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Clear Adjustment: Status Self-Concept Clarity and Emotion Regulation

by

Isidro Landa

A dissertation presented to
The Graduate School
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

August 2021
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ABSTRACT OF THE DISSERTATION

Clear Adjustment: Status Self-Concept Clarity and Emotion Regulation

by

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Doctor of Philosophy in Psychological and Brain Sciences

Washington University in St. Louis, 2021

Associate Professor Tammy English, Chair

One factor associated with a person’s adjustment during important life transitions is self-concept clarity (SCC)—“the extent to which the contents of an individual's self-concept (e.g., perceived personal attributes) are clearly and confidently defined...”. However, it is not fully understood why and for whom SCC predicts adjustment. Recent work suggests that SCC may function as a resource for regulatory functions, allowing one to focus on long-term self-relevant goals rather than narrowly focusing on regulating immediate discomfort associated with uncertainty. It is possible that having high SCC facilitates emotion regulation in such a way that it allows one to engage and further process self-relevant information (i.e., acceptance, positive reappraisal) whereas low SCC hinders adjustment through emotion regulation strategies that interfere with processing of self-relevant information via disengagement (i.e., distraction, minimizing, suppression) or over-engagement strategies (i.e., rumination, focus on consequences, worry). This investigation uses daily diary and experience sampling methods to test whether emotion regulation strategies partially mediate the link between SCC and adjustment and explores the role of first-generation college student membership (i.e., first in their family to attend college). I investigated both general SCC and SCC that is specific to the socioeconomic status self-concept

(SES-SCC) given the growing interest in applying of psychological frameworks to understand the impact of socioeconomic status and in socioeconomic status as an important part of people's identity. Findings indicate that SCC is differentially associated with emotion regulation. Specifically, at both the between- and within-person levels, SCC is associated with lower disengagement and lower over-engagement strategies. SCC is not consistently associated with engagement strategies. Over-engagement partially mediates the association between SCC and adjustment such that SCC predicts greater adjustment via lower over-engagement, at both the within- and between-person levels, controlling for disengagement and engagement strategy types. This research builds on prior work by replicating findings in a growing literature that investigates self and emotion processes—linking SCC and emotion regulation to better understand the implications for adjustment among different people and intensively across time. A better understanding of students' self-concepts and regulation in daily life, as well as their implications for adjustment can create opportunities for additional pathways for support via improved communication and culturally responsive programming.

Chapter 1: Introduction

People experience major normative life transitions that have important implications for psychological adjustment. One factor associated with a person's adjustment within the context of life transitions is self-concept clarity (SCC)—“the extent to which the contents of an individual's self-concept (e.g., perceived personal attributes) are clearly and confidently defined, internally consistent, and temporally stable” (Campbell et al., 1996, p. 141). To be well-adjusted (e.g., emotionally, socially), one must have a clear sense of who one is despite the changes in the external environment. However, it is not fully understood why and for whom SCC predicts adjustment.

There is recent work suggesting that SCC may function as a resource for regulatory functions allowing one to focus on long-term self-relevant goals (e.g., Light, Rios, DeMarree, 2018). Given that navigating new environments, such as the transition to college, might frequently prompt stress or emotions that need to be managed, I focus on *emotion regulation*—how people influence their emotional states (Gross, 1998)—as one potential explanation for why SCC might predict college adjustment. I predict that high SCC facilitates a more engaged form of emotion regulation that allows one to further process self-relevant information whereas low SCC hinders adjustment via other forms of emotion regulation that interferes with processing of self-relevant information via disengagement or over-engagement. Transitions can inherently prompt self-relevant uncertainty in one's self-concept. For example, many people—particularly in predominantly individualistic countries—experience increased identity exploration, self-focus, and instability, during the years following post-secondary education (Arnett, 2000). At the same time, there are important changes in their social networks and financial outlook that make

specific self-concepts salient (e.g., relationships, vocation, status) and subject to uncertainty, perhaps more for some groups of students than others.

One important self-concept relevant to post-secondary life transitions is self-concept based on socioeconomic status (Destin, Rheinschmidt-Same, & Richeson, 2017). It is not fully clear how prominent socioeconomic status as a self-concept is in daily life, but increasingly more first-generation college students (FGS; students whose parents did not attend college) are enrolling in college. Like continuing-generation college students (CGS; students whose parents did attend college), FGS place value on post-secondary education as a means for financial stability for themselves; FGS further cite financial stability for their families as a motive for attending college more often than CGS (e.g., Jackson, Galvez, Landa, Buonora, & Thoman, 2016). Thus, it is possible that a socioeconomic status self-concept might be more salient for FGS compared to CGS because they place greater value on cross-generational social mobility. Despite the motives for attending college, students experience challenges adjusting once in college (e.g., English, Davis, Wei, & Gross, 2017), some of which uniquely affects FGS (Stephens et al., 2012a; Walton & Cohen, 2007). Therefore, in addition to generally investigating SCC, I highlight socioeconomic status self-concept clarity (SES-SCC) to determine whether any associations found with adjustment replicate when focusing on specific self-concepts. Given the limited work on socioeconomic status in psychology, I will draw from the existing literature on SCC more generally, and specify when findings are specific to SES-SCC.

The current investigation builds on prior literature to further examine mechanisms of the link between clarity of people's self-concepts and adjustment. I make the case that emotion regulation is a candidate mediator because it might allow for further processing of self-relevant information which facilitates adjustment in college and other new environments.

1.1 Self-Concept Clarity and Self-Concept Fit: An Underlying Framework

Broadly, SCC refers to evaluation of the degree of self-unity. Research on SCC began with efforts to understand why people with lower self-esteem, compared to those with higher self-esteem, have more malleable self-views (Baumgardner, 1990; Campbell, 1990). Early work on SCC was circumscribed with a focus on certainty of self-views. Further, SCC is distinguished as an evaluation of the structure of one's sense of self, not an evaluation of the content of self (DeMarree & Bobrowski, 2017). That is, SCC does not reflect the accuracy of the self-concept (e.g., behaviors matching the representation of a self-concept), but rather it captures the certainty in the subjective sense of being.

Research on person-environment (PE) fit provides a framework for understanding how SCC might emerge and how it might impact adjustment (Schmader & Sedikides, 2017). Subtle cues in a new environment can either promote or hinder PE fit, implicating one's gestalt sense of state authenticity, or feeling like one's true self. Similarly, PE fit might implicate one's sense of self clarity. PE fit refers to a (mis)match between characteristics of the environment and core aspects of the self. A mismatch is likely to prompt doubt or uncertainty in one's relevant self-concepts, particularly if the PE mismatch involves a self-concept mismatch. Self-concept fit is one form of PE fit that is specific to self-concept relevant cues (Schmader & Sedikides, 2017). Goal fit refers to motivational affordances in the environment wherein people perceive the possibility of carrying out certain goals. Social fit refers to being able to receive support and validation from others. It is thought that even in the absence of other forms of PE fit—personal goals versus goal affordances of the environment, validation versus rejection by other people in the environment—simply being in certain environments that feel familiar can result in self-concept fit. Experiencing self-concept fit should not reflect a threat to one's self-concept, but

rather in a perception of one's cued selves as harmonious—clear and confident characterization of one's subjective sense of self.

Lack of SCC, on the other hand, can lead to distress. In fact, both lower SES-SCC and general SCC—hereafter SCC—have been linked to lower optimism, self-esteem, and life satisfaction and with greater neuroticism (Destin, Rheinschmidt-Same, & Richeson, 2017). Lower SCC has also been linked to detriments in mental health such as greater depression (DeMarree & Bobrowski, 2017; van Dijk et al., 2014). Chronically low SCC is associated with poorer well-being (Cross, Gore, & Morris, 2003). Among adolescents, a couple of studies find that SCC predicts lower anxiety (Schwartz et al., 2012) and depression (Schwartz et al., 2012; van Dijk et al., 2014) at a later time. Thus, it is important to find ways to improve SCC or reduce its potentially negative effects on emotional experiences, to promote adjustment in new environments, especially for groups that might not have the same familiarity with or experience the same level of representation in the college environment.

1.2 The Role of Emotion Regulation

Emotion regulation is one potential bridge that could explain the link between SCC and adjustment consequences. SCC has previously been posited to serve as a resource for regulatory functions (Light, 2017), providing a candidate to help understand how self-uncertainty and associated distress can be managed when adjusting to new environments. Drawing from literature on self-regulation, SCC plays a role in the maintenance of goal pursuit necessary for self-regulation and low SCC undermines self-regulation (Light, Rios, DeMarree, 2018). Light (2017) argues that there are three ways in which low SCC might undermine self-regulation: 1) low SCC interferes with the ability to set clear and self-congruent goals (i.e., goal-setting); 2) low SCC facilitates a negativity bias where people might attend more to personal weaknesses

than strengths; and most relevant to this investigation 3) low SCC reduces goal striving by reducing the salience of self-discrepancies (i.e., goal-striving). To further elaborate on the third mechanism, people with low SCC may lack the self-clarity to be able to identify self-relevant discrepancies, thereby reducing goal striving. To build on this argument, people might not necessarily have lower goal striving tendencies, but rather strive towards different goals depending on their level of SCC. Further, beyond the individual differences in the tendency to experience SCC (between-person variability), goal striving may vary across time and contexts (within-person variability) depending on the within-person level of SCC. That is, *when* people experience varying levels of SCC they might also strive towards different goals in those moments as well.

Currently, there is some work at the between-person level of the correlates of SCC but a dearth of work examining within-person differences, and much less work examining both SCC and emotion regulation across time. In a series of studies, SCC was manipulated through a writing task, and compared to those who were higher on SCC, participants low in SCC focused more on *disengagement* from emotional experience via distraction with smartphones to reduce aversive uncertainty (Light, Rios, DeMarree, 2018). Use of this regulation strategy created a bias for short-term goals at the cost of important long-term goals. Those who were induced with uncertainty performed worse on a later academic task (quiz on history video) because of their disengagement while watching a video.

An important feature of emotion regulation is the point of intervention. The process model is a prominent framework for conceptualizing emotion regulation (Gross, 1998). It describes how people can intervene to influence the intensity, duration, and quality of their emotions along different points in the emotion generation process. One can intervene early on

(*antecedent-focused strategies*) or later in the process, as emotion more fully unfolds (*response-focused strategies*). Further, there are five lower-level families of emotion regulation strategies that people can use. Specifically, people may avoid or approach different situations (*situation selection*) to reach their emotional goals; they may modify situations they already find themselves in to diminish or amplify the intensity of some other component of emotion (*situation modification*); they may attend to or distract themselves from emotion-eliciting aspects in a situation (*attentional deployment*); they may attempt to change their initial cognitive appraisal of a situation (*cognitive change*); or lastly, people may attempt to directly influence some aspect of emotion (e.g., expression) once it has fully been elicited (*response-modulation*). In addition to these different families of emotion regulation strategies, there have been other efforts that suggest the dimension of engagement as another way to understand the characteristics and potential influence of emotion regulation (Naragon-Gainey et al., 2017). In the next section I apply this approach to thinking about why SCC impacts adjustment.

1.3 From Clarity to Engagement

One important feature of emotion regulation is the ways in which strategies afford engagement with emotional stimuli. According to the extended process model of emotion regulation (Gross, 2015), emotion and emotion regulation are instances of first- and second-level valuation, respectively. Emotion represents an initial response to an emotion-eliciting event whereas subsequent emotion regulation is a valuation of that initial emotional response, a desire to maintain or modify the emotional response. Thus, the emotion regulation strategies that we use to influence how we feel after an emotional event may allow us to engage with, or elaborately process an emotional response in different ways. A recent meta-analysis isolated three categories of emotion regulation strategies: disengagement, engagement, and over-engagement (Naragon-

Gainey et al., 2017). Disengagement emotion regulation strategies are characterized by decreased attention to one's emotions or by concealing emotions (e.g., distraction, minimizing, suppression). In contrast, engagement emotion regulation strategies involve elaborately processing emotions in a less non-judgmental and more constructive way (e.g., acceptance, positive reappraisal, perspective-taking). Engagement may still include evaluative or judgmental features, but to a lesser degree compared with disengagement (e.g., positive reappraisal requires evaluation of the emotion-eliciting stimulus to ultimately change an undesirable emotion). Lastly, over-engagement emotion regulation includes strategies that involve perseverative thinking coupled with negative judgments or avoidance of negative emotion (e.g., rumination, evaluating the negative consequences of an event that occurred, or worrying about an event that might occur).

The type of engagement an emotion regulation strategy affords, emotion regulation strategies may minimize the degree to which people can engage with their emotions, potentially decreasing the self-relevant information that may be available. That is, the self-relevant information that emotion can provide (e.g., Clore, 1994) may not be accessible to the degree that one interferes with the naturally occurring emotion (i.e., disengagement). On the other hand, it is possible for people to *over-engage* with their emotions, reflecting a perseverative pattern in attempts to influence emotion (Naragon-Gainey, McMahon, & Chacko, 2017; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; over-engagement). A more balanced form of engagement is possible if one is able to elaborate on their emotional experience and intervene later with little to no judgment (i.e., engagement). For example, one may use cognitive change strategies such as positively reappraising an emotion-eliciting stimulus (e.g., trying to see the positives in anxiety associated with career uncertainty and necessary planning). To influence one's emotion in this

way, one must engage with the stimulus (e.g., a plethora of career opportunities and agency in planning). Nonetheless, the more the emotion changes (e.g., from anxiety to contentment or decreased anxiety), and the more quickly it changes, the more one may miss out on self-relevant information available in that emotion (e.g., career planning hastily without fully understanding why anxiety arose). Absence of intervention or later intervention of emotion regulation allows emotional stimuli to be elaboratively processed to some degree. I argue next that the type of engagement that emotion regulation affords will have important implications for accessibility of self-relevant information, and that elaborately and constructively processing is beneficial for adjustment.

Engagement via emotion regulation strategies, as a means for elaborate processing of self-relevant information, may be, in part, predicted by high SCC. It is unlikely that people non-judgmentally engage with their emotions when SCC is low because the lack of clarity may not provide the appropriate regulatory resources. In fact, some work suggests low SCC might be linked to disengagement-related emotion regulation (Schmader & Sedikides, 2017; Steele & Aronson, 1995). Self-concept mismatch is thought to prompt threat via attention to threatening feedback or conflicting contextual cues relevant to aspects of one's sense of self. Attending to these self-relevant threatening cues (e.g., cultural stereotypes) depletes emotion regulation efforts and negatively impact academic performance. In a series of studies, researchers employed stereotype threat designs such as pairing male experimenters and male confederates with female participants for a math test (Johns, Inzlicht, & Schmader, 2008). Given the stereotype that men are better than women in math, they captured self-concept misfit in identity-threatening cues—the need for female participants to disconfirm a conflicting stereotype about their academic ability. Participants that experienced self-concept threat used expressive suppression (a form of

disengagement) more to manage their anxiety associated with the math test performed poorly. SCC was not measured directly in this study, but the threatening context is likely to prompt a lack of PE fit where SCC is relevant and might influence the frequency with which disengagement or engagement strategies are used when not instructed.

