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Exploring The Interconnections of Role Satisfaction, Self-Efficacy, Negative Affect, and Stress Among College Students

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ABSTRACT

EXPLORING THE INTERCONNECTIONS OF ROLE SATISFACTION, SELF-EFFICACY, NEGATIVE AFFECT, AND STRESS AMONG COLLEGE STUDENTS

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Previous research has explored the connections between various psychosocial factors among students, such as the negative association between self-efficacy and stress, or the influence of affect on stress. A separate vein of research has explored the nature of roles and how expectations and behaviors arise for particular roles such as those associated with work or school. As of yet, little to no research has attempted to bridge the gap between these veins of research in order to explore student satisfaction with various roles and what effect, if any, those perceptions have on overall levels of stress. The current study focused on three types of role satisfaction (family roles, friend role, and student roles) as predictors of overall stress, as well as how self-efficacy and negative affect function as intermediate factors in this evaluative process. Within a sample of undergraduate students ($N = 158$), none of the three types of role satisfaction significantly predicted overall stress. It was proposed that general self-efficacy might function as a mediator in the relation between role satisfaction and stress, but this was not supported for any of the three types of role satisfaction. Finally, an additional model of moderated mediation was tested with general self-efficacy proposed as a mediator in the relation

between role satisfaction and stress and negative affect moderating the relation between self-efficacy and stress. However, no evidence for moderated mediation was found with each of the types of role satisfaction. Limitations to the current study are discussed, as well as directions for future research.

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EXPLORING THE INTERCONNECTIONS OF ROLE SATISFACTION,
SELF-EFFICACY, NEGATIVE AFFECT, AND STRESS AMONG
COLLEGE STUDENTS

BY

JONATHAN D. EMMONS
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
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Michelle Demaray

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CHAPTER 1

INTRODUCTION

Overview

College students experience a number of stressors throughout their academic career. Naturally, academic tasks and responsibilities can contribute to students' overall stress. However, many domains outside of academics can be viewed as potential stressors. The presence of stress and its myriad adverse consequences has been well-represented in the existing literature (e.g., Bailey & Miller, 1998; Chang, 2001; Dyson & Renk, 2006; Edwards, Hershberger, Russell, & Market, 2001; Hudd et al., 2000; Lumley & Provenzano, 2003; Pritchard, Wilson, & Yamnitz, 2007; Struthers, Perry, & Menec, 2000), with multiple studies observing effects of stress among this group, such as difficulty concentrating, poor academic performance, decreased life satisfaction, not getting enough sleep, and stress carrying over into multiple roles. But how do students evaluate or see themselves in these multiple roles (we can understand the term "role," on a basic level, to mean the behaviors and norms that are associated with a unique social identity, such as employee or student; see Biddle, 1986)? And how might satisfaction with various roles – family roles, friend roles, and, of course, the role of student – actually contribute to students' overall stress?

The evaluation of roles has equated to the concept of role satisfaction in existing literature. Unfortunately, there has been much difficulty in arriving at a consensus of the

definition of role satisfaction among students (i.e., “student satisfaction”) due to inconsistent findings and multiple contributing factors – relationships with faculty, social life on campus, and program difficulty, to name a few (Astin, 1993; Bean & Bradley, 1986; Sax & Harper, 2005; Strayhorn & Saddler, 2009). Interestingly, how students rate their overall satisfaction appears to be highly dependent on factors of their environment, rather than drawing upon beliefs about their own performance/efficacy/motivation within that role or by evaluating typical expectations of the role of student.

In addition to the relation between role satisfaction and stress, it is also important to consider other factors that influence students’ perceived stress. Notably, personal beliefs seem to influence how individuals evaluate potential stressors from their environment (Lazarus & Folkman, 1984). Existing beliefs about the self, including self-efficacy, have the potential to alter perceptions or appraisals of stress, thus altering the impact of the stressor itself. Research has shown that individuals who exhibit greater self-efficacy tend to feel confident in their ability to manage tasks and cope effectively in situations that can be perceived as stressful (Chemers, Hu, & Garcia, 2001; Pintrich & De Groot, 1990). The mediating role of self-efficacy in the stress process has been demonstrated, particularly in the relation between stress and academic performance (Bandura, 1995; Hackett, Betz, Casas, & Rocha-Singh, 1992; Torres and Solberg, 2001). However, previous research has not explored whether self-efficacy also mediates between satisfaction with different roles and overall stress.

Positive and negative affect, or a person’s tendency to experience positive or negative emotions, have also been studied in the stress process. For example, negative affect has been shown to moderate the association between social support and stress (Çivitci, 2015).

Additionally, affect can relate to self-efficacy in several unique ways. In one study, self-efficacy for regulating affect moderated the relation between negative affect and life satisfaction (Lightsey, Maxwell, Nash, Rarey, & McKinney, 2011). When evaluating specific negative emotions, research has also shown a moderating relation between self-efficacy and achievement, such that higher levels of negative emotions seem to weaken the link between higher levels of self-efficacy and greater academic achievement (Villavicencio & Bernardo, 2013). This research provides clues about the connections between beliefs about the self, general emotional experiences, and stress. Yet, research has neglected the study of how negative affect specifically might potentially moderate between role satisfaction and stress.

In order to address these existing gaps in the literature, the current study examined the interconnections among all the above factors. In particular, the current study evaluated: 1) students' satisfaction with multiple roles, 2) the relation of role satisfaction to overall stress, and 3) the mediating and moderating influence of other factors (self-efficacy and negative affect) in this relation. This research may be important in exploring alternative definitions of role satisfaction and methods for measuring it, as well as evaluating previously unexplored connections between different psychosocial factors and overall stress. This research may also yield practical implications for evaluating the complex nature of stress in higher education, allowing advisors, counselors, and instructors to better help students remove obstacles to achieving success in their education.

CHAPTER 2

LITERATURE REVIEW

Stress

Models of Stress

Stress research and theory has evolved in many ways over the past century. From Hans Selye's focus on the autonomic and physiological reactions to stress (Selye, 1936; 1976) to Lazarus and colleagues' transactional model (e.g., Lazarus, 1966, 1981; Lazarus & Folkman, 1984), the definition of stress has shifted somewhat, expanding the understanding of the nature of stressors and the stress response to account for psychological as well as physiological origins and effects of various stressors.

The main thrust in the argument for a transactional model of stress and coping comes from the cognitive appraisals of individuals, or the process of evaluating various encounters with the environment and how those encounters might impact personal well-being. According to this model, a person must determine what is at stake in their encounter (a process known as "primary appraisal") and take inventory of their available physical, social, and emotional resources (the complementary process of "secondary appraisal") in order to respond to the encounter in a manner that helps them to benefit from the situation and/or prevent harm or loss (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).

Coping is the next stage of the transactional process and is defined as the efforts made to manage demands of the transaction between the person and their environment after it has been

appraised as either taxing or exceeding the resources of the individual. The perception of stress in specific contexts determines, in part, coping strategies. After the initial encounter with the stressor, primary and secondary appraisals, and coping efforts, the appraisal process begins again as the thoughts and experiences associated with one encounter are applied to other stressors or subsequent encounters with the same stressor (Folkman et al., 1986). Although the appraisal process does arise from specific encounters in specific domains, secondary appraisals are described as global procedures, as all available resources are assessed by the individual (Folkman et al., 1986). Thus, while a stressor may be highly specific, the outcome of stress can be considered more globally. Global stress may also refer to cumulative effects of stress across domains. This relation was explored in the current study as the contribution of satisfaction with various roles to overall stress was considered.

The collective elements of this transactional model seem to imply an important and necessary balance of internal processes (i.e., appraisals) to external demands in determining specific outcomes of stress. As such, it may be of particular importance to evaluate ways in which specific stressors may be counteracted by beliefs about the self. In the current study, the transactional model was applied to questions regarding the impact of role satisfaction on perceptions of overall stress, with self-efficacy and negative affect considered throughout the appraisal process.

Stressors in the Post-Secondary Educational Environment

A number of stressors exist for college students, both in the transition from high school to college as well as throughout one's college academic career. These stressors carry a number of

adverse consequences including stress carrying over into multiple roles, difficulties with concentration, decreased life satisfaction, not getting enough sleep, consuming more junk food, and poor academic performance (Bailey & Miller, 1998; Chang, 2001; Dyson & Renk, 2006; Edwards, Hershberger, Russell, & Market, 2001; Hudd et al., 2000; Lumley & Provenzano, 2003; Pritchard, Wilson, & Yamnitz, 2007; Struthers, Perry, & Menec, 2000).

Naturally, academic tasks and responsibilities can contribute to students' overall stress.

However, many domains outside of academics can be viewed as potential stressors. A review of qualitative research on stressors for college students by Hurst and colleagues (2013) revealed several themes among this group, including stress from family, peer and romantic relationships, stress stemming from a lack of resources (financial and otherwise), stress in the initial transition to college, concerns about the future, as well as stress resulting from diversity-related issues such as racial/ethnic minority status, disability status, sexual orientation, etc. (Hurst, Baranik, & Daniel, 2013).

With so many stressors cited by students as contributing to their overall reported stress, it may be increasingly important to dissect the unique connections between individual stressors and overall stress in order to ameliorate the negative effects of stress. The current study proposes that these stressors may be encapsulated within individuals' experiences as part of a unique role (e.g., family roles or student roles). That is, perceptions of and satisfaction with certain roles can perhaps be linked to overall stress, as there are many facets of a particular role and therefore many opportunities for potential stressors to arise. In this sense, overall stress functions as an outcome of intrapersonal and psychosocial factors.

Role Theory

Background and Various Perspectives

Some of the basic tenets of role theory have been explored quite extensively in sociological, psychological, and anthropological research. In one sense, role theory is concerned with characteristics of human behavior that differ depending on a given situation, as well as on a person's unique social identities. In another sense, role theory attempts to harmonize the contributions of multiple factors toward the formation and maintenance of different types of roles (Biddle, 1986). Notably, different perspectives have impacted researchers' understanding of what exactly a "role" is. In functional role theory, for instance, social structures made up of collections of social positions are what characterize social systems. The stability and overall organization of these structures is, in part, attributed to adherence to shared norms that govern behaviors that are enacted by individuals occupying a particular social position. So, within this perspective, a role is defined by these accepted norms for behavior.

Meanwhile, within a symbolic interactionist perspective, social interaction contributes to the evolution of roles, while cognitive concepts contribute to the understanding and interpretation of roles by evaluation of one's self and of others (Heiss, 1981; Stryker & Statham, 1985). An interactionist perspective also lends itself towards the consideration of the relationship between roles and other factors such as emotions, stress, and self-concept.

