A Longitudinal Study of How Autonomy Supportive Parenting Relates to Motivation, Coping, and Well-Being Across the Transition to College

Ishaan Prinz

In collaboration with Olivia DuSold and Alfred Lee

Advisor: Jennifer Lilgendahl

Haverford College Department of Psychology

May 4, 2018
# Table of Contents

Abstract.......................................................................................................................................................... 3  
The Parent-Adolescent Relationship in the Transition to Adulthood .......................................................... 5  
Parenting Style, Well-Being and Identity .................................................................................................. 6  
Self-Determination Theory ....................................................................................................................... 9  
Achieving Academic High Points in College .............................................................................................. 11  
Coping with Academic Low Points in College .......................................................................................... 12  
Cultural Differences in Parenting, Motivation and Coping............................................................... 16  
  Cultural Differences in Motivation around Academic High Points ....................................................... 18  
  Cultural Differences in Coping with Academic Low Points ................................................................. 19  
Narrative Approach ................................................................................................................................... 21  
Current Study ............................................................................................................................................. 24  
Methods ...................................................................................................................................................... 29  
  Participants and Procedure ....................................................................................................................... 29  
  Measures .................................................................................................................................................. 30  
  Narrative Prompts and Coding .............................................................................................................. 32  
Results ......................................................................................................................................................... 36  
Discussion ................................................................................................................................................... 49  
Tables .......................................................................................................................................................... 60  
Appendix A: Coding System for Motivation in Academic High Points ................................................. 63  
Appendix B: Coding System for Coping in Academic Low Points ....................................................... 64
Abstract

Autonomy supportive parenting and parental involvement are associated with many positive life outcomes. On the basis of self-determination theory (SDT), our longitudinal study examined how students’ perceptions of parenting related to well-being across the transition to college. We also explored how academic high point and low point narratives mediated this process through the respective mechanisms of motivation and coping. Our main sample consisted of $N = 375$ students from the Identity Pathways Project who took part in four waves of data collection (summer before freshman year to fall of sophomore year). We found that students who perceived their parents to be less autonomy supportive and more involved decreased significantly in well-being across the four waves. While neither motivation nor coping mediated this relationship, adaptive coping themes were associated with higher well-being. Finally, our data indicate that autonomy supportive parenting is cross-culturally important for well-being, as suggested by SDT.

*Keywords:* autonomy support, involvement, control, well-being, helicopter parenting, college students, intrinsic motivation, extrinsic motivation, adaptive coping, longitudinal
Recently, “helicopter parenting”, a term coined by Cline and Fay (1990) to refer to parents who hover over their children to the extent that it limits their ability to be autonomous, has received a lot of attention in the popular press (e.g., Schiffrin, Liss, Miles-McLean, Geary, Erchull & Tashner, 2013). Various researchers have argued that parents being too involved in their children’s lives can have negative effects on their development, including lower perseverance in school (Levine, 2006), feelings of incompetence in the face of adverse situations (Marano, 2008), higher levels of depression and child anxiety (Gibbs, 2009), and lower well-being (LeMoyne and Bucanan, 2011).

The context of college is a particularly interesting time period to study the effects of helicopter parenting, as adolescents strive to gain independence from their parents and find their own place in the world. College is an eventful and often overwhelming time of life in which students experience a variety of emotions, from joy and triumph to disappointment and failure. Our longitudinal study examines how college students’ perceptions of parenting style relate to well-being across the transition to college, and how the narration of academic high points and low points may mediate this process through the respective mechanisms of motivation and coping. In our literature review, we first discuss the process of identity development between adolescence and adulthood, and what this implies for the parent-college student relationship. Next, we investigate how parenting style, specifically autonomy supportive parenting and parental involvement, influence the process of identity development and well-being among college students. We explore these concepts through the self-determination theory, the theoretical basis for the model of parenting in our study. We then connect theories of motivation to academic high points in college, and coping strategies to academic low points, and discuss how these mechanisms may explain the relationship between parenting and well-being. Finally,
we investigate how cultural values and norms may affect motivation and coping strategies among college students, and consequently influence the relationship between perceived parenting style and involvement and well-being during college. By using a narrative approach, we expect to arrive at a more contextualized and integrated understanding of college students’ daily academic experiences and their processes of deriving meaning from these experiences. An identity is not merely reflected in the stories individuals construct around their lives but also actively takes shape through these stories (McAdams, 2001).

**The Parent-Adolescent Relationship in the Transition to Adulthood**

The transition to adulthood is a particularly important time-period for identity development. According to Erikson (1968), it is in late adolescence and young adulthood when people first question how they fit into society and experiment with different roles, activities and behaviors, aiming to consolidate them into a strong and coherent identity. Arnett (2004) has labeled this period as emerging adulthood, a transitional phase of life between the ages 18 and 25 in which individuals undergo identity exploration, encounter instability in their lives, and experience feelings of being “in-between” adolescence and adulthood. Emerging adults seek to understand themselves and their place in the world, develop the knowledge, skills and qualities needed for adult life, and work towards becoming independent adults.

One common context for the transition to adulthood is attending college for the first time. This is a very interesting time period to study the individuation process. On the one hand, adolescents gain independence and separation from their parents (Moretti and Peled, 2004). On the other hand, parents still remain a very important influence on the adolescents’ behaviors and values (Steinberg, 2001). For example, adolescents may move out their parents’ house and take responsibility for their day-to-day activities, while still being at least partially financially reliant
on their parents (Dubas & Petersen, 1996) and also often dependent on their emotional support (Ryan and Lynch, 1989).

Various factors have been found to influence adolescents’ adjustment to college. These include dispositional factors, social-cognitive factors, and of particular interest to our study, parenting. A key developmental task of the emerging adulthood period is for adolescents to gain autonomy from their parents. The transition from adolescence to adulthood disrupts and poses a challenge to the adolescent-parent relationship, as behaviors performed by one member are at times incongruent with the goals, desires or expectations of the other member (Collins, Laursen, Mortensen, Luebker & Ferreira, 1997). This necessitates both parents and their college-aged children to make adjustments for the dyad to maintain a close and healthy bond (Collins, 1995).

**Parenting Style, Well-Being and Identity**

The idea that parents can have profound effects, both positive and negative, on the healthy development and functioning of their children has been around for decades. Carl Rogers, a humanist and pioneering figure in personality psychology in the 1950s, advocated for a person-centered approach to studying personality (Rogers, 1951). Rogers believed that humans are born with the desire to self-actualize, or to be the best they can. For children to live up to their full potential, they need to have grown up in an environment of unconditional positive regard. Rogers believed that certain parenting qualities and behaviors would facilitate children’s potential to flourish. Parents should empower and encourage their children to find their own voice, be guided by their own beliefs and values, solve problems themselves and make independent choices. Additionally, they should guide their children towards positive behaviors, rather than suppressing negative ones.
Since Carl Rogers’ breakthrough in the 1950s, various researchers have sought to empirically investigate how parents can influence the psychological health and functioning of their children. A widely examined concept has been autonomy supportive parenting. Autonomy supportive parents appreciate and encourage their children to freely express themselves, and provide them with the room to explore opportunities that resonate closely with their values and personal interests. Children who feel a sense of autonomy undergo behaviors that are self-initiated and self-regulated, and are based on a sense of volition. This parenting style is tied to Rogers’ idea of “positive parenting”, in that parents who employ it empower their children to initiate and manage their behaviors. In contrast, controlling parenting shrinks children’s feelings of autonomy (Grolnick and Ryan, 1989, 1991; Vansteenkiste, Zhou, Lens, & Soenens, 2005). Controlling parents attempt to exert control over, repress, and manipulate their children’s thoughts and feelings. Controlling parenting behaviors involve exerting pressure to perform a behavior that is based on external sources of motivation, or that is not aligned with or integrated into children’s internal needs and values. Children whose parents foster their sense of autonomy experience various positive outcomes, including higher ego development and self esteem (Allen, Hauser, Bell, & O’Connor, 1994), better academic achievement (Fan and Chen, 2001), higher psychological well-being (Frank et al., 1990), lower levels of depression (Grolnick and Ryan, 1989) and greater family cohesion (Ryan & Lynch, 1989), while children with controlling parents experience the inverse of these outcomes.

There are a few models of parenting that are conceptually related to autonomy supportive and controlling parenting. Baumrind’s (1971) parenting archetypes of authoritative and authoritarian parenting provide one such model. Parents classified as authoritative foster independent decision-making, enable self-regulation and encourage self-assertion by being
highly responsive to their children’s needs. Authoritative parents are also demanding and have high expectations for their children. Authoritative parenting is conceptually similar to autonomy supportive parenting in that the behavioral demands parents make are aligned with their children’s ability to make volitional and self-initiated decisions. In contrast, authoritarian parents are described as very demanding but not responsive to their children’s needs and demands (Baumrind, 1971). Parents characterized as authoritarian make demands that are directive and power-asserting, leaving no room for the child’s voice to be heard. This parenting style is conceptually similar to controlling parenting in that it restricts the child’s sense of autonomy.

While authoritative parenting is associated with various positive outcomes for college students, including better academic adjustment (Hickman et al., 2000), greater academic confidence and persistence (Strage and Brandt, 1999), lower levels of depression, loneliness and anxiety (Silva et al., 2007), and higher well-being (Love and Thomas, 2014), these effects are reversed under an authoritarian parenting style.

Besides the degree of autonomy support provided by parents, parental involvement has also been found to be a key contextual factor influencing psychological health and functioning. Parental involvement refers to the extent to which parents take an interest in, are attentive to, and actively immerse themselves into the day-to-day activities of their children (Schiffrin, Liss, Miles-McLean, Geary, Ershull & Tashner, 2013). Children who have parents who are involved have better academic performance, higher-well-being (Niemiec et. al, 2006) and better self-regulation (Grolnick & Ryan, 1989). On the other hand, students whose parents are overly involved report feeling less satisfied with family life, lower levels of psychological well-being and higher levels of depression and anxiety (LeMoyne & Duchanan, 2011).
Recent studies have found that it is not merely the degree of involvement that matters, but also the form of involvement parents take in their children’s lives. Specifically, highly involved parents can be autonomy supportive or controlling (Schiffrin et al., 2013). Parents who are very involved in their children’s lives but also seek to control or manipulate the child’s beliefs or emotional states are typically referred to as “helicopter parents”. Helicopter parents tend to control the behaviors of their children or act on their behalf, though the children may be fully capable of performing the behavior on their own. Common examples of helicopter parenting behaviors include parents choosing their child’s activities and friends, doing their homework, and contacting their professors when they receive a bad grade on a test. There has been a recent surge of interest in helicopter parenting in academia and mainstream media. Over the past decade, several studies have sought to conceptualize and objectively measure helicopter parenting and its impact on adolescents. For example, Schiffrin et al. (2013) consulted several books to arrive at over 25 behaviors that are conceptually linked to helicopter parenting in the literature in order to comprehensively operationalize the concept. Studying helicopter parenting in the context of college is particularly interesting, as this is a time when children’s need for autonomy heightens as they transition from being adolescents dependent on their parents to independent and self-reliant adults. In their study on college students, Schiffrin et al. (2013) found that helicopter parenting behaviors were associated with higher levels of depression and decreased satisfaction with life, suggesting that high involvement coupled with an inappropriate level of control is bad for college students.