There is also direct evidence that emotion regulation may serve as a mediator between SCC and adjustment, specifically with regards to one engagement strategy. In one recent study, interpersonally engaging strategies partially explain the association between SCC and indices of well-being among married couples (Parise et al., 2019). Specifically, non-judgmental responsiveness to one's partner's stress explained why greater SCC—in the partner exhibiting responsiveness—predicted couple relationship satisfaction. Some example items from the measure of non-judgmental responsiveness were: “I listen to my partner, give her/him the opportunity to express her/his stress, comforts, and encourage her/him” and “I tell her/him that it is not that bad and help her/him to see the situation in a different light.” Although this measure seemed to capture elements of emotion regulation, the strategies they examined do not quite match the characteristics of the engagement framework in that they may not be solely capturing the regulation of emotion. Rather, it might have captured an open disposition towards one's partner (e.g., reflective listening). Moreover, although this measure seemingly captured elements of positive reappraisal, it is unclear whether there is something unique about positive reappraisal or if SCC might be associated with strategies capturing other forms of engagement.

There is also work suggesting a link between low SCC and over-engagement. For example, in a cross-sectional study, women with high stress tended to have high ruminative behaviors and were more likely to exhibit low SCC (Willis & Burnett, 2016). The negative association between SCC and rumination has been replicated by others, even when controlling

for self-esteem, a potential alternative explanation for over-engagement (Campbell et al., 1996; DeMarree & Bobrowski, 2017). These findings provide preliminary evidence suggesting that people who are low in SCC might have perseverative or intrusive emotional reactions due to the self-uncertainty. However, given that these studies are cross-sectional, it is also possible that perseveration or self-relevant intrusive emotions decrease SCC because of the repetitive thoughts that may further create confusion around one's self-concept, particularly for groups of students who are more susceptible to self-concept misfit.

1.4 First-Generation College Students and Self-Concept Clarity

Another important standing question is whether the proposed link between SCC and adjustment is stronger for specific groups. Schmader and Sedikides's PE fit model (2017) is a relevant framework that indicates specific group differences in state authenticity (i.e., the subjective sense of feeling like one's true self), proposing that there are advantaged and disadvantaged identities. American universities highlight independent values that they aim to cultivate in students, potentially resulting in a disadvantage for FGS socialized with interdependent values (Stephens et al., 2012a). The potential misfit with the environment in higher education due to the highlighted identities could trigger lower clarity in one's self-concepts. FGS are predominantly socialized with interdependent cultural values which may conflict with the independent values of American universities (Stephens et al., 2012a). As such, they might be more attentive or sensitive to cues in the college environment that signal fit, or lack thereof. Specifically, they might experience a cultural mismatch between their self-concepts related to home life and those emerging in college life as they seek upward mobility (Covarrubias et al., 2019). As an increasing number of FGS attend college, there is a need to ensure universities can facilitate important transitions into and out of college (i.e., recruitment,

matriculation) for students who are typically regarded as non-traditional, from lower social class backgrounds.

There has been increasing interest in the application of psychological frameworks to understand the impact of social class (e.g., for a review see Kraus & Stephens, 2012) and in social class as an important part of people's identity (e.g., Croizet & Claire, 1998; V. Thomas & Azmitia, 2014). People have dynamic and multi-faceted self-concepts that vary in relevance or importance (e.g., Markus & Wurf, 1987). I highlight the socioeconomic status self-concept because post-secondary education is a prominent life transition that makes status salient and predicts social mobility (Baum, Ma, & Payea, 2013). FGS often come from low-income households (Allen, Muragishi, Smith, Thoman, & Brown, 2015). Therefore, the cultural conflict between university norms and that of FGS socialized background might create a disadvantage that manifests itself in lower socioeconomic status SCC (SES-SCC) for FGS students who particularly value upward mobility via educational goals, but are not sure of what the future holds. In the process of seeking upward mobility through higher education, FGS might differentially utilize regulatory strategies, compared to CGS.

FGS might be more reliant on emotion regulation than CGS because FGS experience greater negative emotion, due to cultural mismatch. This suggests that emotion regulation might be more strongly linked to adjustment for FGS, compared with their CGS counterparts. In one experiment, FGS and CGS were instructed to engage in an academic task (i.e., give a speech) after having read a letter ostensibly from the president (Stephens et al., 2012b). For half of the participants, the letter was manipulated to convey the importance of independent, middle class norms (i.e., expressing one's individuality, finding one's passion). Whereas for the other half, participants read a letter that conveyed the importance of interdependent norms (i.e., being part

of an intellectual community, collaborating in research). Independent norms were thought to create a cultural mismatch for FGS that would result in greater psychological distress. Indeed, they found that FGS reported greater negative emotional reactions in their speech, compared to CGS. This study suggests a group difference in the impact of self-concept related factors in the environment on adjustment. Thus, one might expect the effect of SCC on adjustment to be stronger for FGS than CGS.

However, it is not fully understood whether there are clear differences in the way FGS respond or regulate associated distress. Some work shows they underutilize familial social support due to fear of burdening their family (Chang et al. 2019). One might expect for students to naturally rely more on college friends than family given the transition from home to college, but FGS often have a unique challenge adjusting to social life in college due to the PE mismatch. Thus, I hypothesize that FGS rely more on intrapersonal emotion regulation strategies, versus interpersonal strategies, and compared to CGS, the effect of on adjustment will be more consequential because it might be their primary form of emotion regulation.

1.5 The Present Research

Having a clear sense of one's situationally relevant self-concepts is important for adjustment to new environments. There are two important gaps to address: it is not fully understood *why* and for *whom* SCC predicts adjustment. During the self-evaluation involved in SCC, certainty is thought to serve as a resource for regulatory functions. Thus, this investigation builds on prior work by testing types of emotion regulation strategy use, varying in the emotional engagement that they afford, as mediators in the link between SCC and adjustment. I highlight people's SCC related to socioeconomic status (i.e., SES-SCC) given its salience during the transition post-secondary education (Study 2).

I employed two studies using intensive longitudinal methods (Study 1: daily diary; Study 2: experience sampling method) to examine effects between participants and within participants, across time. These methods afford the opportunity to replicate between-person level findings of the associations between SCC and adjustment and the limited work on the associations between SCC and emotion regulation strategies. There is substantial work demonstrating the importance of individual differences in both SCC and emotion regulation for adjustment-related outcomes (Campbell et al., 1990; Campbell et al., 1996; Gross & John, 2003), but less work has examined the association between SCC and regulatory functions.

Further, examining differences within participants is relevant to this investigation for two main reasons. First, both SCC and emotion regulation are phenomena that are thought to vary across time (Campbell et al., 1990; Gross, 2015), yet little work has examined this property of SCC. The longitudinal work that exists for SCC typically involve long intervals of sampling (e.g., months to years; van Dijk et al., 2014). Secondly, there is a need to understand the mechanisms of SCC and longitudinal work can bring us one step closer by affording temporal precedence and examining other temporal aspects of SCC. Moreover, it is important to measure these phenomena closer to their theoretical time scale (i.e., monthly, daily, momentarily).

Whereas emotion regulation is known to occur on a short time scale and depend greatly on the context (Kuppens & Verduyn, 2015), the stability of SCC is unclear.

In addition to replicating prior associations between SCC and adjustment, the hypotheses for the two studies are as follows.

1.5.1 Hypothesis 1

In Studies 1 and 2, greater SCC (or SES-SCC) will be associated with more engagement, less disengagement, and less over-engagement emotion regulation strategies.

1.5.2 Hypothesis 2

In Studies 1 and 2, emotion regulation strategy use will mediate the association between SCC (or SES-SCC) and adjustment. Disengagement and over-engagement strategies are negatively associated with adjustment, while engagement strategies are positively associated with adjustment.

1.5.3 Hypothesis 3a

In Study 2, the main effects of SCC and of emotion regulation on adjustment, will be stronger for FGS than CGS.

1.5.4 Hypothesis 3b

In Study 2, the mediated effects of SCC on adjustment, through each emotion regulation strategy type, will be stronger for FGS compared to CGS.

Chapter 2: Study 1 Introduction

There is a dearth of evidence examining SCC and adjustment over time (for exceptions see Parise et al., 2019; Schwartz et al., 2012; van Dijk et al., 2014), as well as the role of emotion regulation in explaining this association. Study 1 focused on a within-person assessment investigating whether SCC predicts specific emotion regulation strategy use in daily life and whether emotion regulation can partly explain why SCC predicts adjustment. Concurrent effects were examined between SCC and emotion regulation, and between SCC and adjustment. A within-person mediation model tested whether emotion regulation partially explained the association between SCC and adjustment.

Chapter 3: Study 1 Methods

3.1 Sample

Two hundred and fifty-seven undergraduate participants from the Psychological and Brain Sciences SONA Subject Pool participated in a daily diary study for 1 course credit or monetary compensation. The target sample size was based on the fact that prior work has been able to detect associations between SCC and emotional phenomena with lower sample sizes (i.e., $N = 103$; Nezlek & Plesko, 2001), but a much larger sample size was proposed for this study because anticipated missing data points due to compliance was expected to impact the planned analysis given the daily diary design over two weeks. Of participants who reported their gender, they were predominantly female (72%), followed by male (26%), transgender (1%), and non-binary (<1%). Of participants who reported their ethnicity, participants predominantly self-identified as European-American (46%), followed by Asian/Asian-American (28%), African-American (10%), and Latinx/Hispanic (7%). A portion of these students self-identified as multi-ethnic (7%).

3.2 Procedure

Following informed consent, participants were asked to download Expiwell, a software application commonly used for daily diary and experience sampling studies (<https://app.expiwell.com/>). Using this software, participants filled out a demographic questionnaire while on the phone. This demographic questionnaire took approximately 3.75 minutes ($SD = 1.09$), on average. On the following day, participants started the daily diary portion of the study and received brief daily surveys each day during the evening for 14 days that assessed SCC, emotion regulation, and adjustment. They were instructed to complete the survey

before going to bed and advised that the survey would be open from 6 pm to midnight. See Appendix A for all daily diary survey items for Study 1.

3.3 Measures

3.3.1 Baseline Demographics

Participants completed a demographics questionnaire, which included questions about sex, race, income, and political ideology. It also included a single-item about subjective status using an image of a ladder (Adler, Epel, Castellazzo, & Ickovics, 2000) in which participants rate where they see themselves in relation to others, from 1 (*“people who are the worst off – those who have the least money, least education, and the least respected jobs or no job”*) to 10 (*“people who are the best off - those who have the most money, the most education, and the most respected jobs”*).

3.3.2 Self-Concept Clarity

Participants were asked to rate four items on the self-concept clarity scale (Campbell et al., 1996), adapted to ask about their day. Participants rated their agreement on a 7-point Likert scale from 1 (Strongly disagree) to 7 (Strongly agree).

3.3.4 Emotion Regulation

Participants were also asked to rate their use of nine emotion regulation strategies that day on a Likert scale from 1 (*Not at all*) to 7 (*Extremely*) (adapted from English et al., 2017; Heiy & Cheavens, 2015). These strategies were selected to capture each of the three engagement categories (i.e., disengagement, engagement, and over-engagement) using three strategies per category.

3.3.5 Adjustment

Two items based on prior work (English et al., 2017) were included in the daily diary to assess academic adjustment (How satisfied did you feel with your academic life TODAY?) and social adjustment (How satisfied did you feel with your social life TODAY?). A third item was added to capture life satisfaction in general (How satisfied did you feel with your life in general TODAY?). Participants were also asked to rate their experience of negative and positive emotions during the day. Specifically, they rated six negative items (*angry, anxious, sad, guilty, bored, and embarrassed*) and six positive items (*excited, content, calm, happy, proud, and accomplished*). All items were rated on a 7-point Likert scale from 1 (*Not at all*) to 7 (*Extremely*).

Chapter 4: Study 1 Results

4.1 Analysis Plan

Within-person composites were created for all measures. A composite of SCC was computed by averaging the scale items for each day ($\omega = .81$). For emotion regulation, three separate composites were computed for each day by averaging items within each of the three types of strategies: disengagement (*distraction, minimizing, suppression*), engagement (*acceptance, positive reappraisal, distancing reappraisal, reflection*), and over-engagement (*rumination, consequences, worry*). Given the low reliabilities of the disengagement ($\omega = .46$) and engagement ($\omega = .48$) strategy types, these clusters were broken down such that models testing bivariate and main effects were constructed to examine the effect of individual strategies within these two strategy types. For consistency and comparison, I also included models testing individual over-engagement strategies, even though this factor had acceptable reliability ($\omega = .74$). The three satisfaction items and 12 emotional experience items (with the negative emotion items reverse-scored) were averaged into a within-person adjustment composite, which demonstrated good reliability ($\omega = .85$). Greater scores indicated greater SCC, greater emotion regulation strategy use, and greater adjustment, respectively.

Preliminary analyses included separate models testing the association between time, or position of day within the measurement period, and SCC and emotion regulation, to determine whether time should be included in each model. In models testing the association between SCC and emotion regulation, time was centered at zero (i.e., day 1 coded as 0) for interpretation. I also examined bivariate correlations between study variables and a multilevel model testing the effects of SCC on adjustment.

To test Hypothesis 1, I examined concurrent within-person correlations between SCC and emotion regulation, in three multilevel models—one for each emotion regulation strategy type. Given the concern with reliability of some emotion regulation strategy types (i.e., disengagement and engagement), I also examined the effects of individual strategies as well—an additional nine multilevel models. Person-centered and intraindividual mean-level scores (i.e., aggregated across the sampling period for each person) were calculated to test both within- and between-person effects for all multilevel models, respectively.

To test Hypothesis 2 (i.e., fully within-person mediation model) the data were restructured into double-entry data (Bolger & Laurenceau, 2013), stacking the mediators (i.e., emotion regulation strategy types) and adjustment. Dummy variables were computed to indicate row entry, or each regression pathway, and to calculate separate variances for each outcome. The within-person mediation model only examined person-centered effects. Fixed and random effects were included in the model for all predictors including time. Due to the base complexity of the model, this within-person mediation model tested the three emotion regulation composites (i.e., disengagement, engagement, over-engagement, and adjustment), rather than nine separate simultaneous mediators. A semi-partial R^2 effect size will be used to report the magnitude of the reduction in error for all within-person analyses, with recommended cutoffs at .02 (small), .13 (medium), and .26 (large) (Edwards et al., 2008).

4.2 Findings

4.2.1 Preliminary Findings

The average compliance rate was just under 12 surveys of a total of 14 (84%; $M=11.76$, $SD=2.66$). Compliance rate was unrelated to father and mother education, family income, sex, or ethnic background ($r_s < |.13|$, $p_s > .198$). Compliance rate was negatively associated with the

tendency to regulate one's emotions for all three types of strategies (r s range = $-.14$ to $-.23$, p s < $.031$). That is, those who completed fewer surveys, on average, also regulated their emotions more. Compliance rate was also positively associated with SCC ($r = .19$, $p = .003$), indicating that those with greater compliance had a greater tendency to have clarity in their general self-concept. Compliance was not, however, associated with adjustment ($r = .02$, $p = .692$).

