and satisfaction!

Matt Jezzi and Dr. Robert Lent of the University of Maryland's Department of Counseling, Higher Education, and Special Education are conducting a study on college social life. We want to learn more about your perceptions of your social relationships and social network during college.

What's Involved? Our study involves a one-time survey that is completed online in about 30 minutes or less. Your responses will be confidential.

Compensation? Your responses will be confidential, and as a result of participation, you will be eligible for a lottery for one of ten $20 gift cards to Amazon.com!

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Please visit the following link if you are interested in participating. You will be taken to a website that gives a description of the study. You will also be able to view the informed consent form before you decide if you would like to participate.

https://umdsurvey.umd.edu/SE/?SID=SV_5o30jSe4FxQghtr

Informed Consent

Project Title	A College Social Life: Factors that Promote Satisfaction
Purpose of the Study	**This is a research project being conducted by Mr. Matt Jezzi and Dr. Robert Lent at the University of Maryland, College Park. We are inviting you to participate in this research project because you are an undergraduate student at UMD. The purpose of this research project is to identify your experiences in social relationships and your attitudes about your social life at college.**
Procedures	**The procedures involve completing a one-time online survey. The survey will take approximately 20-30 minutes to complete. You will access a link, which will take you to the online survey. Your responses will be confidential. The survey will examine your perceptions of your close relationships and about your social life. There will be questions regarding your perceptions of your interactions in close relationships and your general social network at college. For example: The questionnaire will contain self-report measures about your (a) social satisfaction (e.g., "During the past week, how often have you… enjoyed talking or being with friends or relatives?", (b) social self-efficacy (e.g., "How much confidence do you have in your ability to… Work out conflicts or disagreements with a friend"), (c) outcome expectations of social pursuits (e.g., Spending time socializing will likely allow me to… feel relaxed and calm), (d) social support, (e.g., "I have close personal relationships with other people"), (e) progress toward social goals (e.g., "Developing a satisfying social life"), (f) positive emotions (e.g., "Thinking about yourself and how you normally feel, to what extent do you generally feel… interested"), (g) general experiences in close relationships (e.g., "I prefer not to show others how I feel deep down"), and (h) demographic information consistent with information sought in counseling psychology journals (e.g., "What is your race/ethnicity?". For each section, please read the brief instructions that explain the response options.**
Potential Risks and Discomforts	**Although there are no known risks associated with taking part in this study, it is possible that you could experience mild discomfort when responding to certain items about their level of relationship support and relationship quality, or lack thereof. Another possible risk could involve mild discomfort when responding to items about relationship intimacy (e.g., "My desire to be very close sometimes scares people away").**
Potential Benefits	**There are no direct benefits from participation in this research. We hope that, in the future, other people might benefit from this study through improved understanding of college students social relationships and college adjustment.**

Confidentiality	**All data you provide will be treated as confidential. Your responses will be recorded in a secure server with Qualtrics.com. The two researchers, Matthew Jezzi and Robert Lent, are the only two parties who will have access to the Qualtrics.com account and access to download survey responses.**

After completing the survey, if you provide your email address to enter the raffle for a gift card, your email information will be destroyed immediately after data are collected.

If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law. |
| **Compensation** | **You will receive a web link to enter a lottery for one of ten $20 gift certificates from Amazon.com. The odds of winning a gift certificate are approximately 2.5%.** |
| **Right to Withdraw and Questions** | **Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. Your grades, employability, or standing at UMD will not be positively or negatively affected by your decision to participate in the study.**

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:

Mr. Matt Jezzi and Dr. Robert Lent at the University of Maryland, College Park. If you have any questions about the research study itself, please contact

Matt Jezzi: Department of Counseling, Higher Education, and Special Education (CHSE),
3210 Benjamin Building, College Park, MD 20742,
Tel: (610) 504-9473,
Email: mjezzi@umd.edu; or
Bob Lent at: CHSE Department, University of Maryland, 3214 Benjamin Building, College Park, MD 20742, (301) 405-2878, boblent@umd.edu. |
| **Participant Rights** | **If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:**

University of Maryland College Park |

	Institutional Review Board Office
	1204 Marie Mount Hall
	College Park, Maryland, 20742
	E-mail: irb@umd.edu
	Telephone: 301-405-0678
	This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Appendix C.