Self-Determination Theory

What is the mechanism that drives the positive association between autonomy supportive and highly involved parenting and positive life outcomes, and the negative association between
“helicopter” parenting and negative outcomes among college students? In other words, what are the pathways from autonomy supportive and highly involved parenting to high life satisfaction and well-being? Self-determination theory (SDT) provides the theoretical basis for the model of parenting we will use. SDT posits that people have basic, innate and universal psychological needs that are critical for healthy development and functioning (Deci & Ryan, 2008). The first component is the need for autonomy, or the need to feel volitional with regard to one’s behavior. The second component is the need for relatedness, or the need to feel loved and valued by others. The third component is the need for competence, or the need to feel confident in one’s abilities and accomplishments.

According to SDT, the motivations that drive our behaviors can be assessed on a continuum of regulation (SDT; Deci & Ryan, 1991), ranging from external motivation (the activity is performed for an instrumental end), to introjected motivation (the activity is performed due to internal pressures), to identified motivation (the activity is performed because it is seen as personally valuable), to integrated motivation (the activity is performed because it is aligned with one’s sense of self), to intrinsic motivation (the activity is performed because it is inherently valuable). External and introjected motivation are seen as nonconcordant and potentially harmful, as behaviors are not fully accepted or integrated into one’s sense of self. Identified and intrinsic motivation on the other hand are seen as concordant and healthier as they are fully accepted and represent a more central and stable self (Sheldon et. al, 2004).

SDT asserts that parents are a key contextual element that influences the process of autonomy development (Collins & Luebker, 1994). Several studies have found that parental autonomy support is closely linked to self-regulation, the broad consensus being that autonomy supportive parenting promotes intrinsic motivation, while controlling parenting restricts it.
Gurland and Grolnick (2005) reasoned that parents with a controlling style of motivating achievement were more likely to direct their children toward the outcomes of learning rather than the process of learning. The children would therefore be more likely to aim for extrinsic goals in school, such as looking smart to others, than actually increasing their knowledge and skills. Their findings supported these predictions as children of more controlling parents were more motivated by gaining approval from teachers and peers than were children of autonomy supportive parents. In a similar study, Ginsburg and Bronstein (1993) found that children of parents who closely monitored their homework, reacted with negative control to their grades, and were overly controlling were more extrinsically motivated and had low academic performance. On the other hand, children of parents who responded to their grades with positive encouragement scored higher on intrinsic motivation and performed better in school. Finally, Kenney-Benson and Pomerantz (2005) found that more controlling mothers had children who developed perfectionistic concerns, which fostered depressive symptoms. The form of perfectionism the researchers examined was socially prescribed perfectionism, which is associated with extrinsic motivation for studying, lower confidence and higher anxiety in exams (Stoeber, Feast and Hayward, 2009).

**Achieving Academic High Points in College**

SDT can inform our understanding of why the forces that drive college students when they succeed are linked to their life satisfaction. From time to time, college students experience academic events that stand out as being extremely positive. These high points may encompass a range of topics, from declaring a major to receiving high praise from a professor to arriving at a profound academic or personal revelation that changes one’s entire worldview. In addition, there is a wide variety of ways in which these peak experiences are explored and evaluated.
SDT posits that intrinsic motivation promotes the satisfaction of the three basic needs, leading to improved social and emotional adjustment and greater well-being (Conti, 2000; Hope, Milyavskaya, Holding, & Koestner, 2014; Ryan & Kasser, 1993; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). For example, a student who won a big prize at the science fair may consider the experience a high point because being a scientist is integral to her identity (identified motivation), because she genuinely enjoys doing scientific research (intrinsic motivation), because the achievement alleviated the pressure of satisfying her parents (introjected motivation), or simply because she was happy to walk away with the big prize (extrinsic motivation). Studies have found that students who are identified or intrinsically motivated to attain a goal are more likely to experience enhanced well-being, whereas students who are extrinsically motivated experience ill-being, a measure encompassing lower adjustment, lower social productivity, and greater instances of behavioral disorders (Kasser & Ryan, 1993; Sheldon & Kasser, 1998). Our study considers academic high points to be moments of goal attainment, allowing us to examine how levels of college student self-regulation are related to their well-being.

**Coping with Academic Low Points in College**

While college students from time to time experience moments of academic triumph, academic setbacks and failures also constitute a major part of the college experience. From doing poorly on a test, to being criticized by a professor, to losing interest in a subject, the range of negative experiences is vast. Regardless of the type of situation, studies have shown that specific strategies are vitalizing in coping with adverse events. Broadly, it has been found that students who convert negative and emotionally challenging experiences into opportunities for growth experience more positive life outcomes than those who don’t (McAdams, 2001). Additionally,
various researchers have shown that individuals who actively and strategically solve problems have higher well-being than those who avoid the stressor and the negative feelings associated with it (Carver, Scheier, and Weintraub, 1989). Moreover, studies have found that seeking social support in times of stress can have important implications for life satisfaction and self-growth (e.g., Prati & Pietrantoni, 2008).

Most frameworks that seek to understand individual differences in the use of coping responses consider the extent to which individuals take an active approach to solving a problem. Carver et al. (1989) distinguished between problem-focused and emotion-focused coping strategies. Individuals who employ problem-focused coping responses are proactive in trying to tackle the problem that is causing the stressor. They believe the problem can be resolved through deliberate, well-reasoned and persistent efforts. A problem-focused approach to solving setbacks is adaptive help-seeking, which involves seeking the social support of others to address issues that the individual feels cannot be solved independently. Another coping strategy that is conceptually related to but distinct from problem-focused coping is “support for feeling”, which involves turning to others for emotional support to lessen the negative effects of the academic failure. Problem-focused coping, adaptive help-seeking, and “support for feeling” are three coping responses are deemed to be mastery strategies to dealing with adverse academic experiences.

On the contrary, emotion-focused coping is a defensive strategy in which individuals see the problem as being out of their control, and try to reduce the negative emotional responses associated with the stressor, rather than resolving the issue directly. While students with a problem-focused approach may respond to a poor grade on an exam by practically and proactively engaging in their studies to make sure this doesn’t happen again, those with an
emotion-focused approach may see the bad grade as being a signal of their lack of intelligence. They would respond to it by blaming others, physically releasing emotions (Carver et. al, 1989), or by concealing their emotional reactions, claiming the bad grade was insignificant (Schutz et al., 2006).

Carol Dweck’s (1999) implicit theories constitute an important social-cognitive factor that can inform us about why some students rebound from, embrace, and sometimes even enjoy setbacks and failures, confronting them with self-composure and confidence, while others wilt and shrink back in the face of obstacles. Dweck proposed that there are two core mindsets, or beliefs, about one's own abilities that shape how people approach challenges: fixed mindset, the belief that one's traits and abilities are predetermined and cannot be significantly changed, and growth mindset, the belief that one's traits can be developed through hard work and perseverance. Students with a fixed mindset see failure as evidence for their inabilities. The fixed mindset has been found to be associated with various negative outcomes, including a decrease in self-esteem over time (Robins & Pals, 2002), as well as depressive tendencies (Molden & Dweck, 2006). In contrast, students with a growth mindset see failure as an opportunity to develop their talents and abilities by learning what went wrong and putting in effort to build their skillsets (Robins & Pals, 2002). In other words, failure is either seen as a challenge to competence or as a demonstration of incompetence and threat to one’s sense of self (Skinner & Wellborn, 1994). The growth mindset can be seen as a conceptual underpinning of mastery coping.

Research shows that parents can have a powerful impact on their children’s mindset. Parents who believe that failure is enhancing teach their children from a young age that their intelligence is malleable. While praising children for being smart promotes a fixed mindset,
praising them for working hard promotes a growth mindset. The mindset students employ when coping with an academic failure has been found to be closely associated with their psychological health and adjustment in college. In a recent study, Kyla and Dweck (2017) found that adolescents whose parents accept mistakes as learning opportunities, and encourage them to pursue challenging tasks, are better prepared to withstand difficulty.

The degree to which students experience academic failures as a challenge to their competence versus as a threat can be understood in terms of two motivational aspects of competence (Raftery & Grolnick, 2016). First, perceived control is the belief that one can determine one’s own internal states and behavior and transform adverse outcomes into desirable ones in one’s environment (Connell, 1985). Second, perceived competence is the perceived ability to effectively manage difficult situations and prevent negative outcomes (Harter, 1982). Students who feel they have more control over academic outcomes are better able to manage stressful academic experiences (Pekun, 2000). Children high in perceived competence also have lower levels of classroom anxiety and take on more challenging tasks than those low on this dimension (Harter, 1982). Students who feel competent and in control of their academic situation are able to focus less on restoring negative self-views and more on understanding the external context in which the event took place (Skinner and Wellborn, 1994). The conceptualization of coping in our study was derived from Raftery-Helmer and Grolnick’s (2015) study investigating how specific dimensions of parenting (autonomy support and involvement) were associated with academic coping. The researchers used the SDT framework to examine the main contextual and motivational factors that explain why some students use mastery strategies to cope with academic failure, while others use defensive strategies. They found that perceived control mediated the negative relationship between autonomy support and defensive coping. Students
with controlling parents did not feel they could influence or control adverse outcomes, and as a result turned to defensive strategies in the face of failure, focusing more on reestablishing an internal sense of competence than on solving the problem at hand.

**Cultural Differences in Parenting, Motivation and Coping**

There is an abundance of research showing that basic differences in parenting exist across cultures. For example, various research shows that Asian American parents score higher on the authoritarianism scale than do their European American counterparts (e.g., Dornbush, Ritter, Leiderman, Roberts, and Fraleigh, 1987). Asian American parents also emphasize the importance of learning early academic skills, and tend to hold higher expectations of their children than do European American parents (Goyette and Xie, 1999). Chirkov and Ryan (2001) found that parents from Russia were more controlling than their American counterparts. The dominant approach in psychology to understanding cultural differences in parenting is the individualism-collectivism dimension (Hofstede, 1980). Individualism is a concept characteristic of Western cultures that generally values individual identity, self-fulfillment, and standing out, whereas collectivism emphasizes group identity, social responsibility, and fitting in, and is more typically seen in non-Western cultures (Markus & Kitayama, 1991).