Baseline trait SCC was significantly associated with mean-centered SCC measured at the daily level ($r = .64$, $p < .001$). Further, baseline trait SCC strongly predicted daily, person-centered SCC ($\gamma = .57$, $SE = .04$, $p < .001$, semi-partial $R^2 = .404$), providing some validity for the SCC scale adapted to assess daily SCC. Inspection of the intraclass correlation coefficient (ICC) of SCC indicates there was substantially more between-person than within-person variability at the daily level (ICC = $.68$). Nonetheless, approximately a third of the variability was within-person suggesting it worthwhile to examine within-person correlations.

There were small time effects on SCC and each emotion regulation strategy. SCC scores slightly increased across the 14-day sampling period ($\gamma = .01$, $SE = .002$, $p < .001$, semi-partial $R^2 = .013$). On the other hand, there was a negative trend for disengagement ($\gamma = -.02$, $SE = .004$, $p < .001$, semi-partial $R^2 = .004$), engagement ($\gamma = .57$, $SE = .04$, $p < .001$, semi-partial $R^2 = .404$), and over-engagement ($\gamma = -.02$, $SE = .004$, $p = .002$, semi-partial $R^2 = .008$). There was no trend for adjustment ($\gamma = .003$, $SE = .003$, $p = .332$, semi-partial $R^2 < .001$). Therefore, I included time centered at zero for models testing SCC and emotion regulation as predictors.

See Table 1 for bivariate correlations between study variables at the within- and between-person levels. As expected, SCC was negatively associated with all the disengagement and over-engagement individual strategies. On the other hand, whereas SCC is positively associated with two of the engagement strategies (acceptance and positive reappraisal), it is negatively associated

with reflection ($r = -.15$, $p < .001$), suggesting reflection might have not captured the constructive form of engagement that was intended. Indeed, reflection had a high correlation with over-engagement strategies ($r_s > .37$, $p_s < .001$).

To replicate prior work examining the association between SCC and adjustment, I constructed one multilevel model with time, person-centered SCC, and mean-centered SCC as predictors of adjustment. Time did not significantly predict adjustment in this model ($\gamma = -.004$, $SE = .003$, $p = .165$, semi-partial $R^2 = .001$). On days when SCC was high, adjustment was also high ($\gamma = .52$, $SE = .02$, $p < .001$, semi-partial $R^2 = .154$), above and beyond between-person effects, or the tendency to experience greater SCC ($\gamma = .42$, $SE = .04$, $p < .001$, semi-partial $R^2 = .221$).

4.2.1 Hypothesis 1 - Associations Between SCC and Emotion Regulation

To test and interpret the within-person effects of SCC on emotion regulation, three predictors were entered into each model: time, person-centered SCC, and mean-centered SCC (see Table 3 for unstandardized estimates). At the within-person level, daily SCC was associated with lower daily disengagement ($\gamma = -.28$, $SE = .03$, $p < .001$, semi-partial $R^2 = .026$) and over-engagement ($\gamma = -.71$, $SE = .03$, $p < .001$, semi-partial $R^2 = .121$) emotion regulation, above and beyond between-person effects. SCC, however, was not associated with engagement ($\gamma = .04$, $SE = .03$, $p = .127$, semi-partial $R^2 = .001$).

In post-hoc analyses, I constructed follow-up multilevel models that predicted each of the three specific strategies within each emotion regulation type rather than all three strategies within each type combined. In these models, I similarly controlled for time centered at zero and included the within- and between-person effects of SCC as simultaneous predictors. Consistent with hypotheses, the within-person effect of SCC was associated with greater acceptance ($\gamma =$

.20, SE = .04, $p < .001$, semi-partial $R^2 = .007$) and greater positive reappraisal ($\gamma = .27$, SE = .04, $p < .001$, semi-partial $R^2 = .013$). Notably, the within-person effect of SCC on reflection was significant and in the negative direction, contrary to what was expected ($\gamma = -.34$, SE = .04, $p < .001$, semi-partial $R^2 = .019$). The effects for all other individual emotion regulation strategies were consistent with the expectations for their respective emotion regulation category (see Table 4).

To examine the robustness of these models, I controlled for relevant variables. Given that greater compliance predicted greater SCC and lower use of emotion regulation, it was important to determine how much extraneous influence compliance had on the associations between SCC and emotion regulation. Therefore, I controlled for compliance rates to determine whether SCC still significantly predicted emotion regulation in follow up models. Within-person SCC still significantly predicted lower daily disengagement ($\gamma = -.28$, SE = .03, $p < .001$, semi-partial $R^2 = .026$), controlling between-person SCC ($\gamma = -.53$, SE = .06, $p < .001$, semi-partial $R^2 = .181$), time ($\gamma = -.01$, SE = .004, $p = .021$, semi-partial $R^2 = .001$), and compliance ($\gamma = -.52$, SE = .29, $p = .075$, semi-partial $R^2 = .005$). Within-person SCC still did not predict greater daily engagement ($\gamma = .04$, SE = .03, $p = .130$, semi-partial $R^2 = .001$), controlling between-person SCC ($\gamma = .01$, SE = .07, $p = .891$, semi-partial $R^2 < .001$), time ($\gamma = -.01$, SE = .004, $p < .001$, semi-partial $R^2 = .004$), and compliance ($\gamma = -.67$, SE = .34, $p = .049$, semi-partial $R^2 = .008$). Within-person SCC still significantly predicted lower daily over-engagement ($\gamma = -.71$, SE = .03, $p < .001$, semi-partial $R^2 = .122$), controlling between-person SCC ($\gamma = -.53$, SE = .06, $p < .001$, semi-partial $R^2 = .152$), time ($\gamma = -.01$, SE = .01, $p = .197$, semi-partial $R^2 < .001$), and compliance ($\gamma = -.41$, SE = .32, $p = .203$, semi-partial $R^2 = .002$).

The effects of SCC on disengagement and over-engagement also remained when controlling for negative emotional experience. Within-person SCC still predicted lower daily disengagement ($\gamma = -.16$, $SE = .03$, $p < .001$, semi-partial $R^2 = .008$), lower over-engagement ($\gamma = -.32$, $SE = .03$, $p < .001$, semi-partial $R^2 = .032$), but not engagement ($\gamma = .01$, $SE = .03$, $p = .858$, semi-partial $R^2 < .001$).

4.2.2 Hypothesis 2 – Within-Person Mediation Model

To test whether emotion regulation partially mediates the within-person association between SCC and adjustment, all three emotion regulation strategy types were simultaneously included in the model. A simplified version of the model with all *a* and *b* paths can be found in Figure 1. There were three *a* paths: one for each emotion regulation strategy type regressed on SCC. Similarly, there were three *b* paths: one for adjustment regressed on each emotion regulation strategy type.

All *a* and *b* paths were statistically significant, except for a_2 path—SCC predicting engagement. For the first pathway, SCC significantly predicted lower disengagement ($\gamma = -.30$, $SE = .04$, $p < .001$, semi-partial $R^2 = .008$, 95% CIs = $-.02, -.58$). For each one-unit increase in daily SCC on a given day, daily disengagement was predicted to be $-.30$ units lower that day. Daily disengagement predicted lower adjustment ($\gamma = -.08$, $SE = .02$, $p < .001$, semi-partial $R^2 = .001$, 95% CIs = $-.06, -.10$). For the second pathway, SCC did not significantly predict engagement ($\gamma = .03$, $SE = .03$, $p = .449$, semi-partial $R^2 < .001$, 95% CIs = $.19, -.25$). Daily engagement, however, significantly predicted greater adjustment ($\gamma = .19$, $SE = .02$, $p < .001$, semi-partial $R^2 = .006$, 95% CIs = $.17, .20$). Lastly, for the third pathway, SCC significantly predicted lower over-engagement ($\gamma = -.68$, $SE = .04$, $p < .001$, semi-partial $R^2 = .039$, 95% CIs = $-.41, -.95$). Daily over-engagement, also significantly predicted lower adjustment ($\gamma = -.24$, SE

= .01, $p < .001$, semi-partial $R^2 = .013$). The direct effect of SCC was also significantly predicted adjustment ($\gamma = .26$, $SE = .03$, $p < .001$, semi-partial $R^2 = .005$, 95% CIs = -.23, -.26).

SCC indirectly predicted greater adjustment via emotion regulation. There were very small indirect effects via disengagement (.05) and engagement (.01), compared to over-engagement (.17). Of the total effects of the model (.48), over-engagement partially mediated the largest proportion (35%), followed by disengagement (10%), and engagement (1%). On the other hand, the percent of the mediated effect accounted by the covariances between each a and b path was small (4%).

Chapter 5: Study 1 Discussion

The primary aims of the current study were to examine within-person associations between SCC, emotion regulation, and adjustment. There was some evidence that SCC predicts lower disengagement, lower over-engagement, and greater engagement, and that these emotion regulation strategy types might help partially explain the association between SCC and adjustment.

First, building on prior work, I replicated past findings (e.g., Campbell et al., 1990, Campbell et al., 1996) utilizing a daily diary design. Specifically, SCC was moderately associated with greater adjustment at the within-person level, above and beyond between-person effects of SCC on adjustment. Therefore, regardless of the intraindividual mean-level scores of SCC, on days when participants reported greater SCC, they also reported greater adjustment. This replication at the within-person level, and particularly at the daily level, is important to further elaborate on. It suggests a source of variability in SCC worthwhile examining further. Put differently, regardless of the differences between people in experiencing greater or lower SCC, people might still have days where they experience greater or lower SCC, with implications for adjustment-related factors (e.g., satisfaction, emotional experience) in daily life.

Partially consistent with the first hypothesis, SCC predicted lower use of disengagement and over-engagement emotion regulation strategies. That is, on days when participants reported greater SCC, they also reported using less strategies characterized by minimal attention to their emotional experience (e.g., distracting one's self) and repetitive attention characterized by perseveration (e.g., ruminating nonstop). On the surface the use of these emotion regulation strategies might sound conflicting because it might be difficult for people to both disengage and over-engage simultaneously. However, I make no assumption that they were used throughout the

day simultaneously. It is possible they were used sequentially or cyclically as one might have prompted the other. In fact, emotion regulation strategy types characterized by disengagement and over-engagement were strongly correlated at the between-person level in prior meta-analytic work ($r = .67$; Naragon-Gainey et al., 2017). While the within-person correlations in the current study were not as high in magnitude, the between-person correlations were closer in magnitude to prior work (see Table 1). Nonetheless, disentangling the order of use of disengagement and over-engagement strategies, as they relate to SCC, should be the subject of future work. Another limitation was the difficulty in obtaining reliable estimates of disengagement and engagement emotion regulation strategy factors within-person. I drew on theory and recent empirical work (Naragon-Gainey et al., 2017) to categorize emotion regulation strategies based on the degree to which they might afford engagement with emotional experience. Some strategies, for example, intervene early in the emotion generative process, cutting emotional experience short (Sheppes & Gross, 2012), hence disengagement from emotional experience. Additional work is needed to examine the dimensionality of emotion regulation strategies, particularly at the within-person level.

Notably, SCC did not unequivocally predict all engagement strategies. Splitting up the models for the three engagement strategies showed that SCC was associated with greater use of acceptance and positive reappraisal strategies, consistent with the hypothesis. SCC, however, was associated with reflection in the opposite direction—predicting lower reflection—although reflection was positively associated with both acceptance and positive reappraisal, at both the within- and between-person levels. This finding might suggest that reflection was capturing emotional processes more akin to ruminative and perseverative over-engagement strategies. Measures for rumination typically involve a negative connotation when assessing repetitive

thought in that they inherently contain judgment (e.g., “Why do I always react this way?”; Treynor et al., 2003). On the other hand, reflection has been described as “neutrally valenced” (Treynor et al., 2003, p. 251), and I tried to capture the neutrality in the item I created to measure reflection (i.e., “I reflected on why I felt the way I did”). While prior work on rumination has established that the brooding component and reflection component are distinct, it may be difficult to capture this distinction with single items. Therefore, future studies should incorporate slightly longer measures of strategies (e.g., three or more items) to the extent that a daily diary design affords greater length relative to repeated sampling throughout the day.

Further, there was some evidence that emotion regulation mediated the within-person association between SCC and adjustment. Specifically, over-engagement accounted for a significant proportion of the indirect effect of SCC on adjustment; On days when SCC was high, adjustment was also high, particularly due to decreased use of daily over-engagement. Although this finding is not causal evidence, it is preliminary support for the idea that SCC’s link with adjustment might be explained by some forms of emotion regulation. That engagement’s mediational effect was almost non-existent suggests it to be unlikely that daily SCC predicts greater use of some emotion regulation strategy types (e.g., engagement), but rather SCC predicts lower use of other strategy types (i.e., over-engagement). Another form engagement—disengagement—although related to SCC, did not have a strong mediational effect, suggesting that strategies like suppression, distraction, and minimizing may equally be used when SCC is high or low and not necessarily affect daily adjustment.

Chapter 6: Study 2 Introduction

Although Study 1 can tell us about the general association between SCC and emotion regulation and adjustment, there are important limitations that Study 2 is designed to address. Study 1 captured within-person associations with SCC. It is possible, however, that although people may feel a relatively high level of general SCC, they might still experience a lack of clarity for some aspects of their self-concept. Study 2 will focus on the socioeconomic experiences of undergraduate students to attempt to capture an aspect of their self-concept that likely becomes more salient during the transition period from high school to college. We will explore the frequency with which participants report thinking about their self-concepts related to socioeconomic status to empirically determine its salience. While Study 1 captured how these processes happen over a relatively long period of time (14 days), its daily diary design might miss important contexts throughout the day due to the end-of-day fixed schedule. An experience sampling approach was utilized in Study 2 to examine whether SCC specific to the socioeconomic self-concept (i.e., SES-SCC) predicts emotion regulation strategy use and whether emotion regulation strategy use partially explains the association with adjustment.

Only one prior study has measured SCC and emotion regulation-relevant constructs using experience sampling methods. Ellison and colleges (2019) found that greater SCC predicted lower impatience among undergraduate student participants. They used the Momentary Impulsivity Scale with the following four items: “I said things without thinking”, “I felt impatient”, “I spent more money than I meant to”, and “I made a spur of the moment decision”. This measure likely overlaps with emotion regulation, but also seems to capture reactionary behavior prompted by general discomfort and not necessarily aimed at regulating emotion. Nonetheless they did not examine other emotion regulation strategies that might provide insight

into the idea that SCC facilitates a form of elaboration of emotional experience that might implicate adjustment. Therefore, like in Study 1, I measured several emotion regulation strategies and attempted to capture more contexts throughout the day, thereby increasing generalizability through assessments of a wider range of contexts. Moreover, Study 2 also sought to examine for whom the SCC-adjustment association might be most relevant by examining the role of first-generation college student status.

