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# Achievement Motivation in Emerging Adulthood: An Examination of Overparenting, Need Satisfaction and Frustration, and Goal Complexes

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# Achievement Motivation In Emerging Adulthood: An Examination Of Overparenting, Need Satisfaction And Frustration, And Goal Complexes

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**Dedication**

This dissertation is dedicated with my deepest love and gratitude to my husband George and my irrepressibly wonderful and heart-melting children Hadley and Leo. George, your steadfast patience and support made my dream a reality. Hadley and Leo, your silliness, laughter, and hugs gave me the energy to keep going, especially on days when I thought I would never finish. I also dedicate this dissertation to my grandmother Cory Sparks. Your absolute belief in me has always been an unwavering presence in my life and has become a part of who I am. I will be forever grateful for that gift.

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**Abstract**

In recent years, helicopter parenting, or overparenting, has become an increasing concern on college campuses. Research has linked overparenting to a variety of maladaptive characteristics and outcomes among emerging adults, but little is known about how overparenting predicts achievement goals. This study used an integrated framework of self-determination theory (SDT) and the hierarchical model of achievement motivation from the achievement goal approach (AGA) to examine how overparenting and the basic psychological needs of autonomy, competence, and relatedness predict the endorsement of achievement goal complexes. Participants were 176 emerging adult college students who completed an online survey. Data were analyzed using hierarchical regression. Overparenting negatively predicted autonomy satisfaction and positively predicted autonomy frustration but had no relationship with any of the achievement goal complexes. Need satisfaction and competence satisfaction positively predicted the mastery approach (MAp) autonomous goal complex. Need satisfaction, competence satisfaction, and competence frustration positively predicted the performance approach (PAp) autonomous goal complex. Need frustration positively predicted the PAp Controlled goal complex. No predictive relationships were found between overparenting, need satisfaction, and need frustration and the MAp Controlled goal complex. The significance, limitations, and implications for future research and practice are discussed.

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**List of Abbreviations**

AGA ..... Achievement Goal Approach

MAp ..... Mastery Approach

MAp Aut. ..... Mastery Approach Autonomous

MAp Con. ..... Mastery Approach Controlled

MAv ..... Mastery Avoidance

PAp ..... Performance Approach

PAp Aut. ..... Performance Approach Autonomous

PAp Con. ..... Performance Approach Controlled

PAv ..... Performance Avoidance

SDT ..... Self-Determination Theory

# Chapter 1

## Introduction

My research explores the role helicopter parenting, or overparenting, plays in achievement motivation during emerging adulthood. Specifically, I use self-determination theory and the achievement goal approach as guiding frameworks to examine the degree to which overparenting predicts both the satisfaction and frustration of emerging adults' basic psychological needs (i.e., autonomy, competence, and relatedness) and the achievement goals they adopt. Additionally, my research investigates the possibility of need satisfaction and/or need frustration moderating the relationship between overparenting and achievement goal adoption.

### 1.1 Emerging Adulthood

Emerging adulthood is the developmental period between adolescence and adulthood (Arnett, 2015). This period is a time of transition and is characterized by intense identity explorations and increasing autonomy development. Although emerging adulthood is typically identified as the ages of 18 to 25 years, the stage has no definitive endpoint. Rather the achievement of reaching adulthood is a subjective feeling based on three criteria: accepting responsibility for one's self, making independent decisions, and becoming financially independent (Arnett, 2015). Thus, emerging adults are defined as people between the ages of 18 and 25 who have not yet assumed adult roles and responsibilities (e.g., marrying, having children, maintaining stable employment, and achieving emotional and financial independence from their caregivers). Additionally,

they have begun but not yet completed their identity explorations. See Chapter 2 for a more detailed discussion of emerging adulthood.

**1.2 Overparenting**

Over the last decade a new parenting construct, helicopter parenting, has emerged from anecdotal stories told by exasperated college personnel and reported by popular media. Helicopter parenting, or overparenting, is defined as developmentally inappropriate, intrusive, and controlling levels of parental support (Segrin, Woszidlo, Givertz, Bauer, & Murphy, 2012). Examples of overparenting include making important decisions for their emerging adult children (e.g., where to live, what to choose as a college major, etc.); intervening in resolving their emerging adult children's disputes with friends, instructors, or employers; and assuming responsibilities that their emerging adult children should manage (e.g., looking for job opportunities and applying for scholarships; Padilla-Walker & Nelson, 2012). Helicopter parents hover over their children, poised to rescue them from any perceived challenges they encounter. Research has shown that overparenting is linked to a variety of detrimental outcomes including decreased well-being and academic difficulties (Bradley-Geist & Olson-Buchanan, 2014; Darlow, Norvilitis, & Scheutze, 2017; Hofer, 2008; Hong, Hwang, Kuo, & Hsu, 2015; Kouros, Pruitt, Ekas, Kiriaki, & Sunderland, 2017; Kwon, Yoo, & Bingham, 2015; Kwon, Yoo, & De Gagne, 2017; LeMoyne & Buchanan, 2011; Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Reed, Duncan, Lucier-Greer, Fixelle, & Ferraro, 2016; Rousseau & Scharf, 2015; Schiffrin & Liss, 2017; Schiffrin et al., 2014; Segrin, Givertz, Swaitkowski, & Montgomery, 2015; Segrin et al., 2012; Segrin, Woszildo, Givertz, & Montgomery, 2013; Shoup, Gonyea, & Kuh, 2009). The invasive and controlling nature of

overparenting is particularly worrisome during emerging adulthood when primary developmental tasks include identity exploration, autonomy development and achieving independence from one's parents.

### 1.3 Theoretical Framework

My research conceptualizes achievement motivation through the theoretical frameworks of self-determination theory (SDT) and the achievement goal approach (AGA) and expands on previous work integrating these two motivation frameworks. I chose SDT as a guiding framework because its focus on psychological needs offers much conceptual overlap with overparenting (see Chapter 2 for a detailed discussion). Additionally, much of the extant literature on overparenting has used a SDT framework (Darlow et al., 2017; Reed et al., 2016; Schiffrin et al., 2014; Segrin et al., 2013), providing the opportunity for replication of previous findings. I chose AGA as a guiding framework because, unlike SDT, its connection to overparenting has been largely unexamined (Schiffrin & Liss, 2017), providing the opportunity to expand overparenting and AGA research findings while also examining a core construct in achievement motivation among emerging adult college students – achievement goals. Additionally, the recent integration of SDT and AGA through the hierarchical model of achievement motivation (Elliot, 2005; Elliot & Fryer, 2008; Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Fryer & Elliot, 2012) provides valuable opportunities for replicating and expanding what is known about achievement goal complexes (see Chapter 2 for a detailed discussion).

SDT divides intentional, motivated behavior into two key types based on their regulatory processes: self-determined behavior and controlled behavior (Deci, Vallerand,

Pelletier, & Ryan, 1991). Self-determined behavior is defined as motivated behavior that is regulated by choice (i.e., engaged in because a person finds the behavior to be personally enjoyable, meaningful, or valuable) and characterized by an internal locus of control. In contrast, controlled behavior, although intentionally engaged in, is compelled or coerced by internal or external forces such as guilt, fear, praise, or punishment. Controlled behavior is defined as motivated behavior that is regulated by compliance (i.e., engaged in to earn a reward, avoid a punishment, minimize guilt, or preserve self-worth) and characterized by an external locus of control.

According to SDT, individuals have three innate psychological needs that provide the energy for motivated behavior: autonomy, competence, and relatedness (Deci et al., 1991). Autonomy is being volitionally responsible for initiating and regulating one's own behavior, signifying a self-endorsement of one's behavior (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Deci et al., 1991; Vansteenkiste & Ryan, 2013). Competence includes both the understanding of how to achieve one's aims and the capability to accomplish the required actions. Relatedness is feeling a sense of belonging to and connection with others in one's social environment (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Deci et al., 1991; Vansteenkiste & Ryan, 2013).

One's social environment can be need supportive, need depriving, or need thwarting, resulting in an experience of need satisfaction, need dissatisfaction, or need frustration (Vansteenkiste & Ryan, 2013). Need satisfaction means that a person feels their needs for autonomy, competence, and relatedness are met or fulfilled by their social environment. Lack of need satisfaction, or need dissatisfaction, "means to feel that something is not as good as it should be" (Bartholomew, Ntoumanis, Ryan, & Thøgersen-

Ntoumani, 2011, p. 78). In contrast, need frustration is a perceived *active* hindering of one's psychological needs by the social environment (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Gillet, Lafreniere, Vallerand, Huart, & Fouquereau, 2014). For example, a person whose need for relatedness is unmet may feel lonely because of a lack of connection to others, but a person whose need for relatedness is frustrated may experience outright rejection or bullying by peers (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Vansteenkiste & Ryan, 2013).

The degree to which one's social environment meets these innate needs determines the extent to which a behavior is self-determined. My research examines both need satisfaction and need frustration. While need satisfaction has been linked to well-being, autonomous motivation, and adaptive identity exploration, need frustration has been linked to ill-being, controlled motivation, amotivation, and maladaptive identity exploration (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Cordeiro, Paixão, Lens, Lacante, & Luyckx, 2018; Deci & Ryan, 2000; Gillet et al., 2014; Michou, Matos, Gargurevich, Gumus, & Herrera, 2016).

Multiple studies have investigated overparenting from a SDT perspective, generally finding that overparenting is negatively associated with emerging adults' basic psychological needs of autonomy, competence, and relatedness (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Hofer, 2008; Kwon et al., 2015; Locke, Campbell, & Kavanaugh, 2012; Nelson, Padilla-Walker, Christensen, Evans, & Carroll, 2010; Nelson, Padilla-Walker, & Nielson, 2015; Odenweller, Booth-Butterfield, &

Weber, 2014; Padilla-Walker & Nelson, 2012; Schiffrin & Liss, 2017; Schiffrin et al., 2014; Segrin et al., 2012; Segrin et al., 2013; van Ingen et al., 2015). No research to date has examined overparenting and need frustration; however, based on previous research that linked overparenting to a critical family environment (Segrin et al., 2012; Segrin et al., 2013), authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), and behavioral and psychological control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Rousseau & Scharf, 2015), it is possible that emerging adults may view intrusive and controlling overparenting as a deliberate undermining of their psychological needs. Furthermore, controlling parenting, coaching, and teaching have been linked to need frustration (Amoura et al., 2015; Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Cheon, Reeve, & Song, 2016; Cheon et al., 2018; Cordeiro et al., 2018; González, Tomás, Castillo, Duda, & Balaguer, 2017; Haerens, Aelterman, Vansteenkiste, Soenens, & Van Petegem, 2015; Inguglia, Liga, Coco, Musso, & Ingoglia, 2018; Jang, Kim, & Reeve, 2016; Liu, Bartholomew, & Chung, 2017; Mabbe, Soenens, Vansteenkiste, & Van Leeuwen, 2016; Roman et al., 2015).

The achievement goal approach (AGA) identifies two primary types of achievement goals: goals to *develop* competence (e.g., to improve one's reading skills), called mastery goals and goals to *demonstrate* competence (e.g., to score higher than peers on a reading test), called performance goals (Elliot, 2005). My research utilizes the 2 x 2 achievement goal framework. This framework is based on two dimensions: how competence is defined (i.e., mastery or performance goals) and how competence is valenced (i.e., approaching a desirable outcome or avoiding an undesirable outcome), resulting in four goal types: mastery-approach (MAp; e.g., to improve one's writing

abilities), mastery-avoidance (MAv; e.g., to avoid making more mistakes in one's writing compared to previous assignments), performance-approach (PAp; e.g., to earn the highest grade in the class on a writing assignment), and performance-avoidance (PAv; e.g., to avoid earning a lower grade on a writing assignment than peers) (Elliot, 2005; Elliot & McGregor, 2001). In general, MAp goals have been associated with a variety of adaptive outcomes; PAp goals have been associated with a mix of positive and negative patterns; and MAv and PAv goals have been associated with negative patterns (Elliot, 2005; Elliot & McGregor, 2001).

Few studies to date have examined overparenting and achievement goals; however, preliminary research has found overparenting and similar controlling parenting behaviors (e.g., person-focused feedback, conditional approval, worry induction) to be positively associated with performance goals (PAp and PAv) and avoidance goals (MAv and PAv), while no relationship was found with MAp goals (Elliot & McGregor, 2001; Schiffrin & Liss, 2017).

Researchers have noted irregularities in how achievement goal is defined in AGA research (Elliot, 2005; Elliot & Fryer, 2008; Elliot & Moller, 2003; Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Thrash & Elliot, 2001; Vansteenkiste, Lens, Elliot, Soenens, & Mouratidis, 2014). Typically, achievement goal is defined as the *purpose* for engaging in a behavior; however, *purpose* can ambiguously mean both the reason for which something is done and the desired end result or aim (Elliot & Thrash, 2001). For example, PAp goals were often defined as a normative standard of competence (i.e., the aim) with an underlying self-presentation motive (i.e., reason; e.g., I want to earn a higher score than my classmates in order to appear

competent). In response, Elliot and colleagues proposed the hierarchical model of achievement motivation which more narrowly defines achievement goal as the aim of behavior and separates goals from their underlying reasons (Elliot, 2005; Elliot & Fryer 2008; Elliot & Murayama, 2008; Elliot et al., 2011; Elliot & Thrash, 2001; Fryer & Elliot, 2012). Competence is defined solely by its evaluative standards: Mastery goal competence is evaluated using task-based (i.e., mastering a task) or intrapersonal standards (i.e., doing better than one's past performance), and performance goal competence is evaluated using normative standards (i.e., performing better than others) (Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001). Thus, mastery goals are defined as goals that use task-based or intrapersonal standards, and performance goals are defined as goals that use normative standards.

Recently researchers studying the hierarchical model of achievement motivation have used SDT as the framework with which to classify the underlying reasons for achievement goals, dividing the reasons into two types: autonomous reasons and controlled reasons (Delrue et al., 2016; Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet et al., 2017; Gillet, Lafreniere, et al., 2015; Gillet et al., 2014; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010). Thus far, empirical support for the integration of SDT and AGA has been promising. Regardless of goal type, achievement goals pursued for autonomous reasons are generally associated with more adaptive antecedents and outcomes than achievement goals pursued for controlled reasons (Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet, Lafreniere, et al., 2015; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006;

Vansteenkiste, Smeets, et al., 2010). Notably, need satisfaction has been linked to underlying autonomous reasons (Delrue et al., 2016; Gillet et al., 2014; Michou et al., 2016), and need frustration has been linked to underlying controlled reasons (Gillet et al., 2014; Michou et al., 2016). Researchers have generally found that both the achievement goal and the underlying reason are significant factors in achievement motivation and work together to form a Gestalt-like goal complex in which the goal complex is more than the simple sum of goal and reason (Gaudreau & Braaten, 2016; Sommet & Elliot, 2017; Vansteenkiste, Lens, et al., 2014).

**1.4 Rationale**

Within the frameworks of SDT and AGA, I investigate the relationships among overparenting, the satisfaction and frustration of emerging adults' basic psychological needs (i.e., autonomy, competence, and relatedness), and the strength of achievement goal complexes (i.e., goal and underlying reason). Autonomy and identity development are the central areas of focus in emerging adulthood (Arnett, 2015; Chickering, 1993). Frustrated psychological needs have been linked with maladaptive identity exploration and other indicators of ill-being (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Cordeiro et al., 2018; Deci & Ryan, 2000; Gillet et al., 2014; Michou et al., 2016). Overparenting in the emerging adult population has been associated with low need satisfaction (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Hofer, 2008; Locke et al., 2012; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014; Segrin et al., 2012; Segrin et al., 2013; van Ingen et al., 2015). No research to date has examined need frustration in an overparenting context. However,

need frustration has been linked to parental psychological control (Inguglia et al., 2018; Mabbe et al., 2016) and authoritarian parenting (Roman et al., 2015), constructs that have also been linked to overparenting (Leung & Shek, 2018; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Segrin et al., 2012). Basic psychological needs are also relevant in the adoption of achievement goals. Need satisfaction has been linked with autonomously regulated achievement goals while need frustration has been linked with achievement goals regulated by control (Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet, Lafreniere, et al., 2015; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006; Vansteenkiste, Smeets, et al., 2010). Finally, the limited research on overparenting and achievement goals show that overparenting is associated with less adaptive performance and avoidance goal types (Elliot & McGregor, 2001; Schiffrin & Liss, 2017). While the extant literature has separately investigated the constructs of emerging adulthood, overparenting, basic psychological needs, and achievement goals, no prior research had consolidated these constructs into a single study.

**1.5 Significance and Research Questions**

My study addresses several research areas that have received little attention thus far in the extant literature, including the relationship between overparenting and achievement goals, the relationship between overparenting and need frustration, overparenting and the basic psychological needs as contextual antecedents to achievement motivation, and replication of a new achievement goal complex measure (Sommet & Elliot, 2017; see Chapter 2 for a detailed discussion). My research offers practical significance as well. Parents and school personnel may use these results to

develop strategies to meet the developmental needs of emerging adult college students and to foster more motivating contexts.

Thus, my research addresses gaps in the extant literature as well as sheds light on the practical matter of fostering achievement motivation in emerging adults by asking the following research questions:

1. To what extent does the strength of emerging adults' perceived overparenting predict their basic need satisfaction and basic need frustration?
2. To what extent do the strength of emerging adults' perceived overparenting, basic need satisfaction, and basic need frustration predict the achievement goal complexes they adopt?
3. Do emerging adults' need satisfaction and/or need frustration moderate the relationships between overparenting and achievement goal complexes?