Though mean level differences in autonomy support and involvement have been widely found across cultures, the universal importance of these concepts for psychological health and well-being has been hotly debated. Some researchers contend that autonomy is essentially a Western, agentic concept, and that the fostering of self-initiated and self-regulated behaviors is only beneficial for individuals from individualistic cultures. Adolescents in collectivistic cultures have interdependent self-construals and understand themselves largely through the relationships they have with their parents (Markus & Kitayama, 1991). As a result, individual exploration,
self-regulation and self-efficacy would be valued less than meeting group goals and maintaining social harmony, suggesting that less autonomy supportive parenting would not be as associated with lower well-being for college students from collectivistic cultures as it would for students from individualistic cultures. On the other hand, SDT asserts that autonomy support is important for well-being and healthy functioning across cultures as it supports the achievement of the three universal needs of autonomy, competence and relatedness. If individuals’ basic psychological needs are not met, their levels of well-being will be adversely impacted regardless of culture.

Several researchers have sought out to explore this contention and examine whether the relationship between self-concordance and positive outcomes truly is culturally invariant. In their widely-cited study, Sheldon et al. (2009) found that self-concordant motivation was positively associated with subjective well-being, including positive affect and life satisfaction, in four different countries, namely the United States, South Korea, Taiwan and China. This supports the idea that students benefit more when they enjoy and identify with the process of learning rather than when they feel pressured or coerced into learning, regardless of their cultural background. Chirkov and Ryan (2001) and Vansteenkiste, Zhou, Lens and Soenens (2005) also found that autonomy support was positively associated with better adjustment and higher well-being, among students from Russia (a traditionally authoritarian and moderately collectivistic culture) and from China respectively.

In a study on parenting styles in Ghana, a collectivistic and hierarchical country, Marbell and Grolnick (2012) interestingly found that autonomy supportive parenting was positively associated with the promotion of interdependence. In other words, children were more likely to internalize the values and practices of their culture when they were given the volition to explore these values and interpret them themselves. The study supports the idea posed by SDT that the
need for self-regulated behavior is important for psychological health across diverse nations and cultures, and that autonomy supportive parenting and interdependent values need not be mutually exclusive. For example, parents in collectivistic cultures can teach their children to respect and listen to figures in authority, while still encouraging them to voice their own opinions in a respectful manner (pg. 89). This way, children experience a sense of autonomy and its associated benefits without compromising their cultural values. Soenens and Vansteenkiste (2007) distinguished the promotion of independence (PI) and the promotion of volitional functioning (PVF) as two distinct conceptualizations of autonomy support. Importantly, the study found that PVF was more important than PI for healthy adolescent psychosocial functioning.

**Cultural Differences in Motivation around Academic High Points**

In line with the Self-determination Theory, research in the past decade suggests that autonomy supportive parenting is associated with intrinsic motivation, and consequently positive life outcomes, in both Western and non-Western cultures. Lekes, Gingras, Philippe, Koestner and Fang (2009) predicted that parenting practices that support a child’s autonomy is related to a greater endorsement of intrinsic values and less emphasis on extrinsic values in adolescent samples from North America and China. Additionally, the researchers hypothesized that intrinsic goals will lead to higher well-being in both cultural groups because according to SDT, they are based in the satisfaction of the three universal needs. While their results suggested that autonomy support as well as intrinsic motivation were higher in absolute terms in the North American sample than the Chinese sample (as shown in previous studies, e.g. Kim, 2003), autonomy support predicted greater academic motivation and well-being in both groups, supporting the idea that there is a universal need for autonomy. Interestingly, Lekes et al. (2009) found that parental autonomy support was negatively associated with the promotion of extrinsic values in
North America, whereas autonomy support and extrinsic life goals approached a positive association in China.

Sue and Okazaki (1990) offer one explanation for this. In their classic study, they concluded that the emphasis on academic achievement among Asian Americans is not something that is innate to East Asians, but is rather a consequence of the lack of pathways available to succeed besides education for Asian Americans. Therefore, while being extrinsically motivated may be associated with ill-being and maladjustment for students from individualistic cultures, being extrinsically motivated may be normative and appropriate for those in collectivistic cultures who see the instrumental ends associated with doing well academically as a guarantee of their livelihood. As a result, parents in collectivistic cultures may be inclined to prioritize and raise their children to strive for the tangible ends tied to academic achievement, such as status, wealth and external approval.

**Cultural Differences in Coping with Academic Low Points**

While the mechanisms that explain our motivation when experiencing high points has been shown to vary across cultures, there is also evidence that the forces that drive us when we fail are culture-specific. For example, some scholars argue that mastery coping, with its emphasis on perceived control, perceived competence, and environmental mastery, is essentially a Western construct and is not the most effective strategy in dealing with failure in non-Western cultures. For example, Hobfoll et al. (2002) suggest that communal mastery (the idea that one can succeed by being closely interconnected with others) might be more effective than self-mastery (the idea that one can succeed through independent action) in collectivistic cultures. They examined the effects of coping among a Native American tribal group of women with a collectivistic orientation and found that women who had high scores of communal mastery were more resilient
to stressful situations and displayed significantly less depressive symptoms and anger than those low in communal mastery. Those who scored high on self-mastery, on the other hand, were not more resilient to stress.

Stigler and Perry (1988) also argue that the definition, interpretation and experience of struggle is different across cultures. For the most part in individualistic cultures, failure is seen as the product of one’s intrinsic abilities and as an indicator of weakness. Individuals respond to failure with the goal of reestablishing self-esteem. In contrast, collectivistic cultures actually encourage individuals to struggle as failure enables self-improvement. The act of struggling is perceived as a measure of emotional strength. Self-criticism is normative and even valued in collectivistic cultures, while self-esteem and positive regard are seen as irrelevant (Heine et. al, 1999; Wang & Leichtman, 2000). Heine (2001) found that Japanese-American students were more likely to persist on a task after being told they failed at it, a reflection of their emphasis on the values of diligence, perseverance and concentration. European-Americans in contrast were more likely to continue the task after being told they completed it successfully, a reflection of their emphasis on maintaining self-esteem.

Differences in the use of social support between individualistic and collectivistic cultures can also inform and add complexity to our understanding of coping. Social support has been defined as information from others that one is loved and care for, and part of a strong and stable social network (Cobb, 1976; Cohen & Wills, 1985; Seeman, 1996). What may be considered as healthy and adaptive support-seeking has been found to vary across cultures. Wang, Shih, Hu, Louie and Lau (2010) examined differences in daily support-seeking in Asian American and European American samples. The research found that Asian Americans were less likely than European Americans to seek out social support in response to stress events. These differences
were explained by the collectivistic value of maintaining group harmony by exercising emotional restraint. When experiencing life’s most negative events, emotional restraint allowed Asian Americans to maintain group harmony and avoid burdening others with their personal issues. Not only did Asian Americans use support less, they also perceived the support to be less helpful when they did use it.

Taylor, Welch, Kim, and Sherman (2007) found that those from collectivistic cultures seek out forms of social support that do not risk disrupting relationships. For instance, social support may be used without discussing problems or explicitly talking about the negative stressor. According to Taylor et al. (2007), Asian Americans may be more likely to use implicit social support, which they defined as the “emotional comfort one can obtain from social networks without disclosing or discussing one’s problems vis a vis specific stressful events” (p. 832). This way, the recipient of the support would enjoy the benefits of social support simply by being aware that a social support network exists, without disrupting group harmony, worrying others or losing face.

**Narrative Approach**

In order to explore the pathways from parenting style to well-being across the transition to college, we took a narrative approach to identity development in emerging adulthood. McAdams (2001) defines narrative identity as the process in which an individual “reconstructs the autobiographical past and imagines the future in such a way as to provide a person’s life with some degree of unity, purpose, and meaning” (p. 233). Constructing a life story that connects the past to the current self provides the individual with a sense of purpose, continuity, and direction, thus fostering the process of “self-making” (Pals, 2006). According to McAdams (2001), the
narration of momentous life events, such as high points and low points, facilitates this process by influencing how individuals perceive themselves and the roles they play in their lives.

A narrative often involves some form of conflict, and it is how this conflict is explored and evaluated that determines psychological health and functioning. The process of converting negative events into positive outcomes, known as redemption seeking, has been found to be vital for well-being. For example, Pals (2006) found that midlife adults who explore and reflect on adverse situations have higher levels of emotional and cognitive maturity. When asking emerging adults to narrate a low point, McLean and Lilgendahl (2008) found that participants whose memories were redemptive tended to have greater personal growth and purpose in life.

While redemption sequencing involves a sense of experiencing progress and moving towards an integrated identity, contamination sequencing, the process of converting positive events into negative outcomes, minimizes the part of the self that was threatened and hinders the possibility of self-growth.

In studying the narrative processing of life’s lowest moments, Lilgendahl, McLean and Mansfield (2012) ran the first study that examined how Dweck’s (1999) implicit theories manifest themselves in life stories. Specifically, the researchers examined how fixed and growth mindsets about the self were related to the affect of statements about the self when recounting memories of traumas and transgressions. They found that individuals who possessed an incremental theory of the self would focus their narratives on aspects of the negative experience that provided life lessons and encouraged self-reflection, thus fostering self-growth and improvement. On the other hand, those who possessed an entity theory of the self would not engage in meaning-making and focus instead on the negative event’s seemingly unchangeable implications for the self. Instead of evaluating the event as an opportunity to change certain
aspects of their behavior to become a better person, those with a fixed mindset saw the trauma or transgression as a confirmation of the self as a bad person.

A few studies have employed a narrative life story approach to understanding the intricacies of the characteristics and processes that constitute identity development in emerging adulthood. Dumas, Lawford, Tieu and Pratt (2009) for instance examined how late adolescents’ perceptions of positive parenting were associated with their tendency to narrate more integrated and resolved life stories of low points several years later as emerging adults. Their study was the first to explore the connection between parenting in adolescence and the ensuing narration of life stories. Positive parenting was considered to be authoritative, characterized by high levels of both strictness and responsiveness. In line with Pals’ (2006) findings, the researchers found that participants whose low point narratives had coherent and positive endings had higher levels of well-being and optimism, and lower levels of depressive symptoms than participants with less healthy narration patterns.