Social Domain Satisfaction

Instructions: Please indicate how often the following statements have been true for you over the past week.

Not at all or never	Rarely	Sometimes	Often or Most of the Time	Frequently or All of the Time
1	**2**	**3**	**4**	**5**

During the past week, how often have you …

1. … enjoyed talking with or being with friends or relatives?
2. … looked forward to getting together with friends or relatives?
3. … made social plans with friends or relatives for future activities?
4. … enjoyed talking with other students, co-workers, or neighbors?
5. … felt your relationships with your friends or relatives were without major problems or conflicts?
6. … been generally satisfied with your social life?

PANAS: Positive Affect Scale

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate t o what extent you have felt this way during the past few weeks. Use the following scale to record your answers:

Never				**Always**
1	**2**	**3**	**4**	**5**

_____ Alert
_____ Inspired
_____ Determined
_____ Attentive
_____ Active

Appendix E.

Attachment Security: Experiences in Close Relationships Scale.

Part I. <u>Instructions</u>. The following statements concern how you generally feel in close relationships (e.g., with romantic partners, close friends, or family members). Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale:

Disagree Strongly	Disagree	Disagree Slightly	Neutral/ Mixed	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

1. I prefer not to show others how I feel deep down.
2. I worry about being rejected or abandoned.
3. I am very comfortable being close to other people.
4. I worry a lot about my relationships.
5. Just when someone starts to get close to me I find myself pulling away.
6. I worry that others won't care about me as much as I care about them.
7. I get uncomfortable when someone wants to be very close to me.
8. I worry a fair amount about losing my close relationship partners.
9. I don't feel comfortable opening up to others.
10. I often wish that close relationship partners' feelings for me were as strong as my feelings for them.
11. I want to get close to others, but I keep pulling back.
12. I want to get very close to others, and this sometimes scares them away.
13. I am nervous when another person gets too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with others.
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to others.
18. I need a lot of reassurance that close relationship partners really care about me.
19. I find it relatively easy to get close to others.
20. Sometimes I feel that I try to force others to show more feeling, more commitment to our relationship than they

otherwise would.

21. I find it difficult to allow myself to depend on close relationship partners.
22. I do not often worry about being abandoned.
23. I prefer not to be too close to others.
24. If I can't get a relationship partner to show inter in me, I get upset or angry.
25. I tell my close relationship partners just about everything.
26. I find that my partners don't want to get as close as I would like.
27. I usually discuss my problems and concerns with close others.
28. When I don't have close others around, I feel somewhat anxious and insecure.
29. I feel comfortable depending on others.
30. I get frustrated when my close relationship partners are not around as much as I would like.
31. I don't mind asking close others for comfort, advice, or help.
32. I get frustrated if relationship partners are not available when I need them.
33. It helps to turn to close others in times of need.
34. When other people disapprove of me, I feel really bad about myself.
35. I turn to close relationship partners for many things, including comfort and reassurance.
36. I resent it when my relationship partners spend time away from me.

Appendix F.

Social Self-Efficacy Scale

Instructions: Please indicate how much confidence you have in your ability to perform each of the following behaviors in social situations. Use the 0-9 scale below to indicate your degree of confidence.

No Confidence At All					Some Confidence			Complete Confidence	
0	1	2	3	4	5	6	7	8	9

How much confidence do you have in your ability to:
1. Make new friends
2. Start up a conversation with a stranger
3. Get to know new people at a social event
4. Help other people to feel at ease in a new social situation
5. Disclose information about yourself to a new acquaintance
6. Keep a conversation going with someone you've just met
7. Initiate social activities with friends
8. Work out conflicts or disagreements with a friend
9. Share painful feelings with someone you feel close to you
10. Maintain relationships with old friends who do not live nearby
11. Provide comfort to a friend who is in distress
12. Ask for support from a friend when you could use support

Appendix G.