## Chapter 2

## Literature Review

In recent years higher education professionals are increasingly regarding helicopter parenting, or overparenting, as prevalent and problematic among emerging adult college students (Somers & Settle, 2010a). Overparenting is a developmentally inappropriate and overbearing parenting approach characterized by parents' extreme readiness to help their emerging adults with even the smallest of obstacles (Segrin, et al., 2012). The distinct juxtaposition of intrusive overparenting during emerging adulthood, a developmental transition characterized by identity explorations, autonomy development, and independence, is particularly worrisome and warrants further investigation (Arnett, 2015; Segrin, et al., 2012). Furthermore, because over a third of emerging adults choose to attend college (National Center for Higher Education Management Systems, n.d.), understanding factors associated with successful achievement motivation among emerging adult college students is particularly relevant. My research uses self-determination theory (SDT) and the achievement goal approach (AGA) as an integrated framework to examine overparenting and achievement motivation in emerging adult college students. The hierarchical model of achievement motivation allows for the intersection of the AGA and SDT by accounting for both the aim and the energization of achievement goals: what one is aiming to accomplish and why one wants to accomplish that aim (Elliot, 2005; Elliot & Fryer 2008; Elliot & Murayama, 2008; Elliot et al., 2011; Elliot & Thrash, 2001; Fryer & Elliot, 2012). In this

chapter I provide a detailed explanation of emerging adulthood as a developmental transition period, review previous research on overparenting, and discuss the theoretical frameworks of SDT and AGA both separately and integrated within the hierarchical model of achievement motivation. I also identify gaps in the extant research literature which provide the foundation for the rationale of my research. Finally, I outline my research questions and hypotheses.

**2.1 Emerging Adulthood**

Emerging adulthood is a developmental phase proposed in recent years to clarify the transition period between adolescence and adulthood (Arnett, 2015). Emerging adulthood is theorized to have arisen from cultural and demographic changes over the last half century. Arnett (2015) identifies four primary revolutions that have contributed to the development of emerging adulthood. The technology revolution shifted the economies of developed countries from manufacturing to service jobs that require a greater knowledge base, more technological skills, and longer education and training. The sexual revolution and the invention of oral contraception allowed people to engage in sexual intimacy without having to marry first. The women's movement expanded women's opportunities beyond marriage and motherhood and opened new educational and career possibilities. Finally, the youth movement glorified being young and free from adult responsibilities. These cultural revolutions have contributed to more widespread enrollment in postsecondary education, delays in entering marriage and parenthood, and a longer path to stable employment (Arnett, 2015). Because of the socioeconomic nature of the revolutions, Arnett (2015) argued that emerging adulthood is not a universal life stage but one that is culture-based and seen worldwide in cultures where there is a

substantial transition period between adolescence and the assumption of adult roles and responsibilities (e.g., marriage, parenthood, and stable employment). Emerging adulthood is predicted to become increasingly common worldwide as globalization makes postsecondary education the norm in more countries (Arnett, 2015).

Emerging adulthood is characterized by five main features: identity explorations, instability, a focus on self, feeling in-between, and optimism for one's future (Arnett, 2015). While these characteristics may be present during other life stages, they are most prevalent and prominent during emerging adulthood. The identity explorations that begin in adolescence intensify during emerging adulthood as emerging adults try on various roles in an attempt to answer, "Who am I?". These explorations may be seen in frequent changes in college major, new social groups, adopting new interests and goals, and trying new activities. A consequence of intense identity explorations is instability. Emerging adults frequently experience instability in love, friendships, work, and even residences as they experiment with possible identities. Emerging adulthood is a period when one's commitments and obligations to others are low. Free from the parental rules they lived under as adolescents and having no spouse or children to consider, emerging adults can focus largely on themselves as they work toward identity development and becoming self-sufficient. Feeling freer and more independent than an adolescent but not yet having fully assumed adult roles and responsibilities, emerging adults often report feeling "in between" these two life stages. Finally, emerging adulthood is marked by optimism for the seemingly limitless possibilities the future holds. Ongoing identity explorations mean their future selves have yet to be determined and virtually anything is possible (Arnett, 2015).

Although emerging adulthood is typically identified as the ages of 18 to 25 years, the stage has no definitive endpoint and may end prior to or extend past 25 years (Arnett, 2015). The achievement of reaching adulthood is largely a subjective feeling based on three criteria identified by emerging adults themselves as signifiers for when one has become an adult: accepting responsibility for one's self, making independent decisions, and becoming financially independent (Arnett, 2015).

**2.2 Overparenting**

Despite the abundance of popular media accounts of helicopter parenting, the empirical examination of helicopter parenting is still in its infancy. A LexisNexis search at the time of this writing resulted in over 17,000 newspaper and magazine articles about helicopter parenting; however, researchers have yet to reach a consensus regarding the best term for this construct. Because the terms overparenting and helicopter parenting are both prominently and interchangeably used in the literature, I will treat these terms synonymously. Researchers are working to operationally define the construct and understand how overparenting may differ from similar constructs such as intrusive parenting, behavioral and psychological control, and authoritarian parenting (Bradley-Geist & Olson-Buchanan, 2014; Fingerman et al., 2012; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Segrin et al., 2012). In my research, I will use the overparenting definition developed by Segrin and colleagues (2012) that defines overparenting as

> developmentally inappropriate parenting that is driven by parents' overzealous desires to ensure the success and happiness of their children, typically in a way that is construed largely in the parents' terms, and to remove any perceived obstacles to those positive outcomes. (p. 238)

This excessive parental interference denies emerging adults' the autonomy that is appropriate for their age and development (Segrin et al., 2012). While both overparenting and intrusive parenting/parental psychological control are assumed to minimize a child's sense of individuation, competence, and efficacy, overparenting does not involve manipulation of the child's emotions and is often believed to originate from more compassionate purposes (Segrin et al., 2012). Indeed Padilla-Walker and Nelson (2012) found overparenting to be a related but distinctly different construct from parental behavioral and psychological control. While behavioral and psychological control were associated with adverse parenting and parent–child relationship variables, overparenting was associated with both adaptive (e.g., guidance, involvement, and emotional support) and maladaptive (e.g., lack of autonomy) parenting and parent-child relationship variables. A positive correlation between overparenting and Baumrind's authoritarian parenting has been found (Odenweller et al., 2014); however, theoretically overparenting seems to represent a unique pattern of parenting not fully matching any of Baumrind's typologies (Segrin et al., 2012). For example, overparenting is characterized by the high parental control found in authoritarian parenting and the high responsiveness to the child's needs (at least how the parent perceives the child's needs) found in permissive parenting (Segrin et al., 2012).

Researchers have developed at least seven separate measures of overparenting since 2011 (Bradley-Geist & Olson-Buchanan, 2014; LeMoyne & Buchanan, 2011; Lowe, Dotterer, & Francisco, 2015; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014; Segrin et al., 2012) with no clear consensus on if these instruments measure the same construct or if one instrument is superior to the others.

These instruments differ greatly in how they were developed and how they are used. For example, most of the instruments are completed by the emerging adult (Bradley-Geist & Olson-Buchanan, 2014; LeMoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014;), but Segrin and colleagues (2012) developed an overparenting measure that is completed by the parent. Parent reports of overparenting may not be the most valid measure of overparenting, however. Parent reports and child reports of overparenting were found to be only moderately correlated (Schiffrin & Liss, 2017; Segrin et al., 2015; Segrin et al., 2013), and generally only child reports were associated with child well-being measures (Schiffrin & Liss, 2017; Segrin et al, 2015). Parents may be more influenced by social desirability and less likely to report overparenting behaviors. Compared to their children, parents rated family cohesion and communication more highly and reported using lower levels of authoritarian and permissive parenting styles and higher levels of authoritative parenting (Givertz & Segrin, 2014). Moreover, a child's perceptions rather than the objective presence or absence of overparenting attributes may be more relevant to the lived experience of the child (Segrin et al., 2015; Segrin et al., 2013). Indeed, adult children may not be conscious of many overparenting attributes, such as risk aversion and anticipatory problem solving, because "they represent private cognitions or actions that happen outside of the child's presence" (Segrin et al., 2013 p. 478). Similarly, the measure developed by Odenweller and colleagues (2014) contains items that ask the emerging adult child about their parents' thoughts and feelings, knowledge of which the emerging adult is not likely to possess. Finally, most overparenting measures inquire about the presence of certain parental characteristics or behavior (e.g., *My parent makes important decisions for me*; Padilla-

Walker & Nelson, 2012); however, some researchers simply used frequency of support (Fingerman et al., 2012) or frequency of contact (Shoup et al., 2009) to measure overparenting. While overparenting may be associated with frequent support or contact, other parenting approaches, including positive and healthy approaches, may also be characterized by frequent support and contact. Moreover, frequent support or contact alone does not meet the definition of overparenting (Segrin, et al., 2012).

The various overparenting instruments also show great variability in whose parenting is measured and when overparenting is measured. For example, the instrument developed by Schiffrin and colleagues (2014) asks only about mothers' parenting attributes, the instrument developed by Bradley-Geist and Olson-Buchanan (2014) includes the parenting attributes of both parents, and Odenweller and colleagues (2014) ask participants to report on the parent with whom they communicate most frequently. While most of the overparenting instruments measure overparenting as it is currently occurring during the emerging adult years (Bradley-Geist & Olson-Buchanan, 2014; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014; Segrin et al., 2012), LeMoyne and Buchanan's (2011) instrument measures an emerging adult's retrospective perception of overparenting in the years preceding their college years. They argue that while primarily associated with college students, overparenting does not suddenly begin in college but rather develops over time prior to the emerging adult years. However, because overparenting is defined by developmentally inappropriate levels of parental support (Segrin et al., 2012), this instrument may simply measure emerging adults' memories of developmentally appropriate levels of parental support from a younger age (Odenweller et al., 2014).

Overparenting has been shown to occur in both Western (Bradley-Geist & Olson-Buchanan, 2014: LeMoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Segrin et al., 2012; Segrin et al., 2013) and non-Western cultures (Hong et al., 2015; Kwon et al., 2015). However, overparenting seems to be less common and problematic than anecdotal and media accounts suggest. Research has shown both a low prevalence and measurement range restriction (Kwon et al., 2015; LeMoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Schiffrin & Liss, 2017). Prevalence estimates have ranged from 10% to 21% (Shoup et al., 2009; Fingerman et al., 2012). However, sampling issues (e.g., convenience samples) and lack of a consensus on how to measure overparenting (e.g., past or present characteristics, frequency of contact, frequency and type of support) limit the generalizability and validity of these estimates. Interestingly, higher education professionals have estimated the prevalence of helicopter parents on their campuses to be much higher than empirical studies have found with estimates ranging from 40% to 60% (Somers & Settle, 2010a). Perceptions of overparenting may be a key factor in these discrepant findings. What college personnel may perceive as intrusive interference, emerging adults may perceive as welcomed support. As previous research showed, emerging adults' perceptions of overparenting were more predictive of their well-being than parental reports of overparenting (Schiffrin & Liss, 2017; Segrin et al., 2015). Therefore, emerging adults' perceptions may matter more than the perceptions of others or the objective presence or absence of overparenting behaviors (Segrin et al, 2015; Segrin et al., 2013). Their perceptions, their lived experiences, are their realities.

Somers and Settle (2010b) suggested seven factors that may have contributed to the rise of overparenting: 1) demographic shifts in America leading to increased college

enrollment and perceived competition for "good" colleges, 2) a decrease in the average family size enabling parents to give each child more attention than in the past, 3) the rise of technology such as smart phones that makes parental hovering easier, 4) economic changes such as a decreased return for education and an unstable job market, 5) a psychological shift as reflected in decreased societal and parental expectations of emerging adults, 6) the increasingly accepted view of education as a commodity and students as consumers, and 7) an increased emphasis on child safety. Some of these factors overlap with factors associated with the rise of emerging adulthood, such as increased college enrollment, smaller family sizes (due in part to better birth control), decreased return for education, and decreased societal and parental expectations of emerging adults (Arnett, 2015).

The motives that drive overparenting are typically assumed to originate from parents' benevolent, well-intentioned desires to help their children or an overwhelming need to ensure their children's success (usually as determined by the parents) (Padilla-Walker & Nelson, 2012; Segrin et al., 2012); however, recent findings have called the benevolent nature of overparenting into question. Rather, overparenting seems to be characterized by poor family relationships, withdrawal, low warmth, a critical family environment, and parental conditional regard (Nelson et al., 2015; Padilla-Walker & Nelson, 2012; Segrin et al., 2015; Segrin et al, 2012; Segrin et al., 2013).

In general, research has shown that overparenting is both directly and indirectly associated with a variety of maladaptive patterns among emerging adult college students, including withdrawing from problems (Segrin et al., 2015; Segrin et al., 2013), depression (Darlow et al., 2017; Kouros et al., 2017; Reed et al., 2016; Schiffrin et al.,

2014), decreased satisfaction with life (Reed et al., 2016; Schiffrin et al., 2014), distress (Rousseau & Scharf, 2015), narcissism (Leung & Shek, 2018), use of prescription medication for anxiety and depression, recreational use of prescription pain medication, a diminished ability to function and thrive in difficult situations (LeMoyne & Buchanan, 2011), and decreased emotional well-being (Kouros et al., 2017; Kwon et al., 2015; Kwon et al., 2017). Furthermore, in a qualitative survey of school counselors, school psychologists, mental health professionals, teachers, and other professionals who work with children and families, respondents frequently reported increased anxiety among children who are overparented (Locke et al., 2012).

In the academic realm, overparenting has been linked directly or indirectly to decreased school engagement (Padilla-Walker & Nelson, 2012), reduced enthusiasm for learning, decreased student academic regulation, dissatisfaction with college (Hofer, 2008), maladaptive perfectionism (Schiffrin & Liss, 2017), poor academic adjustment to college (Darlow et al., 2017), procrastination, and difficulties with self-regulated learning (Hong et al., 2015). Results have been mixed on the relationship between overparenting and academic performance. While Shoup and colleagues (2009) found that high parental involvement was associated with lower grades, other researchers have found no significant relationships between overparenting and academic performance (Bradley-Geist & Olson-Buchanan, 2014; Hofer, 2008; LeMoyne & Buchanan, 2011). Additionally, because of the primarily correlational nature of overparenting research, it is impossible to know if overparenting leads to lower grades or if parents resort to overparenting in response to their children's academic difficulties (Shoup et al., 2009).

Not all research has shown overparenting to be associated with maladaptive patterns in emerging adults. Shoup and colleagues (2009) found that students who were overparented reported significantly higher college engagement, greater satisfaction with their college experience, and greater gains in personal and social development, personal competence, and general education compared to other students. Contradicting Schiffrin and colleague's (2014) findings that overparenting was associated with decreased life satisfaction, Fingerman and colleagues (2012) found that overparenting was associated with clearly defined goals and greater life satisfaction. However, Shoup and colleagues' research (2009) represents one of the earliest attempts to study overparenting and used a very basic measure of overparenting that solely focused on the frequency of parental contact with their emerging adult college students and with college officials. Relying only on frequency of contact may explain why Shoup and colleagues found an inverse relationship between overparenting and academic performance; the child's poor academic performance may have prompted parents to contact their child and college officials more frequently. Likewise, Fingerman and colleagues' research (2012) measured overparenting by asking emerging adult college students how often their parents provided six forms of support: emotional, practical, socializing, advice, financial support, and listening to them talk about daily events. Frequent support may not be an adequate measure of overparenting. The choice of measures may have contributed to the unique results of Shoup and colleagues (2009) and Fingerman and colleagues (2012) and calls into question the validity of their conclusions.

Little research has been conducted to determine how emerging adults feel about overparenting, and the limited extant research has yielded conflicting results. Shoup and

colleagues (2009) found that overparented college students reported higher quality of support compared to other college students while Fingerman and colleagues (2012) found that overparented emerging adults were more likely to report receiving more support than they wanted. Likewise, parents who reported overparenting their children were more likely to report that they provided too much support to their children compared to other parents. Finally, overparenting was indirectly linked to decreased family satisfaction through lower-quality parent-child communication (Segrin et al., 2012).

Notably, overparenting research thus far has been primarily correlational in nature; therefore, the directionality of any relationship with overparenting cannot be determined. Perhaps parents are resorting to overparenting tactics because their child lacks self-efficacy, suffers from depression or anxiety, is not engaging in college academics, etc. Overparenting may be an attempt to provide additional support to a struggling emerging adult child. Another possibility is that the excessive control of overparenting robs emerging adults of their opportunity to learn to be responsible for themselves, to develop competence, and to form healthy relationships with others. A third possibility is that directionality is cyclical with overparenting contributing to strained relationships, low self-efficacy, and poor well-being which leads to more overparenting and so on (Segrin et al., 2013).

**2.3 Self-Determination Theory**

Self-determination theory (SDT) provides a logical theoretical framework for my research because its focus on autonomy is relevant to the developmental tasks of emerging adulthood. SDT divides intentional, motivated behavior into two key types based on their regulatory processes (see Figure 2.1; Deci & Ryan, 2000). Self-determined

behavior is "engaged in wholly volitionally and endorsed by one's sense of self" (Deci et al., 1991, p. 326). The behavior is regulated by choice with an internal locus of control. In contrast, controlled behavior, although intentional, is compelled (e.g., through guilt, fear, praise, etc.) and regulated by compliance with an external locus of control. Intrinsic motivation represents self-determined behavior that is performed for the simple enjoyment of the activity (Deci et al., 1991; Deci & Ryan, 2000; Reeve, Ryan, Deci, & Jang, 2012). In contrast, extrinsically motivated behavior falls along a continuum dependent on how autonomously regulated the behavior is (Deci et al., 1991; Deci & Ryan, 2000; Reeve et al., 2012). External regulation, the least self-determined regulation, is behavior engaged in for completely external reasons such as earning a reward or avoiding a punishment. Introjected regulation is internally coerced by factors such as guilt and self-worth. Identified regulation occurs when a behavior is compelled by its perceived utility or value (e.g., students seek help at the writing lab because they think strong writing skills are important to college success). Finally, integrated regulation represents autonomous, self-determined behavior that is wholly integrated with a person's identity, values, and needs. For example, a student who values being a strong student and a good musician decides to wake an hour early to have enough time to prepare for a math test and an orchestra audition (Deci et al., 1991; Deci & Ryan, 2000; Reeve et al., 2012).