Positive memories also make up an important part of narrative identity (McLean, 2005; Pasupathi, 2006). McLean and Lilgendahl (2008) found that positive reflection on high points is especially important for adolescents as they first begin to construct their identity. In addition, the narration of high points was seen as highly important to well-being for adolescents. While the narration of high points has been examined extensively, less research has explored the motivation type that drives these life stories. In fact, we have not identified any studies that code for intrinsic and extrinsic motivation in high point narratives. While studies have shown that reflecting on the goals one sets promotes intrinsic motivation and facilitates adjustment in emerging adulthood and the successful transition to college (e.g. Conti, 2000), few studies have done this through a narrative approach, indicating a gap in the literature.
Our narrative construction and meaning-making processes are also shaped by our cultural contexts. Several studies have shown that meaning-making is not a one-dimensional process approached the same way across cultures. As an example of this, Reese and colleagues (2016) examined the narratives and meaning-making processes of adolescents from three New Zealand cultures: Māori, Chinese and European, and found variations among the three cultural groups in the associations between narrative style and identity development and well-being. For example, narratives with themes of personal development, in which an individual underwent a change in beliefs or behaviors, were positively linked with well-being for the European group, but not for the other two groups. While narrating events focused on personal development and change is related to higher well-being for individuals with an independent orientation, these self-concentrated events seem to be less important for individuals with a more collectivistic orientation. Narratives high on thematic coherence (i.e. narratives that included central themes that were developed, elaborated and resolved within the narrative) were positively associated with well-being for the Māori group but not for the other two. Although an array of studies have found cultural differences in narrative identity, few studies to date have examined cultural differences in the manifestation of motivation and coping as themes in the narrative process.

**Current Study**

This study is part of the Identity Pathways Project, a longitudinal study that examines how critical academic and social experiences influence various outcomes during and after college, including identity development, college adjustment and well-being. The goal of our study is to assess how autonomy supportive and involved parenting versus “helicopter” (controlling and involved) parenting are associated with well-being through their impact on the self-determination of students. Specifically, we aim to focus on how the perception of one’s
parents influences how college students narrate and thereby process critical academic experiences. By using a narrative approach, we will investigate academic high points and low points that are salient aspects of students’ college experience and gain insights into the process of meaning making college students undergo in the first year of college, a critical time for identity development (Arnett, 2004). While most studies in the literature examining the role of parenting among college students have a cross-sectional design, our staggered, multiwave design allows us to look for an association between parenting style and changes in well-being during college, thus getting closer to isolating possible patterns of causality.

We add a layer of complexity to our study by examining how different cultural norms and values may complicate the relationship between parenting style and well-being through the content and structure of narratives around academic high and low points. Dumas et al.’s (2009) study on the association between positive parenting and narratives of low points, while highly important in advancing this field of research, predominantly examined White adolescents who came from unilingual, English-speaking homes. Our study addresses this limitation by examining how the relation between adolescents’ perceptions of parenting and the narrative processing of academic high and low points may differ across cultures. By doing so, we test the foundation on which the self-determination theory is built and see if the three basic needs it stands for truly are universal.

The current study seeks to explore three key questions. First, we examine the relationship between parenting style and well-being. Next, we test whether his relationship is mediated by motivation type and coping style in the context of narratives of academic high points and low points. Finally, we explore how cultural differences affect the relationship between parenting style and well-being. The following hypotheses will be tested:
Hypothesis 1: Parenting and Well-Being

Students who perceive their parents as being involved and autonomy supportive will experience an increase in well-being over the first year of college. Whereas past research has shown that autonomy support and involvement are important for college student well-being (e.g. Allen et al., 1994), few studies have examined how these parenting variables relate to changes in well-being during college. In addition to examining the main effects of these variables, we explore how their interaction relates to well-being. Recent research has suggested that parental involvement is related to life satisfaction differently depending on whether parents are autonomy supportive or controlling (Schriffrin et al., 2013). Thus, we predict that involvement will only relate positively to an increase in well-being across the transition to college when it is coupled with an autonomy supportive parenting.

Hypothesis 2: Parenting, Motivation and Well-Being

We explore how intrinsic and extrinsic motivation themes in the context of academic high and low point narratives mediate the relationship between parenting and well-being. Specifically, we hypothesize that intrinsic motivation in academic high point narratives will mediate the relationship between autonomy supportive parenting and an increase in well-being over the first year of college. In contrast, extrinsic motivation will mediate the relationship between controlling parenting and a downward trajectory in well-being.

Hypothesis 3: Parenting, Coping and Well-Being

In addition to examining motivation in academic high points, we analyze the coping strategies used in the context of academic low points. The vast body of research on coping indicates that adaptive coping, which captures problem-focused coping, adaptive help-seeking, support for feeling and a growth mindset, among other behaviors, is positively related to well-
being (e.g. Carver et al., 1989). In addition, children whose parents promote a sense of autonomy tend to use more proactive and growth-oriented strategies when coping with adverse events (Raftery-Helmer & Grolnick, 2015). Thus, we predict that autonomy supportive parenting would be positively associated with adaptive coping, while controlling parenting would associate with maladaptive coping, which includes defensive coping, maladaptive support seeking and a fixed mindset. Going further, we predict that the use of adaptive coping strategies in low point narratives will mediate the relationship between perceived levels of autonomy support and involved parenting and college students’ increase in well-being. While few studies have examined this relationship directly, an abundance of evidence has shown that parents play a crucial role in shaping their children’s mindset around adversity and failure (e.g. Kyla & Dweck, 2017).

Hypothesis 4: Culture and its Relation to Parenting, Motivation, Coping and Well-being

We explore whether the benefits of autonomy supportive parenting extend to collectivistic cultures, or if they are experienced primarily in Western countries. First, we predict that Asian students will perceive their parents to be less autonomy supportive on average than non-Asian students, as has been found in the research literature (Dornbush et al., 1987). We will then explore whether autonomy supportive and involved parenting are equally important for well-being for both Asian and non-Asian students. SDT proposes that autonomy support and involvement are universally important, in that they support the basic needs for autonomy, competence and relatedness that are critical for healthy development and functioning (Deci and Ryan, 1991). In line with this theory, researchers have suggested that autonomy supportive parenting is compatible with collectivistic cultures (e.g. Marbell & Grolnick, 2012). On the other hand, some scholars argue that self-determination omits important collectivistic values such as
interdependence, family values and deference to authority, and that the relations between autonomy support, involvement and well-being are only significant for students from individualistic cultures. Finally, we examine whether parenting relates to changes in well-being correspondingly between the two groups, or if an increase in well-being is only seen among non-Asian students.

If motivation mediates the relationship between parenting and well-being, we will explore whether this mediation effect is significant for both Asian and non-Asian college students. The research literature suggests that intrinsic motivation may be less valued or important for well-being in collectivistic cultures (Lekes et al., 2009). Therefore, we predict that intrinsic motivation would mediate the relationship between autonomy support and involvement and an increase in well-being only for non-Asian students.

Given that coping strategies are interpreted and valued differently across cultures (Hobfoll et al., 2002; Heine et al., 1999; Stigler & Perry, 1988; etc.), we explore whether the relations between autonomy supportive parenting, adaptive coping and well-being hold true in both collectivistic and individualistic cultures. The literature on cultural differences in coping suggests that mastery coping may not be universally beneficial. For example, Asian Americans seek out social support less and also perceive it to be less vitalizing than do European Americans (e.g., Wang et al., 2010). However, little research to date has examined how parenting styles factor into adaptive coping strategies.
Methods

Participants and Procedure

The data utilized by our current study comes from the Identity Pathways Project, a longitudinal study of college student development currently being conducted at two colleges in the United States, a small liberal arts college in the Mid-Atlantic and a medium-sized public university on the West Coast. The overall design of the study involves the administration of 13 online surveys that includes both quantitative and narrative measures, with three annual surveys conducted each academic year. Participants were compensated $20 per survey. The current study will focus on data from the summer and winter of the first year of college, as well as data from the fall of sophomore year (Waves 1-4). Data on subjective well-being (SWB) was collected in all four waves to assess changes in well-being over time (Waves 1-4). SWB encompasses four measures: Satisfaction with Life Scale (SWL), Depression and Anxiety Scale (DASS), Basic Psychological Needs Scale: Autonomy, and Basic Psychological Needs Scale: Competence. Data on perceptions of parenting was collected in the winter of freshman year (Waves 2). Narrative data in which students described academic high and low points were collected in the spring of freshman year (Wave 3; see Table 1 for a summary of data collected across the four waves).

A total of 638 students completed Wave 1 of the Identity Pathways Project. At that initial wave, 75% of the sample was White, 18% Asian, 10% Latino/a, 6% Black, 2% Native American, 1% other, and 13% two or more categories, which was roughly consistent with the demographics of the institutions as a whole. In terms of gender, female students were over-represented in the sample, with 63% of participants being female, 35% male, and 2% indicating “other”. Because some participants completed Wave 1 only and no other waves after that, the true size of the longitudinal sample for IPP is in the range of $N = 350-450$ depending on the
waves included in the analyses. For the current analyses, our main sample included participants who completed the necessary measures at Waves 1, 2, and 4 (N = 375), and this N dropped down to 342 when narrative data from Wave 3 was also included.

For our cultural comparison, we included a racial demographic question in which participants were asked to select their ethnicity: Caucasian/White, Black/African American, Latino/Latina, Native American, Mixed, and/or Other. To examine cultural differences in our variables of interest in the context of the individualism–collectivism dimension, we selected for participants who had identified as Asian only, and then created subsamples for Asian (N = 54; 14% of total sample) and non-Asian (N = 321; 86% of total sample) students in order to compare these groups in our analyses.

**Table 1. Summary of Data Collection (Wave 1-4)**

<table>
<thead>
<tr>
<th>Wave 1 (Summer of First Year)</th>
<th>Wave 2 (Winter of First Year)</th>
<th>Wave 2 (Spring of First Year)</th>
<th>Wave 4 (Fall of Sophomore Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Demographics</td>
<td>- Satisfaction with Life Scale</td>
<td>- Academic high point narratives</td>
<td>- Satisfaction with Life Scale</td>
</tr>
<tr>
<td>- Satisfaction with Life Scale</td>
<td>- Depression and Anxiety Scale</td>
<td>- Academic low point narratives</td>
<td>- Depression and Anxiety Scale</td>
</tr>
<tr>
<td>- Depression and Anxiety Scale</td>
<td>- Basic Psychological Needs Scale: Autonomy</td>
<td></td>
<td>- Basic Psychological Needs Scale: Autonomy</td>
</tr>
<tr>
<td></td>
<td>- Basic Psychological Needs Scale: Competence</td>
<td></td>
<td>- Basic Psychological Needs Scale: Competence</td>
</tr>
<tr>
<td></td>
<td>- Perception of Parents Scale</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Measures**

**Well-being.** The present study conceptualizes well-being as a multidimensional construct that includes the Satisfaction with Life Scale (*SWL*), Depression and Anxiety Symptoms Scale (*DASS*) and the Basic Psychological Needs Scale (*BPNS*). *SWL* and *DASS* were included in Waves 1-4 and *BPNS* was included in Waves 2-4.
Satisfaction with Life Scale (SWLS; Pavot & Diener, 2008). A 7-point Likert scale was used to measure the life satisfaction component of subjective well-being. The measure contains 5 items, for which participants rate the extent to which they agree with the statement from “strongly disagree” (1) to “strongly agree” (7). The items included phrases like “In most ways my life is close to my ideal” and “The conditions of my life are excellent”. The possible range of scores is from 5 to 35. Scores between 5-9 indicate the respondent is extremely dissatisfied with life, whereas scores between 31-35 indicate the respondent is extremely satisfied with life. A score of 20 indicates the person is neutral, i.e. neither satisfied nor dissatisfied with life.