The consideration of how role expectations and behavior relate to one another occupies yet another space in the area of role research. Cognitive role theory and its associated subfields help to address the need to expound on role behavior as a product of various cognitive and developmental processes. This mode of understanding roles has led to notable research,

including that of Sherif (1936) on group norms, as well as research in therapeutic/clinical settings (Brewer, Dull, & Lui, 1981; Carver & Scheier, 1981; Kelly, 1955; McNamara & Blumer, 1982; Rotter, 1954).

Role Satisfaction among College Students

The overall breadth of research within role theory has continued to proliferate, bringing with it new terms. One such term is role satisfaction, or the positive or negative feelings regarding experiences associated with a particular role (work, parenting, marriage, etc.). Notably, these feelings tend to be important in how individuals understand their own identity as certain roles may be more salient than others (Brown & McGill, 1989; Hoelter, 1983; Thoits, 1991). The distinction of roles and identity is somewhat important in the context of role theory in general and the evaluation of expectations, experiences, and performance that comprise, in part, what is meant by role satisfaction. While roles are traditionally associated with social positions, which in turn represent a social identity of sorts, identity may be best understood as the outcome of role behavior which is organized within an individual's self-concept (Biddle, 2013; Hogg, Terry, & White, 1995).

The relation of role satisfaction to other concepts such as role conflict, overall life satisfaction, and various health outcomes has also been explored extensively in existing research (see Chiu, 1998; Higgins, Duxbury, & Irving, 1992; Kopelman, Greenhaus, & Connely, 1983; Wickrama, Conger, Lorenz, & Matthews, 1995). For college students, satisfaction is related to levels of motivation (Chute, Thompson, & Hancock, 1999; Donohue & Wong, 1997) and likelihood to continue their education (Astin, 1993; Edwards & Waters, 1982).

Issues of clarity tend to exist for measures of role satisfaction, especially those measuring satisfaction with the role of student. The student role in higher education may represent many facets of social and academic functioning such as living in a dorm, having an on-campus job, participating in extra-curricular activities, and so on. The relegation of this focus on the role of students to the umbrella term “student satisfaction” has made it difficult to advance traditional concepts of role theory within educational research. For example, Astin (1993) proposed that contact time with faculty members and administrators, availability of career advisors, social life on campus, and overall relationships with faculty and administrators were the most important factors in undergraduate student satisfaction. Meanwhile, Bean and Bradley (1986) proposed that academic integration, institutional fit, quality and usefulness of education, social life, and difficulty of the program are the most important predictors of satisfaction.

It would seem that how students rate their overall satisfaction is highly dependent on factors of their environment, rather than beliefs about their own performance or efficacy or motivation within that role or evaluation of typical expectations regarding the role of student. In this regard, what constitutes a “role” is somewhat of a departure from traditional role theory. To clarify some of these issues, a new measure of role satisfaction for students was utilized in the current study. The Adolescent Role Evaluation Questionnaire (AREQ) was developed for the current study and evaluates three categories of roles that are particularly relevant to students: family roles, friend role, and student role. One of the main purposes of developing the AREQ was to align with similar constructs such as self-efficacy, with responses indicating an individual’s beliefs about themselves in the role of student.

Self-Efficacy

Models of Self-Efficacy

Some early work on the concept of self-efficacy has been noted to stem from Albert Bandura's social cognitive theory. Namely, Bandura's work posits a system within the self that allows individuals to exercise control over their feelings, thoughts, and actions (1986).

Considering Bandura's definition of self-efficacy, which he described as "an individual's belief in his or her own ability to organize and implement action to produce the desired achievements and results" (Bandura, 1997, p. 3), it is evident that the concept of self-efficacy is actually a subset of beliefs within the aforementioned self-system. These beliefs are viewed as distinct from other cognitive determinants of behavior and emotional reactions but are connected in the sense that efficacy beliefs influence thoughts and emotions.

Throughout various stages of development and in distinct environments, individuals are afforded opportunities to expand their self-efficacy. Attending school, engaging with new peer groups, and gaining independence throughout the adolescent years as individuals attempt to balance the roles of student, friend, employee, etc., can have a transformative effect on self-efficacy, causing individuals to gain coping skills that reinforce positive self-efficacy, or else diminish self-efficacy as challenges are not successfully dealt with (Bandura, 1994). In all of these stages, it is important to recognize the interplay between beliefs about the self and the impact of positive and stressful experiences from one's environment, as these events can be interpreted as either minor setbacks or serious threats through the lenses of high or low self-efficacy.

It seems that Bandura's original conceptualization of self-efficacy was quite broad, as these beliefs can be applied to a number of tasks and behaviors (Bandura, 1986). In fact, research has considered a wide range of learning outcomes and performance/behaviors related to one's job (e.g., Brown, Lent, Telander, & Tramayne, 2011; Chen, Gully, & Eden, 2001). Further research has considered how self-efficacy may differ based on the specific task being performed (academic self-efficacy or math self-efficacy, for instance).

The relation between general and specific efficacy beliefs is also outlined in existing research, with a general consensus that individuals who become more efficacious in specific tasks experience a more generalized sense of self-efficacy which can apply to tasks and behaviors that are not related to the domain of the specific task (Bandura, Adams, Hardy, & Howells, 1980). Therefore, general self-efficacy becomes useful in predicting behavior in novel situations where knowledge and prior experience are minimal (Sherer et al., 1982), such as the transition from high school to college or job satisfaction (Judge & Bono, 2001). The current study utilized a general measure of self-efficacy due to the measurement of specific roles in the newly-developed measure of role satisfaction as well as evidence from previous research for unique effects of general self-efficacy on overall stress (e.g., Ebstrup, Eplov, Pisinger, & Jørgensen, 2011).

Stress and Self-Efficacy

In certain models of stress, personal beliefs play an important role in evaluating potential stressors from one's environment (e.g., Lazarus and Folkman, 1984). That is, demands from the environment can be viewed as either a challenge or a threat through a cognitive appraisal

process, depending on existing beliefs about the self and in conjunction with other interpersonal and intrapersonal factors. Research has shown that individuals who exhibit greater self-efficacy tend to feel confident in their ability to manage tasks and cope effectively in situations that can be perceived as stressful (Chemers, Hu, and Garcia, 2001; Pintrich and De Groot, 1990). Thus, self-efficacy seems to play a mediating role in the stress process, mediating the relation between external stressors and stress outcomes (e.g., Bandura, 1995). In fact, the negative association between self-efficacy and perceived stress has been considered in relation to academic outcomes (e.g., Zajacova, Lynch, & Espenshade, 2005), health outcomes (Bandura, 1997), and psychological outcomes (Holahan & Holahan, 1987; Kavanagh, 1992; O’Leary, 1992).

It is important to note, however, that many studies vary in defining the overall characteristics and role of self-efficacy in different situations. While a specific stressful encounter (e.g., taking a math test) may create demands that relate to a specific appraisal tool or mechanism (math self-efficacy), the relation between general self-efficacy, stress, and various outcomes has been more difficult to establish (e.g., Gigliotti and Huff, 1995). One study in particular did find that general self-efficacy mediated the relation between personality factors and overall stress (Ebstrup et al., 2011), indicating that general self-efficacy may be more relevant in understanding how stress is perceived when intrapersonal factors are considered. In the current study, the relation between self-efficacy and stress was examined, with self-efficacy as a proposed mediator between overall stress as an outcome and a third variable – role satisfaction.

Student Satisfaction and Self-Efficacy

One area of interest in higher education deals with student satisfaction as an indicator of the overall student experience. A logical connection between student satisfaction and self-efficacy can be made, as positive beliefs about the self not only influence thoughts, feelings, and behaviors, but interaction with and perception of one's environment. In the context of learning, this has typically been related to achievement as a particular outcome (e.g., Chemers et al., 2001). However, grades and other indicators of performance tell only a portion of the story. Examining other factors of student success, including student satisfaction, may help identify important precursors to academic success as well as overall well-being for students in college and university settings.

Considering student satisfaction as life satisfaction (i.e., subjective judgment of overall emotional well-being and global contentment with life), Wilcox and Nordstokke (2019) found that academic self-efficacy was not predictive of college students' satisfaction with life when other factors (school connectedness and college gratitude) were accounted for. Student satisfaction has also been conceptualized as satisfaction with the teaching process (see Doménech, 2011). With this definition of student satisfaction, Doménech-Betoret and colleagues (2017) evaluated how secondary students' general academic self-efficacy was related to their satisfaction. Results indicated that academic self-efficacy had a significant direct effect on teaching process satisfaction. Another study noted the impact of first-year university students' self-efficacy ratings on satisfaction with courses, satisfaction with teaching, and satisfaction with their academic orientation, concluding that there was a significant positive relation between

academic self-efficacy and student satisfaction at the beginning of the academic year, but this relation was not significant at the end of the year (Pennington, Bates, Kaye, & Bolam, 2018).

Overall, it seems that the relation between student satisfaction and self-efficacy is a bit murky. While there is some evidence of the interplay between these constructs, inconsistencies between definitions of student satisfaction make it difficult to determine the precise nature and interpretation of this relationship. Student satisfaction may be equated to life satisfaction or may be viewed as the evaluation of how different concepts or courses are taught, or some other perception of the academic experience altogether. More research is needed in order to thoroughly evaluate the proposed impact of general and academic self-efficacy on satisfaction with one's role as a student and the many facets which make up that role. The current study sought to clarify student satisfaction by conceptualizing satisfaction as a self-evaluation of different student roles.

Positive and Negative Affect

The Role of Affect in the Student Experience

The importance of affect, both positive and negative, in impacting development and various outcomes has been explored extensively. Simply put, positive affect refers to the generally positive way that a person experiences the world around them, including how they interact with others and deal with challenges and stress. Negative affect involves the experience of more negative emotions, negativity in relationships, and negative responses to stress.

In learning situations, negative affect can lead to decreased motivation and perseverance and can hinder the use of appropriate strategies by students (Turner, Thorpe, & Meyer, 1998). During the transition to college, Rogers and colleagues found that students experienced a general decrease in

positive affect over the course of their first semester, while levels of negative affect remained stable (2018). At an even broader level, positive and negative affect can be seen as relating to life satisfaction (e.g., Huebner & Dew, 1996) and subjective well-being (Kormi-Nouri, Farahani, & Trost, 2013; Yilmaz & Arslan, 2013) among older students. In addition, students who report higher levels of self-esteem also tend to experience more positive emotions and less negative emotions (Ozyesil, 2012).