**Three basic psychological needs.** According to SDT, individuals have three innate psychological needs that must be satisfied to promote motivation, healthy development, and optimal performance: autonomy, competence, and relatedness (Deci et al., 1991; Vansteenkiste & Ryan, 2013). A person's psychological needs are satisfied

when one's social environment is need supportive. In contrast, a social environment that is need thwarting actively stops or prevents a need from being met, and the person experiences need frustration (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Gillet et al., 2014; Vansteenkiste & Ryan, 2013). Need frustration is not simply low need satisfaction or need dissatisfaction; rather, need frustration reaches an intensity that need dissatisfaction does not (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Vansteenkiste & Ryan, 2013). For example, a student may feel incompetent in calculus because of inadequate skills despite the best efforts of the teacher; thus, the need for competence is not met. In contrast, another student may feel incompetent because the teacher is critical; thus, the need for competence is actively thwarted. See Table 2.1 for examples of need satisfying and need thwarting parental statements.

The degree to which one's psychological needs are met and unmet impacts one's overall functioning and well-being, accounting for "both the 'dark' and 'bright' side of people's functioning," (Vansteenkiste & Ryan, 2013, p. 263). The satisfaction of one's basic psychological needs leads to well-being, while the thwarting of these needs, particularly by significant caregivers, leads to ill-being and potentially pathology (Vansteenkiste & Ryan, 2013). The degree to which one's social environment satisfies these innate needs also determines the extent to which a behavior is internalized, integrated, and self-determined. If a person has a need that is unsatisfied, that person will be energized or motivated to fill that need (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Deci et al., 1991; Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). For example, a person feeling lonely may be energized to find friendships

or a person feeling incompetent may be motivated to increase their skills (Deci & Ryan, 2000). When a person has their needs met, rather than behaving in a way to satisfy their needs, "they will be doing what they find interesting [intrinsic regulation] or important [internalized extrinsic regulation]" (Deci & Ryan, 2000, p. 230).

Psychological need frustration, on the other hand, leads a person to respond protectively to "preserve as much satisfaction as seems possible in the nonsupportive situations" (Deci & Ryan, 2000, p. 249; Vansteenkiste & Ryan, 2013). People resort to the three types of compensatory accommodations when faced with psychological need thwarting: need substitutes, nonautonomous regulatory styles, and compensatory behavior patterns (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). Need substitutes do not satisfy the thwarted needs but may offer "some collateral satisfaction" (Deci & Ryan, p. 249; Vansteenkiste & Ryan, 2013). For example, a person whose need for relatedness is thwarted may resort to seeking others' approval through image-oriented avenues, such as wealth, possessions, or physical appearance (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). A person may also respond to need frustration by adopting a nonautonomous regulatory style, such as controlled regulation (e.g., compliance or defiance) and amotivation (i.e., becoming out of control or helpless) (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). Indeed, adolescents who perceived their parents as controlling were more likely to respond to a vignette-based scenario of maternal regulation (e.g., a mother asking her child to study more) with opposition-defiance or submission while adolescents who perceived their parents as autonomy-supportive were more likely to use negotiation or accommodation (i.e., flexibly adjusting one's goals and priorities; Van Petegem et al., 2017). Finally, a person may respond to need thwarting

with maladaptive behavior patterns such as a release of self-control (e.g., substance abuse, binge-eating, self-injurious behavior), rigid behavior patterns (i.e., a behavioral "script" that provides structure and predictability such as self-critical perfectionism), and oppositional-defiance (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013, pp. 270-272). While these behavior patterns may protect a person from the internal pain of having their needs thwarted, they ultimately prevent a person from facing their internal experiences and are often relied on even in situations in which they are no longer needed (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). For example, anorexia nervosa is a rigid behavior pattern (i.e., body control through eating) that may arise from the thwarting of a person's need for autonomy and competence (Deci & Ryan, 2000). These compensatory accommodations can become self-perpetuating and circular, contributing to even further need thwarting (Deci & Ryan, 2000, p. 231).

The linkage between basic psychological need satisfaction and well-being has been long-documented by researchers (Deci et al., 1991; Deci & Ryan, 2000). Daily fluctuations in perceived need satisfaction predicted well-being at both between- and within-person levels (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Kasser & Ryan, 1999; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996; Vandenkerckhove, Soenens, et al., 2019). Perceived needs satisfaction has been positively linked to psychological adjustment (Baard, Deci, & Ryan, 2004; Deci et al., 2001), task motivation (Deci et al., 2001), work satisfaction (Gillet et al., 2014), vitality (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; González, et al., 2017), positive affect (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011, Gillet et al., 2014), well-being (Akbag & Ummet, 2017;

Chen et al., 2015), social-emotional/behavioral functioning (Saeki & Quirk, 2015), academic motivation (Eryilmaz, 2017), engagement (Jang et al., 2016; Jowett, Hill, Hall, & Curran, 2016; Saeki & Quirk, 2015), academic honesty (Kanat-Maymon, Benjamin, Stavsky, Shoshani, & Roth, 2015), and self-determined motivation (Martinent, Guillet-Descas, & Moiret, 2015). Conversely, need satisfaction has been negatively linked to maladaptive characteristics such as burnout (Gonzalez et al., 2017; Martinent et al., 2015), negative affect (Gonzalez et al., 2017), disengagement (Jang et al., 2016), a likelihood to cheat (Kanat-Maymon et al., 2015), and controlled motivation (Martinent et al., 2015). Furthermore, basic need satisfaction mediated the relationship between adolescents' life goals and their academic motivation, suggesting that having life goals is not enough to motivate students, rather the students must also have their basic psychological needs met (Eryilmaz, 2017).

Despite the abundance of research on need satisfaction, research on need frustration has been scarce until recently. Much of the early research relied on measures of need satisfaction (i.e., low need satisfaction scores) to indirectly measure need frustration, because no instruments existed to measure need frustration directly (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Costa, Ntoumanis, & Bartholomew, 2015). However, this approach is questionable because low need satisfaction does not necessarily equal need frustration (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). Additionally, need satisfaction scales typically focus on positive aspects of the basic psychological needs (e.g., feeling supported, accepted, and understood) and do not address the negative aspects that are to be expected with need

frustration (e.g., feeling rejected, jealous, and hostile) (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011).

Recently, several instruments to measure need frustration have been developed (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Chen et al., 2015; Cuevas, Sánchez-Oliva, Bartholomew, Ntoumanis, & García-Calvo, 2015; Gillet, Forest, Benabou, & Bentein, 2015; Liu & Chung, 2015; Longo, Alcaraz-Ibáñez, & Sicilia, 2018; Longo, Gunz, Curtis, & Farsides, 2016; Martinent et al., 2015; Nishimura & Suzuki, 2016; Olafse, Niemiec, Halvari, Deci, & Williams, 2017). The research on these instruments have shown consistent evidence that need satisfaction and need frustration are distinct but related constructs rather than opposite ends of the same spectrum. First need satisfaction scores better predicted positive attributes and outcomes (e.g., positive affect, well-being, vitality) than negative attributes and outcomes (e.g., negative affect, ill-being, exhaustion), and need frustration scores better predicted negative attributes and outcomes than positive attributes and outcomes (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Chen et al., 2015; Longo et al., 2018; Longo et al., 2016; Nishimura & Suzuki, 2016). These results suggest that ill-being variables are "more related to the presence of psychological need thwarting than to the absence of psychological need satisfaction" (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011, p. 97). Second, regression analyses, factor analyses, and structural equation modeling all supported these variables as distinct constructs "that independently contribute to the individual's experience . . ." (Martinent et al., 2015, p. 36; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 201; Cheon et al., 2016; Gunnell, Crocker, Wilson, Mack, & Zumbo, 2013; Vandenkerckhove, Brenning,

Vansteenkiste, Luyten, & Soenens, 2019). Furthermore, follow-up studies showed need satisfaction, need dissatisfaction, and need frustration to be three distinct constructs (Cheon, et al., 2018; Costa et al., 2015). Need frustration better predicted maladaptive outcomes than need satisfaction and need dissatisfaction; and need satisfaction better predicted adaptive outcomes than need dissatisfaction and need frustration (Costa, Ntoumanis, et al., 2015). In fact, need dissatisfaction showed weak predictive utility (Costa, Ntoumanis, et al., 2015). Third, research showed that psychological need satisfaction and psychological need frustration are only modestly negatively correlated (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Gunnell et al., 2013; Haerens et al., 2015). Finally, researchers found small but significant interactions between corresponding need frustration and need satisfaction subscales, suggesting that need frustration and need satisfaction can co-occur (e.g., a person who offers their friendship but only if one complies with their demands) and that buffering effects are possible between these constructs (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). Taken together these results highlight the importance of viewing need satisfaction and need frustration as related but distinct constructs.

In recent years, research on need frustration has greatly increased. Consistently need frustration has been positively linked with characteristics associated with ill-being (Chen et al., 2015; Cordeiro et al., 2018), including negative affect (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Gillet et al., 2014; Gunnell et al., 2013; Liu, Bartholomew, & Chung, 2017; Liu & Chung, 2015; Liu & Chung, 2018; Longo et al., 2018; Roman, et al., 2015; Vandenkerckhove, Soenens, et al., 2019), negative relationship experiences (Costa, Ntoumanis, et al., 2015), disordered eating

(Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Boone et al., 2014), body-related shame and guilt (Thøgersen-Ntoumani et al., 2018), physical symptoms (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011), psychosomatic complaints (Trépanier, Fernet, & Austin, 2016), a biomarker for psychological stress (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011), burnout (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Cuevas et al., 2015; González et al., 2017; Huyghebaert, Gillet, Fernet, Lahiani, & Fouquereau, 2018; Jowett et al., 2016; Longo et al., 2018; Martinent et al., 2015; Vander Elst, Van den Broeck, De Witte, & De Cuyper, 2012), stress (Olafse et al., 2017), bullying (Hein, Koka, & Hagger, 2105; Trépanier et al., 2016), maladaptive perfectionism (Boone, Vansteenkiste, Soenens, Van der Kaap-Deeder, & Vertsuyf, 2014; Jowett et al., 2016; Mallinson & Hill, 2011), self-criticism (Vandenkerckhove, Brenning, et al., 2019), dependency (Vandenkerckhove, Brenning, et al., 2019), internalizing and externalizing problems (Vandenkerckhove, Brenning, et al., 2019), work-family conflict (Huyghebaert et al., 2018), anger (Hein et al., 2105) employee turnover intentions (Gillet, Forest, et al., 2015; Huyghebaert et al., 2018), employee role conflict (Gillet, Forest, et al., 2015), cynicism (Gillet, Forest, et al., 2015), job insecurity (Vander Elst et al., 2012), classroom disengagement (Jang et al., 2016; Vandenkerckhove, Soenens, et al., 2019), anxiety (Inguglia et al., 2018), and depression (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011). Moreover, daily variability in need frustration predicted daily fluctuations in ill-being (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Vandenkerckhove, Soenens, et al., 2019). Need frustration has also been negatively linked to characteristics associated with well-being (Cordeiro et al.,

2018) such as vitality (González et al., 2017; Liu et al., 2017; Liu & Chung, 2015), vigor (Vander Elst et al., 2012), affective workplace commitment (Gillet, Forest, et al., 2015), positive affect (Liu & Chung, 2018), life satisfaction (Trépanier et al., 2016), and self-acceptance (Inguglia et al., 2018). Moreover, need frustration has been positively associated with controlled regulation (Gillet et al., 2014; Haerens et al, 2015; Martinent et al., 2015; Vandenkerckhove, Soenens, et al., 2019), and even amotivation (Haerens et al, 2015; Martinent et al., 2015) and negatively associated with self-determined regulation (Amoura et al., 2015; Martinent et al., 2015). Person-centered studies have shown similar patterns with controlled motivational profiles being linked to high need frustration and low need satisfaction scores and autonomous motivational profiles being linked to low need frustration scores and high need satisfaction scores (Cece, Lienhart, Nicaise, Guillet-Descas, & Martinent, 2018; Liu & Chung, 2018). Liu and Chung (2018) concluded that "motivational profiles based on self-determination theory may be better explained from a psychological needs perspective . . ." (p. 186).

These patterns of results were found in a variety of countries and cultures, including the USA (Chen et al., 2015; Longo et al., 2018), China (Chen et al., 2015; Liu & Chung, 2015; Liu & Chung, 2018), Belgium (Chen et al., 2015; Vandenkerckhove, Soenens, et al., 2019; Vander Elst et al., 2012), Peru (Chen et al., 2015), Portugal (Cordeiro et al., 2018), France (Martinent et al., 2015), Canada (Gillet, Forest, et al., 2015; Trépanier et al., 2016), Estonia (Hein et al., 2105), Korea (Jang et al., 2016), Spain (Cuevas et al., 2015; Longo et al., 2018), Japan (Nishimura & Suzuki, 2016); Britain (Longo et al., 2018), Norway (Olafse et al., 2017), South Africa (Roman et al., 2015), and Australia (Longo et al., 2018; Thøgersen-Ntoumani et al., 2018), and in a variety of

populations and contexts such as a police training program (Gillet et al., 2014), university students (Amoura et al., 2015; Chen et al., 2015; Longo et al., 2018; Nishimura & Suzuki, 2016), working MBA students (Gillet, Forest, et al., 2015), adolescents (Boone et al., 2014; Hein, Koka et al., 2105; Jang et al., 2016; Roman et al., 2015; Vandenkerckhove, Soenens, et al., 2019) and their parents (Vandenkerckhove, Brenning, et al., 2019), athletes (González et al., 2017; Jowett et al., 2016; Mallinson & Hill, 2011; Martinent et al., 2015), physical education students (Liu & Chung, 2015; Liu & Chung, 2018), physical education teachers (Cuevas et al., 2015), work environments (Huyghebaert et al., 2018; Olafse et al., 2017; Trépanier et al., 2016; Vander Elst, et al., 2012), and MTurk workers (Longo et al., 2018). Moreover, the pattern of results remained unchanged even after controlling for personality traits (Mabbe et al., 2016; Nishimura & Suzuki, 2016). The replication of these results across cultures, contexts, populations, and personality traits supports SDT's argument that the basic psychological needs of autonomy, competence, and relatedness are indeed universal and inherent to human nature (Chen et al., 2015; Mabbe et al., 2016; Nishimura & Suzuki, 2016).

**SDT and overparenting.** From a theoretical perspective, SDT has much face validity with the construct of overparenting. The contexts in which children grow up, the environments created by their parents, play a key role in meeting or failing to meet their basic psychological needs of autonomy, competence, and relatedness (Pomerantz, Grolnick, & Price, 2005). Overly controlling parents are likely to provide contexts for their children that lack autonomy support, few occasions to problem-solve independently and develop competence, and limited opportunities to develop open and satisfying parent-child relationships (Pomerantz et al., 2005). Indeed, researchers have found support for

using a SDT framework to study overparenting (Darlow et al., 2017; Reed et al., 2016; Schiffrin et al., 2014; Segrin et al., 2013). Research has shown that overparenting is linked to decreased autonomy among emerging adult college students (Hofer, 2008; Kwon et al., 2017; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014) and negatively correlated with an internal locus of control (Kwon et al., 2015). Moreover, emerging adults who reported increased overparenting were less likely to want high levels of parental involvement, suggesting that emerging adults who are overparented desire more autonomy than they are granted by their parents (Darlow et al., 2017).

Overparenting has also been shown to have an inverse relationship with competence (Schiffrin et al., 2014) and self-efficacy (Bradley-Geist & Olson-Buchanan, 2014; Darlow et al., 2017; Givertz & Segrin, 2014; Kwon et al., 2017; Leung & Shek, 2018; Locke et al., 2012; van Ingen et al., 2015). When parents inappropriately take responsibility for their children, they may communicate to their children that they are not competent to take responsibility for themselves. Remarkably, a greater sense of entitlement also has been associated with overparenting (Givertz & Segrin, 2014; Locke et al., 2012; Richardson, Simon, & Futris, 2017: Schiffrin & Liss, 2017), suggesting that excessive parental involvement may "diminish the child's self-efficacy as they grow used to having someone else provide for them at the exclusion of their own efforts" (Givertz & Segrin, 2014, p. 1129) and may not develop the internal resources to be independent problem-solvers (Bradley-Geist & Olson-Buchanan, 2012). To support this explanation, both a direct and an indirect through low self-efficacy, relationship was found between overparenting and emerging adults' responses to workplace scenarios (Bradley-Geist & Olson-Buchanan, 2012). Emerging adults who reported higher levels of overparenting

were more likely to choose responses that were dependent on others (e.g., blaming others or having others help them) over accepting responsibility for themselves. A troubling possibility is that the diminished self-efficacy and sense of entitlement that seem to accompany overparenting may undermine a child's intrinsic motivation to learn. "If children come to expect that (i.e., feel entitled to) their parents will be heavily involved in their academics and their lives in general, they may be less motivated to intrinsically work for academic goals" (Schiffrin & Liss, 2017, p. 1473).