Depression and Anxiety Symptoms Scale (DASS-21). A 4-point self-report was used to measure the related negative emotional states of depression, stress and anxiety. The measure contains 19 items, for which participants rate the extent to which a statement applied to them over the past week, from “did not apply to me at all” (0) to “applied to me very much, or most of the time” (3). Items include “I felt that I was using a lot of nervous energy” and “I found it hard to wind down”.

Basic Psychological Needs Scale (BPNS; Deci & Ryan, 2000). A 7-item Likert Scale was used to assess the degree to which people feel satisfaction of the needs of autonomy, competence and relatedness. Participants rated the extent to which they thought 21 items were true from “not at all true” (1) to “very true” (7). Items addressed the subscales of competence (e.g., “often, I do not feel very competent”), relatedness (e.g., “people in my life care about me”) and autonomy (e.g., “I generally feel free to express my ideas and opinions”).

Parenting style and involvement. The Perceptions of Parents Scales (POPS; Niemiec, et al., 2006), an 18-item self-report questionnaire, was used to assess students’ perceptions of their parents’ autonomy support (e.g. “My mother/father allows me to decide things for myself”; “My
mother/father insists upon my doing things her way” - reversed) and involvement (e.g. “My mother/father finds time to talk with me”; “My mother/father is not very involved with my concerns” - reversed). Though the measure addresses perceptions of mothers and fathers separately, our hypotheses were not specific to mother and father and we created composites by averaging mother and father together for both autonomy support and involvement. Participants rated the extent to which they agreed with statements about their parents from “not at all true” (1) to “very true” (7).

**Narrative Prompts and Coding**

We first coded for academic high-point narratives and then low-point narratives. To ensure high interrater reliability, we first coded a subset of narratives from Wave 1, noted discrepancies between the three coders, discussed and resolved these discrepancies, and then moved on to code another set. In this process of preparing for our formal coding analysis, we failed to achieve sufficient interrater reliabilities in the timeframe we were working with for certain themes, namely learning/mastery/growth in high points and maladaptive coping in low points. Therefore, we moved forward in our analysis without these themes. Once we achieved high congruence in the scoring of all other themes, we began the formal coding process to be used in our analysis.

*Academic high points.* Participants were asked to talk about an academic experience from the last school year that stood out as extremely positive. Participants were asked to describe “what happened, when it happened, who was involved, what you were thinking and feeling, why this experience was a high/low point, and why it is meaningful to you” (see Appendix A for full coding system). Following the general prompt, a number of ‘telling questions’ were asked of participants, including the number of times the memory was shared in the past, when it was
shared, how many different people it was shared with and who they were, the positivity/negativity of sharing it and the emotions involved. Academic high-point narratives were coded for motivation, specifically the presence of intrinsic motivation themes (enjoyment/interest and pride/confidence, and mastery/learning/growth) and extrinsic motivation themes (overall external validation and specific external validation from the sources of parent, teacher, grade and peers).

*Enjoyment/Interest.* We evaluated the extent to which a narrative was an academic high point because a topic, assignment, or task was enjoyable and/or sparked the person’s interest. This measure was rated on a 0-3 scale, from “theme not present” (0) to “theme implied or minimally mentioned in a very peripheral way” (1) to “theme clearly mentioned as part of high point, but not developed” (2) to “theme clearly stated and central to high point and developed” (3). The interclass correlation coefficients (ICCs) for enjoyment/interest ranged from .72 to .99. This excerpt of an academic high point narrative is illustrative of a high score (3) on this measure: “I fell in love with the subject. I actually enjoyed going to class, I would constantly ask the professor questions after class because I just wanted to know more. I also enjoyed that I understood the topic well enough to help others with their learning”.

*Pride/Confidence.* The extent to which a narrative was an academic high point because the person felt proud of themselves or gained confidence from the intrinsic process of their own efforts was measured on the same 3-point scale as for enjoyment/interest. People who scored highest on this measure had their own internal set of standards independent of external validators that provided a source of positive self-evaluation. The ICCs for pride/confidence ranged from .43 to .75. An example of a high point narrative that scored high on this theme contained the following: “*When submitting the project [...] I felt proud about the learning process I went*
through to complete it...I feel like I have the ability to then produce more pieces like this of similar and better quality”.

**External Validation.** An overall score for external validation was given based on the extent to which the high point in the narrative was defined in terms of being validated by external sources. An excerpt that demonstrates a high score of external validation is as following: “I received a 4.0 on a paper […] This good grade was very validating for me […] and it was great to receive affirmation that my excitement and interest were paying off”. The same 3-point scale was used as in the coding system for intrinsic motivation. ICCs for this overall measure were high, ranging from .73 to .87.

**Specific External Validators.** In addition to deriving an overall external validation score for each narrative, we coded for more specific external sources of validation namely *parent*, *teacher*, *grade*, and *peer validation* in terms of the presence (1) or absence (0) of these themes. An excerpt from a narrative that scored high on teacher validation is provided: “I just received an email from my professor from this past semester with comments on my final pieces for the class and they were positive […] The professor’s comments on my essays made me think that I could actually do it […]. I had a sort of validation of my work […]. My professor’s response made me think that was more within my grasp”. Since these items were categorical, the kappa statistic was used to measure inter-rater agreement. The kappas ranged from .39 to 1.00 for *parent*, .58 to .88 for *teacher*, .65 to 1.00 for *grade*, and .46 to 1.00 for *peer validation*.

**Academic low points.** Participants were asked to talk about an academic experience from the last school year that stood out as extremely negative, and were then given the same instructions to describe the event as for the academic high point. Academic low point narratives were coded for the presence of *adaptive/mastery coping* (see Appendix B for full coding...
system). This theme was characterized by active problem solving (such as seeking out help, changing study strategies, increasing one’s efforts), overcoming adversity or taking on a challenge, learning lessons that are adaptive for the future, and/or emphasizing self-growth. *Adaptive/mastery coping* could also include a healthy sense of self-awareness and perspective about the low point. After the low point, participants reported details of the social support they sought out in the face of the academic low point, including how often they shared the low point with others and how many people they shared it with.
Results

Preliminary Analysis

Before testing our hypotheses, we conducted a correlation analysis to investigate the correspondence between perceived levels of autonomy support and involvement for each parent. Substantial correlations between these respective parenting variables between mothers and fathers would justify creating composite measures for autonomy supportive parenting and involvement by averaging the scores for mothers and fathers together for each. We did find that autonomy supportive parenting of mothers and fathers were strongly correlated, $\beta = .394, p < .01$, as were parental involvement of mothers and fathers, $\beta = .430, p < .01$, making it possible to examine how the parenting dyad rather than separate parental figures are related to well-being.

Hypothesis 1: Parenting and Well-Being

Our first hypothesis examined whether parenting style was related to changes in well-being over time over the first year of college. Before we examined change, we first examined bivariate correlations between the parenting styles measured at Wave 1 and the indicators of well-being measured at waves 1, 2, and 4. As shown in Table 1, we found that students’ perceptions of their parents’ autonomy support and level of involvement were associated with their well-being all through college. Autonomy support and involvement were strongly correlated with our well-being measures (Satisfaction with Life Scale and Depression and Anxiety Scale) as well as the three Basic Psychological Needs scales across the four waves.

In order to test our first hypothesis, that parenting style measured in Wave 2 would predict a change in well-being from Wave 1 and Wave 4, we performed a multiple regression analysis in which involvement and autonomy support were entered in the first step and the term representing their interaction was entered in the second step. The interaction term was
constructed by centering both parenting variables and multiplying the centered means. This allowed us to explore whether autonomy supportive parenting might have a different effect on changes in well-being depending on the parent’s degree of involvement in the college student’s life. Each well-being outcome was then regressed on these two parenting predictors. We first examined this interaction effect for change in SWL. Main effects were found for each parenting variable, in that autonomy support predicted an increase in life satisfaction ($\beta = .356, p < .01$) while involvement predicted a decrease ($\beta = -.187, p < .05$). However, the combination of autonomy support and involvement produced a non-significant effect for change in SWL ($\beta = .016, p > .05$). We examined this same interaction effect for change in DASS. Autonomy support positively predicted an increase in DASS from Wave 1 to Wave 4 ($\beta = .364, p < .01$), and involvement was unrelated to changes in DASS across the four waves ($\beta = .091, p > .05$). Although involvement on its own did not have an effect on DASS, Figure 1 shows that the combination of low autonomy support and high involvement has a considerable effect on changes in DASS. In fact, college students who showed the steepest increase in depression and anxiety from Wave 1 to Wave 4 were those whose parents were perceived as combining low autonomy-support and high involvement.

![Figure 1. Moderation Effect of Autonomy Support on Involvement in Relation Change in DASS (Wave 1-4)](image-url)
We also ran multiple regression analyses to examine how changes in college students’ sense of autonomy and competence regressed on autonomy support, involvement, and the interaction of these two parenting variables. Though main effects were found for autonomy support ($\beta = .358, p < .01$) and involvement ($\beta = .070, p > .05$) on changes in $BPNS_{autonomy}$, no significant interaction effect was found ($\beta = .070, p > .05$). In terms of changes in $BPNS_{competence}$, significant main effects were found for autonomy support ($\beta = .312, p < .01$) and involvement ($\beta = -.220, p < .01$), and the interaction effect was marginally significant ($\beta = .083, p = .05$). As shown in Figure 2, students whose parents are both involved and controlling show a decrease in their sense of competence across their time at college.

![Figure 2](image)

**Figure 2. Moderation Effect of Autonomy Support on Involvement in Relation to Change in $BPNS_{Competence}$ (Wave 1-4)**

After running multiple regressions to examine both the main and interaction effects of our parenting variables on $DASS$, we conducted a mixed factorial ANOVA to examine the three-way interaction between autonomy support, involvement and time in predicting these outcomes. We first looked at the effects of this interaction on $DASS$. To examine the effects of this interaction, autonomy and involvement were two between-subjects factors and were split up based on their median scores as high or low. Time ($DASS$ at Wave 1 and 4) was the within-subjects factor. First, we found a main effect of the within-subjects factor of time ($F = 23.66, p <$
.01), showing that for the sample as a whole, mean-level DASS scores increased significantly from 1.54 to 1.64 from Wave 1 to Wave 4. Consistent with the regression results, there was also a significant three-way interaction for time, autonomy support and involvement ($F = 4.17$, $p < .05$). As shown in Figure 3, the group that showed the steepest increase in DASS were students who perceived their parents to be controlling and involved. In contrast, parents perceived to be involved and autonomy supportive were the only group that did not show an increasing trajectory of depression and anxiety across the four waves.