A whole host of other topics and constructs have been explored in relation to positive and negative affect as well, including having a fixed or growth mindset (King, 2016), positive or negative coping strategies (Deniz & Işık, 2010; Maher, Hevel, Reifsteck, & Drollette, 2021), and drug and alcohol use (Armeli et al., 2014; Martens et al., 2008; Weiss et al., 2018).

The Moderating Influence of Positive and Negative Affect

Although positive and negative affect have been viewed as predictors of various outcomes for students, as well as outcomes in and of themselves, the current study is interested in the way in which a tendency toward negative emotions moderates certain outcomes for students – in particular, stress. Çivitci, in exploring how perceived social support impacts stress among college students, found that negative affect had a moderating influence on the relation between social support and stress, while no such moderation occurred when positive affect was considered (2015). Specifically, the function of negative affect was such that an increase in negative affect was associated with a decrease in the positive effect of social support on stress. That is, despite having available sources of social support, students tend to experience higher levels of stress when they report more negative emotions. Negative emotions have also been

shown to moderate the relation between self-efficacy and academic achievement (Villavicencio & Bernardo, 2013).

Other research has identified a similar pattern of moderation (significant results for negative affect but not for positive affect) when examining the relation between self-efficacy and subjective well-being (Afzal, Malik, & Atta, 2014). In adult samples, the moderating influence of affect can be seen as well when it comes to stress. Fortunato and Harsh, for instance, found that negative, but not positive, affect moderates the relation between stress and quality of sleep (2006). The current student sought to identify whether negative affect moderated the association between self-efficacy and stress within a proposed moderated mediation model considering role satisfaction, self-efficacy, and overall stress in addition to negative affect.

Current Study

The current study aimed to explore the associations among stress, role satisfaction, self-efficacy, and negative affect. The following questions guided the current research:

Research Question 1

Research Question 1: How does students' satisfaction with various roles relate to overall stress?

It is predicted that a negative relation between role satisfaction (family, friend, and student roles) and overall stress will exist (Hurst et al., 2013), where greater satisfaction with a type of role is associated with lower levels of stress. It was expected that each role type will relate to stress in a similar manner.

Research Question 2

Research Question 2: Do students' ratings of self-efficacy explain the relation of role satisfaction to stress? It was predicted that self-efficacy will fully mediate the relation between role satisfaction and stress, with negative associations between role satisfaction and stress and self-efficacy and stress, and a positive association between each type of role satisfaction and self-efficacy (Bandura, 1995; Capri et al., 2012; Chemers, Hu, and Garcia, 2001; Pintrich and De Groot, 1990).

Research Question 3

Research Question 3: Within the relation of role satisfaction, self-efficacy, and stress, do students' ratings of negative affect moderate the association between self-efficacy and stress? As with Research Question 2, negative associations was proposed between role satisfaction and stress and self-efficacy and stress, and a positive association was expected between each type of role satisfaction and self-efficacy. A positive association was also expected between negative affect and stress. Finally, it was predicted that negative affect would moderate the relation between role satisfaction and stress, such that higher levels of negative affect would weaken the overall relation of self-efficacy to stress (Çivitci, 2015; Dua, 1993). It was expected that this relation would be consistent across role types (family, friend, and student).

CHAPTER 3

METHODOLOGY

Participants

Participants consisted of 163 undergraduate psychology students from a midwestern university. Students self-reported their gender (66.5% Female), age (range from 17 to 58; $M = 21.4$ years; $SD = 4.563$), year in school, and ethnicity for the present study. Among the current sample, 34.2% reported that they were in their Freshman/1st year in college, 18.4% Sophomore, 29.1% Junior, 10.8% Senior, and 7.6% 5th year or higher. Students reported their ethnicity as follows: 44.3% White, 22.2% Hispanic, 20.3% African American, 8.2% Asian, 3.8% Other, and 1.3% Native American. Overall enrollment at the university is approximately 16,609 with an ethnic makeup of 51.5% White students, 17.4% Black/African American, 19.3% Hispanic/Latino, 5.7% Asian, 3.7% two or more races, 1.9% Non-resident Alien, 0.1% Native American, 0.1% Native Hawaiian, and 0.2% Unknown. Demographic data for the university was obtained from the university's website and reflects student characteristics as of the fall of 2019. In comparing the participants of the current study to the overall population of the university, the ethnic makeup seems to constitute a representative sample.

Measures

Perceived Stress Scale

The 10-item Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1994) measures stress from various situations in one's life. Participants are asked to reflect on experiences within the last 30 days in responding to various items such as the following: "In the last month, how often have you felt that things were going your way?" or "In the last month, how often have you been angered because of things that were outside of your control?" The PSS was designed to be used in community (i.e., non-clinical) samples. Each item is rated by participants on a 5-point response scale ranging from 0 (*Never*) to 4 (*Very Often*). Negatively-worded items are reverse-scored, and the average of the resulting scores is calculated to obtain a score relating to a participant's overall level of perceived stress, with higher scores representing higher levels of stress. For the current sample, internal consistency of the PSS was $\alpha = .60$. In addition, 10 cases (6.1%) of 163 were excluded due to no response. Multiple studies have demonstrated an acceptable level of internal consistency for the 10-item version of the PSS (Chronbach's α ranged from .74 to .91 in various samples; Lee, 2012). Test-retest reliability was also determined to be acceptable in multiple studies (Lee, 2012). For a full review of the PSS, see Appendix A.

Adolescent Role Evaluation Questionnaire

The Adolescent Role Evaluation Questionnaire (AREQ) was developed for the current study and based on the Role Evaluation Questionnaire, developed by Lakey and Edmundson (1993). Lakey and Edmundson's version was designed to have participants self-select roles from a list of 13 possible roles and rank their relative importance. It also attempted to make

predictions with role satisfaction scores from individual roles as well as aggregating multiple roles. The AREQ, however, uses pre-selected roles that are likely to relate to the experience of most adolescents and combined related roles based on psychometric evidence from an exploratory factor analysis. For the AREQ, participants are asked to respond to statements about their satisfaction with various roles (e.g., student, friend, son/daughter, etc.), such as “I think that I am good at performing the tasks/duties associated with this role (*student*).” Responses are selected from a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). A mean score for each role represents the overall satisfaction with that role. An exploratory factor analysis was conducted to identify an initial factor structure and loadings for various items. Detailed results from this analysis are presented along with preliminary analyses for the current study.

A 3-factor solution was proposed with son/daughter and sibling roles making up one factor (Family Roles), friend making up another factor (Friend Role), and student and classmate roles making up the third and final factor (Student Roles). This 3-factor solution accounted for 64.7% of the total variance. All items loaded as expected onto their respective factors. Reliability for each of the three factors was good: $\alpha = .87$ for Family Roles; $\alpha = .88$ for Friend Role; $\alpha = .87$ for Student Roles. For a full review of the AREQ, see Appendix B.

New General Self-Efficacy Scale

The New General Self-Efficacy Scale (NGSES; Chen, Gully, & Eden, 2001) consists of 8 items relating to one’s overall ability and confidence to perform across many different tasks and situations. Participants respond to items such as “I will be able to successfully overcome many

challenges” using a 5-point response scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The average of a participant’s responses yield a total general self-efficacy score. Reliability scores in the current sample were determined to be good ($\alpha = .90$). Of the 163 participants, 10 cases (6.1%) were excluded due to no response. In addition, Chen et al. (2001) found evidence of content, discriminant, and predictive validity for the NGSES. A full review of the NGSES is available in Appendix C.

Positive and Negative Affect Schedule

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, Tellegen, 1988) asks participants to rate the extent to which they have felt certain emotions that are either positive (e.g., excited, proud, inspired, etc.) or negative (e.g., upset, distressed, nervous, etc.) over the past week. Ratings for each emotion are made on a 5-point scale ranging from 1 (*Very Slightly or Not At All*) to 5 (*Extremely*). Responses to positive items are added to provide a total positive affect score, with higher scores representing higher levels of positive affect. Similarly, responses to negative items are added to yield a negative affect score, with lower scores representing lower levels of negative affect. The PANAS showed good reliability among the current sample, both on the positive affect ($\alpha = .88$) and negative affect ($\alpha = .87$) subscales. Of the 163 participants, 12 cases (7.4%) were excluded due to no response. Evidence for convergent and criterion-related validity for the PANAS has been found in additional validation studies (Thompson, 2007). Appendix D contains a full copy of the PANAS.

Procedure

Approval to conduct the current study was obtained through the Institutional Review Board. Participants were recruited through undergraduate classes at a local midwestern university. Students either received research participation credit or extra credit depending on the course in which they were enrolled. An additional incentive to be included in a drawing for a \$50 Amazon gift card was provided to potential participants.

Students provided their initial consent online before accessing an electronic survey (Qualtrics) and completing the above questionnaires. Measures were counterbalanced to limit any order effects and the survey took approximately 20 minutes to complete. To facilitate the collection of responses during shelter-in-place procedures during the COVID-19 pandemic, only electronic surveys were distributed (April 8 to May 7, 2020). Students at the university had transitioned to remote classes approximately three weeks before the data collection period.

For each of the analyses, missing data were handled in a listwise deletion manner. The following table (Table 1) shows missing cases (role was not endorsed by the participant) for each role of the AREQ that was initially considered in an exploratory factor analysis.

Table 1
Missing Data for Roles of the Adolescent Role Evaluation Questionnaire

Role	Valid Cases		Excluded		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Son/Daughter	152	93.3	11	6.7	163	100
Sibling	141	86.5	22	13.5	163	100
Friend	152	93.3	11	6.7	163	100
Student	155	95.1	8	4.9	163	100
Classmate	155	95.1	8	4.9	163	100
God/Higher Power	98	60.1	65	39.9	163	100
Significant Other	71	43.6	92	56.4	163	100
Teammate	42	25.8	121	74.2	163	100
Employee	85	52.1	78	47.9	163	100
Coworker	84	51.5	79	48.5	163	100
Other Role	9	5.5	154	94.5	163	100

CHAPTER 4

RESULTS

Preliminary Analyses

Preliminary analyses included examining the initial factor structure of the AREQ through an exploratory factor analysis, as well as examining means and standard deviations and correlations for all variables considered (Overall Stress, three areas of Role Satisfaction, Self-Efficacy, and Negative Affect).