Finally, overparenting has been associated with multiple variables reflecting emerging adults' difficulties relating to their parents. Despite initial assumptions that overparenting originates from well-intentioned desires to help one's child, statistically it has been linked directly or indirectly with less open and more problematic parent-child communication (Kelly, Duran, & Miller-Ott, 2017; Odenweller et al., 2014; Segrin et al., 2012; Segrin et al., 2013), problems with parent-child relationships (Kwon et al., 2017; Segrin et al., 2012; Segrin et al., 2013), decreased family satisfaction, child withdrawal from the family, a critical family environment, parental conditional regard (Segrin et al., 2012; Segrin et al., 2013), authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), paternal attachment anxiety (Rousseau & Scharf, 2015), and behavioral and psychological control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Rousseau & Scharf, 2015). The intense parental support found in overparenting may be experienced as intrusive and overbearing by the child and contribute to poorer quality parent-child relationships. Moreover, while overparenting was linked to emerging adults' reliance on their parents for guidance, disclosure, and emotional support, parental roles that seem to

imply warmth and affection, no direct relationship was observed between overparenting and parental warmth and affection (Padilla-Walker & Nelson, 2012).

Overparenting has also been linked to difficulty relating to people outside of the family (Schiffrin et al., 2014; Segrin et al., 2013), peers (Hofer, 2008; van Ingen et al., 2015), and professors (Hofer, 2008); lowered social adjustment to college (Darlow et al., 2017); social anxiety (Kouros et al., 2017); and greater interpersonal sensitivity (i.e., an excessive concern about others' opinions and pleasing others) (Rousseau & Scharf, 2015; Scharf, Rousseau, & Bsoul, 2017). Disturbingly, overparenting was indirectly associated with perpetration of sexual coercion through an increased sense of entitlement among male college students (Richardson et al., 2017). Taken together, these results suggest that emerging adults who are overparented may have widespread difficulty meeting their need for relatedness.

No research found to date has explicitly examined overparenting and need frustration; however, several studies have examined the relationship between need frustration and controlling behavior by coaches and teachers. Controlling coaching and teaching practices predicted need frustration among athletes and students (Amoura et al., 2015; Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; González et al., 2017; Haerens et al., 2015; Jang et al., 2016; Liu et al., 2017). Additionally, need frustration mediated the relationships between controlling teaching behaviors and controlled motivation and amotivation (Haerens et al, 2015).

Overparenting by definition is a developmentally inappropriate intrusion (Segrin, et al., 2012). If emerging adults do in fact perceive overparenting as intrusive and controlling, it is possible that they may also view it as a deliberate undermining of their

needs. To support this argument, overparenting has previously been linked to a critical family environment (Segrin et al., 2012; Segrin et al., 2013), authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), and behavioral and psychological control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Rousseau & Scharf, 2015), all of which are likely to be perceived by emerging adults as deliberate attempts to undermine their basic psychological needs. Furthermore, parental psychological control (Inguglia et al., 2018; Mabbe et al., 2016) and authoritarian parenting (Roman et al., 2015) have been linked with increased need frustration. As an exception, however, one earlier study found no link between parental psychological control and need frustration (Cordeiro, Paixão, & Lens, 2015). Notably, Cordeiro and colleagues (2018) found that need frustration mediated the relationships between parental need thwarting and maladaptive indicators of identity exploration, and need satisfaction mediated the relationships between parental need support and adaptive indicators of identity development. Thus, parental need support may be a protective factor in successfully navigating the identity explorations of emerging adulthood while parental need thwarting may be a risk factor.

**2.4 Achievement Goal Approach**

The achievement goal approach, first proposed in the late-1970s and early 80s, identified two primary types of achievement goals: goals to develop competence, called mastery goals and goals to demonstrate competence, called performance goals (Elliot, 2005; Fortunato & Goldblatt, 2006; Pastor, Barron, Miller, & Davis, 2007; Pintrich, Conley, & Kempler, 2003). The achievement goal approach has since undergone several revisions (see Elliot, 2005 for a historical overview). My research utilizes the 2 x 2 achievement goal framework. This framework is based on two dimensions: how

competence is defined (i.e., mastery or performance goals) and how competence is valenced (i.e., approaching a desirable outcome or avoiding an undesirable outcome), resulting in four goal types: mastery-approach (MAp; e.g., to improve one's algebra skills), mastery-avoidance (MAv; to avoid forgetting or losing one's algebra skills), performance-approach (PAp; to earn the highest grade in the class on an algebra test), and performance-avoidance (PAv; to avoid being outscored by others on an algebra test) (Elliot, 2005; Elliot & McGregor, 2001).

MAp goals have been associated with a variety of adaptive outcomes: need for achievement, self-determination, classroom engagement, deep processing, self-efficacy, high task value, intrinsic interest, positive affect, and greater effort and persistence (Elliot & McGregor, 2001; Hulleman, Schrager, Bodmann, & Harackiewicz, 2010; Pastor et al., 2007; Pintrich, 2000; Senko, Hulleman, & Harackiewicz, 2011). MAv goals have been associated with generally negative patterns such as fear of failure, low self-determination, entity theory of intelligence, anxiety, disengagement, low self-efficacy, disorganized study, test anxiety, and low achievement (Elliot & McGregor, 2001; Hulleman et al., 2010; Pintrich, 2000, Senko et al., 2011). PAp goals have been associated with a mix of positive and negative patterns such as high effort, need for achievement, persistence, interest, achievement, mild anxiety, fear of failure, and surface learning strategies (Brophy, 2005; Elliot, 2005; Elliot & McGregor, 2001; Elliot & Moller, 2003; Hulleman et al., 2010; Midgley, Kaplan, & Middleton, 2001; Pintrich, 2000; Senko et al., 2011). PAv goals have been related to maladaptive patterns such as fear of failure, low self-determination, entity theory of intelligence, low achievement, low effort, low interest, disorganized study, surface learning strategies, test anxiety, help avoidance, and self-

handicapping (Elliot & McGregor, 2005; Hulleman et al., 2010; Pastor et al., 2007; Pintrich, 2000; Pintrich et al., 2003; Senko et al., 2011).

**Hierarchical model of achievement motivation.** In the last two decades, researchers have noted problematic inconsistencies in how achievement goals are defined in achievement goal research (Elliot, 2005; Elliot & Fryer, 2008; Elliot & Moller, 2003; Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014). Researchers tend to define an achievement goal as the purpose for engaging in a behavior (Elliot & Thrash, 2001; Elliot, Murayama, & Pekrun, 2011; Thrash & Elliot, 2001). However, purpose is an ambiguous term that can be interpreted as both the reason for which something is done and the desired end result or aim (Elliot & Thrash, 2001). "[M]ost theorists have construed achievement goals as a combination of the reason for behavior in achievement settings and as the aim or outcome that the individual seeks to attain in that setting" (Elliot & Thrash, 2001, p. 141). Thus, performance goals are often conceptualized as a combination of a self-presentation motive or underlying reason (i.e., to demonstrate competence) and the use of a normative standard of competence (e.g., I want to appear competent to others by outperforming my classmates), and mastery goals are often conceptualized as a combination of a self-improvement motive or underlying reason (i.e., to develop competence) and the use of a task-based standard of competence (e.g., I want improve my skills by shooting 20 baskets) (Elliot & Thrash, 2001). A major problem with this approach is that it conceptualizes "the achievement goal construct as an omnibus combination of variables, thus making it difficult to know exactly which aspect of the achievement goal should be considered responsible for any hypothesized or

observed effects" (Elliot & Thrash, 2001, p. 141). Moreover, researchers must determine which and how many of the possible variables must be present to determine if a person has espoused a particular goal (Elliot & Thrash, 2001).

In response to these inconsistencies and the limitations of the omnibus approach, Elliot and colleagues proposed the hierarchical model of achievement motivation which more narrowly defines achievement goal as the aim of behavior or the "what" that an individual wants to accomplish and separates goals from their underlying reasons or the "why" of the goal (Elliot, 2005; Elliot & Fryer 2008; Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Fryer & Elliot, 2012). Competence is defined solely by its evaluative standards. Mastery goal competence is evaluated using absolute, task-based standards (i.e., mastering a task) or intrapersonal standards (i.e., doing better than one's past performance), and performance goal competence is evaluated using normative standards (i.e., performing better than others) (Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001). Although the hierarchical model separates goals from reasons, reasons are believed to lead to goals, making goals and reasons interconnected in the goal regulation process. Together reasons, other underlying motivation constructs (e.g., dispositions, values, feelings), and goals form the goal complex (Elliot & Thrash, 2001; Elliot, Murayama, & Pekrun, 2011; Fryer & Elliot, 2012), and it is the goal complex that is the "functionally meaningful unit that best predicts achievement-relevant outcomes" (Thrash & Elliot, 2001, p. 17).

Separating aims from reasons and broader goal orientations is important for many reasons. First, it allows for greater conceptual clarity, precision, and parsimony and avoids confounding the separate constructs (Elliot, 2005; Elliot & Fryer 2008; Elliot &

Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Thrash & Elliot, 2001). Additionally, the hierarchical model more completely addresses both the energization and direction of goal-oriented behavior than other achievement goal conceptualizations (Elliot & Thrash, 2001; Thrash & Elliot, 2001). The underlying reasons for an achievement goal provide energization for goal-directed behavior while the achievement goal itself directs the behavior. Different underlying reasons may affect motivation, the achievement goal process, and outcomes uniquely (Urdan & Mestas, 2006). Finally, separating aims from reasons provides for a more flexible examination of the regulatory processes of achievement behavior (Vansteenkiste, Lens, et al., 2014), allowing for any combination of reason and goal, including a "mismatch" in the aim and reason; the possibility of multiple reasons for a single goal; and the possibilities of two or more individuals pursuing the same goal for different reasons or vice versa, pursuing different goals for the same reason (Elliot & Thrash, 2001; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014). For example, an individual may aim to earn a higher grade than classmates on a calculus test, a performance-approach goal, for many reasons, including what have traditionally been considered mastery reasons: the enjoyment of the challenge, to impress others, to avoid a punishment, earning high grades in math is important to career goals, etc. (Elliot & Thrash, 2001; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014; Urdan & Mestas, 2006). Likewise, one could pursue the mastery-approach goal of aiming to master calculus problems on a test for the same possible reasons.

**AGA and overparenting.** Few studies have been completed to date that examine overparenting and achievement goals. Schiffrin and Liss (2017) found that overparenting

was associated with PAp, PAv, and MAv goals. The relationship between overparenting and avoidance goals supports prior research showing a relationship between overparenting and decreased self-efficacy and competence (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Locke et al., 2012; Schiffrin et al., 2014; van Ingen et al., 2015). Furthermore, the lack of a relationship between overparenting and MAp goals supports prior research linking overparenting to variables that imply a decrease in intrinsic motivation, such as decreased school engagement (Padilla-Walker & Nelson, 2012), reduced enthusiasm for learning, dissatisfaction with college (Hofer, 2008), procrastination (Hong et al, 2015), decreased self-regulated learning (Hofer, 2008; Hong et al., 2015), and a sense of entitlement (Givertz & Segrin, 2014; Locke et al., 2012; Richardson et al., 2017: Schiffrin & Liss, 2017). However, this study used an older version of the Achievement Goal Questionnaire (AGQ) in which an omnibus definition of achievement goal was utilized. The revised version of the AGQ separates aims from reasons (Elliot & Murayama, 2008).

Although Elliot and McGregor (2001) did not study overparenting, they did examine other controlling parenting behaviors such as person-focused feedback (versus more adaptive behavior-focused feedback), conditional approval, and worry induction. Prior research has linked overparenting to similar parental control constructs such as a critical family environment and parental conditional regard (Segrin et al., 2012; Segrin et al., 2013). Elliot and McGregor (2001) found that maternal and paternal conditional approval and paternal person-focused positive feedback predicted PAp goals. These results suggest that adoption of PAp goals may reflect an effort to win the love and approval of one's parents. Similarly, maternal and paternal person-focused negative

feedback and maternal and paternal (MAv goals only) worry induction predicted PAv and MAv goals suggesting that avoidance goals may be pursued to prevent being belittled by one's parents. However, this study also used the older version of the AGQ with an omnibus definition of achievement goal (Elliot & Murayama, 2008).

From another perspective, Mageau, Bureau, Ranger, Allen, and Soenens, (2016) studied the relationship between achievement goals that mothers have for their adolescents and autonomy-supportive and controlling parenting practices. Maternal PAp goals were linked with controlling parenting, performance pressure from mothers, guilt induction, and decreased recognition and acknowledgement of adolescents' feelings (recognition of feelings is an autonomy-supportive behavior). In contrast, maternal mastery goals and PAv goals were linked with decreased maternal guilt induction. Importantly, however, this study did not examine adolescents' own achievement goals. Therefore, it is unknown if maternal achievement goals were correlated with adolescents' achievement goals. Furthermore, this study examined autonomy-supportive and controlling parenting rather than overparenting. However, because of the parallels between overparenting and parental control (Padilla-Walker and Nelson, 2012), some of their findings may be relevant to the overparenting literature.

**2.5 Integrating SDT and AGA: The Hierarchical Model**

In recent years, researchers studying the hierarchical model of achievement motivation have used SDT as the framework with which to conceptualize the energization underlying achievement goals (Delrue et al., 2016; Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet et al., 2014; Gillet, Lafreniere, et al., 2015; Gillet et al., 2017; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006;

Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010; see the following two paragraphs for a summary of this research). AGA and SDT share many central concepts, lending themselves well to integration. Both frameworks posit that the quality, rather than the quantity, of one's motivation is determined by the reasons underlying an achievement goal, and that these underlying reasons impact the approach one takes, engagement in the goal, how success and failure are defined, and one's reactions to success and failure (Urdan, 2000). Competence is viewed by both frameworks as a key purpose for achievement behavior. Moreover, SDT and AGA both consider the impact of one's context on a student's motivational orientation and espouse a model of education in which motivation and cognitive growth are fostered by a focus on personal development rather than prescribed learning (Urdan, 2000). Finally, the concepts of intrinsic motivation from SDT and mastery goals (as they were originally conceived) from AGA overlap substantially (Deci & Ryan, 2000; Urdan, 2000). Both concepts "imply that the purpose of achievement, or of engagement in the task, is inherent to the task itself. That is, the task is seen by the student as either interesting, valuable, or otherwise worth doing for its own sake" (Urdan, 2000, p. 3). Indeed, Elliot and McGregor (2001) found that self-determination was a positive predictor of MAp goals and a negative predictor of MAv and PAv goals (note that this study used an omnibus measure of achievement goals). No relationship was found between self-determination and PAp goals. However, the overlap between extrinsic motivation and performance goals (as they were originally conceived) is limited in comparison (Deci & Ryan, 2000). In SDT "extrinsic motivation can be internalized to differing degrees, and the more fully it is internalized and integrated the more positive are

its consequences," (Deci & Ryan, 2000, p. 260) meaning that performance goals can be endorsed for reasons ranging from very controlled, extrinsic reasons to autonomous, integrated reasons. In examining AGA through a SDT lens, Deci and Ryan (2000) concluded that

> it is necessary not only to consider what goals people pursue but also why they pursue them (i.e., the perceived locus of causality of the goal pursuits) in order to understand the goals' effects. The effects of the performance goals are likely to be quite different depending on whether they are pursued for relatively autonomous or relatively controlled reasons. (p. 260)

Using the hierarchical model of achievement motivation, this conclusion can be extended to mastery goals as well: The effects of mastery goals are likely to vary depending on how autonomously or controlled these goals are pursued. (Elliot, 2005; Elliot & Fryer 2008; Elliot & Murayama, 2008; Elliot, Murayama, & Pekrun, 2011; Elliot & Thrash, 2001; Fryer & Elliot, 2012).

Since Deci and Ryan (2000) first made their argument for the importance of autonomy in achievement goals, several researchers have used the SDT framework to classify the underlying reasons for achievement goals into two types: autonomous reasons and controlled reasons (Delrue et al., 2016; Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet et al., 2014; Gillet, Lafreniere, et al., 2015; Gillet et al., 2017; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010). Autonomous regulation is aligned naturally with one's values and interests and consequently is associated with energy and task absorption

(Gillet, Lafreniere, et al., 2015; Vansteenkiste, Lens, et al., 2014). Autonomous regulation includes intrinsic, integrated, and identified regulation (Vansteenkiste, Smeets, et al., 2010). In contrast, with controlled regulation one feels pressure either through external or introjected regulation to adopt a goal that is not aligned as closely with one's values and interests, draining one's energy reserves and having a more damaging impact (Gillet, Lafreniere, et al., 2015; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Smeets, et al., 2010). The underlying motivational regulations of achievement goals play a vital role in the goal complex by altering "the functional significance or the attributed meaning of the goal" (Vansteenkiste, Lens, et al., 2014, p. 161). For example, an achievement goal pursued for a controlled reason may create a critical experience in which progress (or lack of) in reaching a goal is viewed as a reflection of one's self-worth. An achievement goal pursued for autonomous reasons may create a less threatening experience in which progress (or lack of) is viewed as helpful information to guide future behavior (Vansteenkiste, Lens, et al., 2014).