Chapter 7: Study 2 Methods

7.1 Sample

Participants were $N = 274$ undergraduate students from two research-intensive institutions—Washington University in St. Louis (WU; $n=198$) and University of California, Santa Cruz (UCSC; $n=76$)—that participated in an experience sampling study for 1 course credit or \$10. A target sample size of 300 was proposed to account for missing data and increase power. The target sample size was conservatively determined based on prior compliance rates in similar studies investigating daily emotion and emotion regulation (e.g., English, Lee et al., 2017), prior work on the daily association between SCC and mood (Nezlek & Plesko, 2001), and the anticipated challenge in recruiting students for a labor-intensive ESM study. The final sample size fell short of the target sample size due to the COVID-19 pandemic. Nonetheless, data collection at UCSC was carried out to increase the chance of being able to reliably test for group differences between FGS and CGS given the greater proportion of FGS as UCSC than UC. In this study, there were 28 FGS from UCSC and 17 from WU. The majority of participants were female (71%) and a smaller portion were male (26%). The majority of participants identified as European-American (41%), followed by Asian/Asian-American (24%), Other (12%), Latino (11%), and African-American (6%).

7.2 Procedure

Participants were recruited via the psychology subject pool or via recruitment flyers and were verbally consented over the phone during a 15 min phone call. Upon consent, they were asked to download the same software used in Study 1 and complete a baseline survey while on the phone call that comprised of a demographic questionnaire and a short, validated measure of SES-SCC (Destin et al., 2017). Before the call ended, participants were made aware of what we

mean by socioeconomic status with the same definition they saw in the survey and were advised that the 7-day ESM surveys would start the day after the recruitment call and that there would be four signal-contingent notifications sent randomly every 4-hr interval each day within a 12-hr daily time window. To capture the daily prominence of SES and its subjective contextual cues, participants were asked whether they were thinking about their SES since the last notification and what prompted them to think about it. They were also asked to think about their self-concept clarity regarding SES, related emotion, and emotion regulation strategy use. Please see Appendix B for all experience sampling method measures. The day after the ESM component of the study ended, participants were asked to complete a brief, online post-survey to assess adjustment in various domains (social, academic, and emotional domains; see Appendix C).

7.3 Measures

7.3.1 Baseline Measures

Baseline measures included the same demographics questionnaire as in Study 1 and the status-based uncertainty scale (Destin et al., 2017) to measure trait SES-SCC on a 7-point Likert scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). A sample item includes, “*My beliefs about where I stand in society often conflict with one another*”. The reliability was good in the current study.

7.3.2 Experience Sampling Measures

7.3.2.1 Emotion. Participants reported their emotional experience at each occasion as an indicator of emotional adjustment. Participants were instructed to rate their current experience of five negative items (*frustrated, anxious, sad, guilty, and embarrassed*) and five positive items (*excited, content, happy, proud, and accomplished*). A Likert scale from 1 (Not at all) to 7 (Extremely) was used for each item.

7.3.2.2 *SES Prominence*. Participants then answered the question: “*Since the last notification, did you think about your socioeconomic status in society (i.e., income, education level, and occupational prestige)?*” on a Likert scale from 1 (*Never*) to 7 (*Very frequently*).

7.3.2.3 *Emotion Regulation*. If participants indicated they were thinking about their SES since the last notification, then they rated their use of emotion regulation strategies with a prompt that asked them about their SES (“***Since the last notification***, how much did you do any of the following to influence your emotions related to your status in society?”). If they were not thinking about their SES since the last notification, they received a more general prompt (“*In general, did you do any of the following to influence your emotions since the last notification?*”). The same emotion regulation strategy items were presented regardless of the prompt: three disengagement strategies (*distraction, minimizing, expressive suppression*), three engagement strategies (*acceptance, positive reappraisal, reflection*), and three over-engagement strategies (*rumination, thinking about consequences, situational worry*) (see Appendix B for items). A Likert scale from 1 (Not at all) to 7 (Extremely) was used for each item.

7.3.2.4 *SES-SCC*. An adapted 4-item momentary scale was used to assess state socioeconomic status self-concept clarity (i.e., SES-SCC; Destin et al., 2017). Participants saw the following prompt: “*Please consider your status in society **right now** (i.e., income, education level, and occupational prestige). Consider your family background, where you stand now, and/or where you think you are headed later in life when answering the following questions.*” The items were: 1) “*My beliefs about where I stand in society conflict with one another*”, 2) “*I feel unsure about where I stand in society*”, 3) “*I feel that my socioeconomic status is not really what others think it is*”, and 4) “*I have a clear sense of where I stand in society.*” Item one was previously used by Nezlek & Plesko (2001) in an experience sampling design that occurred twice

a day for one week. Items 2-4, in their original form from the SCC scale (Campbell et al., 1996) were used in a prior ESM study and judged to be state-like, or moved around by situational cues (Ayduk, Gyarak, & Luerssen, 2009). These items have all been used in prior work to assess state SCC, hence the adaptation to measure SES-SCC. These items were averaged into a composite score at each prompt then aggregated across the sampling period to obtain an intraindividual mean level score.

7.3.3 Post-Survey Adjustment

All adjustment indices were coded such that greater scores indicate better adjustment.

7.3.3.1 Academic Adjustment. Academic self-efficacy was measured with an 8-item subscale specific to academic performance out of the class (Zajacova, Lynch, & Espenshade, 2005; see Appendix F). Sample items include “*studying*”, “*writing term papers*”, and “*preparing for exams*”. A Likert scale from 0 (*Not confident*) to 10 (*Extremely confident*) was used.

7.3.3.2 Emotional Adjustment. Participants were asked to rate the degree to which they agree with statements about their satisfaction with life, using the Satisfaction with Life Scale (SWLS-5; Diener, Emmons, Larsen, & Griffin, 1985). A sample item includes, “In most ways my life is close to my ideal”. A Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*) was used.

7.3.3.3 Social Adjustment. Participants were asked to rate the frequency of social contacts with friends and family, using the Lubben Social Network Scale (Lubben et al., 2006). A sample item includes “How many relatives do you see or hear from at least once a month?”. A Likert scale from 1 (*none*) to 6 (*nine or more*) was used. A brief Belonging Uncertainty Scale was also included to tap into a more subjective sense of belonging (Walton & Cohen, 2007), on a Likert scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

Chapter 8: Study 2 Results

8.1 Analysis Plan

Between-person composites were created for all measures. Reliability was good for the baseline trait measure of SES-SCC ($\omega = .89$). For ESM measures, within-person composites at each occasion were computed first and then used to calculate the between-person, intraindividual mean-level scores across the week (e.g., average level of emotion regulation engagement strategy use). The daily measure of SES-SCC had good to excellent reliability (between-person $\omega=.97$; within-person $\omega=.81$). For emotional experience, composites were computed for negative (between-person $\omega=.92$; within-person $\omega=.76$) and positive emotion (between-person $\omega=.96$; within-person $\omega=.82$) by averaging across the five items at each prompt. Momentary and intraindividual mean-level composites were also computed for each of the three types of emotion regulation (i.e., disengagement, engagement, over-engagement; see Table 2 for inter-correlations). Using .70 criteria, reliability was acceptable to excellent at the between-person level for disengagement ($\omega=.78$), engagement ($\omega=.88$), and over-engagement ($\omega=.94$). At the within-person level, however, it was below acceptable for disengagement ($\omega=.54$), engagement ($\omega=.57$), and acceptable for over-engagement ($\omega=.77$). Lastly, adjustment was composed of various indices of adjustment measures that were standardized and then served as indicators of overall adjustment. Given that most adjustment indices were only measured during the post-survey there are only between-person reliabilities for them. Reliabilities ranged from good to excellent for most adjustment measures: academic self-efficacy ($\omega=.93$); the Satisfaction With Life Scale ($\omega=.82$); the Lubben Social Network Scale ($\omega=.81$). The reliability for Belonging Uncertainty Scale ($\omega=.69$) was lower. See Table 2 for inter-correlations between non-latent adjustment indices.

Preliminary analyses included examining bivariate correlations between study variables and primarily descriptive and exploratory analyses to determine how prominent thoughts about SES are for students. I also explored whether there were group differences between FGS to CGS using a multilevel model given that the question assessing frequency of thoughts about one's SES were within-person. The FGS membership variable was dummy-coded (FGS=1, CGS=0) and it was included as the predictor of daily thoughts about SES.

8.1.1 Hypothesis 1 - Associations Between SES-SCC and Emotion Regulation

I started with the baseline trait measure of SES-SCC given that prior work has examined this measure's validity (Destin et al., 2018). I examined bivariate between-person correlations between SES-SCC and emotion regulation. I also tested the concurrent effect of the state measure of SES-SCC adapted from the trait measure by examining multilevel (occasion nested within person) associations between SES-SCC and each emotion regulation type. Moreover, to examine whether SES-SCC predicts changes in emotion regulation, I also examined multilevel time-lagged models to test whether SES-SCC at Time 1 predict the continuous scores for emotion regulation types at Time 2, controlling for Time 1 use. In both concurrent and time-lagged models, I examined the within- and between-person sources of variability by testing the effect of the person-centered and intraindividual mean-level scores of state SES-SCC, respectively.

As a robustness check, compliance rate was tested as a level 1 moderator of the associations between SES-SCC and emotion regulation, separately, to determine whether any effects are dependent on how many surveys were completed.

8.1.2 Hypothesis 2 - Mediation Model of SES-SCC and Adjustment Model

To maintain temporal precedence between SES-SCC and emotion regulation and because I am predicting person-level adjustment (i.e., measured only at post-survey), I used baseline trait ratings of SES-SCC and aggregate responses emotion regulation types into intraindividual mean-level scores across the week (e.g., average level of emotion regulation engagement strategy use) to increase reliability in the estimates. To test the mediation model for the association between SCC and adjustment, I used a latent structural equation model. The mediation model was conducted to test whether the effect of SES-SCC on adjustment is partially mediated by emotion regulation strategy use. The structural portion of the model included a latent model of baseline SES-SCC indicated by the individual scale items, each emotion regulation strategy type indicated by each of the three individual strategies categorized within each group, and adjustment which was indicated by each adjustment measure that was first averaged into a composite and standardized for interpretability. I used a bootstrap procedure to produce standard errors. Each type of emotion regulation strategy use (disengagement, engagement, and over-engagement) was simultaneously tested as a partial mediator in the association between SES-SCC and adjustment. Emotion regulation items served as latent indicators of each emotion regulation category based on the categorization described above in Measures and the categories were allowed to correlate with each other. Using R Version 4.0.4, I constructed the structural equation model and used common thresholds to determine goodness of fit (Hu & Bentler, 1999).

In a separate follow-up models, I included data collection site (UCSC vs WU) as a covariate and compliance rates of the experience sampling to test whether effects were robust to location of sampling and missing data in experience sampling, respectively.

8.1.3 Hypothesis 3 - The Role of First-Generation College Student Membership

The difficulty of collecting data given the COVID-19 pandemic made it challenging to test hypotheses about whether the effects on adjustment are amplified for FGS with sufficient power. Due to the small sample size of participants identifying as FGS, compared to CGS, there was insufficient power to test interactions between FGS and each emotion regulation strategy type. Thus, I instead examined group differences in study variables based on FGS membership to better understand how each key study variables were associated with FGS status.

8.2 Findings

8.2.1 Preliminary Findings

The average compliance rate was just under 16 surveys of a total of 21 (76%; $M=15.91$, $SD=5.05$). Compliance rate was higher among participants who reported higher father and mother education ($r_s = .16$, $p_s < .05$) and greater family income ($r = .22$, $p < .01$). Like in Study 1, but at the between-person level in the current study, compliance rate was also negatively associated with the tendency to regulate one's emotions for all three types of strategies: disengagement ($r = -.17$, $p < .01$), engagement ($r = -.28$, $p < .001$), and over-engagement ($r = -.17$, $p < .001$). That is, those who completed more surveys, on average, also regulated their emotions less. Compliance rate was also negatively associated with negative emotion ($r = -.19$, $p < .01$), but not significantly linked with any other adjustment indicator ($r_s < |.12|$, $p_s > .060$).

Similar to Study 1, trait SES-SCC was strongly associated with state SES-SCC ($r = .69$, $p < .001$). All three emotion regulation strategy types had moderate to strong, positive correlations with each other. SES-SCC was correlated with both negative ($r = -.26$, $p < .01$) and positive emotions ($r = .16$, $p < .01$). SES-SCC was also positively associated with all other adjustment

indicators ($r_s > .16$, $p_s < .05$). See Table 2 for the full matrix of bivariate between study variables.

Thoughts about SES were not very prominent. On approximately 67% of occasions, participants did not think about their SES at all (i.e., responded “never” to every experience sampling survey). Of those who thought about their SES since the last notification, the average response was “rarely”—the midpoint anchor on the Likert scale ($M = 3.08$, $SD = .72$). As expected, compared to CGS ($M = 1.64$, $SE = .04$), FGS reported greater thoughts related to their SES ($M = 2.16$, $SE = .11$, $p < .001$, semi-partial $R^2 = .028$). However, there was more within-person than between-person variability ($ICC = .28$). That is, although people were more alike than not in their reporting lower SES prominence, or frequency of thoughts about their SES, there was noteworthy variability, or within-person difference in SES prominence across the ESM period.

8.2.2 Hypothesis 1 - Associations Between SES-SCC and Emotion Regulation

Trait SES-SCC was negatively correlated with disengagement ($r = -.24$, $p < .001$) and over-engagement ($r = -.24$, $p < .001$), but not significantly correlated with engagement ($r = -.08$, $p = .224$). The effects were similar when controlling for compliance: baseline trait SES-SCC was still associated with lower disengagement ($b = -.21$, $SE = .05$, $p < .001$, $R^2 = .08$) and over-engagement ($b = -.23$, $SE = .06$, $p < .001$, $R^2 = .12$) emotion regulation strategies, but not associated with engagement strategies ($b = -.02$, $SE = .06$, $p = .741$, $R^2 = .05$). Intra-individual mean-level scores of SES-SCC measured during the experience sampling period similarly predicted lower disengagement ($b = -.20$, $SE = .05$, $p < .001$, $R^2 = .06$) and over-engagement ($b = -.23$, $SE = .06$, $p < .001$, $R^2 = .06$) emotion regulation strategies, but did not predict engagement strategies ($b = -.03$, $SE = .04$, $p = .551$, $R^2 < .01$).

The within-person effects were similar to the between-person effects. In terms of concurrent, state-level associations, SES-SCC predicted lower daily disengagement and over-engagement, but it did not predict engagement. See Table 3 for within-person estimates, including intercepts and effects of time for multilevel models. There were significant within-person effects on both disengagement and over-engagement, controlling for between-person effects of SES-SCC and the effect of time. Specifically, on occasions when SES-SCC was higher than usual (i.e., greater than between-person intra-individual mean-level scores), disengagement ($\gamma = -.17$, $SE = .03$, $p < .001$, semi-partial $R^2 = .007$) and over-engagement were lower ($\gamma = -.29$, $SE = .03$, $p < .001$, semi-partial $R^2 = .015$), above and beyond the between-person level associations with SES-SCC. SES-SCC was not associated with engagement at the within-person level ($\gamma = -.05$, $SE = .03$, $p = .080$, semi-partial $R^2 = .001$).