The factor structure of the AREQ was examined through several procedures. First, only roles that were endorsed by 80% or more of the respondents were included in the initial factor analysis (e.g., only 43.6% of participants indicated that they were in a romantic relationship, so the role of Significant Other was not included). Five factors remained including Son/Daughter, Sibling, Friend, Student, and Classmate. Each role was examined separately for reliability. A total of 5 items were included for each role. After examining item-total correlations for each role, items 1 and 5 were deleted due to low correlation. This was kept consistent across roles as the questions were identical for each role (e.g., “I am happy with this role at the present time” referring to sibling, son/daughter, friend, etc.). Item-total correlations for item 1 ranged from .482 to .632. Item-total correlations for item 5 ranged from .286 to .517.

The remaining items of the AREQ were included in a principal component analysis. This analysis yielded a four-factor solution based on eigenvalues of 1 or higher and accounted for 71.8% of the total variance. It was expected that items related to a particular role would load

onto separate factors, therefore yielding a five-factor solution. The majority of items loaded most strongly onto a single factor. To appropriately discriminate between the individual roles and account for the lower number of factors in the initial solution, a three-factor solution was proposed, combining the items for Son/Daughter and Sibling roles into Family Roles, combining Student and Classmate roles into Student Roles, and keeping the Friend Role as a separate factor. The three factors were extracted using a principal axis factoring method with oblique (oblimin) rotation. This 3-factor solution accounted for 64.7% of the total variance. All items loaded as expected onto their respective factors. Two items on the Student Roles factor had loadings of -.304 and -.344 on the Friend Role factor but had higher primary loadings on their proposed factor (.443 and .536, respectively). The final factor structure and loadings for each item are summarized in Table 2. Reliability was re-examined for these newly defined factors using Cronbach's alpha and was acceptable: $\alpha = .87$ for Family Role; $\alpha = .88$ for Friend Role; $\alpha = .87$ for Student Role.

Table 3 provides a summary of means and standard deviations on all study variables for the overall sample as well as by gender. In addition, correlations among all study variables were examined. Table 4 summarizes correlations among variables across the entire sample, while correlations for males and females are presented in Table 5.

Gender differences between variables were tested using univariate (ANOVA) and multivariate (MANOVA) analysis of variance tests. For Overall Stress, an ANOVA revealed significant differences between males and females, $F(1, 152) = 6.859, p = .010$, with females reporting higher levels of Overall Stress compared to males ($M = 2.255, SD = .479$ for females; $M = 2.045, SD = .456$ for males). No significant gender differences were found when General

Table 2
Factor Loadings and Communalities for an Oblimin Rotated Three-Factor Solution for 15 AREQ Items (N = 158)

Item	Factor			Comm.
	Family Roles	Student Roles	Friend Role	
I am happy with this role at the present time. (<i>son/daughter</i>)	.672	.178	.126	.495
In the future I expect that I will be happy with this role. (<i>son/daughter</i>)	.592	.112	.060	.377
I think that I am good at performing the tasks/duties associated with this role. (<i>son/daughter</i>)	.695	.043	-.029	.525
I am happy with this role at the present time. (<i>sibling</i>)	.743	-.076	-.105	.592
In the future I expect that I will be happy with this role. (<i>sibling</i>)	.799	-.086	-.094	.666
I think that I am good at performing the tasks/ duties associated with this role. (<i>sibling</i>)	.760	-.095	-.053	.570
I am happy with this role at the present time. (<i>student</i>)	.090	.798	.164	.623
In the future I expect that I will be happy with this role. (<i>student</i>)	-.041	.694	-.051	.487
I think that I am good at performing the tasks/duties associated with this role. (<i>student</i>)	.004	.760	.060	.554
I am happy with this role at the present time. (<i>classmate</i>)	.015	.579	-.280	.531
In the future I expect that I will be happy with this role. (<i>classmate</i>)	.121	.443	-.304	.461
I think that I am good at performing the tasks/duties associated with this role. (<i>classmate</i>)	.042	.536	-.344	.557
I am happy with this role at the present time. (<i>friend</i>)	.194	.045	-.702	.676
In the future I expect that I will be happy with this role. (<i>friend</i>)	.299	-.058	-.588	.555
I think that I am good at performing the tasks/duties associated with this role. (<i>friend</i>)	-.105	.117	-.896	.806

Self-Efficacy was considered, $F(1, 152) = .194, p = .660$. Likewise, a test of gender differences for Negative Affect revealed no significant results, $F(1, 152) = 3.222, p = .075$. Finally, among the three factors of Role Satisfaction, no gender differences were found after completing a MANOVA, $p = .913$; Wilks' $\Lambda = 0.996$.

Table 3
Means and Standard Deviations for Study Variables

Variable	Overall		Female		Male	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Stress	2.183	.480	2.255	.479	2.045	.456
General Self-Efficacy	4.262	.616	4.246	.622	4.292	.609
Negative Affect	2.348	.778	2.429	.761	2.193	.794
Role Satisfaction - Family	4.129	.632	4.143	.627	4.103	.648
Role Satisfaction - Friends	4.292	.749	4.287	.718	4.333	.703
Role Satisfaction - Student	3.940	.735	3.971	.687	3.980	.663

Note. Scale for Stress scores ranged from 0 (*Never*) to 4 (*Very Often*), 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) for General Self-Efficacy, 1 (*Very Slightly or Not At All*) to 5 (*Extremely*) for Negative Affect, and 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) for subscales of Role Satisfaction. Thus, higher scores on all of the above scales correspond to more stress, greater self-efficacy, higher levels of negative affect, and greater satisfaction within roles.

Table 4
Bivariate Correlations among Study Variables – Overall Sample

Variable	1	2	3	4	5	6	7
1. Gender	-						
2. General Self-Efficacy	-.036	-					
3. Negative Affect	.144	-.261**	-				
4. Overall Stress	.208**	-.055	.508**	-			
5. Role Satisfaction - Family	.030	.389**	-.177*	.023	-		
6. Role Satisfaction - Friend	.021	.364**	-.102	.132	.493**	-	
7. Role Satisfaction - Student	.089	.514**	-.074	.081	.421**	.485**	-

Note. * = Correlation is significant at the 0.05 level. ** = Correlation is significant at the 0.01 level. Gender was dummy coded with males = 0, females = 1.

Table 5
Bivariate Correlations among Study Variables by Gender

Variable	1	2	3	4	5	6
1. General Self-Efficacy	-	-.213**	-.118	.352**	.321**	.605**
2. Negative Affect	-.159	-	.442**	-.203	-.082	-.172
3. Overall Stress	.094	.596**	-	.008	.092	-.059
4. Role Satisfaction - Family	.467**	-.153	.037	-	.323**	.325**
5. Role Satisfaction - Friend	.443**	-.144	.192	.811**	-	.365**
6. Role Satisfaction - Student	.398**	.034	.261	.604**	.642**	-

Note. * = Correlation is significant at the 0.05 level. ** = Correlation is significant at the 0.01 level. Correlations for females appear above the diagonal; correlations for males appear below the diagonal.

Research Question 1

In order to examine the relation of role satisfaction to overall stress, a series of three regression analyses were conducted. Independent variables included the three subscales of the AREQ (Family Roles, Friend Role, and Student Roles). The dependent variable was overall stress from the PSS. In addition, gender was included as a covariate in each analysis (dummy coded with males = 0, females = 1).

When considering Family Roles Satisfaction as a predictor of Overall Stress, the overall model was not significant, $R^2 = .035$, $F(2, 139) = 2.536$, $p = .083$. A model with Friend Role Satisfaction significantly predicted participants' Overall Stress, $R^2 = .059$, $F(2, 151) = 4.725$, $p = .010$; however, only Gender was a significant predictor within this model, with females reporting higher Overall Stress compared to males, $\beta = .204$, $p = .011$ (Friend Role Satisfaction: $\beta = .125$, $p = .114$). When Student Roles Satisfaction was considered as a predictor, the overall model was significant, $R^2 = .047$, $F(2, 151) = 3.728$, $p = .026$; however, only Gender was a significant predictor within this model, with females reporting higher Overall Stress compared to males, $\beta = .202$, $p = .012$ (Student Roles Satisfaction: $\beta = .063$, $p = .434$). The results of these analyses are presented in Tables 6, 7, and 8.

Table 6

Regression Coefficients for Family Roles Satisfaction Predicting Overall Stress

Variable	B	SE	β	t	p
Constant	2.013	.266	-	7.560	.000
Gender	.186	.083	.186	2.235	.027
Family Roles Satisfaction	.013	.063	.018	.213	.832

Table 7

Regression Coefficients for Friend Role Satisfaction Predicting Overall Stress

Variable	B	SE	β	t	p
Constant	1.700	.227	-	7.490	.000
Gender	.205	.080	.204	2.584	.011
Friend Role Satisfaction	.081	.051	.125	1.588	.114

Table 8

Regression Coefficients for Student Roles Satisfaction Predicting Overall Stress

Variable	B	SE	β	t	p
Constant	1.889	.210	-	8.994	.000
Gender	.203	.080	.202	2.534	.012
Student Roles Satisfaction	.041	.052	.063	.784	.434

Research Question 2

In order to explore a possible mediating effect of self-efficacy on the relation of role satisfaction to stress, regression path analysis models were constructed using the PROCESS macro (model number 4) for SPSS (Hayes, 2017), with direct paths from role satisfaction to self-efficacy and stress as well as self-efficacy to stress being evaluated. Separate models were utilized for each subscale of the AREQ and each model included gender as a covariate.

Results of the regression path analysis with Overall Stress as the outcome and Family Roles Satisfaction and General Self-Efficacy as predictor and mediator, respectively, are presented in Tables 9 and 10. Based on confidence intervals, the indirect effect of Family Roles Satisfaction on Overall Stress through General Self-Efficacy was not significant (95% CI = -.086, .031).

Table 9

Mediation: Direct Effects of Family Roles Satisfaction and Self-Efficacy on Stress

	Coeff.	SE	<i>t</i>	Sig.
Role Satisfaction –				
Family Roles (X)	.034	.068	.496	.621
Self-Efficacy (M)	-.055	.072	-.766	.445
Gender (covariate)	.180	.084	2.153	.033

Table 10

Mediation: Bootstrap Results for Indirect Effect

Effect	Boot SE	95% CI	
		Lower	Upper
-.021	.029	-.086	.031

When Friend Role Satisfaction was examined in the place of Family Roles Satisfaction in the above model, the indirect effect of Friend Role Satisfaction on Overall Stress through General Self-Efficacy was not significant (95% CI = -.069, .018). The direct effect of Friend Role Satisfaction on Stress was marginally significant within the model ($t = 1.946, p = .054$). Tables 11 and 12 summarize the results of this analysis.