Although still in the early stages of research, empirical support for the integration of SDT and AGA has been promising. Across multiple study designs (e.g., cross-sectional, longitudinal, survey, laboratory, experimental), populations (e.g., employees, high school students, college students, athletes, adults), cultures (e.g., the United States, Canada, England, France, Turkey, Belgium, Israel, Greece), contexts (e.g., academic, employment, sports), and outcome domains (e.g., learning, athletic performance, moral functioning), the reasons underlying one's achievement goals have accounted for variance in a variety of outcomes beyond the influence of achievement goals alone (Delrue et al., 2016; Gaudreau & Braaten, 2016; Gillet et al., 2017; Gillet, Lafreniere, et

al., 2015; Gillet et al., 2014; Michou et al., 2016; Spray et al., 2006; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010). Consistently, autonomous reasons underlying achievement goals, regardless of the goal type (i.e., MAp, MAv, PAp, or PAv), have been associated with adaptive outcome patterns including effective learning strategies (Michou et al., 2016; Michou et al., 2014), satisfaction (Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet, Lafreniere, et al., 2015)), goal directed effort, goal attainment (Gillet et al., 2014), engagement (Gillet, Lafreniere, et al., 2015), positive affect (Gaudreau & Braaten, 2016; Gillet, Lafreniere, et al., 2015), intrinsic motivation (Oz et al., 2016), enjoyment, persistence, performance (Spray et al., 2006), and perceived goal attainment (Gaudreau & Braaten, 2016) and negatively correlated with cheating (Michou et al., 2014; Oz et al., 2016) and academic anxiety (Gaudreau, 2012). In contrast, controlled reasons underlying achievement goals have been positively associated with maladaptive outcome patterns such as anxiety (Gillet, Lafreniere, et al., 2015) and pressure (Oz et al., 2016), and negatively correlated with effort regulation (Michou et al., 2014). Notably, underlying autonomous reasons, regardless of goal type, were associated positively with psychological need satisfaction (Delrue et al., 2016; Gillet et al., 2014), and underlying controlled reasons were associated positively with psychological need frustration and negatively with need satisfaction (Gillet et al., 2014) Even MAp goals which were previously assumed to be inherently adaptive goals have been linked to detrimental outcomes if pursued for controlled reasons, including a decreased sense of choice, less interest/enjoyment, increased pressure and tension (Benita et al., 2014), a longitudinal decrease in self-efficacy (Gillet et al., 2017), decreased satisfaction, negative affect (Gaudreau & Braaten,

2016), and perceiving goals as threats versus challenges (Delrue et al., 2016). Finally, these studies found that the relationships between achievement goal strength and outcomes often rose above significance after controlling for underlying reasons, leading many researchers to suggest that the underlying reason for adopting an achievement goal may be more salient in predicting outcomes than the achievement goal itself (Delrue et al., 2016; Gillet et al., 2017; Gillet, Lafreniere, et al., 2015; Gillet, et al., 2014; Michou et al., 2016; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010).

Given the numerous studies that have found maladaptive outcome patterns associated with controlled regulation and adaptive outcome patterns associated with autonomous regulation, investigating the contexts and antecedents of the adoption of achievement goal complexes is an important next step in understanding and maximizing achievement motivation. Unfortunately, few studies to date have examined the contexts and antecedents of achievement motivation using the hierarchical model. Vansteenkiste, Smeet, and colleagues (2010) found that one's personal perfectionist orientation was an antecedent in PAp goal adoption with adaptive perfectionism predicting autonomous goals and maladaptive perfectionism predicting controlled goals. Michou and colleagues (2014) found evidence that one's distal motives may influence both the direction and energization of one's achievement motivation. Specifically, a motive to succeed predicted MAp goals, PAp goals, and underlying autonomous reasons, and a fear of failure predicted PAp goals, PAv goals, and underlying controlling reasons. In a follow-up study, Michou and colleagues (2016) found that the predictive relationships between motive to succeed and MAp autonomous and MAv autonomous goals were mediated by one's basic need satisfaction. Conversely, the predictive relationships between fear of

failure and MAp controlling and MAv controlling goals were mediated by one's basic need frustration. Taken together these results show that contextual antecedents in general and the satisfaction or frustration of the basic psychological needs specifically predict the achievement goal complexes people adopt and highlight the need for further research on these antecedents.

Many of the studies cited previously found that the underlying reasons for achievement goals were stronger predictors for various learning and well-being outcomes than achievement goals themselves, leading one to question if achievement goals matter at all (Vansteenkiste, Lens, et al., 2014). Despite the often greater predictive strength of underlying reasons, theoretically and statistically it is the goal complex, the combination of the "what" (i.e., the achievement goal) and the "why" (i.e., the underlying reason), that is important in achievement motivation (Gaudreau & Braaten, 2016; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014). First, in these studies, achievement goals did contribute to the variance in many of the relationships between achievement motivation and outcomes, and at times interacted with underlying reasons to predict unique outcomes (Dysvik & Kuvaas, 2010; Vansteenkiste, Lens, et al., 2014). Furthermore, specific combinations of goals and underlying reasons were associated with different results (Vansteenkiste, Lens, et al., 2014). Finally, in a comprehensive study designed specifically to address the importance of goals versus underlying reasons, Sommet and Elliot (2017) showed that for most outcomes both goals and reasons contributed independent variance, and their variance remained but was diminished when tested simultaneously, suggesting that these constructs are both "distinct and overlapping, and that neither unilaterally eliminates the influence of the other" (p. 1141). For some

outcomes, reasons contributed greater variance than goals, while for other outcomes, goals contributed greater variance than reasons. Additionally, for most outcomes, the goal complex contributed additional variance when controlling for goals and reasons, suggesting that the goal complex may be more than a sum of goals and reasons. Thus, the results support the argument in favor of the goal complex and highlight the need to continue exploring the role of the goal complex in achievement motivation rather than focusing on a comparative "either/or" approach with goals and their underlying reasons (pp. 1157-1158).

**2.6 Rationale**

My research explores the relationship between overparenting and achievement motivation within the frameworks of AGA and SDT. Specifically, I investigate the relationships among overparenting, the satisfaction and frustration of emerging adults' basic psychological needs (i.e., autonomy, competence, and relatedness) and the strength of achievement goal complexes. Autonomy development and identity development are key tasks in emerging adulthood (Arnett, 2015; Chickering, 1993). The three criteria that signify that adulthood has been achieved are accepting responsibility for one's self, making independent decisions, and becoming financially independent (Arnett, 2015). Having a diminished sense of autonomy, competence, or relatedness is likely to interfere with these tasks and delay the onset of adulthood. Indeed, in a study of Portuguese high school seniors making future career and college plans, need frustration negatively predicted commitment-making (Cordeiro et al., 2018). Conversely, need satisfaction predicted adaptive indicators of identity exploration (e.g., exploration in breadth and depth and commitment making) and negatively predicted maladaptive identity

exploration (i.e., ruminative exploration). Prior research has shown that overparenting in the emerging adult population is linked conceptually (Reed et al., 2016) and statistically with the lack of fulfillment of the basic needs of autonomy, competence, and relatedness (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Hofer, 2008; Locke et al., 2012; Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014; Segrin et al., 2012; Segrin et al., 2013; van Ingen et al., 2015). Although no research to date has examined need frustration in an overparenting context, given previous findings linking overparenting to a critical family environment (Segrin et al., 2012; Segrin et al., 2013), authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), and behavioral and psychological control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Rousseau & Scharf, 2015), need frustration and overparenting seem to be conceptually related. In addition, research has linked controlling coaching, teaching, and parenting behaviors to need frustration (Amoura et al., 2015; Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Cheon et al., 2016; Cheon et al., 2018; Cordeiro et al., 2018; González et al., 2017; Haerens et al., 2015; Inguglia et al., 2018; Jang et al., 2016; Liu et al., 2017; Mabbe et al., 2016; Roman et al., 2015).

Basic psychological needs (i.e., autonomy, competence, and relatedness) have also been shown to be important in the adoption of achievement goals. Regardless of goal type, achievement goals pursued for autonomous reasons are associated with more adaptive antecedents and outcomes than achievement goals pursued for controlled reasons (Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet, Lafreniere, et al., 2015; Michou et al., 2016; Michou et al., 2014; Oz et al., 2016; Spray et al., 2006; Vansteenkiste, Smeets, et al., 2010). Furthermore, research has linked need satisfaction

and need frustration to achievement goal complexes both as antecedents (Michou et al., 2016) and as outcome variables (Delrue et al., 2016; Gillet et al., 2014). Need satisfaction/frustration may act in a cyclical nature both influencing one's future achievement motivation and being shaped by one's past achievement experiences (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Deci & Ryan, 2000). However, my research is based on the premise that overparenting may foster a context in which one's basic needs are unfulfilled and/or actively thwarted. Achievement goals are then adopted within this context. This idea is supported by Elliot and McGregor's work (2001) which examined parental control as a context in which emerging adults adopted achievement goals and is also grounded in SDT which posits that need satisfaction (or lack of) provides the energy for motivated behavior and that one's development is a function of the social environment meeting one's basic psychological needs (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Deci et al., 1991; Michou et al., 2016).

**2.7 Significance**

My research fills gaps in several research areas. In a thorough review of the literature, overparenting and the achievement goal approach have been examined in only one study found to date (Schiffrin & Liss, 2017). Unfortunately, that study used an outdated version of the AGQ which relied on an omnibus definition of achievement goal (Elliot & Murayama, 2008), possibly impacting the validity of the findings. Moreover, the study offered only a very abbreviated examination of the relationship between these two constructs and did not use the framework of SDT. Additionally, research has consistently shown a negative relationship between overparenting and need satisfaction,

but no research has examined overparenting and need frustration. The concept of need frustration in general, although important theoretically to SDT, has been largely ignored from an empirical standpoint until recently (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani,). The examination of the AGA approach through the lens of SDT is also relatively new in the last decade. Numerous studies have examined outcomes associated with autonomous and controlled goal complexes; however, personal and contextual antecedents, such as the roles that parenting and need satisfaction/frustration play in goal adoption, are still largely unexamined and warrant further exploration (Gillet et al., 2014; Michou et al., 2016).

Additionally, my research is among the first to incorporate a new approach to measure achievement goal complexes (Sommet & Elliot, 2017). Existing research primarily used a flawed method for measuring reasons (Sommet & Elliot, 2017). While the goal measures used in these studies were "pure" (Sommet & Elliot, 2017, p. 1143) and devoid of any reason content, the reason measures were linked directly to specific goal content (i.e., what is one's reason for pursuing a specific goal versus what is one's reason for pursuing goals in general). Thus, these studies contained measurement redundancy in that goals were measured both separately and within a goal complex, but reasons were only measured within a goal complex. If goals are detached from reasons, then reasons must also be detached from goals to adequately determine the amount of unique variance each construct contributes in predicting an outcome. To correct this measurement weakness, Sommet and Elliot (2017) developed a measure of goal

complexes, but their measurement approach has not yet been used beyond their original study.

Aside from addressing research gaps, my research offers much practical significance as well. For the emerging adult college population, exploring the roles of parenting contexts, basic need satisfaction and need thwarting, and achievement goals is especially important given the key emerging adult developmental tasks of autonomy and identity development (Arnett, 2015, Chickering, 1993) and recent findings that need satisfaction and need frustration are associated with identity exploration (Cordeiro et al., 2018). Furthermore, research on achievement goal complexes has shown that both the aim and underlying reason matter in predicting positive and negative outcomes. These results suggest that encouraging adaptive mastery goals in students may not be enough and that parents and teachers should also foster a context that supports autonomy in achievement goal adoption (Benita et al., 2014; Delrue et al., 2016; Gaudreau & Braaten, 2016; Gillet et al., 2017; Michou et al., 2016, Michou et al., 2014). Given that underlying controlled motivation has been found to have deleterious outcomes, investigating contextual antecedents to achievement motivation will help clarify what situations and contexts should be cultivated to foster autonomously regulated motivation. My research may clarify contextual factors that are associated with more adaptive and autonomous achievement goal complexes. College personnel may use these results to guide parents in helping their emerging adult students transition to college in developmentally appropriate and motivating ways (Wartman & Savage, 2008).

**2.8 Research Questions**

My research aimed to address the following research questions:

RQ1a: To what extent does the strength of emerging adults' perceived overparenting predict basic need satisfaction?

RQ1b: To what extent does the strength of emerging adults' perceived overparenting predict basic need frustration?

H1: Increased overparenting will negatively predict need satisfaction.

H2: Increased overparenting will positively predict need frustration.

Past research has consistently linked overparenting to decreased autonomy (Hofer, 2008; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014), decreased competence (Schiffrin et al., 2014) and decreased self-efficacy (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Locke et al., 2012; van Ingen et al., 2015), and maladaptive family relationship patterns (Segrin et al., 2012; Segrin et al., 2013). Taken together these results suggest that overparenting is negatively associated with basic need satisfaction.

No research has yet examined overparenting and need thwarting. Given prior research that revealed a link between overparenting and a critical family environment (Segrin et al., 2012; Segrin et al., 2013), authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), and behavioral and psychological control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Rousseau & Scharf, 2015), it is plausible to expect that overparenting may provide a social environment in which emerging adults feel that their needs are being actively undermined. Previous research found that parental psychological control (Inguglia et al., 2018; Mabbe et al., 2016), parental need thwarting (Cordeiro et al., 2018), and authoritarian parenting (Roman et al., 2015) were positively linked with need frustration; however, as an exception, one study found no link between

parental psychological control and need frustration (Cordeiro et al., 2015). Likewise, controlling coaching and teaching practices predicted need frustration among athletes and students (Amoura et al., 2015; Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; González et al., 2017; Haerens et al., 2015; Jang, Kim, & Reeve, 2016; Liu, Bartholomew, & Chung, 2017). Finally, self-criticism and dependence were found to be antecedents to perceived need thwarting (Vandenkerckhove, Brenning, et al., 2019). Given the associations between overparenting and decreased autonomy (Hofer, 2008; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014), decreased competence (Bradley-Geist & Olson-Buchanan, 2014; Givertz & Segrin, 2014; Locke et al., 2012; Schiffrin et al., 2014; van Ingen et al., 2015), entitlement (Givertz & Segrin, 2014; Locke et al., 2012; Richardson et al., 2017: Schiffrin & Liss, 2017), and a critical family environment (Segrin et al., 2012; Segrin et al., 2013), it is plausible to anticipate that both self-criticism and dependence are theoretically linked to overparenting.

RQ2a: To what extent do the strength of emerging adults' perceived overparenting and basic need satisfaction predict the achievement goal complexes they adopt?

RQ2b: To what extent do the strength of emerging adults' perceived overparenting and basic need frustration predict the achievement goal complexes they adopt?

H3: Increased overparenting will positively predict the adoption of less adaptive goal complexes.

H4: Increased need satisfaction will positively predict the adoption of more adaptive goal complexes.

H5: Increased need frustration will positively predict the adoption of less adaptive goal complexes.

Prior research has linked overparenting to both performance goals and avoidance goals (Schiffrin & Liss, 2017). Furthermore, controlling parenting behaviors such as person-focused feedback, worry induction, and conditional approval were found to predict performance and avoidance goal types (Elliot & McGregor, 2001). Similarly, maternal PAp goals were associated with controlling parenting, performance pressure, guilt induction, and decreased recognition and acknowledgement of adolescents' feelings (recognizing and acknowledging feelings is a form of autonomy support) (Mageau et al., 2016). These maladaptive parenting characteristics are similar to parenting patterns (e.g., authoritarian parenting, behavioral and psychological control, critical family environment, conditional regard, problematic communication,) associated with overparenting (Odenweller et al., 2014; Segrin et al., 2012; Segrin et al., 2013; Padilla-Walker & Nelson, 2012). Finally, overparenting was associated with coping with problems with avoidance strategies (Segrin et al., 2013), suggesting that avoidance goals may be more prevalent among overparented emerging adults.

Regarding reasons underlying achievement goals, prior research has found that overparenting (or similar constructs) is linked to decreased autonomy among emerging adult college students (Hofer, 2008; Kwon et al., 2017; Schiffrin et al., 2014) and negatively correlated with an internal locus of control (Kwon et al., 2015). Furthermore, overparenting has been associated with lowered self-regulation of learning (Hofer, 2008; Hong et al., 2015) and decreased ability to set one's own goals (Hong et al., 2015), suggesting that emerging adults who are overparented may be less likely to adopt achievement goals for autonomous reasons and more likely to feel coerced into adopting a goal. Overparenting has also been linked to outcomes that imply lowered intrinsic

motivation such as decreased school engagement (Padilla-Walker & Nelson, 2012), reduced enthusiasm for learning, and dissatisfaction with college (Hofer, 2008). Diminished intrinsic motivation is likely to be associated with less autonomous and more controlling reasons for goal adoption, reflecting a lack of personal investment in one's education (Padilla-Walker & Nelson, 2012). Moreover, prior findings linking overparenting to a sense of entitlement and decreased self-efficacy suggest that emerging adults who are overparented may rely on and expect their parents for help in achieving their goals, may be less intrinsically motivated (Givertz & Segrin, 2014; Locke et al., 2012; Richardson et al., 2017: Schiffrin & Liss, 2017), and consequently may be more likely to pursue their goals for controlled reasons. Authoritarian parenting, a construct associated with overparenting (Odenweller et al., 2014) has been linked to extrinsic life goals (Roman et al., 2015), suggesting that a more controlling parenting approach may be associated with extrinsic motivation. As a notable exception, however, a study of Chinese adolescents found no relationship between perceiving one's parents or teachers to be psychologically controlling and adolescents' autonomous and controlled motivation (Li, Deng, Wang, & Tang, 2018).

According to SDT, the three basic psychological needs provide the energy for motivated behavior. These needs must be met for autonomous, self-determined motivation to occur (Deci et al., 1991; Deci & Ryan, 2000). Conversely, when people's needs are thwarted, they are more likely to feel controlled in their motivation (Deci & Ryan, 2000; Michou et al., 2016). Prior research has linked need satisfaction to greater adoption of mastery goals (Michou et al., 2016) and autonomous underlying reasons (Martinent, et al., 2015; Michou et al., 2016) and lower adoption of PAv goals

(Duchesne, Ratelle, & Feng, 2017). Furthermore, self-determination was found to positively predict MAp goals and negatively predict MAv and PAv goals (Elliot & McGregor, 2001). In contrast, need frustration was linked to MAv goals (Michou et al., 2016) and controlled underlying reasons (Gillet et al., 2014; Martinent, et al., 2015; Michou et al., 2016). Moreover, weekly variation in need frustration positively predicted weekly variation in controlled motivation and weekly variation in need satisfaction positively predicted weekly variation in autonomous motivation (Vandenkerckhove, Soenens, et al., 2019). Finally, need frustration mediated the relationships between controlling teaching behaviors and controlled motivation (Haerens et al., 2015), and decreased autonomous motivation (Amoura et al., 2015) while need satisfaction mediated the relationship between autonomy-supportive teaching and autonomous motivation (Amoura et al., 2015; Haerens et al., 2015).