In the time-lagged models, SES-SCC did not predict changes in emotion regulation. That is, there was no effect of prior SES-SCC on emotion regulation reported in subsequent surveys. Specifically, person-centered SES-SCC did not predict next occasion disengagement ($\gamma = -.04$, $SE = .03$, $p = .273$, semi-partial $R^2 < .001$). Consistent with the trait measure findings and concurrent analyses, person-centered SES-SCC did not predict next occasion engagement ($\gamma = -.03$, $SE = .03$, $p = .364$, semi-partial $R^2 < .001$). Lastly, person-centered, lagged SES-SCC did not predict next occasion over-engagement ($\gamma = .03$, $SE = .04$, $p = .391$, semi-partial $R^2 < .001$). See Table 4 for time-lagged effects of emotion regulation and between-person level associations. Conversely, emotion regulation did predict changes in SES-SCC.

8.2.3 Hypothesis 2 - Mediation Model of SES-SCC and Adjustment

The latent mediation model was a fully between-persons analysis. I tested a mediation model with the three emotion regulation strategy types as sole predictors first. I found

suboptimal fit in the initial model, $\chi^2(289, N = 314) = 842.19, p < .001, RMSEA = .085, 90\% CI [.08, .09], CFI = .832, SRMR = .089$ (see Table 6 for factor loadings).

When examining modification indices with a minimum value of 10, I identified a couple of theoretically-consistent ways to improve model fit for the initial mediation model. Specifically, a re-specified structural equation model was constructed with the following modifications that allowed mostly within-factor residual correlations between social adjustment (i.e., Lubben Social Networking Scale) and emotional adjustment indices (i.e., Satisfaction with Life Scale [56.97], positive emotion [15.72], and negative emotion [15.47]), between emotional adjustment indices (i.e., Satisfaction with Life Scale and positive emotion [37.15]), between academic adjustment and both emotional adjustment (i.e., Satisfaction with Life Scale [12.64]) and social adjustment (i.e., Lubben Social Network scale [11.66]). There were also some residual correlations between emotion regulation strategies. Specifically, I specified residual correlations between worry and consequences (27.63), rumination and consequences (22.66), suppression and acceptance (45.04), suppression and positive reappraisal (15.61). Lastly, there were two additional specifications between emotion regulation and indicators of adjustment. Specifically, I respecified residual correlations between rumination and negative emotion (13.63) and between positive reappraisal and positive emotion (31.21).

Following these modifications, the model had satisfactory fit, $\chi^2(302, N = 271) = 597.04, p < .001, RMSEA = .065, 90\% CI [.06, .07], CFI = .906, SRMR = .077$ (See Table 7 for all unstandardized estimates). Overall, the total effect of the model was significant (Est = .28, SE = .06, Z = 4.49, $p < .001$). SES-SCC had a direct effect on adjustment (Est = .12, SE = .05, Z = 2.49, $p = .013$). However, over-engagement partially mediated this effect on adjustment, such that SES-SCC predicted greater adjustment due to lower use of over-engagement strategies (Est

= .16, SE = .06, Z = 2.68, p = .007). Disengagement (Est = .03, SE = .05, Z = 0.53, p = .594) and engagement (Est = -.03, SE = .02, Z = -1.53, p = .126) did not indirectly predict adjustment. SES-SCC continued to predict both disengagement (Est = -.23, SE = .06, Z = -4.06, p < .001) and over-engagement (Est = -.21, SE = .07, Z = -3.12, p = .002), but not engagement (Est = -.10, SE = .06, Z = -1.73, p = .083).

When controlling for site of data collection, I found a similar model fit $\chi^2(325, N = 271) = 652.12, p < .001, RMSEA = .07, 90\% CI [.06, .07], CFI = .897, SRMR = .081$. Although site was unrelated to adjustment (Est = -.08, SE = .16, Z = -0.48, p = .635), participants at WU reported lower emotion regulation, compared to participants from UCSC. Specifically, they reported lower disengagement (Est = -.31, SE = .14, Z = -2.16, p = .031), lower engagement (Est = -.37, SE = .13, Z = -2.83, p = .005), and lower over-engagement (Est = -.42, SE = .16, Z = -2.72, p = .007). The same pattern remained for direct and indirect effects. SES-SCC had a direct effect on adjustment (Est = .12, SE = .05, Z = 2.56, p = .010). However, over-engagement partially mediated this effect on adjustment, such that SES-SCC predicted greater adjustment due to lower use of over-engagement strategies (Est = .15, SE = .06, Z = 2.47, p = .013). Disengagement (Est = .03, SE = .05, Z = 0.52, p = .600) and engagement (Est = -.02, SE = .02, Z = -1.28, p = .200) did not indirectly predict adjustment. SES-SCC continued to predict both disengagement (Est = -.21, SE = .06, Z = -3.76, p < .001) and over-engagement (Est = -.19, SE = .06, Z = -2.07, p = .004), but not engagement (Est = -.08, SE = .05, Z = -1.51, p = .132).

8.2.5 The Role of First-Generation Student Membership

Compared to CGS (M = 4.68, SD = .99), FGS (M = 4.20, SD = .98) reported lower SES-SCC, $t(259) = 2.92, p = .004, d = .36$. On the other hand, FGS reported significantly greater emotion regulation for each of the three emotion regulation strategy types. Specifically,

compared to CGS ($M = 2.84$, $SD = .89$), FGS ($M = 3.28$, $SD = .97$) reported greater disengagement, $t(262) = -2.98$, $p = .003$, $d = .37$. Compared to CGS ($M = 2.97$, $SD = .91$), FGS ($M = 3.46$, $SD = 1.00$) reported greater engagement, $t(262) = -3.22$, $p = .001$, $d = .40$. Compared to CGS ($M = 2.62$, $SD = 1.05$), FGS ($M = 3.22$, $SD = .92$) reported greater over-engagement, $t(262) = -3.50$, $p < .001$, $d = .43$.

There were not many differences between FGS and CGS with respect to the indicators of adjustment. FGS reported similar levels ($M = 7.54$, $SD = 1.30$) of academic self-efficacy compared to CGS ($M = 7.72$, $SD = 1.61$, $t(233) = .65$, $p = .516$, $d = .09$). FGS reported similar levels ($M = 3.25$, $SD = 1.69$) of belonging uncertainty compared to CGS ($M = 3.62$, $SD = 1.66$, $t(233) = 1.22$, $p = .226$, $d = .16$). Conversely, FGS reported lower scores on the Lubben Social Network scale ($M = 14.58$, $SD = 5.53$) of academic self-efficacy compared to CGS ($M = 19.13$, $SD = 4.90$, $t(233) = 5.01$, $p < .001$, $d = .66$). FGS also reported lower scores on the Satisfaction with Life Scale ($M = 3.98$, $SD = 1.27$) compared to CGS ($M = 4.67$, $SD = 1.18$, $t(233) = 3.19$, $p = .002$, $d = .42$). Regarding other emotionally-related adjustment construct, FGS reported similar levels of negative emotion ($M = 2.33$, $SD = .89$) compared to CGS ($M = 2.18$, $SD = .80$, $t(262) = -1.13$, $p = .261$, $d = -.14$). FGS also reported similar levels of positive emotion ($M = 2.8$, $SD = 1.09$) compared to CGS ($M = 2.93$, $SD = 1.00$, $t(262) = .731$, $p = .466$, $d = .42$).

When controlling the mediation model (Section 8.2.3) for FGS membership, I found almost identical model fit to the previous one $\chi^2(299, N = 233) = 555.35$, $p < .001$, $RMSEA = .06$, $90\% CI [.05, .07]$, $CFI = .913$, $SRMR = .079$. Although FGS was unrelated to adjustment (Est = $-.01$, $SE = .17$, $Z = -0.07$, $p = .945$), FGS participants reported greater disengagement and engagement emotion regulation, compared to CGS participants. Specifically, they reported greater disengagement (Est = $.36$, $SE = .16$, $Z = 2.19$, $p = .028$), greater engagement (Est = $.32$,

SE = .16, Z = 2.01, p = .044), and similar levels of over-engagement (Est = .25, SE = .19, Z = 1.32, p = .187). The same pattern remained for direct and indirect effects. SES-SCC had a direct effect on adjustment (Est = .12, SE = .05, Z = 2.63, p = .008). However, over-engagement partially mediated this effect on adjustment, such that SES-SCC predicted greater adjustment due to lower use of over-engagement strategies (Est = .16, SE = .06, Z = 2.56, p = .010), above and beyond FGS membership. Disengagement (Est = .01, SE = .05, Z = 0.26, p = .794) and engagement (Est = -.02, SE = .02, Z = -1.01, p = .312) did not indirectly predict adjustment.

Chapter 9: Study 2 Discussion

The current study was an ESM study wherein participants reported on their experiences three times per day, for seven days to examine SCC related to SES. Although thoughts about one's SES were generally uncommon in this college sample, FGS thought about their SES more frequently than CGS. Overall, SES-SCC predicted emotion regulation strategies that involve disengagement and over-engagement with one's emotional experience, as expected. That is, on occasions that people reported greater SES-SCC, they also reported lower use of disengagement and over-engagement emotion regulation strategies. Like Study 1, this within-person finding was above and beyond the between-person finding that participants who reported greater SES-SCC also reported lower emotion regulation strategy use in the same two domains. Contrary to expectations, SES-SCC did not predict engagement emotion regulation—whether or not reflection was omitted from the composite. I also found that while SES-SCC directly predicts greater adjustment, this association is, in part, mediated by lower use of over-engagement emotion regulation.

The current study extends prior work in several ways. First, I was able to capture a wider variety of contexts in which self-processes and emotion regulation might have taken place and

minimize memory biases (Miron-Shatz et al., 2009). In doing so, the aim was to examine self-processes that might be implicated in emotion regulation and, in turn, in adjustment. In the current study, I built on the investigation by focusing on one particular self-process of self-evaluation—namely, SCC associated with an SES self-concept. The ESM design allowed for more temporal separation of key variables so I was able to look at lagged effects to examine potential change in emotion regulation due to SES-SCC (Kuppens & Verduyn, 2015). There were no significant links between SES-SCC and changes in subsequent emotion regulation, suggesting that any contextual associations between SCC and emotion regulation are likely concurrent. Thus, this null finding is preliminary evidence against the idea that SCC directly results in certain types of emotion regulation strategy use. Whereas over-engagement partially explains the SES-SCC and adjustment link, SES-SCC also did not predict changes in over-engagement. Nonetheless, this question merits future study because, like in Study 1, SES-SCC varied mostly between-person, suggesting that larger time intervals may be necessary to detect potential changes across time in emotion-related constructs.

Chapter 10: General Discussion

10.1 Project Summary

The purpose of this project was to better understand the association between self-concept clarity (i.e., SCC) and adjustment. The current studies replicated an established finding that SCC is associated with adjustment, which was measured in a variety of domains (e.g., academic, social, emotional adjustment). It further sought to examine why and how this association exists. Importantly, this investigation examined both individual differences between people (between-person level) and differences across time (within-person level) by surveying undergraduate college students over time, using daily diaries (Study 1) and experience sampling methods

(Study 2). Through this approach, I consistently found that SCC is associated with specific types of emotion regulation strategies in daily life. Moreover, SCC is associated with greater adjustment in part due to lower use of emotion regulation strategies characterized by over-engagement. That is, greater SCC predicted lower use of strategies involving repetitive and perseverative characteristics (i.e., rumination, focus on consequences, worry). In turn, lower use of these strategies predicted greater adjustment.

This investigation builds on prior work in a couple of ways. First, it demonstrates a variety of strategies that SCC is associated with and clarifies which types of emotion regulation strategies are most relevant to SCC. Secondly, the investigation provides some support for the hypothesis that emotion regulation partially explains the association between SCC and adjustment. Although there were limitations in testing the role of FGS with respect to SCC related to SES (i.e., SES-SCC; Study 2), the current investigation is the first to document the prominence of people's thoughts about their SES as a self-concept, finding that it is infrequent. Lastly, this investigation builds on the emerging longitudinal work that examines how SCC is associated with adjustment within-person.

10.1.1 Associations Between SCC and Emotion Regulation

Across studies, SCC was associated with lower use of emotion regulation strategies characterized by disengagement (distraction, minimizing, and suppression) and over-engagement (rumination, worry, focus on consequences). Importantly, these consistent findings were found at the within- and between-person levels. Both Study 1 and Study 2 present the novel finding that on days (Study 1) and on occasions when (Study 2) SCC is high, use of disengagement and over-engagement strategies were low. Through the time-lagged analyses in Study 2, I find that these associations are circumscribed to concurrent associations. Put differently, there is evidence that

SCC does not predict decreases in use of these emotion regulation strategies, but rather SCC and emotion regulation fluctuate in tandem, across time.

SCC was not associated with engagement strategies in most bivariate nor in multivariate models. Engagement was comprised of acceptance and positive reappraisal strategies, and of reflection in some models. The only exception was in Study 1 where SCC had small positive correlations with acceptance and positive reappraisals, but an unexpected negative correlation with reflection. One explanation is that reflection captured elements of over-engagement. In fact, reflection has been conceived as one form of rumination, along with brooding, in clinical research on depression (Treynor et al., 2003). Although reflection had strong correlations with other engagement strategies (e.g., $r = .63$ between-persons association with positive reappraisal in Study 1), it also had moderate to strong correlations with over-engagement strategies (i.e., rumination, focus on consequences, and worry) at the between-person level (r s range .37 to .60) and within-person level (r s range .18 to .29). Reflection likely promoted thinking about the causes of emotional stimuli (i.e., “I reflected on *why* I felt the way I did”) which could have tapped into the perseverative thinking characteristic of over-engagement strategies.

10.1.2 Mediation Model of SCC and Adjustment

I argued that SCC might serve as a resource for regulatory functions via differential use of emotion regulation strategies. Strategies that allow for a greater elaboration or processing of emotion (e.g., positive reappraisal, acceptance) were referred to as engagement strategies and expected to partially mediate the association between SCC and adjustment. The findings suggest that SCC does not, however, facilitate greater engagement. Instead, SCC might facilitate more effective emotion regulation in such a way that over-engagement strategies are used less, in turn, helping explain the association with adjustment. People who reported greater SCC, or on

occasions when people experienced greater SCC, also reported using less of these strategies that typically backfire and further intensify negative emotion and uncertainty. Over-engagement strategies can be characterized by an element of judgment of one's emotional experience, often in apprehension towards uncertainty or a focus on worry (Buhr & Dugas, 2002; Hayes-Skelton & Eustis, 2020). Notably, whereas SCC was associated with lower disengagement emotion regulation, these strategies did not help explain the SCC-adjustment link.