Table 11

Mediation: Direct Effects of Friend Role Satisfaction and Self-Efficacy on Stress

	Coeff.	SE	<i>t</i>	Sig.
Role Satisfaction – Friend Role (X)	.106	.055	1.946	.054
Self-Efficacy (M)	-.084	.066	-1.272	.206
Gender (covariate)	.200	.079	2.522	.013

Table 12

Mediation: Bootstrap Results for Indirect Effect

Effect	Boot SE	95% CI	
		Lower	Upper
-.025	.022	-.069	.018

Student Roles Satisfaction was also considered in its relation to General Self-Efficacy and Overall Stress. Tables 13 and 14 describe the direct and indirect effects of the model. Based on confidence intervals, the indirect effect of Student Roles Satisfaction on Overall Stress through General Self-Efficacy was not significant (95% CI = -.109, .037).

Table 13

Mediation: Direct Effects of Student Roles Satisfaction and Self-Efficacy on Stress

	Coeff.	SE	<i>t</i>	Sig.
Role Satisfaction – Student Roles (X)	.078	.061	1.283	.201
Self-Efficacy (M)	-.085	.072	-1.178	.241
Gender (covariate)	.194	.081	2.413	.017

Table 14

Mediation: Bootstrap Results for Indirect Effect

Effect	Boot SE	95% CI	
		Lower	Upper
-.037	.037	-.109	.037

Research Question 3

To explore the effect of negative affect on the relation of role satisfaction, self-efficacy, and stress, a regression path model was constructed using the PROCESS macro model number 14. Similar to the models used for Research Question 2, each subscale of the AREQ was used as a predictor, with general self-efficacy as a proposed mediator and overall stress as the outcome (gender was also included as a covariate). In addition, negative affect was considered as a potential moderator between general self-efficacy and overall stress, resulting in a proposed model of moderated mediation (see figure 1).

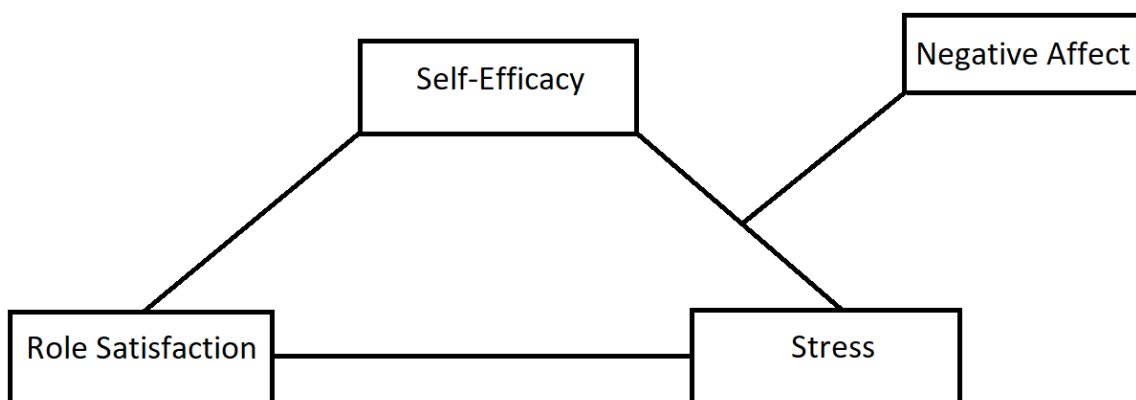


Figure 1
Proposed Moderated Mediation Model for Role Satisfaction, Self-Efficacy, Negative Affect, and Stress

Figures 2, 3, and 4 describe the relation of the variables within the proposed model, with Family Roles Satisfaction, Friend Role Satisfaction, and Student Roles Satisfaction as predictors within each respective model. In the model with Family Roles Satisfaction, the conditional

indirect effect of Family Roles Satisfaction on Overall Stress through General Self-Efficacy and Negative Affect was not significant, as noted by the index of moderated mediation (Index = -.009, BootSE = .033; 95% CI = -.081, .048). This conditional indirect effect was also not significant in the model with Friend Role Satisfaction (Index = -.020, BootSE = .022; 95% CI = -.069, .022). Similarly, the conditional indirect effect of Student Roles Satisfaction on Overall Stress through General Self-Efficacy and Negative Affect was not significant (Index = -.024, BootSE = .036; 95% CI = -.105, .038).

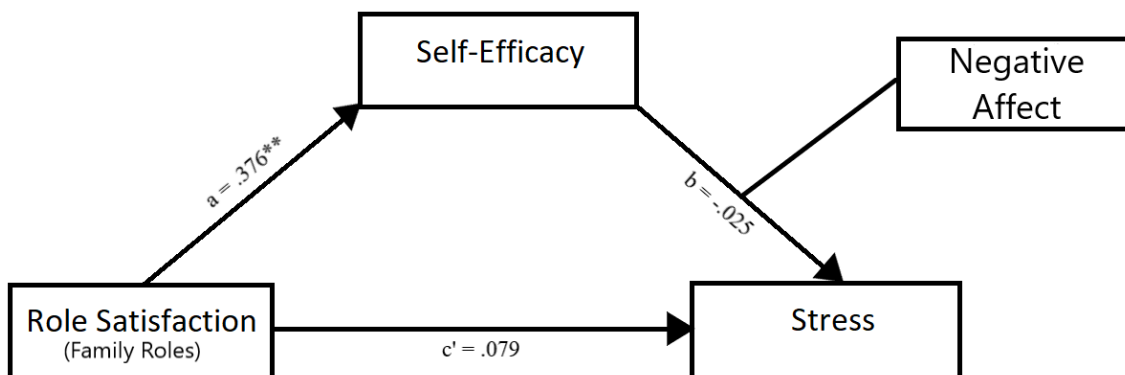


Figure 2
Conditional Indirect Effects of Family Roles Satisfaction and Stress via Self-Efficacy at Various Levels of Negative Affect

Note. ** = $p < .01$

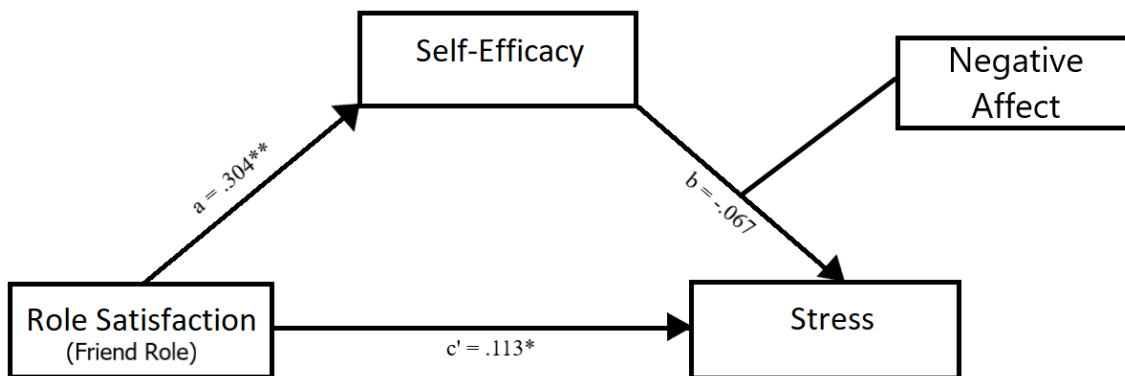


Figure 3
Conditional Indirect Effects of Friend Role Satisfaction and Stress via Self-Efficacy at Various Levels of Negative Affect

Note. $* = p < .05$; $** = p < .01$

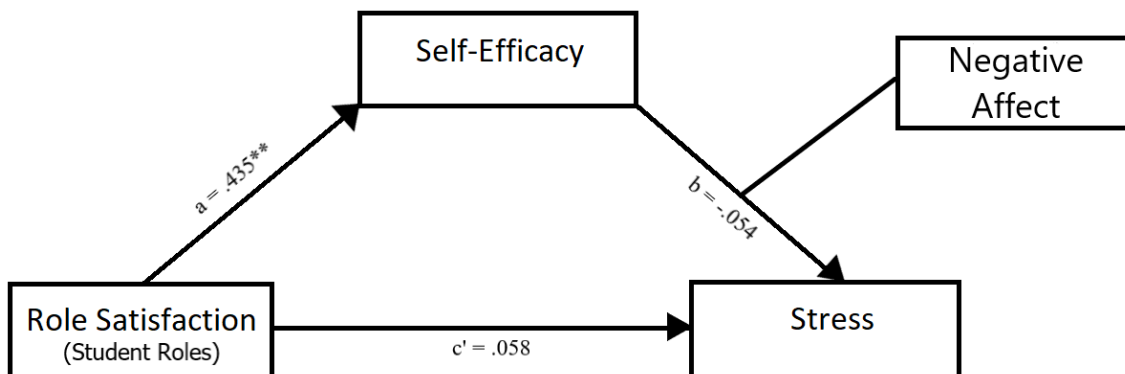


Figure 4
Conditional Indirect Effects of Student Roles Satisfaction and Stress via Self-Efficacy at Various Levels of Negative Affect

Note. $** = p < .01$

CHAPTER 5

DISCUSSION

The current study sought to explore the broad associations among stress, role satisfaction, self-efficacy, and negative affect as well as proposing several models of the interplay between these constructs. Research on the nature of stress and its outcomes for students is extensive in the extant literature (Bailey & Miller, 1998; Chang, 2001; Dyson & Renk, 2006; Edwards et al., 2001; Hudd et al., 2000; Lumley & Provenzano, 2003; Pritchard et al., 2007; Struthers et al., 2000). A link between stress and self-efficacy has also been demonstrated (e.g., Bandura, 1995) as it has been proposed that greater self-efficacy leads to greater confidence in one's ability to manage the demands of various situations and cope effectively when stressors arise (Chemers et al., 2001; Pintrich & De Groot, 1990). Additionally, the impact of negative affect on stress has been explored as it relates to negative coping strategies, particularly in the adolescent/college age group (Deniz & Işik, 2010; Maher et al., 2021). While few studies have addressed these three constructs simultaneously (e.g., Yoon, 2002), a gap exists in the current literature in addressing how role satisfaction may also play a part in the experience of stress. Definitional issues have perhaps made it difficult to clearly define what is meant by "student satisfaction," for instance, particularly when it comes to understanding how students define their own performance in relation to typical expectations of the role of student (the current study used the term "student roles satisfaction" due to the fact that multiple roles were considered). Furthermore, the mixed results represented in the literature regarding the relation between role satisfaction and self-

efficacy (Doménech-Betoret et al., 2017; Pennington et al., 2018) poses an issue when it comes to understanding the complexity of the intrapersonal experience of stress.