RQ3a: Does emerging adults' basic need satisfaction moderate the relationships between overparenting and achievement goal complexes?

RQ3b: Does emerging adults' basic need frustration moderate the relationships between overparenting and achievement goal complexes?

Previous research found that parental warmth moderated the relationships between overparenting and emerging adults' self-worth and their risk behaviors (Nelson et al., 2015). Higher levels of overparenting with lower levels of parental warmth predicted decreased self-worth and increased risk behaviors. Conversely, higher levels of overparenting with higher levels of parental warmth predicted decreased risk behaviors. The researchers concluded that overparenting may be particularly damaging when combined with low parental warmth. Parental warmth is conceptually similar to the basic

need for relatedness. Therefore, it is possible that basic need satisfaction and/or basic need frustration may moderate the relationship between overparenting and achievement goal complexes. However, because of limited extant research, no specific hypotheses will be made regarding possible moderating relationships among these constructs.

Table 2.1 Examples of Need Satisfying and Need Thwarting Parental Statements

| | Need Satisfying | Need Thwarting |
|---|---|---|
| Autonomy | I trust that you will make the best decision for you and your life goals. | This is too important a life decision for you to make. You need to do what I say. I know best. |
| Competence | If you put in the study time, your understanding of this math assignment will improve. | You have never been good at math. You just don't have the brain for it. |
| Relatedness | I'd like to hear your perspective on our disagreement. | I don't even want to look at you until you can acknowledge you were wrong. |

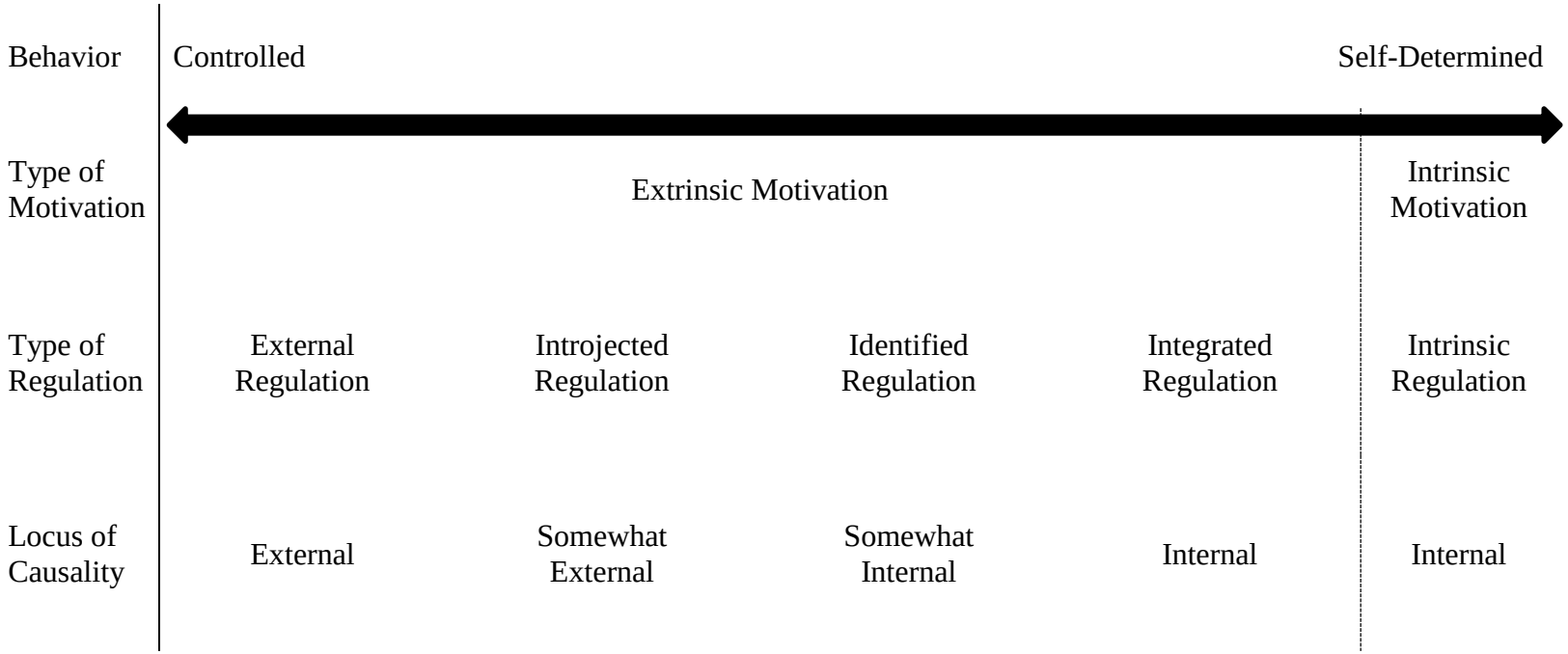


*Figure 2.1.* The self-determination continuum, showing the motivational, regulatory, and perceived locus of causality bases of behaviors that vary in the degree to which they are self-determined. Adapted from "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior," by E. L. Deci, and R. M. Ryan, 2000, *Psychological Inquiry, 11*(4), p. 237. Copyright 2000 by Lawrence Erlbaum Associates, Inc.

# Chapter 3

# Method

## 3.1 Participants

An a priori power analysis using G*Power showed that 131 participants were required to detect medium-sized effects ($f^2 = .15$) in a hierarchical regression model with 13 total predictors (10 demographic control variables and 3 predictor variables: overparenting, need satisfaction, and need frustration) with a power of .80 and alpha of .05 (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007). Medium effect sizes were chosen because researchers have found moderate negative relationships among overparenting and need satisfaction, specifically autonomy ($r = -.37$) and competence ($r = -.29$) (Schiffrin et al., 2014). Additionally, need satisfaction was moderately correlated with the MAp autonomous goal complex ($r = .38$) while need frustration was moderately correlated with the MAv controlling ($r = .33$ and $r = .38$) and MAp controlling ($r = .32$) goal complexes (Michou et al., 2016). Although, overparenting and similar parenting behaviors were shown to have weak relationships with achievement goals (Elliot & McGregor, 2001; Schiffrin & Liss, 2017), these studies used an outdated omnibus measure of achievement goals. More recent research found that integrating aims and reasons to form achievement goal complexes is the best method to "account for competence motivation," (Sommet & Elliot, 2017, p. 1141) with goal complexes contributing predictive strength for most measured outcomes above and beyond that of goals and reasons separately. Therefore, it was expected that using a goal complex

measure would result in stronger relationships between achievement goals and overparenting, need satisfaction, and need frustration, and consequently, the use of medium-sized effects in the power analysis was justified.

Participants were recruited during the fall 2018 and spring 2019 semesters at a public university in the Southeastern United States. Participants were enrolled in one of the following courses: a freshmen introduction to college course, an upper-level peer leadership course, an upper-level educational psychology course for education majors, or an upper-level educational research course for education majors. Survey participation varied by class as some instructors chose not to inform their students of the survey. A total of 248 participants gave their consent to participate in this research, and 196 participants completed the survey. To be included in the data analysis, participants had to meet emerging adult criteria: aged 18-25 years, unmarried, and childless. This population was chosen because it is likely to be in the midst of emerging adulthood. The key emerging adult developmental tasks among this population are unlikely to have been accomplished. Furthermore, college students were chosen because the proposed research was an investigation of achievement goals; therefore, a population in an academic context is appropriate. Parents of emerging adults were not surveyed regarding their use of overparenting because previous research has shown that, while related to one another, emerging adults' reports of perceived overparenting were more predictive of emerging adults' outcomes than parental reports (Schiffrin & Liss, 2017; Segrin et al, 2015). Eight participants did not meet emerging adult criteria, and two participants' ages could not be determined because they chose not to report their ages and were consequently removed from the analyses.

Additionally, participants had to pass attention check items for their responses to be included in the data analyses. The first attention check item appeared to be problematic, with 24% of participants missing it. It is highly likely that the wording was confusing to respondents*: I am paying attention to these questions because it is important to answer accurately. Please choose Somewhat for this item.* Respondents were then given a seven-point Likert scale (1 = not at all, 4 = somewhat, 7 = completely). Based on the responses, participants may have been answering this item based on how closely they agreed with the first sentence of the item (*I am paying attention to these questions because it is important to answer accurately*) rather than following the instructions of choosing *Somewhat*. Of the 44 respondents who missed this item, the majority (32) of respondents choose *7 Completely*, 7 respondents chose *6*, 4 respondents chose *5*, and only 1 respondent chose *2*. In contrast, only 8 participants missed the second attention check item (*I am paying careful attention to these items. Please choose Completely*), and 7 participants missed the third attention check item (*Please select Not at all for this item*). Because of the confusing instructions with the first attention check item, it was disregarded. However, 10 participants were eliminated from the analyses because they missed one (5 participants) or both (5 participants) remaining attention check items. Thus, the participants for my study totaled 176 emerging adult undergraduate students

Regarding the participants in the upper-level education courses, a possible confounding issue is important to note: the topic of parenting styles is included in the content of one of the education courses. Thus, participants who were currently enrolled in the course or took that course previously may have had prior knowledge that influenced their responses to the overparenting survey items. Because data were not

collected on the specific courses in which the participants were enrolled or had previously completed, it was not possible to determine if enrollment in the upper-level education courses was associated with survey responses. Statistical analyses were completed to examine if age or length of college enrollment was associated with perceived overparenting and any other predictor or response variables. Because only junior and senior students were able to take the upper-level education courses, it is possible that any relationships between age or length of college enrollment and the response variables may have been confounded with the prior knowledge from those courses. These analyses are discussed in Chapter 4.

**3.2 Procedure**

A survey method was chosen because an experimental design would have been both impractical and unethical to study parenting approaches in emerging adulthood. Furthermore, a quantitative, versus qualitative, design was selected because an aim of this study was to examine general patterns related to overparenting, emerging adulthood, and achievement motivation rather than a more detailed investigation of individualized experiences.

Participants completed an online single-session anonymous survey on Survey Monkey (see Appendix A). The survey consisted of 71 items and required 10 to 15 minutes to complete. Participating instructors provided an electronic survey link to their students either through email or by posting the link on the University's online learning management system. I included with the survey link a brief paragraph summarizing the research and requesting students' assistance by completing the linked survey within the following two weeks. The granting of extra credit for survey completion was at the

discretion of each instructor; however, I requested that instructors not unduly influence or coerce students to participate by keeping extra credit points low and emphasizing that participation was voluntary.

Students were not granted access to the survey until they indicated their consent to participate. The invitation to participate outlined the purpose of the study, approximate time commitment, and the anonymity of the study. Participants were informed that they could quit the survey and withdraw their consent at any time during the survey. If participants were uncomfortable answering any survey questions, they could either end their participation or choose "I prefer not to answer this item" for any item they did not wish to answer. Participants who did not complete their surveys were assumed to have withdrawn their consent, and their data were not included in the analyses.

### 3.3 Measures

**Achievement goal complex.** To measure the response variable of achievement goal complex, I used the integrated goal complex measure developed by Sommet and Elliot (2017). This goal complex measure combines the Revised Achievement Goal Questionnaire (AGQ-R; Elliot & Murayama, 2008) with a series of phrases measuring autonomous and controlled reasons for pursuing goals (Michou et al., 2014; Vansteenkiste, Mouratidis, et al., 2010). The AGQ-R measures how strongly participants endorse achievement goals and is comprised of four subscales based on goal type: MAp ($\alpha = .84$; *I am striving to understand the content of my courses as thoroughly as possible*), MAv ($\alpha = .88$; *I am striving to avoid an incomplete understanding of my course material*), PAp ($\alpha = .92$; *I am striving do well compared to other students*), and

PAv (α = .94; *I am striving to avoid performing worse than others*). The items were modified slightly to measure achievement goals for college in general rather than for a specific class. Each item from the AGQ-R was paired with reasons for pursuing the goal. Two reasons measured autonomous regulation, and two reasons measured controlled regulation. Autonomous regulation included intrinsic regulation (e.g., *I am striving to understand the content of my courses as thoroughly as possible because this is a highly stimulating and challenging goal*) and identified regulation (e.g., *I am striving to understand the content of my courses as thoroughly as possible because this is a personally valuable goal for me*). Controlled regulation included introjected regulation (e.g., *I am striving to understand the content of my courses as thoroughly as possible because I have to prove myself*) and external regulation (e.g., *I am striving to understand the content of my courses as thoroughly as possible because others expect or require me to do so*). Participants were told, "Below are goals you might choose to pursue in college, together with explanations for why you might pursue these goals," and were asked to indicate on a seven-point Likert scale (1 = not at all, 4 = somewhat, 7 = completely) how strongly they agreed with each goal statement.

To keep the number of items reasonable, reduce the complexity of the analyses, and protect the data quality, I only included items measuring MAp and PAp goals, reduced the number of items for each goal type from three to two (Sommet and Elliot, 2017, made this same modification in their research), and included only one reason for each type of regulation (i.e., intrinsic, identified, introjected, and external). Sommet and Elliot (2017) argued that including all possible goal complexes (which would amount to 30 different goal complexes if using the 3 x 2 achievement goal framework and five main

types of reasons) is too many to adequately study simultaneously and would overburden participants with "a large number of related and (seemingly) redundant questions (which would undoubtedly yield poor quality data)" (p. 1157). Instead, they advocated that researchers consider the ecological validity of their research and study only those goals that are most relevant for the situation under investigation. Because of the prevalence of MAp and PAp goals in academic settings and the long-ranging debate over the benefits and costs of PAp versus MAp goals (Brophy, 2005; Midgely et al., 2001; Pintrich, 2000; Senko et al., 2011), I only included these two goal types in my research. Thus, the final number of items in the goal complex measure was 16: 4 items (2 goal items x 2 reason items) assessed the MAp Autonomous goal complex, 4 items (2 goal items x 2 reason items) assessed the MAp Controlled goal complex, 4 items (2 goals items x 2 reason items) assessed the PAp Autonomous goal complex, and 4 items (2 goal items x 2 reason items) assessed the PAp Controlled goal complex. Participants' means on the 4 items for each goal complex type were calculated and used in the analyses as the outcome measures.

**Demographic control variables.** Self-reported demographic data included gender identity, age, race, ethnicity, semester and year of first college enrollment, approximate high school grades (e.g., mostly As, mix of As and Bs, etc.), approximate college grades, residence (i.e., on-campus, off-campus with roommates or alone, and with family), and parental education level. Parental education level was used as a proxy measure for socioeconomic status. These data were used as control variables in the analyses.

**Overparenting.** I used a 5-item Helicopter Parenting measure (Padilla-Walker & Nelson, 2012) to measure the predictor variable overparenting. This instrument was designed to assess the degree to which parents intervene and make major decisions for their emerging adult children (e.g., "My mother intervenes in solving problems with my employers or professors,") and was found to have strong reliability ($\alpha = .87$ for emerging adult report of mother's parenting, $\alpha = .84$ for emerging adult report of father's parenting, $\alpha = .77$ for mother's report of mother's parenting, and $\alpha = .78$ for father's report of father's parenting). Through latent factor analysis, the Helicopter Parenting measure showed that overparenting is related to but distinct from parental behavioral control and parental psychological control, results that were theoretically expected (Padilla-Walker & Nelson, 2012). Additionally, child's report of mother's parenting, child's report of father's parenting, mother's report, and father's report using this scale all loaded on one latent variable. This instrument was selected over other overparenting measures because it is concise (respondent fatigue and attrition were concerns if the survey was too lengthy), asks about current parenting behaviors (rather than past parenting behaviors when the emerging adult was younger), measures emerging adults' perceptions (rather than their parents' perceptions), and asks only about parents' observable behaviors (rather than parents' private cognitions or feelings of which emerging adults may have little knowledge). To minimize the number of survey items and to collect data on all participants regardless of their parental composition (e.g., deceased parents, stepparents, same sex parents), participants were asked to respond to each item about "at least one of my parents" rather than ask separately about mothers and fathers or to ask about only mothers or only fathers. This item stem was also used by Darlow and colleagues (2017).

Participants were asked to indicate how each statement described their parent(s) on a 5-point scale (1 = not at all like my parent, 5 = a lot like my parent).

**Need satisfaction.** I used the Basic Psychological Need Satisfaction in General Scale (BNSG-S; Deci & Ryan, 2000; Gagné, 2003) to assess the predictor variable composite needs satisfaction as well as the subscores of autonomy satisfaction, competence satisfaction, and relatedness satisfaction. This instrument ($\alpha = .89$) contains three subscales measuring autonomy (seven items, $\alpha = .69$; e.g., *I feel like I am free to decide for myself how to live my life*), competence (six items, $\alpha = .71$; e.g., *I often do not feel very capable*), and relatedness (eight items, $\alpha = .86$; e.g., *I really like the people I interact with*). Participants were asked to indicate how true each item is on a seven-point scale (1 = not at all true, 4= somewhat, 7 = completely). Scores for each subscale were calculated by averaging the items in the subscale. Composite need satisfaction scores were calculated by averaging the three subscores.

**Need frustration.** I used the Psychological Need Thwarting Scale (PNTS; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011) to assess the predictor variable composite needs frustration as well as the subscores of autonomy frustration, competence frustration, and relatedness frustration. The instrument ($\rho = .91$) is comprised of three subscales for autonomy (four items; $\rho = .80$; e.g., *I feel pushed to behave in certain ways*), competence (four items; $\rho = .82$; e.g., *There are situations where I am made to feel inadequate*), and relatedness (four items; $\rho = .77$; e.g., *I feel I am rejected by those around me*). Participants were asked to indicate how true each item is on a seven-point scale (1 = not at all true, 4= somewhat, 7 = completely). Scores for each subscale were calculated by averaging the items in the subscale. Composite need

frustration scores were calculated by averaging the subscales. I modified the PNTS to measure need frustration in general. The original scale measures need frustration in a sport context. This same modification was made by other researchers (Costa, Soenens, Gugliandolo, Cuzzocrea, & Larean, 2015; Thøgersen-Ntoumani et al., 2018). A confirmatory factor analysis of the modified instrument demonstrated good model fit with all items showing satisfactory factor loadings (Costa et al., 2015) and strong internal reliability (α = .93; Thøgersen-Ntoumani et al., 2018).