10.1.3 The Role of First-Generation College Students

Although I found evidence to partially support my hypotheses regarding the mechanism that underlies the SCC-adjustment association, it is still unclear for whom this association is most relevant. Study 2 examined a specific self-concept related to socioeconomic status (SES-SCC) and was designed to test the hypothesis that FGS, compared to CGS, might rely more on emotion regulation strategies leading to an amplification of the associations between study variables and adjustment. FGS might be more sensitive to cues in the college environment that signal fit, or lack thereof, implicating uncertainty. While this uncertainty has been heavily studied in recent years (i.e., belonging uncertainty; Murphy et al., 2020; Walton & Cohen, 2007), I posited that FGS might also lack more clarity when it comes to a self-concept related to one of the purposes of attending college—social mobility. Further, the potential for a cultural conflict between FGS's interdependent upbringing at home and the independent values of American universities (Stephens et al., 2012a) might foster an approach such that emotion regulation becomes FGS's primary form of responding to emotional events in college. Thus, I expected for the effects of SES-SCC and of emotion regulation on adjustment to be amplified for FGS. However, given that it was challenging to recruit a large enough sample size for FGS, I only had

enough power to examine group differences on study variables. Nonetheless, there were some findings that help give shape to the posited model.

First, FGS reported lower SES-SCC, indicating that clarity as it related to participants' SES self-concept was more dubious for FGS. It is possible that having greater motives to attend college for personal and familiar economic mobility (Jackson et al., 2016) increases attention to and questioning of whether one's SES is changing (Destin et al., 2017). Although participants overall did not think about their SES self-concept often, it was more prominent for FGS, providing some credence to the idea that FGS are more sensitive or attentive to cues in the environment for this self-concept. Moreover, FGS reported greater use of all types of emotion regulation strategies, consistent with the hypothesis that they are more reliant on emotion regulation. CGS might have more informational and instrumental support available from their parents who previously attended college and can pass down what they learned, probably increasing the ease with which CGS adjust to college.

10.2 Critiques of the Project Design

10.2.1 Advantages of the project

First and foremost, the evidence for the associations between SCC (and SES-SCC) and emotion regulation is demonstrated across two studies—one using a daily diary approach (across 14 days) and another using a more nuanced experience sampling approach. I also found evidence consistent across studies that over-engagement partially explains the link between SCC and adjustment—at least, at concurrently. This is noteworthy for a couple of reasons. Utilizing daily diary and experience sampling methods, I was able to demonstrate consistent associations between SCC and emotion regulation and between SCC and adjustment at both the between- and within-person levels. That is, state SCC is associated with end-of-day and momentary emotion

regulation, above and beyond the tendency to experience SCC. I was able to examine the within-person variability in SCC. In the few studies that involve longitudinal work on SCC, the time scale typically spans months or years (Crocetti et al., 2016; Schwartz et al., 2012; van Dijk et al., 2014; for exceptions see Ellison et al., 2019; Schwartz et al., 2011). The current investigation allowed me to directly probe at this question of what the optimal time scale might be for SCC. In both studies, SCC had high ICCs, indicating that the largest source of variance is between-persons when measuring it at the daily or experience sampling levels. There was greater within-person variability, however, in Study 1 where I used a daily diary. Put differently, SCC is fairly stable, especially at the experience sampling level. Importantly, no scale has been validated to measure SCC in intensive longitudinal studies. Therefore, I adapted the established SCC scale (Campbell et al., 1990) to the state-level. But it is possible that greater variability can be captured with more optimal measurement tools. Nonetheless, these methodological approaches allowed me to record significant—and null—findings at both the between- and within-person levels.

These approaches also helped minimize memory biases due to measuring state-level SCC, emotion regulation, adjustment (only in Study 1) closer in time to the experience of the construct. This is important because it likely increased reliability of measures at the between-person level by assessing variables more often. The SCC scale is not the only way to measure SCC as there are other methods including response latency and certainty in various personality characteristics (see DeMarree & Bobrowski, 2017). In intensive longitudinal work, however, minimizing burden that could be placed on participants by having them fill out different measures that capture the same thing is important.

10.2.2 Limitations of the project

Although there was evidence for the link between SCC, emotion regulation, and

adjustment at both the within- and between-person levels, the reliability of the adapted state-level measure of SES-SCC in Study 2 was low. The measure was adapted from 12 items (Destin et al., 2017) to four items and from the trait- to the state-level. One explanation for the low reliability of this measure is that I measured it at an incorrect time scale. That is, SES-SCC is not a construct that will vary meaningfully in short intervals of time (e.g., 4-hour intervals). The large ICC (.79) for SES-SCC is consistent with this idea and indicates little within-person variability. SES-SCC might be relatively stable across short period measurements. The fact that SES-SCC focuses on thoughts about uncertainty as they pertain to one specific self-concept might contribute to this stability. Whereas responding to self-report items that attempt to capture fluctuations in clarity around general self-concepts might prompt people to think about various self-concepts, thereby increasing the possibility of variability, asking people to report on SES-SCC narrows the focus of attention to one self-concept. Nonetheless, the associations within-person in Study 2 are consistent with the trait measure at baseline wherein SES-SCC was measured with the full 12-item scale (Destin et al., 2017) and with the within-person findings in Study 1 where there was greater reliability and within-person variability when SCC was measured at the daily level (ICC = .68).

These findings in this investigation were only at the concurrent or cross-sectional level. Therefore, the current investigation cannot make strong claims about causation. The time-lagged models testing the prospective association between SCC and emotion regulation were null, indicating that SCC does not seem to predict changes in emotion regulation. Although there is little control in this naturalistic study, it is preliminary evidence against causality, necessitating a reframing of whether “SCC serves as a resource for emotion regulation”. Instead, SCC may simply covary alongside emotion regulation in response to other contextually related factors.

Related to goals, another important limitation is the lack of assessment of potentially underlying motives. One relevant feature of emotion regulation is the underlying motivation to influence one's emotional experiences. Paralleling goal pursuit in self-regulation, researchers have distinguished between *hedonic* (maximizing pleasure and minimizing pain in the short-term) and *instrumental* emotion regulation goals (using emotion to achieve longer-term goals; Tamir, 2009). The motivation underlying emotion regulation, or the emotion regulation goals, might be more proximally associated with SCC. Therefore, perhaps SCC is more strongly associated with the goals that people set depending on the level of SCC they might experience at any given moment. Assessing emotion regulation goals could help understand, for example, the unexpected negative association between SCC and reflection. Perhaps although reflection can be thought of as an engagement strategy, people might set different goals to influence how they feel compared to the goals set for other engagement strategies (i.e., acceptance, positive reappraisal).

10.3 Future Directions

I have mentioned that SCC has a noteworthy amount of stability. Does this suggest researchers should eschew intensive longitudinal methods? Quite the contrary. It will be important to continue using these methods to capture different aspects of contextual influences. SCC is an inherently dynamic construct defined as “the extent to which the contents of an individual's self-concept (e.g., perceived personal attributes) are clearly and confidently defined, internally consistent, and *temporally stable*” (Campbell et al., 1996, p. 141, emphasis added). As such, it is vital to understand when one's self-concept is not temporally stable, given the evidence for notable within-person variability. It is possible that different methodological techniques are necessary to capture this within-person variability. And it would be informative to do so since SCC has implications for daily adjustment. One path could be to collect and analyze

qualitative data or use different sampling schedules to understand cues in the environment that might prompt variability in SCC and thoughts related to specific self-concepts (e.g., SES). Maslow (1999) referred to “being-cognition” wherein self-consciousness is minimal and one experiences little friction. This could help explain some of the stability in SCC whereby participants do not readily think about questions assessing self-clarity. However, prompting participants to think about certain cues that might be relevant to the measure could help facilitate participants’ thought processes, especially if they were just in states of “being-cognition”. Further, using different schedules such as event-contingent responding could help more accurately capture the prominence of SCC at the within-person level. Again, participants might need guidance and training at the start. Another approach that could help build on this investigation is an experimental approach.

The current investigation did not find evidence of SCC prospectively resulting in emotion regulation. However, the differences in time-scales between SCC and emotion regulation might have played a role. Bringing participants into the lab to cue SCC and prompt emotion regulation may further our understanding of SCC across time and in different contexts, whether naturalistic or controlled. This future direction would require innovation in validating ways to manipulate SCC and examine other proximal outcomes of SCC.

The use of emotion regulation strategies (i.e., goal-striving) is thought to be preceded by emotion regulation goals (i.e., goal-setting) and could be one of those proximal outcomes. It will be important to examine whether SCC might more proximally influence goal-setting when confronting competing situations or possible goals. This future direction has already been proposed by researchers (e.g., Light, 2018). People who report high SCC might be better at identifying and setting clear goals that are congruent with one’s values. I also argue that *when*

people report high SCC, regardless of their typical tendency to report high SCC, they might also be able to identify and set clear and optimal goals. Therefore, it would be imperative to determine when people experience high SCC, what the contextual and temporal correlates are, and what cultural and physical structures promote or hinder SCC, and subsequent adjustment.

10.4 Implications

The focus of this dissertation has been on SCC and its link with adjustment. In keeping with the example context of students in higher education, this work presents several avenues with important implications for the relevance of SCC and adjustment. I focus on the applicability of this work in programming and intervention work for undergraduate college students. First, there is a potential to improve student adjustment by improving SCC. While there was substantial stability in SCC, it did fluctuate within-person across both current studies. Therefore, regardless of the level of SCC that students come in with, they will likely experience moments of low SCC as they adjust to the new college environment. This suggests there is room for programmatic student services that highlight self-exploration and the relevance of having clarity in oneself, and one's future educational and career aspirations. Many student services already highlight self-exploration by promoting extracurricular activities, but it is unclear whether these efforts present the extracurricular opportunities in a way that highlights SCC. While there still much work needed to be done, it might be possible to consider these findings and future work as elements in a psychoeducational intervention that provides guidance and means of achieving SCC and associated adjustment. It will also be important to consider incorporating this work on SCC in a way that takes into account the person-environment fit literature, to highlight different possible selves that also align with underrepresented identities. For example, given that we know that American Universities predominantly promote individualistic cultural norms (e.g., self-

expression, leadership), the promotion of collectivistic cultural norms (e.g., collaborative projects, giving back to community) will particularly benefit students from underrepresented backgrounds (e.g., first-generation college students, non-White students; Stephens et al., 2012a). If intervention designs are not inclusive of different cultural norms, there may be unintended effects that negatively impact SCC, and rather than students seeing opportunity to explore and develop professionally, they might feel inauthentic, unclear about who they are or want to be, and be steered away from the opportunities. Moreover, through the study of SCC, there is potential to design interventions that minimize inadvertent identity-threat via cues in these programmatic efforts.

Intentional framing is necessary in student services and in interventions of any scale. Prior research shows that simply knowing about one's own stigmatized identity can negatively impact psychological adjustment (see Major & O'Brien, 2005; Miller & Kaiser, 2001 for reviews). To combat this challenging issue, prior intervention work has developed subtle ways of communicating inclusivity without disregarding real differences in cultural experiences. For example, by framing social challenges in college as common and transient, researchers improved the academic performance and self-reported health and well-being of all students involved (Walton & Cohen, 2011). These researchers did not highlight the students' ethnic/racial background but were able to particularly benefit African-American students. In the same way, an intervention designed around SCC could focus on students' perceptions of how common it is to be unclear of one's sense of self (i.e., low SCC). Given that first-generation college students reported lower SES-SCC in Study 2, an intervention that aims to modify students' perceptions about themselves might particularly benefit these students, without having to make them hypervigilant of an identity around being first-generation or from a working class family. In this

way, we do not assume that an identity such as that of being a first-generation/working-class student is monolithic and instead focus on the general self-construals that overlap across identities.

Secondly, this investigation demonstrates the feasibility of intensive longitudinal methods (e.g., experience sampling, daily diary, weekly assessments) which may be helpful to supplement existing program evaluation or experimental work, or in lieu of experimental studies that are not always possible. The current standard practice when evaluating an educational program is a pre-post design and although there are recommendations for improving evaluation and assessment (e.g., Hubball et al., 2004), other methods can be challenging and time-consuming. In addition, a program or intervention that aims to improve students' social, emotional, and academic experience and performance has to be conducted in naturalistic environments, not in controlled lab settings. Therefore, concern with feasibility and extraneous factors is the default not the exception. Intensive longitudinal methods provide an alternative way to capture students experiences in various settings on campus over time to measure change during the duration of or after a program. These methods can provide rich datasets to capture daily life experiences and a more in-the-moment, naturalistic understanding of the environment that students engage in. Statistically, it can allow researchers to control for various contextual features that might be relevant to SCC and adjustment through multiple assessments. This investigation suggests this approach is feasible because the surveys were short and completed with a good level of compliance across both studies (> 75%). With additional incentive, compliance would surely improve. As shown in Study 2, time-lagged models can be examined to determine whether key variables change in response to other variables of interest. Moreover, these methods allow us to examine nonlinear change given that there are typically more than two time-point measurements.

Although statistical analyses for these methods are advanced, many graduate students in social sciences are now being trained in them.

There is an opportunity of restructuring student services and affiliated interventions to become more sustainable and benefit multiple parties—undergraduate students, graduate students, and administrators. Educational administrators are often in charge of overseeing program activities and assessment and evaluation of their program. Graduate students interested and trained in intensive longitudinal methods could serve in supportive or leadership roles that tackle evaluative and data analytic components. Many graduate students of color, like faculty of color (Padilla, 1994), are culturally taxed to engage in community service to improve mentorship and the social climate in higher education. While graduate students may seek out these opportunities themselves, they might also not be appropriately compensated. However, with the training in research methods and statistics that many graduate students receive, they might be candidates to take on roles in evaluation and assessment of student success initiatives with commensurate compensation.

The transition to a new environment can be facilitated to improve adjustment. And the use of evidence-based solutions in practice is imperative for the success of people in new environments, whether for students or employees in new career roles. I have focused on the higher educational context and additional work will be necessary to generalize beyond this context. Nonetheless, prior work shows that research with undergraduate college students can generalize to other segments of society (e.g., Cooper et al., 2011).

10.5 Conclusion

The current study combined intensive longitudinal methods to investigate the between- and within-person associations between SCC, emotion regulation, and adjustment. SCC predicts

lower usage of disengagement (e.g., distraction) and over-engagement (e.g., rumination) strategies. In turn, across studies, over-engagement helped partially explain the association between SCC and adjustment. That is, when people evaluate their sense of self and perceive greater self-unity, they are well-adjusted. The current investigation provides some evidence to help us understand *why* these people are well-adjusted. It is one of the first investigations to suggest that SCC predicts adjustment, in part, due to lower use of emotion regulatory strategies that are characterized by a perseverative engagement with one's emotional experience.

Importantly, I find both between- and within-person associations between SCC, emotion regulation, and adjustment. This means that regardless of people's tendencies to experience SCC, they can learn or be provided with the opportunity to experience greater SCC in the moment.

Importantly, these associations are concurrently, not lagged, indicating that SCC might not predict changes in emotion regulation. With additional longitudinal and experimental work, this research may help better understand the role of SCC and regulatory functions in psychological adjustment.