Based on the development of a novel measure of role satisfaction and theoretical points connecting these concepts in previous research, the current study aimed to clarify individual concepts such as role satisfaction as well as the relation of this and other concepts to a broad measure of stress among college students. Several research questions were developed to examine these interconnections. First, family, friend, and student role satisfaction was examined in relation to overall stress. Second, the relation among role satisfaction, self-efficacy, and stress was explored, with self-efficacy proposed as a mediator in the relation between role satisfaction and stress. Finally, several models including role satisfaction, self-efficacy, negative affect, and stress were examined with self-efficacy again proposed as a mediator between role satisfaction and stress and negative affect proposed as a moderator between self-efficacy and stress within the same model.

The Adolescent Role Evaluation Questionnaire, which was developed for the current study, showed acceptable psychometric properties both in its factor structure and the reliability of its subscales, though fewer roles were assessed than intended due to low response rate on some roles as well as combining some roles (e.g., son/daughter and sibling into family roles) in the final factor structure. When gender differences were examined among all variables, significant differences were only found with overall stress, with females reporting more stress than their male counterparts. No gender differences were found for self-efficacy, negative affect, or the three factors of role satisfaction.

Relation of Role Satisfaction to Stress

It was predicted that a negative association would exist between family, friend, and student role satisfaction and stress. That is, higher levels of satisfaction for a particular role would be associated with lower levels of overall stress. This hypothesis was not supported, as bivariate correlations for the whole sample did not reveal any significant correlations between role satisfaction and stress. This association was further tested using regression analyses to test gender as a covariate alongside role satisfaction to predict overall stress. A model with friend role satisfaction and gender predicting stress was significant, as was a model with student role satisfaction and gender predicting stress. However, in each of these models, only gender significantly predicted stress. Role satisfaction was not a significant individual predictor. The remaining model of family role satisfaction and gender predicting stress was not significant.

These findings may suggest that role satisfaction relates poorly to overall stress because it refers only to a small subset of an individual's relationships and experiences that have the potential to produce stress. While a symbolic interactionist perspective of role theory would indicate that the interpretation of roles through self-evaluation can relate to emotions and stress (Heiss, 1981; Stryker & Statham, 1985), this relation may be highly context-dependent, such that the evaluation of one particular role is related to specific stressors, rather than the experience of stress in a global sense. In addition, student satisfaction, although operationalized differently in other studies, has been proposed to relate to stress indirectly through the experience of control (see Lee & Anantharaman, 2013). In this sense, evaluating a singular role may not relate to the sum of experiences contributing to overall stress as the current conceptualization of role satisfaction does not include an individual's sense of control within a particular role. Providing

participants with the opportunity to report specific stress and/or including a broader measure of satisfaction could prove helpful in understanding the function of role satisfaction in its relation to stress. Based on these analyses alone, it is difficult to determine whether intermediate or demographic factors not explored in the current study may have influenced the relation between role satisfaction and stress.

Relation of Role Satisfaction and Self-Efficacy to Stress

It was predicted that student's ratings of self-efficacy would fully mediate the relation between role satisfaction and stress and furthermore, that mediation would occur with each type of role satisfaction (family, friend, and student) tested. Using regression path analysis models to explore this possible mediating effect, no significant indirect effect was found when exploring the relation of family role satisfaction to stress through self-efficacy. Likewise, no indirect effect was found when friend role satisfaction and student role satisfaction were considered. Thus, the hypothesis of mediation among these variables was not supported.

Although previous research has examined self-efficacy as a mediator in the stress process, particularly in the relation between external stressors and outcomes such as academic performance (Bandura, 1995), no such relation was found in the current study. Several explanations for these results are likely. First, ratings of role satisfaction may not equate well to stressors in an individual's life. Although ratings of role satisfaction may be reflective of the experience of stress in a particular role, it is not explicitly included in the conceptualization of role satisfaction itself. As there was no significant positive or negative association between types of role satisfaction and stress in the current study, it is difficult to tell how satisfaction with roles

is considered, if at all, in the individual perception and reporting of stress. It could be that role satisfaction, similar to the proposed effect of self-efficacy, provides a buffer against negative outcomes associated with overall stress and would function more effectively as a mediator or moderator in the models considered in the current study. Additional research may reveal significant connections between role satisfaction and other psychological outcomes which give further insight into the function of role satisfaction in general.

Second, the effect of self-efficacy may have been significantly impacted by atypical experiences encountered by a majority of participants. Whereas negative correlations between self-efficacy and stress are typically reported in studies where this relation is considered (Bandura, 1997; Holahan & Holahan, 1987; Kavanagh, 1992; O’Leary, 1992; Zajacova, Lynch, & Espenshade, 2005), no direct effect or indirect effect of self-efficacy was observed in the models proposed. As mentioned before, the experience of stress (and therefore the effect of particular factors on stress) is thought to be related to a sense of control (Lee & Anantharaman, 2013). In the context of a global pandemic, during which data for the current study were collected, it is reasonable to assume that the resulting stress from changes in daily routines and social activities related very little to participants’ sense of control. For instance, participants at the university had transitioned to fully remote learning approximately three weeks prior to participating in the study. Other distancing guidelines such as no social gatherings or dining in restaurants were also in place at the time of data collection.

New information is being provided on the occurrence of stress and particular stressors that relate to COVID-19 (Park et al., 2020; Tsamakis et al., 2020). Although much of the literature on this very new focus of research has been aimed at understanding occupational stress,

at least one study provided insight into the function of self-efficacy (both affective self-efficacy and self-regulated learning self-efficacy) as it relates to subjective well-being for adolescents amidst the pandemic (Cattelino et al., 2021). Cattelino and colleagues found that students' self-efficacy was indeed related to subjective well-being through the regulation of positive and negative emotions. The positive correlation between self-efficacy and coping strategies for students was also noted by the authors. In addition, the connection between stress and subjective well-being has been established in earlier and more recent literature (e.g., Denovan & Macaskill, 2017; Schlosser, 1990). Thus, it is likely that self-efficacy relates to distinct elements of subjective well-being or specific stressors, yet functions differently as a predictor and mediator of overall stress due to a multitude of potential intermediate/determining factors (e.g., affect, coping strategies, etc.). Since measures of self-efficacy and stress were both global in nature in the current study, specific stressors may not have been brought to mind while participants responded to the survey. Limited studies have demonstrated a link between general self-efficacy and overall stress (Ebstrup et al., 2011). However, this link does seem consistent with descriptions of the appraisal processes within Lazarus and Folkman's transactional model.

Relation of Role Satisfaction, Self-Efficacy, and Negative Affect to Stress

As an extension of the proposed models relating role satisfaction and self-efficacy to stress, it was predicted that negative affect would moderate the relation between self-efficacy and stress, with self-efficacy mediating the relation between role satisfaction and stress. However, this hypothesis was not supported. When family role satisfaction was included in a model along with general self-efficacy, and negative affect predicting stress, no effect of moderated mediation

was found. The same was true of additional models which included friend role satisfaction and student role satisfaction in place of family role satisfaction.

Although previous research has not considered all of these variables simultaneously, some evidence for a moderating effect of negative affect on the relation of self-efficacy to various outcomes has been noted, including academic achievement (Villavicencio & Bernardo, 2013) and subjective well-being (Afzal et al., 2014). However, as noted above, differences in the experience of subjective well-being and stress, especially in the context of experiences related to COVID-19, may help explain the lack of support for this hypothesis (Cattelino et al., 2021). The direct relation of negative affect to stress and coping was not considered in the current study, but negative affect has been shown to relate to positive and negative coping strategies in previous research (Deniz & Işık, 2010; Maher, Hevel, Reifsteck, & Drollette, 2021).

The measures of affect and stress also referenced different periods of time where participants are asked to reflect on their experiences. For the PANAS, participants reflect on experiences within the last week, while events from the past month are recalled for the PSS. More recent negative experiences (negative affect) could have been recalled due to this inconsistency in how participants were expected to respond. Similarly, less stress could have been reported as a longer period of time is referenced. Additional research may be important in clarifying connections among role satisfaction, self-efficacy, affect, and stress to extend beyond global measures of self-efficacy and stress.

Limitations and Future Directions

Several limitations should be noted which may have had an impact on the current study. First, data were collected during the early stages of the global COVID-19 pandemic while shelter-in-place and remote learning procedures were newly put into place. Over time, research has indicated negative effects of COVID-19, particularly in regard to stress and stressors associated with the pandemic (see Tsamakis et al., 2020). One such study by Park and colleagues (2020) found that younger ages have been generally more susceptible to COVID-related stressors, including fearfulness over the severity and contagiousness of COVID-19, financial uncertainty, and changes to social and daily routines (Park et al., 2020). It is not clear to what extent students' experience of these stressors affected their responses to a measure of overall stress. Future studies should continue to explore the effects of the pandemic with attention paid to differences in how students experience and are satisfied with various roles in their lives.

Another limitation could be considered in the current study was the age of participants. The majority of participants did fall within a somewhat typical 18-22 range of undergraduate college students. However, a wide range of ages represented in the study may have resulted in skewed responses, particularly when measuring satisfaction with specific roles (e.g., family roles). Additionally, the PSS showed low internal consistency in the current sample. A potential impact of this scale not meeting an adequate threshold of internal consistency is a lack of predictive ability and relation to other key variables included in the planned analyses. Future studies may utilize different stress measures, including ones more closely associated with the roles measured by the AREQ.

Limitations with the use of the AREQ are also important to consider. Validation of the AREQ was limited to an exploratory factor analysis in the current study. While a final factor structure was found with acceptable psychometric properties, not all roles presented to participants were considered in this analysis, and some roles were combined, which may have resulted in lack of specificity when considering subscales of the AREQ as predictors in subsequent analyses. It is not clear if the deleted items for each role measured changed the overall construct of role satisfaction. In the original scale construction, participants responded to the items “This role is important to me” and “I am not as happy as others seem to be in this role”. Including the perspective of the relative importance of a given role, as well as the comparison to others in a similar role, could give additional insight into role satisfaction as a whole. Responses to these items may be revisited in future studies with a different sample. In addition, two items reached the threshold for cross loading despite loading more strongly onto their expected factor. An analysis of test-retest reliability, confirmatory factor analyses, and other tests of validity, along with potential revisions to the AREQ, may lead to improved properties and utility in future studies.