The authors of the PNTS calculated reliability using a lesser known method, Raykov's composite reliability for congeneric measures model (CRCMM). The CRCMM is a structural equation model equivalent to coefficient omega that can be used to estimate reliability indices and coefficients and to explore the factorial structure of an item set of congeneric composite measures (Raykov, 1997, p. 173). Congeneric measures are "measures of the same latent dimension in possibly different units of measurement and with possibly different precision" (Raykov, 1997, p. 174). These types of measures are prevalent in psychological research. Coefficient omega "is computed using the item factor loadings and uniqueness from a factor analysis whereas coefficient alpha uses the item covariance (or correlation) matrix" (Padilla & Divers, 2016, p. 437). Thus, CRCMM is a more general form of reliability than Cronbach's α (Padilla & Divers, 2016). A primary benefit to using CRCMM with congeneric measures is that, unlike Cronbach's α, it is not prone to underestimate composite reliability (Padilla & Divers, 2016; Raykov, 1997).

The PNTS has been adapted and used in multiple studies since its development, including to measure needs frustration in a police training program (Gillet et al., 2014),

French athletes (Martinent et al., 2015), among Chinese (Liu & Chung, 2015) and Estonian (Hein et al., 2015) school students in a physical education context, in a broader physical activity context (versus sports context; e.g., gardening, walking, etc.) (Gunnell et al., 2013), among Spanish physical education teachers (Cuevas et al., 2015), among French Canadian executive MBA students (Gillet, Forest, et al., 2015), and among Norwegian healthcare workers (Olafse et al., 2017). Furthermore, in a follow-up study of the PNTS, researchers tested whether the distinction between positive (need satisfaction) and negative (need dissatisfaction and need thwarting) dimensions of needs were due to method effects (e.g., positive and negative wording) (Costa et al., 2015). A confirmatory factor analysis showed no significant method effects and supported a factor structure of three separate constructs: need satisfaction, need dissatisfaction, and need frustration.

**Other items.** The survey also included three attention check items to ensure that participants were reading the items prior to answering and not answering randomly. Finally, the survey included a question about marital status and if the participant had children. The purpose of these items was to ensure that only the data of respondents who met emerging adult criteria were included in the statistical analyses.

# Chapter 4

# Results

## 4.1 Missing Data

The survey was designed to minimize missing data. Participants were required to answer all items on a page before proceeding to the next page. If participants did not want to answer an item, they were told they could either withdraw their consent by quitting the survey at any time or they could select the response choice "I prefer not to answer this item". Moreover, attention check items were employed to identify participants who may have been answering randomly. Therefore, missing data in my research is assumed to be items that respondents intentionally did not answer because they did not know the answer, did not understand the item, or felt uncomfortable giving a response.

Overall missing data were minimal, representing just 0.2% of all possible data points used in the analyses (60 survey items multiplied by 176 participants; see Table 4.1). Of the participants with missing data, the vast majority was missing only one data point. Five participants were missing one demographic response, and eight participants were missing one survey response from the overparenting scale, need satisfaction scale, or need frustration scale. These scales were each comprised of multiple survey items: overparenting (5 items), composite need satisfaction (21 items total comprised of 7 autonomy satisfaction items, 6 competence satisfaction items, and 8 relatedness satisfaction items), and composite need frustration (12 items total comprised of 4

autonomy frustration items, 4 competence frustration items, and 4 relatedness frustration items). To maximize the quantity of data included in the analyses, participants were included in the analyses if they had non-missing data for at least 75% of the items in a scale. Their scale scores were calculated by taking the mean of the scale items they completed. For example, the relatedness satisfaction subscore of a participant who answered 7 out of 8 relatedness satisfaction items was calculated by computing the mean of the 7 items that were answered, whereas the relatedness satisfaction subscore of a participant who answered all 8 items was calculated by computing the mean of the 8 items. The data from two participants were excluded from the analyses through listwise deletion: one participant was excluded due to missing 50% of items in the autonomy frustration subscale, and one participant was excluded due to missing 50% of items in the competence frustration subscale. Because demographic data were included in the regression analyses, the five participants with missing demographic data were also excluded from the analyses through listwise deletion. Thus 4% of participants ($n$ = 7) were excluded from the statistical analyses through listwise deletion.

To investigate the impact of excluding participants with missing data, the regression analyses were computed with and without these participants. Three sets of analyses were completed. In data set 1, all participants except the 5 participants with missing demographic data were included. In data set 2, the two participants with less than 75% non-missing data on the scaled variables were excluded. In data set 3, all fifteen participants with missing data were excluded. The results of the regression analyses were largely unchanged across the three analyses sets (see Table 4.2). Thus, data set 2 was determined to be the best choice because it provided the largest sample

with no major changes to the regression analyses. The total number of participants included in the preliminary and main analyses was 169.

**4.2 Preliminary Analyses**

The statistical analyses were completed using SPSS. Using visual and statistical inspection, the data were examined for outliers, missing data, and assumptions of multiple linear regression: linear relationships between the predictor and response variables, no multicollinearity, normally distributed residuals, and homoscedasticity (Moore, 2010). Intercorrelations and variance inflation factors were calculated to check for multicollinearity. Because of a strong correlation between age and length of college enrollment, $r = .91$, as well as high variance inflation factors (VIF; VIF > 6) and low tolerance (tolerance < 0.2), these measures were determined to be multicollinear and redundant. Consequently, length of college enrollment ($M = 382.01$, $SD = 465.13$) was excluded from all main analyses.

Sample means, standard deviations, and minimum and maximum values were calculated and are reported in Table 4.4. Most participants were female, white, and in their first year of college, resided on-campus, had college-educated parents, and earned As or Bs in high school and college. MAp Autonomous goals were the most strongly endorsed by participants and had the smallest range of scores; however, the mean scores of all four goal complexes were above the scale mid-points. Overall, overparenting scores were low as were need frustration scores with means below the scale mid-points, reflecting that most participants reported low overparenting and low need frustration. In contrast, need satisfaction scores were high overall with means above the scale mid-points and more restricted ranges compared to need frustration scores.

Bivariate correlations are reported in Table 4.5. Overparenting was positively correlated with autonomy frustration and negatively correlated with autonomy satisfaction. All need satisfaction variables (i.e., composite need satisfaction, autonomy satisfaction, competence satisfaction, and relatedness satisfaction) were positively correlated with the MAp Autonomous goal complex. Competence satisfaction was also positively correlated with the PAp Autonomous goal complex. All need frustration variables (i.e., composite need frustration, autonomy frustration, competence frustration, and relatedness frustration) were negatively correlated with the MAp Autonomous goal complex. Finally, composite need frustration, autonomy frustration, and relatedness frustration were positively correlated with the PAp Controlled goal complex.

Both age and length of college enrollment were negatively correlated with overparenting ($r$ = -.28, $r$ = -.27 respectively). Theoretically overparenting is expected to decrease as emerging adults age and gain more experience, and these results support that expectation. However, a confounding effect of prior education coursework was a possibility for junior and senior participants. Because coursework data were not collected, it is not possible to know if the correlations between age/length of college enrollment and overparenting are simply a reflection of growing independence as emerging adults age or if prior education coursework contributed to these results.

**4.3 Main Analyses**

The main analyses used hierarchical multiple regression. This method has been used almost exclusively in the existing achievement goal complex research (Delrue et al., 2016; Gaudreau, 2012; Gaudreau & Braaten, 2016; Gillet et al., 2017; Gillet, Lafreniere, et al., 2015; Gillet et al., 2014; Michou et al., 2016; Oz et al., 2016; Sommet & Elliot,

2017; Vansteenkiste, Mouratidis et al., 2010; Vansteenkiste, Smeets, et al., 2010) as well as by Elliot and McGregor (2001) to study the predictive role of controlling parenting behaviors on the adoption of emerging adults' achievement goals.

To simplify the main analyses, several steps were taken with the demographic control variables. First, due to the small number of participants in some race/ethnicity categories, the following categories were combined into one category: Hispanic, Asian, American Indian or Alaskan Native, and Native Hawaiian or Pacific Islander. Second, the single transgender female participant was included in the Female gender category. Third, an academic performance variable was created. Participants' self-reported college grades were used for this variable because these grades were more recent and relevant to their current achievement than their high school grades; however, self-reported high school grades were used in lieu of college grades for participants in their first semester of college who reported not yet earning any college grades ($n$ = 56). Finally, as a proxy measure of socio-economic status, I used only the highest parent/caregiver education level reported by each participant. For example, if a participant reported Parent 1 completed high school and Parent 2 completed college, I used only the higher level of college in the analyses.

When the a priori power analysis was originally completed, 10 demographic control variables and 3 predictor variables were planned, but after making the above adjustments to the demographic variables as well as eliminating length of college enrollment as a redundant variable, the final analysis included only 6 demographic control variables (i.e., age, parent education level, academic performance, gender, race/ethnicity, and residence). Additionally, based on the bivariate correlations,

examining the basic psychological needs satisfaction and frustration both as composite variables and as separate needs seemed warranted to yield a more complete understanding of the relationships among overparenting, psychological needs, and achievement goals. Thus, the number of predictor variables was increased to nine (overparenting, composite need satisfaction, autonomy satisfaction, competence satisfaction, relatedness satisfaction, composite need frustration, autonomy frustration, competence frustration, and relatedness frustration). Finally, two interaction terms (i.e., overparenting x need satisfaction and overparenting x need frustration) were included. Thus, the total number of predictors used in the main analysis was 17 with 169 participants. G*Power estimates that 146 participants are needed to detect medium-sized effects ($f^2 = .15$) in a hierarchical regression model with 17 total predictors with a power of .80 and alpha of .05 (Faul et al., 2009; Faul et al., 2007).

RQ1a: To what extent does the strength of emerging adults' perceived overparenting predict basic need satisfaction?

H1: Increased overparenting will negatively predict need satisfaction.

Hierarchical multiple regressions were completed to explore RQ1a. In Step 1, the demographic control variables were regressed on each of the need satisfaction variables (i.e., composite need satisfaction, autonomy satisfaction, competence satisfaction, and relatedness satisfaction). In Step 2 overparenting was entered. Casewise diagnostics in SPSS identified a possible outlier for composite need satisfaction (standardized residual of -3.12) and autonomy satisfaction (standardized residual of -3.03) and two possible outliers for relatedness satisfaction (standardized residuals of -3.32 and -3.48). However, a visual and statistical inspection of these data points did not support their

exclusion from the analyses. The regression analyses were run again without the possible outliers, and the results remained the same. Therefore, these data were included in the final analyses. Results are summarized in Table 4.6. H1 was partially supported by the data. Overparenting was a significant negative predictor of autonomy satisfaction. However, overparenting did not significantly predict composite need satisfaction, competence satisfaction, or relatedness satisfaction. The regression equations for composite need satisfaction, autonomy satisfaction, and competence satisfaction were significant. However, the equations for composite need satisfaction and competence satisfaction were significant due to the predictive strength of the demographic variables. Indeed, entering overparenting in Step 2 did not improve the adjusted $R^2$ values of these equations. Overparenting did increase the adjusted $R^2$ value for the equation predicting autonomy satisfaction.

Three demographic control variables were significant predictors of need satisfaction variables. First, academic performance was a significant positive predictor of composite need satisfaction and competence satisfaction. Second, other race was a significant negative predictor of composite need satisfaction. Finally, residing with family was a significant negative predictor of composite need satisfaction when overparenting was added to the regression equation and a significant negative predictor of relatedness satisfaction.

RQ1b: To what extent does the strength of emerging adults' perceived overparenting predict basic need frustration?

H2: Increased overparenting will positively predict need frustration.

Hierarchical multiple regressions were completed to explore RQ1b. In Step 1, the demographic control variables were regressed on each of the need frustration variables (i.e., composite need frustration, autonomy frustration, competence frustration, and relatedness frustration). In Step 2 overparenting was entered. Casewise diagnostics in SPSS identified a possible outlier for competence frustration (standardized residual of -3.18). However, a visual and statistical inspection of this data point did not support its exclusion from the analyses. The regression analyses were run again without the possible outlier, and the results remained the same. Therefore, this data was included in the final analyses. Results are summarized in Table 4.7. H2 was partially supported by the data. Overparenting was a significant positive predictor of autonomy frustration. However, overparenting did not significantly predict composite need frustration, competence frustration, or relatedness frustration. Only the regression equation for autonomy frustration was significant, and the only significant variable within the equation was overparenting. Moreover, overparenting significantly increased the adjusted $R^2$ value of the equation.

Of the demographic control variables, academic performance was a significant negative predictor of composite need frustration but rose above significance when overparenting was added to the regression equation. Academic performance was also a significant negative predictor of competence frustration.

RQ2a: To what extent do the strength of emerging adults' perceived overparenting, basic need satisfaction, and/or basic need frustration predict the achievement goal complexes they adopt?

RQ2b: To what extent do the strength of emerging adults' perceived overparenting and basic need frustration predict the achievement goal complexes they adopt?

H3: Increased overparenting will positively predict the adoption of less adaptive goal complexes.

To test H3 hierarchical multiple regressions were completed for each of the four achievement goal complexes, (i.e., MAp Autonomous, MAp Controlled, PAp Autonomous, PAp Controlled). In Step 1, the demographic control variables were regressed on the goal complex, and in Step 2, overparenting was entered. Casewise diagnostics in SPSS identified two possible outliers for the MAp Controlled goal complex (standardized residual of -3.13 and -3.14) and one possible outlier for the PAp Controlled goal complex (standardized residual of -3.07). However, a visual and statistical inspection of these data points did not support their exclusion from the analyses. The regression analyses were run again without the possible outliers, and the results remained the same. Therefore, these data were included in the final analyses. Results are summarized in Table 4.8. H3 was not supported by the data. Overparenting was not a significant predictor of any of the achievement goal complexes. Only the regression equation for the MAp Autonomous goal complex was significant; however, the significance was due to the predictive strength of the demographic variables. Indeed, entering overparenting in Step 2 decreased the adjusted $R^2$ value of the equation.

H4: Increased need satisfaction will positively predict the adoption of more adaptive goal complexes.

To test H4, a third step was added to the hierarchical multiple regression equations computed for H3. In Step 3, composite need satisfaction was entered. Results

are summarized in Table 4.8. The order in which the predictor variables were entered in the hierarchical regression analyses was based on the premise of overparenting as a contextual factor associated with the satisfaction and/or frustration of one's basic psychological needs and subsequently these contextual and regulatory factors predict the adoption of achievement goal complexes. H4 was supported by the data. Composite need satisfaction was a significant positive predictor of the MAp Autonomous goal complex. Composite need satisfaction was not a significant predictor of the MAp Controlled, PAp Autonomous, and PAp Controlled goal complexes. Only the regression equation for the MAp Autonomous goal complex was significant. Entering composite need satisfaction in Step 3 significantly increased the adjusted $R^2$ value for the MAp Autonomous goal complex but did not significantly change the adjusted $R^2$ values for the other goal complexes.

To explore in greater depth how the satisfaction of the separate psychological needs (i.e., autonomy, competence, and relatedness) predicted the achievement goal complexes, Step 3 was repeated using the need satisfaction subscores (i.e., autonomy satisfaction, competence satisfaction, and relatedness satisfaction) in place of the composite need satisfaction score. Results are summarized in Table 4.9. H4 was partially supported by the data. Competence satisfaction positively predicted the MAp Autonomous goal complex but did not predict the other goal complexes. Autonomy satisfaction and relatedness satisfaction were not significant predictors of any goal complex. Again, only the regression equation for the MAp Autonomous goal complex was significant. Entering the need satisfaction subscores in Step 3 significantly increased

the adjusted $R^2$ value for the MAp Autonomous goal complex but did not significantly change the adjusted $R^2$ values for the other goal complexes.

H5: Increased need frustration will positively predict the adoption of less adaptive goal complexes.

To test H5, a third step was added to the hierarchical multiple regressions completed for H3. In Step 3, composite need frustration was entered. Results are summarized in Table 4.8. H5 was supported by the data. Composite need frustration positively predicted the PAp Controlled goal complex and negatively predicted the MAp Autonomous goal complex. Composite need frustration was not a significant predictor of the MAp Controlled or PAp Autonomous goal complexes. The regression equations for the MAp Autonomous and PAp controlled goal complexes were significant. Moreover, entering composite need frustration in Step 3 significantly increased the adjusted $R^2$ values of the equations for the MAp Autonomous and PAp Controlled goal complexes.

To explore in greater depth how the frustration of the separate psychological needs (i.e., autonomy, competence, and relatedness) predicted the achievement goal complexes, Step 3 was repeated using the need frustration subscores (i.e., autonomy frustration, competence frustration, and relatedness frustration) in place of the composite need frustration score. Results are summarized in Table 4.9. H5 was not supported by the data. Autonomy frustration negatively predicted the MAp Autonomous goal complex but did not predict the other goal complexes. Competence frustration and relatedness frustration did not predict any of the goal complexes. Furthermore, none of the need frustration subscores were significant negative predictors. Only the regression equation for the MAp Autonomous goal complex was significant. Moreover, entering the need

frustration subscores in Step 3 significantly increased the adjusted $R^2$ value for the MAp Autonomous goal complex.