Hypothesis 2: Parenting, Motivation and Well-Being

Our second hypothesis explored how intrinsic and extrinsic motivation themes in academic high point narratives mediated the relationship between parenting variables and well-being. We predicted that intrinsic motivation would mediate the relationship between autonomy supportive parenting and an increase in well-being from Wave 1 to 4, while extrinsic motivation would mediate the relationship between control and a decrease in well-being. These hypotheses were based on the idea that students of autonomy supportive parents are more likely to develop an intrinsic set of values and undertake self-regulated behaviors, leading to the satisfaction of the three basic needs and thus greater well-being. The first step for testing mediation is that intrinsic and extrinsic motivation as the proposed mediators had to correlate significantly with both...
parenting and well-being. Our correlation analysis showed that the criteria for mediation were not met: no significant correlations were found between intrinsic motivation themes (enjoyment/interest and pride/confidence) and parenting, nor extrinsic motivation themes (external validation and parent, teacher, grade, and peer validation) and parenting. In addition, few significant associations were found between intrinsic themes and well-being (see Table 2) or extrinsic themes and well-being (see Table 3).

Table 2. Correlation of Intrinsic Motivation Themes (Wave 3) and Well-Being (Wave 1-4)

<table>
<thead>
<tr>
<th></th>
<th>Enjoyment/Interest</th>
<th>Pride/Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.064</td>
<td>.064</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>-0.79</td>
<td>-0.44</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.019</td>
<td>.104*</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-0.021</td>
<td>-0.099*</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>-0.008</td>
<td>.072</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>-0.010</td>
<td>.038</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 3)</td>
<td>.041</td>
<td>.104*</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 3)</td>
<td>-.027</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.055</td>
<td>.169**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.052</td>
<td>-.099</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.039</td>
<td>.028</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>-0.026</td>
<td>.037</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
Table 3. Correlation of Extrinsic Motivation Themes (Wave 3) and Well-Being (Wave 1-4)

<table>
<thead>
<tr>
<th></th>
<th>Overall Validation</th>
<th>Grade Validation</th>
<th>Teacher Validation</th>
<th>Parent Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.000</td>
<td>-.064</td>
<td>.049</td>
<td>.031</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>.027</td>
<td>.020</td>
<td>-.029</td>
<td>-.039</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.021</td>
<td>-.011</td>
<td>.057</td>
<td>.042</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-.011</td>
<td>-.020</td>
<td>.029</td>
<td>-.039</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>.082</td>
<td>-.002</td>
<td>.058</td>
<td>-.043</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>.026</td>
<td>.012</td>
<td>.007</td>
<td>-.009</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 3)</td>
<td>.061</td>
<td>-.033</td>
<td>.046</td>
<td>.053</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 3)</td>
<td>-.060</td>
<td>-.019</td>
<td>.002</td>
<td>-.024</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.056</td>
<td>.008</td>
<td>.055</td>
<td>.043</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.018</td>
<td>-.022</td>
<td>.018</td>
<td>-.029</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.124*</td>
<td>.131*</td>
<td>-.020</td>
<td>.062</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>.043</td>
<td>.098</td>
<td>-.064</td>
<td>.053</td>
</tr>
</tbody>
</table>
Hypothesis 3: Parenting, Coping and Well-Being

Our third hypothesis explored the relations between parenting, coping style and well-being in the context of academic low point narratives. Specifically, we predicted that adaptive coping would mediate the relationship between autonomy supportive parenting and changes in well-being. This was based on the idea that autonomy supportive parents are more likely to foster a sense of academic competence and control over academic outcomes in their children and thus better equip them to manage adverse academic events (Harter, 1982). To test this mediation hypothesis, we followed the same steps as for Hypothesis 2, examining first whether the low point theme of adaptive coping correlated significantly with both parenting and well-being measures. We found significant correlations between adaptive coping in low points and autonomy support ($\beta = .110$, $p < .05$). While no significant associations were found in the first wave, adaptive coping correlated significantly with SWL, BPNS_autonomy, and BPNS_competence in Wave 2, and with DASS and BPNS_competence in Wave 4 (see Table 4).
<table>
<thead>
<tr>
<th>Adaptative Coping in Low Points</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.075</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>-.082</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.168**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-.081</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>.112*</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>.143**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 3)</td>
<td>.147**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 3)</td>
<td>-.130**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.100</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.111*</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.066</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>.119*</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01
Since the criteria for testing mediation was met in that adaptive coping as the mediator correlated significantly with both autonomy support and various well-being measures in Waves 2 and 4, we regressed each well-being measure (DASS and BPNS_competence) on autonomy support and adaptive coping, with autonomy support entered in the first step and adaptive coping entered in the second step. Inconsistent with mediation, the effect of autonomy support on DASS in the first step ($\beta = -.366, p < .01$) was not reduced to non-significance ($\beta = -.361, p < .01$) when adaptive coping was also included in the second step of the analysis. Similarly, the effect of autonomy support on BPNS_competence in the first step ($\beta = .555, p < .01$) was not reduced to non-significance ($\beta = .551, p < .01$) when adaptive coping was included in the second step. Thus, adaptive coping does not appear to mediate the relationship between autonomy supportive parenting and either the DASS or BPNS_competence measures of well-being.

In addition to examining the role of adaptive coping in academic low point narratives as a mediator between parenting style and well-being, we ran correlations to explore if autonomy supportive parenting corresponded with the degree to which college students shared their low points with others. Since social support seeking in times of adversity has been found to be positively associated with life satisfaction (e.g. Prati & Pietrantoni, 2008), we hypothesized that college students who shared the low point with others would score higher on well-being than those who didn’t. Counter to our prediction, no significant associations were found between telling parents and SWL, DASS, BPNS_autonomy or BPNS_competence at Wave 4. As an exploratory hypothesis, we also examined whether students who told others about the event would be more likely to have autonomy supportive and involved parents. We found that students who perceived their parents to be autonomy supportive ($\beta = .181, p < .01$) and involved ($\beta = .139, p < .01$) were more likely to share the low point with them.
Hypothesis 4: Culture and its Relation to Parenting, Motivation, Coping, and Well-being

Our fourth hypothesis explored cross-cultural differences in the relationship between parenting styles and college student well-being. Before investigating the relations between these variables, we first conducted an independent t-test to look at mean-level differences in perceptions of parents’ autonomy support and involvement between Asian and non-Asian college students. In line with our hypothesis and the research literature on cultural differences in parenting (e.g., Chirkov and Ryan, 2001), we found a significant difference in autonomy supportive parenting between these two groups. Specifically, Asian students ($M = 4.85, SD = 1.17$) scored significantly lower than non-Asians ($M = 5.21, SD = 1.13$), on autonomy support, $t(494) = -2.42, p < .05$. However, no significant differences were found between Asian and non-Asian students on mean levels of parental involvement, $t(84.47) = -2.35, p < .05$.

We also conducted an independent samples t-test to compare mean-levels of well-being between Asian and non-Asian students, and found that Asian students scored marginally lower on SWL at Wave 1 and significantly lower at Waves 2, and 4. In addition, Asian students scored marginally lower on BPNS_autonomy in Wave 2 (see Table 5 for all results).
Table 5. Well-Being Means for Asian and Non-Asian College Students

<table>
<thead>
<tr>
<th></th>
<th>Cultural Group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Asian</td>
<td>Non-Asian</td>
<td>t</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td></td>
<td>4.57</td>
<td>4.91 (1.35)</td>
<td>2.14*</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td></td>
<td>1.54</td>
<td>1.54 (.49)</td>
<td>.021</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td></td>
<td>4.41</td>
<td>4.94 (1.34)</td>
<td>2.91*</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td></td>
<td>1.57</td>
<td>1.59 (.55)</td>
<td>.243</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td></td>
<td>4.71</td>
<td>5.00 (.90)</td>
<td>2.42*</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td></td>
<td>4.66</td>
<td>4.86 (1.02)</td>
<td>1.52</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 3)</td>
<td></td>
<td>4.24</td>
<td>4.94 (1.35)</td>
<td>3.66***</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 3)</td>
<td></td>
<td>4.24</td>
<td>1.60 (.53)</td>
<td>-1.18</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td></td>
<td>4.41</td>
<td>5.08 (1.24)</td>
<td>3.69***</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td></td>
<td>1.63</td>
<td>1.65 (.50)</td>
<td>.143</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td></td>
<td>4.72</td>
<td>5.00 (.95)</td>
<td>2.10*</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td></td>
<td>4.61</td>
<td>4.87 (1.08)</td>
<td>1.67*</td>
</tr>
</tbody>
</table>

Note. * = $p < .05$, *** = $p < .001$. Standard Deviations appear in parentheses below means.

To further examine the nature of this difference, we conducted a mixed factorial ANOVA to see if there was a main effect of time on SWL. As shown in Figure 4, the difference in SWL between Asian and non-Asian students was large from the first wave, and widened slightly by Wave 4, though the main effect of time was non-significant ($F = .218, p > .05$). This suggests that cultural differences in SWL were already very apparent at Wave 1, and this difference could not be explained by the progression through college from Wave 1 to 4.


After examining mean-level differences in parenting and well-being variables between the two cultural groups, we ran correlations to look at how our parenting variables related to well-being for Asian and non-Asian students separately. Although parents in collectivistic cultures tend to be less autonomy supportive on average, a growing body of research has shown that autonomy support is universally important for well-being (Chirkov & Ryan, 2001; Marbell & Grolnick, 2012; Sheldon et al., 2009; Vansteenkiste et al., 2005). In line with these findings, we found that associations between parenting (autonomy support and involvement) and well-being (SWL, DASS, BPNS_autonomy and BPNS_competence) were similar between the non-Asian sample and sample as a whole (see Table 2) and the Asian sample and sample as a whole, though these correlations tended to be weaker (see Table 3).

We then added culture as an additional moderating variable to the previously reported multiple regressions for autonomy support, involvement and changes in well-being. Specifically, we added culture as both a main effect, as a two-way interacting factor with each parenting variable, and as a three-way interacting factor with the interaction between the two parenting variables, to explore whether culture mediates the effects of parenting on changes in well-being.
across the transition to college. The only significant effect was a main effect of cultural group on change in life satisfaction ($\beta = -0.109, p < .05$). This negative effect suggests that Asian students increase less in life satisfaction over their time at college than non-Asian students. However, no interaction effects of culture were found for how autonomy supportive and involved parenting relate to changes in DASS, BPNS\textit{autonomy} and BPNS\textit{competence} from Wave 1 to Wave 4. In other words, the differences in well-being trajectories between the two groups are not related to cultural differences in parenting.