Additional outcomes in relation to role satisfaction may be considered in student samples as a focus of future research. While significant correlations were noted between ratings of role satisfaction and self-efficacy as well as negative affect, it may be important to touch on social factors which influence how satisfied an individual is with a particular role. For instance, social support from family may be closely tied to how a person views their unique role within a family unit. As the AREQ is a novel measure, exploring different psychosocial factors that are

predictive of or an outcome of role satisfaction will yield important information on its measurement qualities.

Results of the current study certainly leave room for future exploration of the interrelation of concepts of role satisfaction, self-efficacy, stress, and other related concepts that were not explored in the current study. Each type of role satisfaction (family, friend, and student) was related to a general measure of self-efficacy, but neither role satisfaction nor self-efficacy was related to stress, which is a notable difference between previous research (Chemers, Hu, and Garcia, 2001; Pintrich and De Groot, 1990) and the current study. Some promise of the newly developed AREQ was evident in its psychometric properties, and this measure may be important in exploring models of role satisfaction when considering multiple roles in the school-age/adolescent age range, as previous research has focused primarily on the effects of work and family roles (e.g., Kulik, Shilo-Levin, & Liberman, 2015) without considering student roles as well.

REFERENCES

- Afzal, A., Malik, N. I., & Atta, M. (2014). The moderating role of positive and negative emotions in relationship between positive psychological capital and subjective well-being among adolescents. *International Journal of Research Studies in Psychology*, 3(3).
- Armeli, S., Dranoff, E., Tennen, H., Austad, C. S., Fallahi, C. R., Raskin, S., ... & Pearlson, G. (2014). A longitudinal study of the effects of coping motives, negative affect and drinking level on drinking problems among college students. *Anxiety, Stress, & Coping*, 27(5), 527-541.
- Astin, A.W. (1993). *What matters in college? Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Bailey, R. C., & Miller, C. (1998). Life satisfaction and life demands in college students. *Social Behavior and Personality: an international journal*, 26(1), 51-56.
- Bandura, A. (1986). *Social foundations of thought and action-A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).
- Bandura, A. (Ed.). (1995). *Self-efficacy in changing societies*. Cambridge university press.
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York, NY: Freeman.
- Bandura, A., Adams, N. E., Hardy, A. B., & Howells, G. N. (1980). Tests of the generality of self-efficacy theory. *Cognitive therapy and research*, 4(1), 39-66.
- Bean, J. P., & Bradley, R. K. (1986). Untangling the satisfaction-performance relationship for college students. *The Journal of Higher Education*, 57(4), 393-412.
- Biddle, B. J. (1986). Recent developments in role theory. *Annual review of sociology*, 12(1), 67-92.
- Biddle, B. J. (2013). *Role theory: Expectations, identities, and behaviors*. Academic press.
- Brewer, M. B., Dull, V., & Lui, L. (1981). Perceptions of the elderly: Stereotypes as prototypes. *Journal of personality and social psychology*, 41(4), 656.

- Brown, S. D., Lent, R. W., Telander, K., & Tramayne, S. (2011). Social cognitive career theory, conscientiousness, and work performance: A meta-analytic path analysis. *Journal of Vocational Behavior, 79*(1), 81-90.
- Brown, J.D. and K.L. McGill. (1989). The cost of good fortune: When positive life events produce negative health consequences. *Journal of Personality and Social Psychology, 57*, 1103-1110.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and Self-Regulation*. New York: Springer-Verlag.
- Cattelino, E., Testa, S., Calandri, E., Fedi, A., Gattino, S., Graziano, F., ... & Begotti, T. (2021). Self-efficacy, subjective well-being and positive coping in adolescents with regard to Covid-19 lockdown. *Current Psychology, 1-12*.
- Chang, E. C. (2001). Life stress and depressed mood among adolescents: Examining a cognitive-affective mediation model. *Journal of Social & Clinical Psychology, 20*(3), 416–429.
- Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational psychology, 93*(1), 55.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods, 4*(1), 62-83.
- Chiu, R. K. (1998). Relationships among role conflicts, role satisfactions and life satisfaction: Evidence from Hong Kong. *Social Behavior and Personality: an international journal, 26*(4), 409-414.
- Chute, A.G., Thompson, M.M., & Hancock, B.W. (1999). *The McGraw-Hill handbook of distance learning*. New York: McGraw-Hill.
- Çivitci, A. (2015). The moderating role of positive and negative affect on the relationship between perceived social support and stress in college students. *Educational Sciences: Theory and Practice, 15*(3), 565-573.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1994). Perceived stress scale. *Measuring stress: A guide for health and social scientists, 10*, 1-2.
- Deniz, M. E., & Işık, E. (2010). Positive and negative affect, life satisfaction, and coping with stress by attachment styles in Turkish students. *Psychological reports, 107*(2), 480-490.
- Denovan, A., & Macaskill, A. (2017). Stress and subjective well-being among first year UK undergraduate students. *Journal of Happiness Studies, 18*(2), 505-525.

- Doménech, F. (2011). *Evaluar e Investigar en la Situación Educativa Universitaria. Un Nuevo Enfoque Desde el Espacio Europeo de Educación Superior. [Evaluate and Investigate in the University Educational Setting. A New Approach from the Higher European Area]*. Publicacions de la Universitat Jaume I, Universitat. 34.
- Doménech-Betoret, F., Abellán-Roselló, L., & Gómez-Artiga, A. (2017). Self-efficacy, satisfaction, and academic achievement: the mediator role of students' expectancy-value beliefs. *Frontiers in psychology*, 8, 1193.
- Donahue, T.L., & Wong, E.H. (1997). Achievement motivation and college satisfaction in traditional and nontraditional students. *Education*, 118, 237-243.
- Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology*, 62(10), 1231–1244.
- Ebstrup, J. F., Eplov, L. F., Pisinger, C., & Jørgensen, T. (2011). Association between the Five Factor personality traits and perceived stress: is the effect mediated by general self-efficacy?. *Anxiety, Stress & Coping*, 24(4), 407-419.
- Edwards, K. J., Hershberger, P. J., Russell, R. K., & Markert, R. J. (2001). Stress, negative social exchange, and health symptoms in university students. *Journal of American College Health*, 50(2), 75–79.
- Edwards, J.E., & Waters, L.K. (1982). Involvement, ability, performance, and satisfaction as predictors of college attrition. *Educational and Psychological Measurement*, 42, 1149-1152.
- Folkman, S., Lazarus, R.S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R.J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992-1003. doi:10.1037//0022-3514.50.5.992
- Fortunato, V. J., & Harsh, J. (2006). Stress and sleep quality: The moderating role of negative affectivity. *Personality and Individual Differences*, 41(5), 825-836.
- Gigliotti, R. J., & Huff, H. K. (1995). Role-related conflicts, strains and stresses of older-adult college students. *Sociological Focus*, 28(3), 329-342.
- Hackett, G., Betz, N. E., Casas, J. M., & Rocha-Singh, I. A. (1992). Gender, ethnicity, and social cognitive factors predicting the academic achievement of students in engineering. *Journal of counseling Psychology*, 39(4), 527.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.

- Heiss, J. (1981). Social roles. In *Social Psychology: Sociological Perspectives*, ed. M. Rosenberg, R. H. Turner, pp. 95-129. New York: Basic.
- Higgins, C. A., Duxbury, L. E., & Irving R. K. (1992). Work-family conflict in the dual-career family. *Organizational Behavior and Human decision processes*, 51, 51-57.
- Hoelter, J.W. 1983. The effects of role evaluation and commitment on identity salience. *Social Psychology Quarterly*, 46, 140-147.
- Hogg, M. A., Terry, D. J., & White, K. M. (1995). A tale of two theories: A critical comparison of identity theory with social identity theory. *Social psychology quarterly*, 255-269.
- Holahan, C. K., & Holahan, C. J. (1987). Self-efficacy, social support, and depression in aging: A longitudinal analysis. *Journal of Gerontology*, 42(1), 65-68.
- Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuka, N. (2000). Stress at college: effects on health habits, health status and self-esteem. *College Student Journal*, 34(2).
- Huebner, E. S., & Dew, T. (1996). The interrelationships of positive affect, negative affect, and life satisfaction in an adolescent sample. *Social Indicators Research*, 38(2), 129-137.
- Hurst, C. S., Baranik, L. E., & Daniel, F. (2013). College student stressors: A review of the qualitative research. *Stress and Health*, 29(4), 275-285.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of applied Psychology*, 86(1), 80-92.
- Kavanagh, D. J. (1992). Recent developments in expressed emotion and schizophrenia. *The British journal of psychiatry*, 160(5), 601-620.
- Kelly, G. A. (1955). *The Psychology of Personal Constructs*. New York: Norton.
- King, R. B. (2016). A fixed mindset leads to negative affect. *Zeitschrift für Psychologie*.
- Kopelman, R. E., Greenhaus, J. H., & Connolly, T. F. (1983). A model of work, family, and interrole conflict: A construct validation study. *Organizational Behavior and Human Performance*, 32, 198-215.
- Kormi-Nouri, R., Farahani, M. N., & Trost, K. (2013). The role of positive and negative affect on well-being amongst Swedish and Iranian university students. *The Journal of Positive Psychology*, 8(5), 435-443.