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Tables

Table 1

Study 1: Between- and within-person bivariate correlation matrix for study variables

	<i>M (SD)</i>	<i>ICC</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Self-Concept Clarity	5.15 (1.06)	.68	-	-.47**	-.49**	-.32**	.11	.08	-.23**	-.51**	-.44**	-.42**	.55**
2. Distraction	3.20 (1.72)	.39	-.15**		.66**	.39**	.29**	.32**	.44**	.52**	.52**	.61**	-.27**
3. Minimizing	2.67 (1.59)	.41	-.14**	.28**	-	.32**	.28**	.34**	.42**	.45**	.45**	.54**	-.19**
4. Suppression	3.56 (1.81)	.43	-.11**	.20**	.14**	-	.25**	.07	.11	.35**	.28**	.29**	-.22**
5. Acceptance	3.87 (1.62)	.38	.08**	.04*	.11**	.08**	-	.69**	.44**	.08	.02	.25**	.26**
6. Positive Reappraisal	3.21 (1.62)	.39	.12**	.04*	.10**	.01	.35**		.63**	.19**	.18**	.33**	.40**
7. Reflection	3.19 (1.67)	.39	-.15**	.10*	.12**	.04	.11**	.17**		.46**	.37**	.53**	.05
8. Rumination	2.63 (1.57)	.34	-.36**	.16**	.11**	.16**	-.14**	-.20**	.23**		.79**	.69**	-.45**
9. Worry	2.88 (1.71)	.39	-.33**	.22**	.13**	.12**	-.11**	-.14**	.18**	.53**		.78**	-.39**
10. Consequences	3.01 (1.68)	.35	-.28**	.19**	.13**	.10**	-.02	-.05**	.22**	.41**	.50**		-.26**
11. Adjustment	4.40 (0.95)	.47	.45**	-.16**	-.11**	-.16**	.24**	.33**	-.05**	-.51**	-.45**	-.32**	

Note. ICC = Intraclass Correlation Coefficient. ICC was calculated for the within-person composites created for each variable. Within-person correlations are on the bottom diagonal. Between-person correlations are on the top diagonal. * $p < .05$, ** $p < .01$.

Table 2*Study 2: Between- and Within-Person Bivariate Correlation Matrix for Study Variables.*

	<i>M</i> (<i>SD</i>)	ICC	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. SES Self-Concept Clarity-Trait	3.93 (1.01)	-	-	-	-	-	-	-	-	-	-	-	-
2. SES Self-Concept Clarity- ESM	4.71 (1.08)	.79	.69**	-	-.09**	-.03	-.13**	-.12**	.05**	-.11**	-	-	-
ESM Variables													
3. Disengagement ER	2.90 (0.90)	.40	-.24**	.24**	-	.30**	.35**	.20**	-.06**	.08**	-	-	-
4. Engagement ER	3.50 (0.93)	.45	-.08	-.04	.51**	-	.16**	.00	.21**	.12**	-	-	-
5. Over-Engagement ER	2.72 (1.03)	.41	-.24**	-.24**	.63**	.48**	-	.49**	-.19**	.08**	-	-	-
6. Emotional Adjustment-NA	2.20 (0.80)	.48	-.26**	-.27**	.53**	.27**	-.73**	-	-.32**	.12**	-	-	-
7. Emotional Adjustment-PA	2.91 (1.00)	.52	.16**	.23**	.03	.50**	-.01	-.11	-	.04**	-	-	-
8. SES Prominence	1.79 (0.81)	.28	-.24**	-.24**	.26**	.32**	.31**	.29**	.08	-	-	-	-
Trait Variables													
9. Emotional Adjustment-SWLS	4.57 (1.22)	-	.24**	.33**	-.24**	.05	-.22**	-.27**	.45**	-.18**	-	-	-
10. Social Adjustment-Lubben	18.43 (5.25)	-	.24**	.24**	-.21**	-.00	-.11	-.05	.31**	-.18**	.53**	-	-
11. Social Adjustment-BUN	3.56 (1.66)	-	.28**	.36**	-.23**	-.04	-.26**	-.28**	.24**	-.12	.21**	.20**	-
12. Academic Adjustment	7.69 (1.56)	-	.16*	.25**	-.24**	.00	-.23**	-.21**	.22**	-.05	.33**	.29**	.18**

Note. Between-person correlations are listed below the diagonal, and within-person correlations are above the diagonal. ICC = Intraclass Correlation Coefficient.

ICC was calculated for the within-person composites created for each variable. SES=Socioeconomic status, BUN=Belonging Uncertainty Scale,

ESM=Experience Sampling Method measure, ER=Emotion regulation, NA=Negative emotion, PA=Positive emotion, SWLS=Satisfaction with life scale. * $p < .05$, ** $p < .01$.

Table 3

Study 1: Multilevel models with self-concept clarity predicting daily emotion regulation strategy types and adjustment

	γ (SE)	R ²
<i>Model 1 – Disengagement</i>		
Intercept	6.03 (.29)	-
Time	.01 (.00)	.002
Person-Centered Self-Concept Clarity	-.28 (.03)	.026
Mean Self-Concept Clarity	-.55 (.05)	.195
<i>Model 2 – Engagement</i>		
Intercept	3.61 (.34)	-
Time	-.02 (.00)	.004
Person-Centered Self-Concept Clarity	.04 (.03)	.001
Mean Self-Concept Clarity	-.01 (.06)	.000
<i>Model 3 – Over-Engagement</i>		
Intercept	5.66 (.31)	-
Time	.01 (.00)	.001
Person-Centered Self-Concept Clarity	-.71 (.03)	.121
Mean Self-Concept Clarity	-.54 (.06)	.162
<i>Model 4 – Adjustment</i>		
Intercept	-1.99 (.24)	-
Time	.00 (.00)	.001
Person-Centered Self-Concept Clarity	.39 (.02)	.082
Mean Self-Concept Clarity	.39 (.05)	.182

Notes. The values in bold are statistically significant at $p < .05$. Time is centered at zero, such that the Intercept is the mean at occasion one. Values of zero are less than .01.

Table 4

Study 1: Multilevel models with self-concept clarity predicting individual daily emotion regulation strategies and adjustment

	γ (SE)	R ²
<i>Model 1 – Distraction</i>		
Intercept	6.41 (.37)	-
Person-Centered Self-Concept Clarity	-.33 (.04)	.017
Mean Self-Concept Clarity	-.61 (.07)	.122
<i>Model 2 – Minimizing</i>		
Intercept	5.75 (.34)	-
Person-Centered Self-Concept Clarity	-.28 (.04)	.014
Mean Self-Concept Clarity	-.60 (.07)	.137
<i>Model 3 – Suppression</i>		
Intercept	5.93 (.44)	-
Person-Centered Self-Concept Clarity	-.23 (.04)	.008
Mean Self-Concept Clarity	-.43 (.08)	.061
<i>Model 4 – Acceptance</i>		
Intercept	3.50 (.39)	-
Person-Centered Self-Concept Clarity	.20 (.04)	.007
Mean Self-Concept Clarity	.12 (.07)	.006
<i>Model 5 – Positive Reappraisal</i>		
Intercept	2.75 (.39)	-
Person-Centered Self-Concept Clarity	.27 (.04)	.012
Mean Self-Concept Clarity	.11 (.08)	.005
<i>Model 6 – Reflection</i>		
Intercept	4.56 (.40)	-
Person-Centered Self-Concept Clarity	-.34 (.04)	.018
Mean Self-Concept Clarity	-.27 (.08)	.028
<i>Model 7 – Rumination</i>		
Intercept	5.47 (.32)	-
Person-Centered Self-Concept Clarity	-.77 (.04)	.105
Mean Self-Concept Clarity	-.55 (.06)	.128
<i>Model 8 – Worry</i>		
Intercept	5.74 (.38)	-
Person-Centered Self-Concept Clarity	-.74 (.04)	.083
Mean Self-Concept Clarity	-.55 (.07)	.109
<i>Model 9 – Consequences</i>		
Intercept	5.73 (.36)	-
Person-Centered Self-Concept Clarity	-.61 (.04)	.057
Mean Self-Concept Clarity	-.50 (.07)	.091
<i>Model 6 – Adjustment</i>		
Intercept	2.29 (.21)	-
Person-Centered Self-Concept Clarity	.52 (.02)	.154
Mean Self-Concept Clarity	.42 (.04)	.221

Notes. The values in bold are statistically significant at $p < .05$. Time is centered at zero, such that the Intercept is the mean at occasion one. Values of zero are less than .01.

Table 5*Study 2: Multilevel models predicting daily emotion regulation strategy types*

Predictors	Disengagement		Engagement		Over-engagement	
	γ (SE)	R ²	γ (SE)	R ²	γ (SE)	R ²
<i>ESM Concurrent, State-Level</i>						
Intercept	3.98 (.24)	-	3.33 (.27)	-	3.72 (.28)	-
Time	-.02 (.003)	.007	-.02 (.003)	.014	-.01 (.003)	.002
Within-Person SES-Self-Concept Clarity	-.17 (.03)	.007	.02 (.03)	.000	-.29 (.03)	.015
Between-Person SES-Self-Concept Clarity	-.19 (.05)	.033	.02 (.06)	.000	-.20 (.06)	.028
<i>ESM Time-Lagged</i>						
Intercept	3.12 (.22)	-	3.12 (.26)	-	2.59 (.23)	-
Time	-.01 (.003)	.002	-.02 (.004)	.007	-.002 (.003)	.000
Within-Person SES-Self-Concept Clarity (t-1)	-.04 (.03)	.000	<.01 (.04)	.000	.03 (.04)	.000
Between-Person SES-Self-Concept Clarity	-.16 (.04)	.022	-.03 (.05)	.001	-.12 (.05)	.012
Emotion Regulation (t-1)	.20 (.02)	.051	.11 (.02)	.016	.25 (.02)	.083

Notes. The values in bold are statistically significant at $p < .05$. Time is centered at zero, such that the Intercept is the mean at occasion one.

Values of zero are less than .01. ESM=experience sampling method measures.

Table 6

Study 2: Factor loadings for baseline socioeconomic status self-concept clarity, daily emotion regulation, and post-survey adjustment

	Est. (SE)	Z	P	St. Est.	Var.
<i>SES-Self-Concept Clarity</i>					
Item 1	0.941 (.095)	9.935	<.001	0.682	1.269
Item 2	1.023 (.069)	14.903	<.001	0.739	1.084
Item 3	0.916 (.100)	9.206	<.001	0.627	1.616
Item 4	0.907 (.104)	8.917	<.001	0.601	1.814
Item 5	0.739 (.093)	7.986	<.001	0.577	1.365
Item 6	0.243 (.117)	2.076	.038	0.159	2.855
Item 7	0.872 (.100)	8.731	<.001	0.585	1.819
Item 8	0.942 (.067)	14.144	<.001	0.790	0.668
Item 9	1.000			0.818	0.619
Item 10	0.871 (.069)	12.597	<.001	0.655	1.262
Item 11	0.658 (.086)	7.646	<.001	0.571	1.118
Item 12	0.872 (.082)	10.681	<.001	0.683	1.085
<i>ER Disengagement</i>					
Distraction	1.159 (0.082)	14.575	<.001	0.834	0.377
Minimizing	1.000			0.875	0.195
Suppression	0.843 (0.103)	8.228	<.001	0.538	1.117
<i>ER Engagement</i>					
Acceptance	0.868 (.063)	13.742	<.001	0.729	0.569
Positive Reappraisal	1.000			0.925	0.108
Reflection	0.830 (.078)	10.674		0.765	0.418
<i>ER Over-engagement</i>					
Rumination	0.798 (0.057)	13.793	<.001	0.852	0.256
Consequences	0.946 (0.042)	22.564	<.001	0.879	0.283
Worry	1.00			0.921	0.191
<i>Adjustment</i>					
Academic Self-Efficacy	0.433 (0.376)	1.152	0.249	0.335	0.882
Social Support	0.298 (0.550)	0.543	0.587	0.234	0.915
Belonging Uncertainty	0.497 (0.305)	1.641	0.101	0.384	0.856
SWLS	0.513 (0.630)	0.81	0.418	0.394	0.396
Mean NA	1.000			0.770	0.360
Mean PA	0.286 (0.562)	0.510	0.610	0.233	0.848

Note. Est.= Unstandardized estimate. SE=Standard Error. St. Est.=Standardized Estimate. Var=Variance

Table 7

Study 2: Structural equation mediation model with SES-SCC predicting adjustment through emotion regulation

	Est. (SE)	95% CIs	Z	P	St. Est.	Var.
<i>DV: Disengagement</i>						.58
SES-SCC	-.23 (.06)	-.33, -.12	-4.06	<.001	-.32	
<i>DV: Engagement</i>						.66
SES-SCC	-.10 (.06)	-.21, .02	-1.73	.083	-.13	
<i>DV: Over-engagement</i>						.88
SES-SCC	-.21 (.07)	-.35, -.09	-3.12	.002	-.25	
<i>DV: Adjustment</i>						.05
Disengagement	-.13 (.23)	-.57, .34	-0.54	.588	-.13	-
Engagement	.29 (.11)	.11, .55	2.77	.006	.30	-
Over-engagement	-.78 (.20)	-1.22, -.43	-3.94	<.001	-.95	-
SES-SCC	.12 (.05)	.03, .21	2.49	.013	.17	-

Note. Est.= Unstandardized estimate. SE=Standard Error. CIs = Upper and Lower Confidence Intervals. St. Est.=Standardized Estimate. Var=Variance.