We also examined whether there were any significant differences in intrinsic and extrinsic motivation between the two cultural groups. In the context of academic high points, we hypothesized that Asian students would score higher on extrinsic motivation, given that the research literature on cultural differences in motivation suggests that the endorsement of extrinsic values may be more normative in collectivistic cultures (e.g. Lekes et al., 2009). After conducting an independent samples t-test, we found that non-Asian students scored significantly higher on the intrinsic theme of \textit{enjoyment/interest} ($M = 0.76, SD = 1.07$) than Asian students ($M = 0.46, SD = 0.90$), $t(433) = 2.055, p < .05$. However, no significant differences emerged for \textit{pride/confidence}, or any of the external motivation themes across the two groups.

Next, we examined cultural differences in coping with academic low points. The literature on cultural differences in coping suggests that the concept of mastery coping may not be universally beneficial (e.g. Wang et al., 2010). After conducting an independent samples t-test, we found no significant differences between Asian ($M = 0.45, SD = 0.64$) and non-Asian students ($M = 0.36, SD = 0.52$) on the presence of adaptive coping in academic low point narratives, $t(424) = -1.28, p > .05$. We then conducted a t-test to compare the extent to which each group sought out social support. Research has shown that students from collectivistic
cultures are less likely to seek out social support in response to negative events and instead tend to exercise emotional restraint to avoid burdening others with their problems (e.g., Louie and Lau, 2010). Thus, we predicted that non-Asian students would be more likely to seek out social support when coping with academic low points. Our findings differed from this hypothesis in that no differences were seen between the groups in how often the low point was shared with others or how many people were told about the low point. We then conducted a chi-square test to see if these non-significant findings could be rejected and if there is in fact a significant relationship between Asian and non-Asian students in support-seeking. However, we found no significant differences in the share of respondents who told their parents about the low point within the Asian and non-Asian groups respectively.

**Discussion**

The purpose of this study was threefold. First, we investigated how autonomy supportive parenting and parental involvement relate to college students’ changes in well-being. We then examined how motivation and coping mediate the relations between parenting and well-being in the context of academic high and low point narratives. Finally, we examined cultural differences in the relations between these variables.

We first examined how autonomy supportive and involved parenting correlated with well-being and the satisfaction of the three basic psychological needs of the Self-Determination Theory. Prior research has suggested that emerging adults whose parents promote a sense of autonomy and are highly involved in their everyday lives show higher well-being, lower levels of depression and various other positive life outcomes (e.g., Schiffrin et al., 2013). Consistent with this idea, our data suggests that individuals who perceive their parents to be more autonomy
supportive and more involved experience higher life satisfaction, lower depression and anxiety, and a greater sense of autonomy, competence and relatedness across their time at college. We then went beyond existing research by exploring how parenting is related to changes in well-being during college. Our data were longitudinal, helping us uncover the dynamic and interactional nature of parenting, well-being and cultural variables over time. We found that students who perceived their parents to be autonomy supportive increased on life satisfaction, and felt a greater sense of competence and sense of autonomy over time, while students who perceived their parents to be controlling increased on depression and anxiety. The effect was more pronounced for the DASS scale than the SWL scale, in that having less autonomy supportive parents explained more of a decrease in scores on depression and anxiety than having more autonomy supportive parents explained an increase in life satisfaction.

Surprisingly, we also found that college students who perceived their parents to be more involved decreased on life satisfaction, suggesting that involvement in itself may be potentially detrimental for well-being. Given that emerging adulthood is an important developmental stage of life in which adolescents seek to gain independence from their parents and take responsibility for themselves, it is possible that high involvement, as conceptualized and measured in our study, is developmentally inappropriate in that it reduces adolescents’ perceived ability to transition successfully into adulthood, thereby negatively impacting their psychological health. High involvement may thus be conceptually analogous to Schiffrin et al.’s (2013) notion of ‘helicopter parenting’ at this stage of life, since it conflicts with students’ desire for a heightened sense of autonomy as they work towards becoming independent and self-reliant adults.

Next, we looked at how the combination of autonomy support and involvement relate to well-being. Research has suggested involvement can do more psychological harm than good
when coupled with control (e.g. LeMoyne & Duchanan, 2011; Schiffrin et al., 2013). In line with these findings, we found that the interaction between high involvement and low autonomy support has a large effect on changes in college students’ levels of depression and anxiety as well as their sense of competence over time. Among parents who are highly involved, there is a huge difference in their children’s sense of competence based on whether their parenting style is autonomy supportive or controlling. Specifically, autonomy supportive and involved parenting relates to a decrease in depression and an increase in competence. On the other hand, students whose parents are controlling and highly involved show a major increase in depression and a decrease in competence over their first year at college. These findings support the idea behind SDT that a lack of autonomy support may be especially detrimental for well-being in the transition from late adolescence to adulthood (e.g. Grolnick & Ryan, 1989), especially when coupled with high involvement. If high involvement by itself is akin to parents “hovering” over their children, the combination of high involvement and low autonomy support may better characterize controlling parenting than low autonomy support in itself.

It is important to note that our data do not establish directionality, and it is possible that low well-being may be causing a parenting response in the form of high involvement. In addition, our findings do not indicate causal connections between parenting and well-being. Given this, there could be a third variable in play that explains this relationship. For instance, studies have shown that students who score high on the Big Five personality trait of agreeableness and low on neuroticism score higher on well-being (Grant, Langan-Fox & Anglim, 2009), and also have more autonomy supportive parenting (Prinzie, Stams, Geert, Deković, Reijntjes & Belsky, 2009). Future research should examine reciprocal relations and the influence of other factors in the associations between our parenting variables and well-being.
In the second part of our study, we coded academic high points for themes of intrinsic and extrinsic motivation, and academic low points for themes of adaptive and maladaptive coping, to assess whether motivation and coping strategies mediate the relationship between parenting and well-being. Before examining mediation effects, we explored how motivation and coping themes relate to well-being and parenting.

For the most part, intrinsic motivation was not associated with autonomy supportive parenting or higher well-being, and contrary to our hypothesis, motivation did not mediate the relationship between parenting and well-being. A possible reason for this is that autonomy supportive parenting does not relate to the endorsement of intrinsic values in college, and thus does not lead to more positive life outcomes. However, given the wide body of research suggesting that parents do play a key role in motivation and goal attainment for emerging adults (e.g. Ginsburg & Burnstein, 1993; Gurland & Grolnick, 2005), this explanation seems to be unlikely. A more likely reason could relate to the fact that we were working under a limited timeframe to code each narrative theme, and did not use preexisting coding systems to analyze these themes. While some themes were straightforward to code as shown in their high interrater reliabilities, such as interest and enjoyment, others were conceptually more intricate and had a broader range or reliabilities across the four waves, such as pride and confidence. This construct may be more multifaceted than we understood it to be. Moreover, the extent to which this theme characterizes intrinsic motivation can in hindsight be questioned. Feelings of pride and confidence as a result of experiencing a high point could say more about the internalization of external standards than about the fulfillment of one’s inherent goals and values, and may thus be better captured as identified motivation. Research on motivation in narrative construction should
look to build formalized, structured and comprehensive coding schemes that reliably measure the themes that encompass this concept.

While few significant associations were found between motivation and well-being, our findings on the links between adaptive coping and well-being were more promising. Adaptive coping was significantly associated with various well-being measures in Waves 2, 3 and 4. This finding is consistent with past research showing that individuals who engage in proactive, problem-focused and growth-driven steps to dealing with adverse events are more likely to experience better life outcomes than those who don’t (e.g., McAdams, 2001). While research in the field of narrative identity has found that narratives around negative events that contain themes of redemption and growth, and more positive endings, correspond with an increase in adolescent well-being (e.g., McLean & Lilgendahl, 2008), our research is one of few studies to measure adaptive coping using a narrative approach. Moving forward, more research employing a narrative approach is needed to corroborate our findings.

We also investigated the extent to which adaptive coping was associated with parenting. As hypothesized, emerging adults who perceive their parents to be autonomy supportive had more themes of adaptive coping in their low point narratives, indicating that college students who feel autonomous are more likely to employ proactive and problem-focused strategies in dealing with adversity. In addition, we found that participants who perceived their parents to be more autonomy supportive were more likely to tell their parents about their academic low point. This suggests that parents who are autonomy supportive may be more approachable to college students and are more likely to prompt communication between the dyad. On the other hand, students with controlling parents are less likely to engage them when experiencing academic
stresses, which may create a cycle of negative effects for the parent-college student relationship as the adolescent transitions to adulthood.

In spite of these significant associations, adaptive coping did not mediate the relationship between parenting and well-being. It is possible that a narrative approach as applied in our study simply is not an effective means of illuminating college students’ motivation and coping behaviors. The narrative prompts used in our study may not activate or comprehensively reflect the experiences of academic high and low points in college, and may be better measured using other approaches. There may have been certain aspects of academic high and low points that would have been important to include in our analyses but were overlooked in our prompts. Only once our findings are corroborated by other studies that adopt more developed coding systems for these concepts can we begin to understand the relevance and value of a narrative approach in understanding how students experience peaks and lows in college.

In the final part of our study, we explored how the perception and manifestation of parenting behaviors across cultures relates to well-being among college students. Specifically, we looked at differences between Asian and non-Asian college students in autonomy supportive and involved parenting and the way these parenting styles relate to well-being, motivation around high points and coping with academic low points. Most studies on autonomy supportive parenting in the past have used homogenous samples (e.g. Schiffrin et al., 2013), and our study sought to fill this gap by investigating cross-cultural differences in the relations between parenting and well-being. In line with current research showing lower absolute levels of autonomy support of parents in collectivistic cultures (e.g. Kim, 2013), we found that Asian students perceived their parents to be less autonomy supportive on average than did non-Asian students. However, there were no differences between the groups on perceived levels of parental
involvement. These findings conform to the large body of research showing that parents from collectivistic cultures tend to be more authoritarian and controlling than those from individualistic cultures (e.g., Chirkov & Ryan, 2001; Dornbusch et al., 1987). While levels of involvement are cross-culturally similar, the nature of this involvement differs in terms of autonomy support or control.

Both autonomy supportive parenting and involvement positively correlated with well-being for both Asian and non-Asian samples. This is in line with the idea posited by SDT, and supported by research (e.g., Marbell & Grolnick, 2012; Sheldon et al., 2009) that the benefits of autonomy support are universal. The effect sizes of these variables were similar across the two groups, but the statistical power for the Asian group was at times too low to detect a meaningful association between parenting and well-being, given its small sample size.

Our data also point to motivational differences across the two cultural groups. Specifically, we found that Asian students’ academic high point narratives included less themes of enjoyment and interest. One explanation for this is that students from collectivistic societies may be less likely to associate their academic peak moments with personal gratification, and report these moments more pragmatically. This idea falls in line with the argument put forward by Sue and Osazaki (1990), who suggest that being less intrinsically motivated may be normative in collectivistic cultures, in which doing well in school has more of a functional utility since there are restricted pathways to success besides education for this group, and is thus less relevant to self-esteem. Considering that performing well in school may be seen primarily as a means of improving livelihood, we expected to see a greater emphasis on the tangible outcomes related to academic high points and higher levels of external validation among Asian students. However, Asian students did not narrate more extrinsic themes than non-Asian students. It could
be that mean levels extrinsic motivation of college students are less a product of culture than other factors, such as the higher education system in the United States. In any case, repeating this study with a larger Asian sample and a formalized coding approach for intrinsic and extrinsic motivation would help to increase the credibility of our results, both conceptually and statistically.