Social Outcome Expectations Scale

<u>Instructions</u>: Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

	Strongly Disagree		Disagree		Neither Agree Nor Disagree		Agree		Strongly Agree	
Spending time socializing will likely allow me to:	0	1	2	3	4	5	6	7	8	9

1. ... feel relaxed and calm

2. ... renew my energy for other activities

3. ... enjoy myself

4. ... feel excited

5. ... feel good about myself

6. ... meet new and interesting people

7. ... learn more about myself

8. ... feel a sense of connection or belonging to a group of people

9. ... learn about other people

10. ... take part in an activity that I value and enjoy doing for its own sake

Appendix H.

Social Supports Scale

Instructions: In answering the following set of questions, think about your current relationships with friends, family members, community members, co-workers, and so on. Please indicate to what extent you agree that each statement describes your current relationships with other people.

How much do you agree or disagree with the following statements:

Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**

1. I have close personal relationships with other people
2. I have easy access to people who enjoy the same social activities I do
3. Other people view me as competent in social situations
4. I feel part of a group of people who share my attitudes and beliefs
5. I have close relationships that provide me with a sense of belonging
6. I have friends nearby who share my interests and concerns
7. I feel a strong emotional bond with at least one other person
8. There are people who admire my social skills
9. I have a feeling of intimacy (closeness) with at least one other person
10. There are people I enjoy spending time with

Appendix I.

Social Goal Progress Scale

Instructions: Now we would like for you to rate each of the same goal statements in terms of how much progress you are making toward each one at this point in time. That is, indicate how effectively you feel you are meeting or working toward each goal at present, regardless of how important the goal is for you.
How much progress are you making toward each of these goals at this point in time:

No Progress At All	A Little Progress	Fair Progress	Good Progress	Excellent Progress
1	2	3	4	5

How much progress are you making toward each of these goals at this point in time:
1. Developing a satisfying social life
2. Making the "right" amount of friends (i.e., right for you)
3. Finding other people who can support you in difficult times
4. Maintaining relationships with people you enjoy spending time with
5. Keeping up contacts with social groups that you belong to
6. Helping to maintain harmony within social groups that you belong to
7. Attending to the well-being of friends

Appendix J.

Demographic Questions

The following items are demographic in nature. These items will not be used to identify you in any way and will only be reported in summary form.

1 What is your gender?
- ○ Male (1)
- ○ Female (2)
- ○ Other (3)

2 What is your age?   (Please Enter your age in years.)

3. What is your race/ethnicity?
- ○ Native American / American Indian (1)
- ○ Asian American (2)
- ○ African American / African Descent / Black (3)
- ○ European American / Caucasian / White (4)
- ○ Latino(a) / Hispanic (5)
- ○ Pacific Islander (6)
- ○ Multiracial (7)
- ○ Other (Please Type) (8) _____

4. Which sexual orientation do you identify with most?
- ○ Heterosexual (1)
- ○ Lesbian or Gay (2)
- ○ Bisexual (3)
- ○ Polyamorous (4)

5 What is your academic year/status?
- ○ Freshman (1)
- ○ Sophomore (2)
- ○ Junior (3)
- ○ Senior (4)
- ○ Other (5) _____

6 What is your current relationship status?

◯ Single (1)

◯ In an Exclusive Romantic Relationship (2)

◯ Married (3)

7 How many close friends do you have that live nearby?
Please enter the number of close friends (type 0, if you have no close friends living nearby).

8 Are you currently enrolled at the university as a full-time student?

◯ Yes, I am enrolled as a full-time university student. (1)

◯ No, I am not enrolled as a full-time university student. (2)

9 Do you live on campus or off campus?

◯ On Campus in residential housing (1)

◯ Off Campus (2)

10 Have you completed this survey as participation in another study? Please note, responding "Yes" will not affect your ability to participate in the raffle for a gift card.

◯ Yes, I completed the same survey through SONA Systems to receive credit for a psychology course I am enrolled in. (1)

◯ No, this is the first time I've completed this survey. (2)

Lotto If you would like to be included in the raffle for a $20 Amazon.com gift card, please enter your email address below. Your email address will be deleted promptly after completing the raffle.

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