- Kulik, L., Shilo-Levin, S., & Liberman, G. (2015). Multiple roles, role satisfaction, and sense of meaning in life: An extended examination of role enrichment theory. *Journal of Career Assessment, 23*(1), 137-151.
- Lakey, B., & Edmundson, D. D. (1993). Role evaluations and stressful life events: Aggregate vs. domain-specific predictors. *Cognitive therapy and research, 17*(3), 249-267.
- Lazarus, R.S. (1966). *Psychological stress and the coping process*. New York: Mcgraw-Hill.
- Lazarus, R.S. (1981). The stress and coping paradigm. In C. Eisdorfer, D. Cohen, A. Kleinman, & P. Maxim (Eds.), *Models for clinical psychopathology* (pp. 177-214). New York: Spectrum.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lee, J., & Anantharaman, S. (2013). Experience of control and student satisfaction with higher education services. *American Journal of Business Education (AJBE), 6*(2), 191-200.
- Lightsey Jr, O. R., Maxwell, D. A., Nash, T. M., Rarey, E. B., & McKinney, V. A. (2011). Self-control and self-efficacy for affect regulation as moderators of the negative affect–life satisfaction relationship. *Journal of Cognitive Psychotherapy, 25*(2), 142-154.
- Lumley, M. A., & Provenzano, K. M. (2003). Stress management through written emotional disclosure improves academic performance among college students with physical symptoms. *Journal of Educational Psychology, 95*(3), 641–649.
- Maher, J. P., Hevel, D. J., Reifsteck, E. J., & Drollette, E. S. (2021). Physical activity is positively associated with college students' positive affect regardless of stressful life events during the COVID-19 pandemic. *Psychology of sport and exercise, 52*, 101826.
- Martens, M. P., Neighbors, C., Lewis, M. A., Lee, C. M., Oster-Aaland, L., & Larimer, M. E. (2008). The roles of negative affect and coping motives in the relationship between alcohol use and alcohol-related problems among college students. *Journal of Studies on Alcohol and Drugs, 69*(3), 412-419.
- Mcnamara, J. R., & Blumer, C. A. (1982). Role playing to assess social competence: Ecological validity considerations. *Behavior Modification, 6*(4), 519-549.
- O'Leary, A. (1985). Self-efficacy and health. *Behavior Research and Therapy, 23*, 437-451.
- Ozyesil, Z. (2012). The prediction level of self-esteem on humor style and positive-negative affect. *Psychology, 3*(8), 638-641.

- Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020). Americans' COVID-19 stress, coping, and adherence to CDC guidelines. *Journal of general internal medicine*, 35(8), 2296-2303.
- Pennington, C. R., Bates, E. A., Kaye, L. K., & Bolam, L. T. (2018). Transitioning in higher education: an exploration of psychological and contextual factors affecting student satisfaction. *Journal of Further and Higher Education*, 42(5), 596-607.
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology*, 82(1), 33.
- Pritchard, M. E., Wilson, G. S., & Yamnitz, B. (2007). What predicts adjustment among college students?: A longitudinal panel study. *Journal of American College Health*, 56(1), 15–21.
- Rogers, A. A., Updegraff, K. A., Iida, M., Dishion, T. J., Doane, L. D., Corbin, W. C., ... & Ha, T. (2018). Trajectories of positive and negative affect across the transition to college: The role of daily interactions with parents and friends. *Developmental Psychology*, 54(11), 2181.
- Rotter, J. B. (1954). *Social Learning and Clinical Psychology*. Englewood, Cliffs, NJ: Prentice-Hall.
- Sax, L. J. & Harper, C. E. (2005). Origins of the gender gap: Pre-college and college influences on differences between men and women. Paper presented at the Annual Meeting of the Association for Institutional Research, San Diego, CA, May 2005.
- Schlosser, B. (1990). The assessment of subjective well-being and its relationship to the stress process. *Journal of Personality Assessment*, 54(1-2), 128-140.
- Selye, H. (1936). A syndrome produced by diverse nocuous agents. *Nature*, 138(3479), 32-32. doi:10.1038/138032a0
- Selye, H. (1976). Stress without distress. In *Psychopathology of human adaptation* (pp. 137-146). Springer, Boston, MA.
- Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological reports*, 51(2), 663-671.
- Sherif, M. (1936). *The Psychology of Social Norms*. New York: Harper.
- Strayhorn, T. L., & Saddler, T. N. (2009). Gender differences in the influence of faculty-student mentoring relationships on satisfaction with college among African Americans. *Journal of African American Studies*, 13(4), 476-493.

- Struthers, C. W., Perry, R. P., & Menec, V. H. (2000). An examination of the relationship among academic stress, coping, motivation and performance in college. *Research in Higher Education, 41*(5), 581–592.
- Stryker, S., & Statham, A. (1985). Symbolic interaction and role theory. In *Handbook of Social Psychology*, ed. C. Lindzey, E. Aronson, 1:31, 1-78. New York: Random. 3rd ed.
- Thoits, P.A., (1991). On merging identity theory and stress research. *Social Psychology Quarterly, 54*, 101-112.
- Torres, J. B., & Solberg, V. S. (2001). Role of self-efficacy, stress, social integration, and family support in Latino college student persistence and health. *Journal of vocational behavior, 59*(1), 53-63.
- Tsamakis, K., Triantafyllis, A. S., Tsiptsios, D., Spartalis, E., Mueller, C., Tsamakis, C., ... & Rizos, E. (2020). COVID-19 related stress exacerbates common physical and mental pathologies and affects treatment. *Experimental and therapeutic medicine, 20*(1), 159-162.
- Turner, J. C., Thorpe, P. K., & Meyer, D. K. (1998). Students' reports of motivation and negative affect: A theoretical and empirical analysis. *Journal of educational Psychology, 90*(4), 758.
- Villavicencio, F. T., & Bernardo, A. B. (2013). Negative emotions moderate the relationship between self-efficacy and achievement of Filipino students. *Psychological studies, 58*(3), 225-232.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology, 54*(6), 1063.
- Weiss, N. H., Bold, K. W., Contractor, A. A., Sullivan, T. P., Armeli, S., & Tennen, H. (2018). Trauma exposure and heavy drinking and drug use among college students: Identifying the roles of negative and positive affect lability in a daily diary study. *Addictive behaviors, 79*, 131-137.
- Wickrama, K. A. S., Conger, R. D., Lorenz, F. O., & Matthews, L. (1995). Role identity, role satisfaction, and perceived physical health. *Social Psychology Quarterly, 270-283*.
- Wilcox, G., & Nordstokke, D. (2019). Predictors of university student satisfaction with life, academic self-efficacy, and achievement in the first year. *Canadian Journal of Higher Education/Revue canadienne d'enseignement supérieur, 49*(1), 104-124.

Yilmaz, H., & Arslan, C. (2013). Subjective Well-Being, Positive and Negative Affect in Turkish University Students. *Online Journal of Counseling & Education*, 2(2).

Yoon, J. S. (2002). Teacher characteristics as predictors of teacher–student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality: An international journal*, 30(5), 485-494.

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in higher education*, 46(6), 677.

APPENDICES

APPENDIX A

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

Name _____ Date _____

Age _____ Gender (*Circle*): M F Other _____

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very

Often

- | | |
|--|-----------|
| | 0 1 2 3 4 |
| 1. In the last month, how often have you been upset because of something that happened unexpectedly? | |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? | 0 1 2 3 4 |
| 3. In the last month, how often have you felt nervous and "stressed"? | 0 1 2 3 4 |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems? | 0 1 2 3 4 |
| 5. In the last month, how often have you felt that things were going your way? | 0 1 2 3 4 |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? | 0 1 2 3 4 |
| 7. In the last month, how often have you been able to control irritations in your life? | 0 1 2 3 4 |
| 8. In the last month, how often have you felt that you were on top of things? | 0 1 2 3 4 |
| 9. In the last month, how often have you been angered because of things that were outside of your control? | 0 1 2 3 4 |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 1 2 3 4 |

APPENDIX B

ADOLESCENT ROLE EVALUATION QUESTIONNAIRE

Rate each statement about various roles in your life by selecting the option that relates to you the most.

Respond to the statements about the following role: **son/daughter/child**

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I am happy with this role at the present time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future I expect that I will be happy with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I am good at performing the tasks/duties associated with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Respond to the statements about the following role: **sibling (brother, sister, stepbrother, stepsister, etc.)**

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I am happy with this role at the present time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future I expect that I will be happy with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I am good at performing the tasks/duties associated with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Respond to the statements about the following role: **friend**

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I am happy with this role at the present time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future I expect that I will be happy with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I am good at performing the tasks/duties associated with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Respond to the statements about the following role: **student**

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I am happy with this role at the present time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future I expect that I will be happy with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I am good at performing the tasks/duties associated with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Respond to the statements about the following role: **classmate**

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
I am happy with this role at the present time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future I expect that I will be happy with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I am good at performing the tasks/duties associated with this role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX C

NEW GENERAL SELF-EFFICACY SCALE

Instructions: Participants are told that (a) general self-efficacy relates to “one’s estimate of one’s overall ability to perform successfully in a wide variety of achievement situations, or to how confident one is that she or he can perform effectively across different tasks and situations,” and (b) self-esteem relates to “the overall affective evaluation of one’s own worth, value, or importance, or to how one feels about oneself as a person.”

Instructions: Please circle your answer below.

1. I will be able to achieve most of the goals that I set for myself.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
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2. When facing difficult tasks, I am certain that I will accomplish them.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
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3. In general, I think that I can obtain outcomes that are important to me.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
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4. I believe I can succeed at most any endeavor to which I set my mind.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
-------------------	----------	----------------------------	-------	----------------

5. I will be able to successfully overcome many challenges.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
-------------------	----------	----------------------------	-------	----------------

6. I am confident that I can perform effectively on many different tasks.

Strongly
disagree

Disagree

Neither agree
nor disagree

Agree

Strongly agree

7. Compared to other people, I can do most tasks very well.

Strongly
disagree

Disagree

Neither agree
nor disagree

Agree

Strongly agree

8. Even when things are tough, I can perform quite well.

Strongly
disagree

Disagree

Neither agree
nor disagree

Agree

Strongly agree

APPENDIX D

POSITIVE AND NEGATIVE AFFECT SCALE

Positive and Negative Affect Schedule (PANAS-SF)

	Indicate the extent you have felt this way over the past week.	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
PANAS 1	Interested	1	2	3	4	5
PANAS 2	Distressed	1	2	3	4	5
PANAS 3	Excited	1	2	3	4	5
PANAS 4	Upset	1	2	3	4	5
PANAS 5	Strong	1	2	3	4	5
PANAS 6	Guilty	1	2	3	4	5
PANAS 7	Scared	1	2	3	4	5
PANAS 8	Hostile	1	2	3	4	5
PANAS 9	Enthusiastic	1	2	3	4	5
PANAS 10	Proud	1	2	3	4	5
PANAS 11	Irritable	1	2	3	4	5
PANAS 12	Alert	1	2	3	4	5
PANAS 13	Ashamed	1	2	3	4	5
PANAS 14	Inspired	1	2	3	4	5
PANAS 15	Nervous	1	2	3	4	5
PANAS 16	Determined	1	2	3	4	5
PANAS 17	Attentive	1	2	3	4	5
PANAS 18	Jittery	1	2	3	4	5
PANAS 19	Active	1	2	3	4	5
PANAS 20	Afraid	1	2	3	4	5