It is important to note that our Asian sample may not accurately represent the cultural domain of collectivism, limiting the generalizability of our findings to this population. For one, all students in this group attended college in the United States and were thus influenced to some degree by this individualistic society. Although a substantial share (27.1%) of Asian students identified as international, indicating that an exposure to cultural traditions outside of the U.S., their acceptance of and identification with collectivistic values may have shrunk at college as they encountered and took part in values that characterize an individualistic society. The majority of the Asian sample (50.6%) were born in the U.S., and many are likely to have lived in the U.S. most of their lives and see themselves as American. The bicultural identity literature indicates that it is possible to identify as both American and American, or as Asian-American (e.g. Atkinson, Morten & Sue, 1993), and the racial demographic question for our cultural comparison does not account for these distinctions. Future work should attempt to better encapsulate the varied ways in which different students identify with their host and heritage cultures.

In addition to considering the Asian sample’s relations with and acceptance of the host culture, this study could be expanded by considering cultural influences of parents. While both the parent and child may shift towards Western norms as a result of living in an individualistic society, there may be a mismatch over cultural values between them, in that the parent identifies more closely with collectivistic values. A lot of research has focused on the tension that arises
within families between parents and children due to intergenerational differences in acculturation (Birman, 2006; Trickett and Jones, 2007; Ying and Han, 2007), and it would be interesting exploring how these intergenerational gaps play into the relations between our parenting variables and well-being for college students from collectivistic backgrounds.

The scope of our study also did not allow us to consider the ways in which autonomy supportive and involved parenting behaviors are manifested and perceived in economically diverse populations. There is evidence in the research literature that high autonomy support and high involvement are uniquely characteristic of parents of higher socioeconomic status. Various researchers have found a relationship between low SES and controlling parenting behaviors (Bluestone & Tamis-LeMonda, 1999; McLoyd, 1990; Shumow, Vandell & Posner, 1998). On the other hand, low SES does not guarantee controlling parenting. For instance, Rosier and Corsaro (1993) found that mothers in low SES households were autonomy supportive in that they encouraged their children to be independent and self-reliant as a means of fostering a sense of resiliency in the face of adverse events. Given these findings, it would be interesting to examine the role of SES not only in the relations between parenting and well-being but also parenting and coping with low points.

In addition, our study investigated perceptions of parenting by combining scores of each parent. Future research should consider mother-child and father-child dyads separately to examine how each parent is perceived as engaging in autonomy supportive and involved parenting and their separate impacts on college students. Since the Perceptions of Parents Scale used in our study has separate items for perceptions of mothers and fathers, it would be easy to investigate this. Future research should also compare scores on perceived parenting as reported by students and parents. While our data suggest that student perceptions of helicopter parenting
behaviors have an impact on their subjective well-being and sense of autonomy, competence and relatedness, it would be important to see if their own perceptions reflect their parents’ perceptions. It would also be interesting to examine how autonomy support and involvement affect the mental health of the parent. Past research has shown, for example, that parents who perceive their children as needing too much support score lower on life satisfaction (Fingerman et al., 2012).

Lastly, our study does not distinguish between biological and adoptive parents. It is likely that some students in our sample our adoptive, particularly some of our Asian sample, given that the largest proportion of transracially adopted children are Asian (Kreider & Lofquist, 2010). While a lot of studies have looked at the influence of figures other than parents on children, such as teachers (e.g. Yazici, 2016), little research has been done investigating how children raised by caregivers who are not related to them by blood (but still play a key role in their socialization process) affect their psychological functioning and development. This is an important gap in the literature that deserves to be addressed.

Helicopter parenting is a highly involved, demanding and intensive parenting style that has been found to be associated with various negative life outcomes (e.g., LeMoyne & Duchanan, 2011; Schiffrin et al., 2013; Niemic et al., 2006). Data from the present study suggests that parenting behaviors characterized by low autonomy support and high involvement leads to a decrease in well-being among students across the transition to college. Our study also found that college students who employ adaptive coping strategies when faced with academic low points score higher on well-being than those who don’t. Finally, our data indicate that autonomy supportive parenting is universally important for well-being, as suggested by the Self-Determination Theory. Overall, our findings suggest that autonomy support and involvement
continue to be key parenting behaviors as emerging adults move through college. Parents across cultures should be aware of the impact their parenting behaviors have on the psychological development of their children across their transition to college and beyond.
### Tables

**Table 6. Correlation of Parenting (Wave 2) and Well-Being (Wave 1-4)**

<table>
<thead>
<tr>
<th>Study Measure</th>
<th>Autonomy Support</th>
<th>Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.380**</td>
<td>.348**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.392**</td>
<td>.388**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 3)</td>
<td>.339**</td>
<td>.332**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.370**</td>
<td>.244**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>-.272**</td>
<td>-.241**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-.374**</td>
<td>-.347**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 3)</td>
<td>-.292**</td>
<td>-.253**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.390**</td>
<td>-.347**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>.496**</td>
<td>.387**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 3)</td>
<td>.429**</td>
<td>.294**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.403**</td>
<td>.187**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>.390**</td>
<td>.360**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 3)</td>
<td>.332**</td>
<td>.236**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>.343**</td>
<td>.164**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Relatedness (Wave 2)</td>
<td>.308**</td>
<td>.329**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Relatedness (Wave 3)</td>
<td>.348**</td>
<td>.302**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Relatedness (Wave 4)</td>
<td>.318**</td>
<td>.213**</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
Table 7. Correlation of Parenting (Wave 2) and Well-Being (Wave 1-4) for Non-Asian Students

<table>
<thead>
<tr>
<th></th>
<th>Autonomy Support (Wave 2)</th>
<th>Involvement (Wave 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.396**</td>
<td>.367**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>-.292**</td>
<td>-.273**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.384**</td>
<td>.379**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-.389**</td>
<td>-.378**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>.491**</td>
<td>.383**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>.397**</td>
<td>.357**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.389**</td>
<td>.261**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.406**</td>
<td>-.281**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.415**</td>
<td>.203**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>.363**</td>
<td>.162**</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
Table 8. Correlation of Parenting (Wave 2) and Well-Being (Wave 1-4) for Asian Students

<table>
<thead>
<tr>
<th></th>
<th>Autonomy Support (Wave 2)</th>
<th>Involvement (Wave 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Life (Wave 1)</td>
<td>.232</td>
<td>.191</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 1)</td>
<td>-.161</td>
<td>-.041</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 2)</td>
<td>.378**</td>
<td>.400**</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 2)</td>
<td>-.294**</td>
<td>-.141</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 2)</td>
<td>.489**</td>
<td>.381**</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 2)</td>
<td>.311*</td>
<td>.357**</td>
</tr>
<tr>
<td>Satisfaction with Life (Wave 4)</td>
<td>.199</td>
<td>.091</td>
</tr>
<tr>
<td>Depression and Anxiety Scale (Wave 4)</td>
<td>-.323*</td>
<td>-.076</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Autonomy (Wave 4)</td>
<td>.297*</td>
<td>.057</td>
</tr>
<tr>
<td>Basic Psychological Needs Scale: Competence (Wave 4)</td>
<td>.202</td>
<td>.133</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
Appendix A: Coding System for Motivation in Academic High Points

What qualities contribute to an academic experience being a high point? Typically, if an event is remembered as an emotional high point, it represents the fulfillment of a goal or value of the person and is therefore a window into the forms of motivation that are driving the person academically. For each high point, we will code for the presence of several motivational themes using the following scale:

0 = Theme not present at all
1 = Theme is implied or minimally mentioned in very peripheral way
2 = Theme is clearly mentioned as part of high point, but is not developed
3 = Theme is very clearly stated and is central to high point and developed

I. Intrinsic Motivation Themes
   A. Enjoyment/Interest – academic experience is a high point because a topic, assignment, the class, etc. is very enjoyable and / or sparks the person’s interest.
   B. Feeling proud of oneself/gaining confidence – academic experience is a high point because the person performed well by their own standards and efforts (e.g., hard work) and feels proud or more confident because of it. The person clearly has their own internal set of standards independent of external validators that provide a source of positive self-evaluation. (Note: Not sure if this is truly intrinsic motivation, more like identified motivation – internalization of external standards -- but I do think we should code for it as a theme).

II. Extrinsic Motivation Themes
   A. Overall validation from external sources: First, evaluate the extent to which the narrative conveys an overall sense that the person’s high point is defined in terms of being validated by external sources, and rate on the 0-3 scale provided above.
   B. Specific external validators: Second, code the presence vs. absence of the following more specific external sources of validation:
      a. Parents
      b. Teacher
      c. Grade
      d. Peers
Appendix B: Coding System for Coping in Academic Low Points

Code each of the types of coping defined below on the following 1 to 4 scale. Note that some narratives may not describe coping at all, which will result in low scores on both coding dimensions.

0 = No or minimal/very vague evidence for this form of coping in the low point narrative.
1 = Some evidence of this form of coping, though not very elaborated or central.
2 = Strong evidence for this form of coping – clear and either elaborated or emphasized/central.

I. Adaptive/Mastery-oriented Coping – To what extent does the low point narrative include a description of an adaptive or mastery-oriented coping response to the low point? An adaptive/mastery-oriented coping response could include any of the following – active problem solving (seeking out help, changing study strategies, increasing one’s efforts), overcoming adversity/taking on a challenge, emphasis on learning from setbacks/failures, learning lessons that are adaptive for the future, emphasizing self-growth, etc. This form of coping could also include a healthy sense of self-awareness and perspective about the low point.

II. Maladaptive Coping – To what extent does the low point narrative include a description of a maladaptive coping response to the low point (or as part of the low point)? A maladaptive coping response could include any of the following – a description of active avoidance of dealing with a problem or coping in ways that do not directly address the problem (e.g., disengaging, distracting oneself, ruminating about the problem), focusing on blame in harmful ways (either overly punitive self-blame or inappropriately or excessively externalizing blame onto others), helplessness evidenced by giving up or not knowing what to do going forward, and evidence, direct or indirect, of a fixed mindset – attributions to low ability, doubting one’s intelligence, etc. – making maladaptive and extreme and negative conclusions about the self.
References


Love, Keisha M. and Thomas, Deneia M., "Parenting Styles and Adjustment Outcomes Among College Students" (2014). *Educational, School, and Counseling Psychology Faculty Publications.*


Rogers, Carl. (1951). *Client-Centered Therapy*. p. 64


pmid:20658885


doi:10.12973/jesr.2016.62.1