Figures

Figure 1

Conceptual model of emotion regulation strategy types as mediators in the association between SCC and adjustment

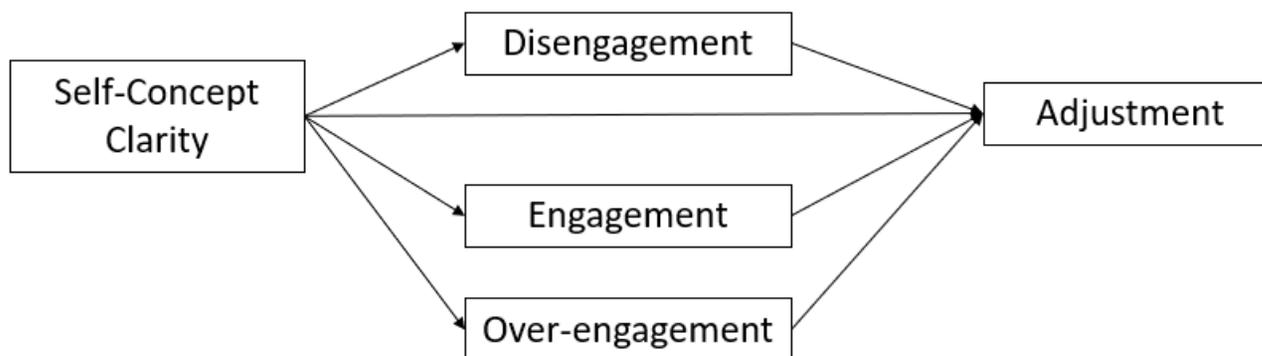
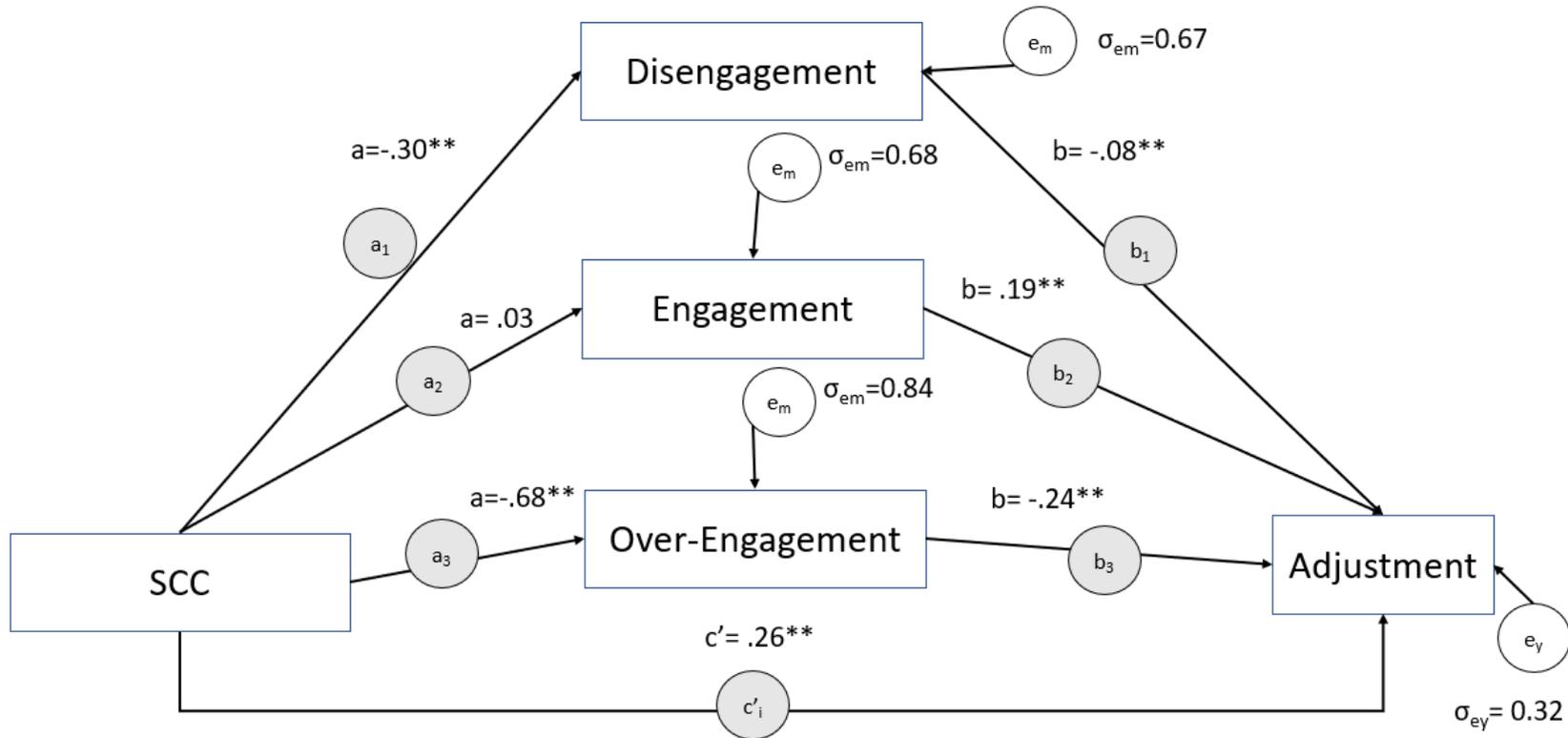


Figure 2

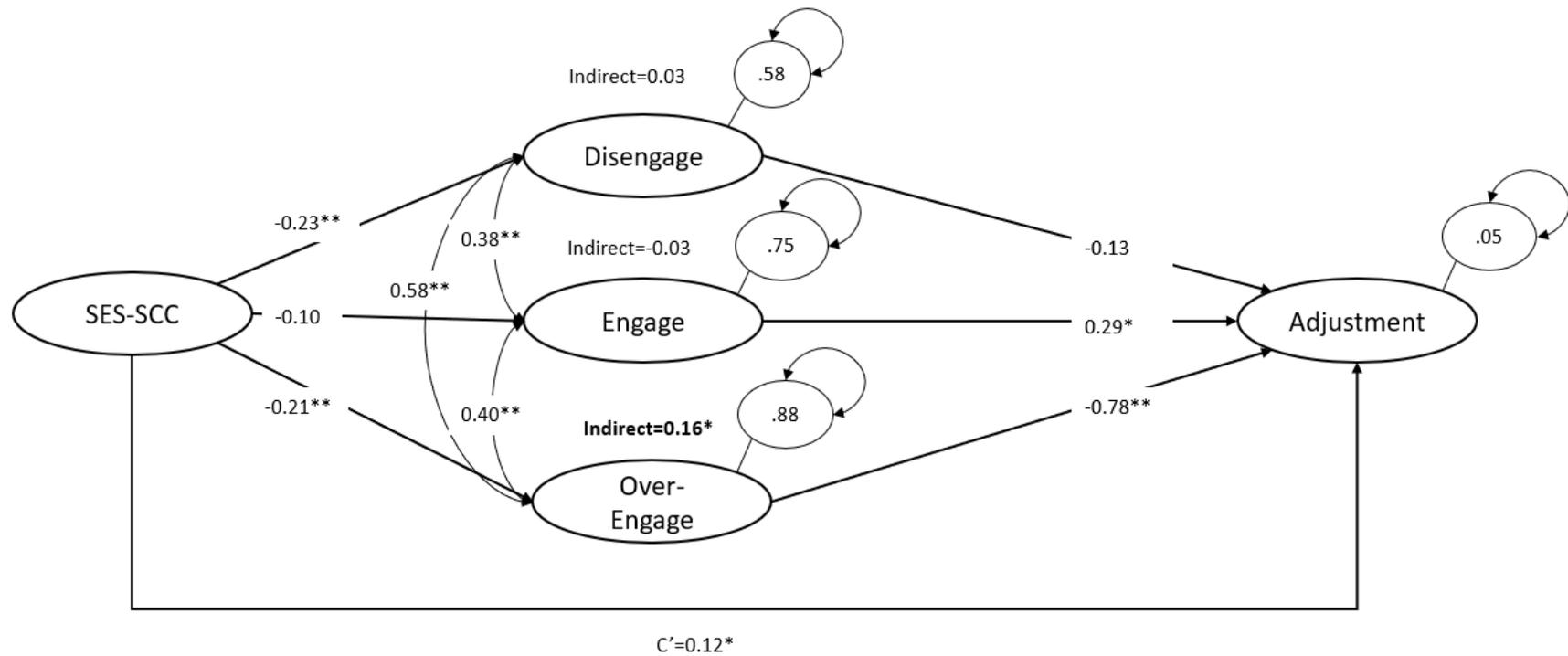
Within-person model of emotion regulation strategy types as mediators in the association between SCC and adjustment



Unstandardized path coefficients. Indirect effect via all emotion regulation mediators (.22) accounts for 46% of total effect (.48). Covariance between all paths account for 4% of the total effect.

Figure 3

Between-person latent model of emotion regulation strategy types as mediators in the association between SES-SCC and adjustment



Socioeconomic status self-concept clarity (SES-SCC) predicting adjustment. Emotion regulation strategies tested as partial mediators. All estimates are unstandardized. $\chi^2(277, N = 271) = 492.78, p < .001, RMSEA = .058, 90\% CI [.05, .07], CFI = .925, SRMR = .073.$

Appendices

Appendix A

Study 1 Daily Diary Survey

Whether virtually or in-person, did you socially interact with anyone from your university **since the last notification**? (e.g., students, faculty)

[Note: Pre-recorded lectures do not count.]

- Yes
- No

[Self-Concept Clarity]

Instructions: Please think about who you are as a person and how you feel about yourself **TODAY**.

Strongly disagree	Disagree	Moderately disagree	Neutral	Moderately agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. Today, my beliefs about myself conflicted with one another. (R)
2. I had a different opinion of myself today than I did yesterday. (R)
3. I spent a lot of time today wondering about what kind of person I really am. (R)
4. I felt that who I am is not really who others think I am. (R)
5. Today, I feel unsure about who I was yesterday. (R)
6. I frequently experienced conflicts between different aspects of myself. (R)
7. Today, I felt I knew others better than I knew myself. (R)
8. Today, my beliefs about myself seemed to change. (R)
9. If I were asked about my personality today, I would be able to easily describe myself.
10. Even if I wanted to, I didn't think I could tell someone what I'm really like. (R)
11. I have a clear sense of who I am.
12. It was hard to make up my mind about things because I don't really know what I want. (R)

[Emotion]

Instructions: Please indicate how much you felt the following emotions **TODAY**.

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

1. How **angry** did you feel today?
2. How **anxious** did you feel today?
3. How **sad** did you feel today?
4. How **guilty** did you feel today?
5. How **embarrassed** did you feel today?

6. How **bored** did you feel today?
7. How **excited** did you feel today?
8. How **content** did you feel today?
9. How **calm** did you feel today?
10. How **happy** did you feel today?
11. How **proud** did you feel today?
12. Did you feel **accomplished**?

[Emotion Regulation]

Instructions: How much did you do any of the following to influence your emotions during the situation that you mentioned?

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

1. (Distraction) I distracted myself by thinking about something else
2. (Minimizing) I minimized the importance of an event
3. (Suppression) I kept my emotions to myself
4. (Acceptance) I accepted the situation
5. (Pos. Reappraisal) I thought about the situation in a more positive way
6. (Reflection) I reflected on why I felt the way I did
7. (Rumination) I dwelled on my negative feelings
8. (Consequences) I kept thinking about the consequences in a situation
9. (Worry) I worried excessively about a situation
10. (Distancing reappraisal) I thought about the situation from detached perspective (e.g., not taking it personally).

[Adjustment]

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

Academic adjustment - How satisfied did you feel with your academic life TODAY?

Social adjustment - How satisfied did you feel with your social life TODAY?

Appendix B

Study 2 Experience Sampling Survey

Whether virtually or in-person, did you socially interact with anyone from your university **since the last notification**? (e.g., students, faculty)

[Note: Pre-recorded lectures do not count.]

- Yes
- No

Instructions: Next we'd like you to indicate how much you are feeling a number of emotions **right now**. Click next to see the first emotion.

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

13. How much are you currently feeling **frustrated**?
14. How much are you currently feeling **anxious**?
15. How much are you currently feeling **sad**?
16. How much are you currently feeling **guilty**?
17. How much are you currently feeling **embarrassed**?
18. How much are you currently feeling **excited**?
19. How much are you currently feeling **content**?
20. How much are you currently feeling **happy**?
21. How much are you currently feeling **proud**?
22. How much are you currently feeling **accomplished**?

Since the last notification, did you think about your socioeconomic status in society (i.e., income, education level, and occupational prestige)?

1	2	3	4	5	6
Never	Very Rarely	Rarely	Occasionally	Frequently	Very Frequently

[**Display logic** - If 2 or greater, then the following open-ended question and SES-related emotion regulation prompt will appear]:

What made you think about your socioeconomic status in society?
(You can type your answers)

How intense were your emotions that were related to your socioeconomic status, **since the last notification**?

(Regardless of whether they were positive or negative. If there were multiple instances when you thought of your socioeconomic status, report on the most important instance.)

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

How much did you try to influence your emotions that were related to your socioeconomic status, **since the last notification**?

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

[Emotion Regulation]

Since the last notification, how much did you do any of the following to influence your emotions related to your status in society?

1	2	3	3	4	5	7
Not at all	Slightly	Somewhat	Moderately	Mostly	Very much	Extremely

11. (Distraction) I distracted myself by thinking about something else
12. (Minimizing) I minimized the importance of an event
13. (Suppression) I kept my emotions to myself
14. (Acceptance) I accepted the situation
15. (Pos. Reappraisal) I thought about the situation in a more positive way
16. (Reflection) I reflected on why I felt the way I did
17. (Rumination) I dwelled on my negative feelings
18. (Consequences) I kept thinking about the consequences in a situation
19. (Worry) I worried excessively about a situation
20. (Distancing reappraisal) I thought about the situation from detached perspective (e.g., not taking it personally).

[**Display logic** - If “1=Never”, then the following open-ended question and general emotion regulation prompt will appear]:

Briefly tell us what have you been thinking about, **since the last notification**?

Select the most important thought or experience since the last notification.

(You can type your answers)

Since the last notification, how much did you do any of the following to influence your emotions?

1. (Distraction) I distracted myself by thinking about something else
2. (Minimizing) I minimized the importance of an event
3. (Suppression) I kept my emotions to myself
4. (Acceptance) I accepted the situation
5. (Pos. Reappraisal) I thought about the situation in a more positive way
6. (Reflection) I reflected on why I felt the way I did
7. (Rumination) I dwelled on my feelings
8. (Consequences) I kept thinking about the consequences in a situation
9. (Worry) I worried excessively about a situation
10. (Distancing reappraisal) I thought about the situation from detached perspective (e.g., not taking it personally).

[SES Self-Concept Clarity]

Please consider your status in society **right now** (i.e., income, education level, and occupational prestige). Consider your family background, where you stand now, and/or where you think you are headed later in life when answering the following questions.

Strongly disagree	Disagree	Moderately disagree	Neutral	Moderately agree	Agree	Strongly agree
1	2	3	4	5	6	7

13. My beliefs about where I currently stand in society conflict with one another. (R)
14. I currently feel unsure about where I stand in society. (R)
15. I currently feel that my socioeconomic status is not really what others think it is. (R)
16. I have a clear sense of where I stand in society right now.

Appendix C

Study 2 Adjustment Measures

[Academic Adjustment - Academic Self-Efficacy]

Not confident											Extremely confident
0	1	2	3	4	5	6	7	8	9	10	

Instructions: Please answer how confident you are that you can successfully complete the tasks below:

1. Studying
2. Keeping up with the required readings
3. Writing term papers
4. Getting papers done on time
5. Preparing for exams
6. Improving my reading & writing skills
7. Researching term papers
8. Understanding my textbooks

[Emotional Adjustment - Satisfaction with Life Scale (SWLS-5)]

Strongly disagree		Moderately disagree	Neutral	Moderately agree	Agree	Strongly agree
1	2	3	4	5	6	7

Instructions:

Indicate your level of agreement or disagreement with each of the statements below. Please be open and honest in your responding

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

[Social Adjustment - Lubben Social Network Scale-6]

Instructions: Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale:

0	1	2	3	4	5
None	One	Two	Three or four	Five thru eight	Nine or more

FAMILY: Considering the people to whom you are related by birth, marriage, adoption, etc...

1. How many relatives do you see or hear from at least once a month?
2. How many relatives do you feel at ease with that you can talk about private matters?
3. How many relatives do you feel close to such that you could call on them for help?

FRIENDSHIPS: Considering all of your friends including those who live in your

4. How many of your friends do you see or hear from at least once a month?
5. How many friends do you feel at ease with that you can talk about private matters?
6. How many friends do you feel close to such that you could call on them for help?

[Social Adjustment - Belonging Uncertainty]

Think about how you feel about yourself at different times. Some people pretty much always feel the same way about themselves. Other people feel differently about themselves at different times. Please answer the questions below about how you feel about yourself at different times.

1. Sometimes I feel that I belong at my university, and sometimes I feel that I don't belong
2. When something bad happens, I feel that maybe I don't belong at my university