Thus far, four primary models were examined to address the possible relationships among overparenting, the basic psychological needs, and achievement goal complexes: 1) overparenting and composite need satisfaction, 2) overparenting, autonomy satisfaction, competence satisfaction, and relatedness satisfaction, 3) overparenting and composite need frustration, and 4) overparenting, autonomy frustration, competence frustration, and relatedness frustration. Because research on need frustration is limited, two additional models were examined to explore need satisfaction and need frustration simultaneously: 1) overparenting, composite need satisfaction, and composite need frustration and 2) overparenting, autonomy satisfaction, competence satisfaction, relatedness satisfaction, autonomy frustration, competence frustration, and relatedness frustration. Running these separate models was believed to yield the most information on the value of need frustration as a predictor variable. To create these two additional models, fourth steps including both need satisfaction and need frustration variables were added to the regression equations in Table 4.8 and in Table 4.9.

For the MAp Autonomous goal complex, when both composite need satisfaction and composite need frustration were included in the regression equation, composite need frustration was no longer a significant predictor. Composite need satisfaction, however, did remain a significant positive predictor. Moreover, the regression equation remained significant. However, the increase in the adjusted $R^2$ value was only significant compared to the need frustration-only equation in Step 3. For the MAp Controlled goal complex, including composite need satisfaction and composite need frustration did not

significantly increase the adjusted $R^2$ value or the overall predictive strength of the regression equation. For the PAp Autonomous goal complex, composite need satisfaction became a significant positive predictor once composite need frustration was added to the regression equation, and the increase in adjusted $R^2$ was significant. However, despite the significant increase, the adjusted $R^2$ value was zero, and the predictive strength of the equation was not significant. Finally, for the PAp Controlled goal complex, composite need frustration remained a significant positive predictor when composite need satisfaction was entered in Step 4, but the regression equation rose above significance. In summary, H4 and H5 were supported. Composite need satisfaction significantly and positively predicted the autonomous goal complexes (i.e., MAp Autonomous and PAp Autonomous) but did not predict the controlled goal complexes. Composite need frustration significantly and positively predicted the PAp Controlled goal complex but did not predict the autonomous and/or mastery goal complexes.

To explore in greater depth how the frustration of the separate psychological needs (i.e., autonomy, competence, and relatedness) predicted the achievement goal complexes, Step 4 was repeated using the need satisfaction and frustration subscores in place of the composite need satisfaction and frustration scores. Results are summarized in Table 4.9. For the MAp Autonomous goal complex, competence satisfaction remained significant, but autonomy frustration rose above significance when all six need subscales were entered. Moreover, the regression equation remained significant. However, the increase in the adjusted $R^2$ value was only significant compared to the need frustration-only equation in Step 3. For the MAp Controlled and PAp controlled goal complexes, including the need satisfaction and frustration subscales did not significantly change the

adjusted $R^2$ values or the overall predictive strength of the equations. For the PAp Autonomous goal complex, both competence satisfaction and competence frustration became significant positive predictors when all need subscores were added to the regression equation. The increase in adjusted $R^2$ was significant when compared to the adjusted $R^2$ value from the need frustration-only equation in Step 3. However, despite the significant increase, the adjusted $R^2$ value remained near zero, and the predictive strength of the equation was not significant. In summary, H4 and H5 were partially supported by this data. In support, competence satisfaction positively predicted the autonomous goal complexes (i.e., MAp Autonomous and PAp Autonomous), and competence frustration positively predicted a performance goal complex (PAp Autonomous). However, no need frustration subscales predicted the controlled goal complexes (MAp Controlled or PAp Controlled).

Six demographic control variables were significant predictors of the achievement goal complexes. First, Other Race/Ethnicity was a significant negative predictor of the MAp Autonomous goal complex ($p \leq .05$), but this relationship rose above significance when the need satisfaction and need frustration variables were added in Step 3. Second, for the MAp Autonomous goal complex, parent education became a significant positive predictor ($p \leq .05$) after entering the need satisfaction variables in the regression equation in Step3 or Step 4. Third, age became a significant positive predictor of the MAp Autonomous goal complex ($p \leq .05$) after entering the separate need frustration subscores (i.e., autonomy frustration, competence frustration, and relatedness frustration) but rose above significance when the need satisfaction subscores were entered. Fourth, male gender identification was a significant negative predictor of MAp Controlled goal

complex ($p \leq .01$). Fifth, academic performance was a significant positive predictor of the PAp Autonomous goal complex ($p \leq .05$). This relationship remained significant when the need frustration variables were added but rose above significance when the need satisfaction variables were added. Finally, residing off-campus with a roommate or alone was a significant negative predictor of the MAp Controlled goal complex ($p \leq .05$) when both composite need satisfaction and composite need frustration were entered and of the PAp Controlled goal complex ($p \leq .05$).

RQ3a: Does emerging adults' need satisfaction moderate the relationships between overparenting and achievement goal complexes?

RQ3b: Does emerging adults' need frustration moderate the relationships between overparenting and achievement goal complexes?

To explore possible interactions between overparenting and need satisfaction and between overparenting and need frustration, interaction terms for these variables were added to the regression equations computed in Step 4 in Table 4.8. Prior to computing interaction terms, the predictor variable means were centered. Results are summarized in Table 4.10. None of the interaction terms were significant, and the interaction terms did not increase the adjusted $R^2$ values for any of the equations. Only the regression equations for the MAp Autonomous goal complex was significant. However, this significance was due to variables entered in previous steps and not due to the interaction terms.

Interactions involving the separate basic psychological needs (i.e., autonomy satisfaction, competence satisfaction, relatedness satisfaction, autonomy frustration, competence frustration, and relatedness frustration) were not examined because of

insufficient statistical power. Including six additional interaction terms (i.e., overparenting x autonomy satisfaction, overparenting x competence satisfaction, overparenting x relatedness satisfaction, overparenting x autonomy frustration, overparenting x competence frustration, and overparenting x relatedness frustration) would increase the total predictors to 23. Furthermore, any significant interaction effect sizes were likely to be small given the main effect sizes obtained in these results. The original a priori power analysis was based on 13 predictors and medium effect sizes. Therefore, including these additional interaction terms was beyond the scope and power of my research.

Table 4.1 Summary of Missing Data

| Participants with missing values | Type of variable | Number of participants |
|---|---|---|
| **Participants missing 1 demographic value** | | |
| Race/ethnicity | Control | 2 |
| Gender | Control | 1 |
| Parent education | Control | 1 |
| Residence | Control | 1 |
| **Participants missing 1 item from overparenting scale** | | |
| Overparenting (scale contains 5 items) | Predictor | 1 |
| **Participants missing 1 item from need satisfaction subscales** | | |
| Competence satisfaction (6 items in subscale) | Predictor and dependent | 1 |
| Relatedness satisfaction (8 items in subscale) | Predictor and dependent | 3 |
| **Participants missing 1 item from need frustration subscales** | | |
| Autonomy frustration (4 items in subscale) | Predictor and dependent | 1 |
| Competence frustration (4 items in subscale) | Predictor and dependent | 1 |
| Relatedness frustration (4 items in subscale) | Predictor and dependent | 1 |
| **Participants with 2 missing values** | | |
| Missing 2 items out of 4 from the competence frustration subscale | Predictor and dependent | 1 |
| **Participants with 3 missing values** | | |
| Missing 2 items out of 4 from the autonomy frustration subscale and 1 item out of 4 from the competence frustration subscale | Predictor and dependent | 1 |
| **Total participants with missing values (*n* = 176)** | | **15** |
| **Total missing values of all participants and all items (60)** | | **18** |

Table 4.2 Summary of Non-Demographic Differences in Regression Analyses Based on Missing Data

| Data Set | Participants Excluded from Analyses | Non-Demographic Differences in Regression Results Compared to Complete Data Set[a] |
|---|---|---|
| 2 | Participants with less than 75% non-missing values in scaled variables ($n$ = 169) | None |
| 3 | All participants (15) with missing values ($n$ = 161 for all analyses) | 1) Regression equation for overparenting predicting autonomy frustration became statistically significant ($p$ = .05) (Note overparenting was a significant predictor of autonomy frustration with all data sets).<br>2) Predictive relationship between autonomy frustration and the MAp Autonomous goal complex in Step 3 for RQ2b rose above significance ($p$ = .13). |

[a] $n$ = 171.

Table 4.3 Demographic Data

| Variable | *n* |
|---|---|
| **Gender** | |
| Female | 127 |
| Male | 41 |
| Transgender female | 1 |
| **Race/Ethnicity**[a] | |
| White | 147 |
| Black | 16 |
| Asian | 11 |
| Hispanic | 8 |
| American Indian or Alaskan Native | 1 |
| Native Hawaiian or Pacific Islander | 1 |
| **Residence** | |
| On-campus | 109 |
| Off-campus with roommate or alone | 51 |
| With family | 9 |
| **Length of College Enrollment** | |
| Less than 1 year | 108 |
| 1 year | 18 |
| 2 years | 20 |
| 3 years | 17 |
| 4 or more years | 6 |
| **Highest Parent Education** | |
| High School | 4 |
| Some college or associate degree | 32 |
| Bachelor's degree or higher | 132 |
| I don't know | 1 |
| **High School Grades** | |
| Mostly As | 75 |
| Mix of As and Bs | 75 |
| Mostly Bs | 15 |
| Mix of Bs and Cs | 4 |
| **College Grades**[b] | |
| Mostly As | 42 |
| Mix of As and Bs | 47 |
| Mostly Bs | 12 |
| Mix of Bs and Cs | 10 |
| Mostly Cs | 1 |
| Mix of Cs and Ds | 2 |

[a] Participants could select more than one race/ethnicity. [b] Not all participants had earned college grades at the time of the survey.

Table 4.4 Descriptive Statistics

| | *M* | *SD* | Minimum | Maximum |
|---|---|---|---|---|
| MAp Autonomous | 5.78 | .98 | 3.00 | 7.00 |
| MAp Controlled | 5.00 | 1.17 | 1.00 | 7.00 |
| PAp Autonomous | 5.02 | 1.44 | 1.00 | 7.00 |
| PAp Controlled | 4.42 | 1.50 | 1.00 | 7.00 |
| Age | 18.96 | 1.32 | 18.00 | 24.00 |
| College Enrollment Length[a] | 382.01 | 465.13 | 8.00 | 1,968.00 |
| Overparenting | 2.11 | .91 | 1.00 | 5.00 |
| Composite Needs Satisfaction | 5.39 | .80 | 2.72 | 7.00 |
| Autonomy Satisfaction | 5.18 | .85 | 2.29 | 7.00 |
| Competence Satisfaction | 5.26 | 1.04 | 2.50 | 7.00 |
| Relatedness Satisfaction | 5.74 | .90 | 2.75 | 7.00 |
| Composite Needs Frustration | 2.99 | 1.02 | 1.00 | 6.42 |
| Autonomy Frustration | 3.04 | 1.14 | 1.00 | 6.75 |
| Competence Frustration | 3.05 | 1.34 | 1.00 | 7.00 |
| Relatedness Frustration | 2.88 | 1.09 | 1.00 | 5.75 |

[a] Measured in days.

Table 4.5 Bivariate Correlations

| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. MAp Autonomous | .20* | .42** | .12 | .20* | -.04 | .41** | .32** | .45** | .29** | -.26** | -.27** | -.23* | -.17† |
| 2. MAp Controlled | | .31** | .70** | -.06 | .06 | -.07 | -.12 | -.03 | -.02 | .12 | .13 | .09 | .09 |
| 3. PAp Autonomous | | | .64** | .05 | .03 | .12 | .09 | .19* | .01 | -.01 | -.01 | .00 | -.03 |
| 4. PAp Controlled | | | | -.10 | .13 | -.12 | -.13 | -.07 | -.11 | .18† | .17† | .14 | .16† |
| 5. Age | | | | | -.28** | .04 | .03 | .08 | -.01 | .04 | .00 | .07 | .02 |
| 6. Overparenting | | | | | | -.12 | -.25** | -.04 | -.03 | .13 | .27* | .04 | .05 |
| 7. Composite Needs Satisfaction | | | | | | | .87** | .87** | .84** | -.81** | -.67** | -.72** | -.70** |
| 8. Autonomy Satisfaction | | | | | | | | .65** | .63** | -.76** | -.70** | -.65** | -.62** |
| 9. Competence Satisfaction | | | | | | | | | .56** | -.70** | -.56** | -.69** | -.54** |
| 10. Relatedness Satisfaction | | | | | | | | | | -.64** | -.48** | -.51** | -.66** |
| 11. Composite Needs Frustration | | | | | | | | | | | .84** | .90** | .83** |
| 12. Autonomy Frustration | | | | | | | | | | | | .64** | .54** |
| 13. Competence Frustration | | | | | | | | | | | | | .63** |
| 14. Relatedness Frustration | | | | | | | | | | | | | - |

†$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

Table 4.6 Standardized Beta Coefficients of Hierarchical Regression Analyses Predicting Basic Psychological Need Satisfaction on the Basis of Overparenting

| | Need Satisfaction | | | |
|---|---|---|---|---|
| | Composite | Autonomy | Competence | Relatedness |
| Step 1 | | | | |
| Academic Performance | .21* | .13 | .30** | .11 |
| Parent Education | -.05 | -.09 | -.02 | -.04 |
| Age | .12 | .05 | .19 | .06 |
| Gender[a] | .05 | .08 | .08 | -.04 |
| Race/Ethnicity: White | -.15 | -.13 | -.16 | -.09 |
| Race/Ethnicity: Black | -.05 | .06 | -.07 | -.11 |
| Race/Ethnicity: Other | -.18† | -.16 | -.16 | -.14 |
| Reside with Family[b] | -.17 | -.10 | -.13 | -.21† |
| Reside Off-Campus with Roommate or Alone[b] | .01 | .03 | -.02 | .01 |
| *F* | 1.97† | 1.34 | 2.70* | 1.49 |
| Adjusted $R^2$ | .05 | .02 | .08 | .03 |
| Step 2 | | | | |
| Overparenting | -.10 | -.26** | .02 | -.03 |
| *F* | 1.92† | 2.35* | 2.42* | 1.35 |
| Adjusted $R^2$ | .05 | .07 | .08 | .02 |
| *F* change in $R^2$ | 1.43 | 10.70** | .07 | .18 |

[a] Gender was represented as 2 dummy variables with Female serving as the reference group. [b] Type of residence was represented as 3 dummy variables with Reside On-Campus serving as the reference group. †$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

Table 4.7 Standardized Beta Coefficients of Hierarchical Regression Analyses Predicting Basic Psychological Need Frustration on the Basis of Overparenting

| | Need Frustration | | | |
|---|---|---|---|---|
| | Composite | Autonomy | Competence | Relatedness |
| Step 1 | | | | |
| Academic Performance | -.16† | -.12 | -.22* | -.06 |
| Parent Education | .07 | .03 | .05 | .09 |
| Age | -.04 | -.02 | -.04 | -.04 |
| Gender[a] | -.04 | -.06 | -.10 | .06 |
| Race/Ethnicity: White | .12 | .11 | .11 | .08 |
| Race/Ethnicity: Black | .00 | .06 | .01 | -.07 |
| Race/Ethnicity: Other | .16 | .13 | .11 | .17 |
| Reside with Family[b] | .09 | -.02 | .09 | .15 |
| Reside Off-Campus with Roommate or Alone[b] | .06 | -.02 | .07 | .08 |
| *F* | 1.07 | .56 | 1.51 | 1.24 |
| Adjusted $R^2$ | .00 | -.02 | .03 | .01 |
| Step 2 | | | | |
| Overparenting | .14 | .28** | .03 | .05 |
| *F* | 1.27 | 1.77 | 1.36 | 1.16 |
| Adjusted $R^2$ | .02 | .04 | .02 | .01 |
| *F* change in $R^2$ | 2.90 | 12.35** | .15 | .43 |

[a] Gender was represented as 2 dummy variables with Female serving as the reference group. [b] Type of residence was represented as 3 dummy variables with Reside On-Campus serving as the reference group. †$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

Table 4.8 Standardized Beta Coefficients of Hierarchical Regression Analyses Predicting Strength of Achievement Goal Complex on the Bases of Overparenting and Basic Psychological Need Satisfaction and Frustration

| | MAp Aut. | MAp Con. | PAp Aut. | PAp Con. |
|---|---|---|---|---|
| Step 1 | | | | |
| Academic Performance | .13 | -.07 | .16† | .07 |
| Parent Education | .13 | .01 | -.06 | -.06 |
| Age | .20 | -.01 | .16 | .04 |
| Gender[a] | .00 | -.20* | .05 | -.10 |
| Race/Ethnicity: White | .03 | -.09 | .13 | .09 |
| Race/Ethnicity: Black | .02 | -.11 | .11 | .11 |
| Race/Ethnicity: Other | -.18† | -.07 | .02 | .15 |
| Reside with Family[b] | .01 | .04 | -.07 | -.08 |
| Reside Off-Campus with Roommate or Alone[b] | .03 | -.19 | -.09 | -.22† |
| *F* | 2.10† | 1.50 | .71 | 1.26 |
| Adjusted $R^2$ | .06 | .03 | -.02 | .01 |
| Step 2 | | | | |
| Overparenting | .02 | .03 | .07 | .13 |
| *F* | 1.89† | 1.36 | .70 | 1.42 |
| Adjusted $R^2$ | .05 | .02 | -.02 | .02 |
| *F* change in $R^2$ | .06 | .16 | .62 | 2.74 |
| Step 3 | | | | |
| Need Satisfaction (RQ2a) | .41** | -.04 | .10 | -.11 |
| *F* | 4.87** | 1.25 | .77 | 1.45 |
| Adjusted $R^2$ | .20 | .02 | -.02 | .03 |
| *F* change in $R^2$ | 31.14** | .19 | 1.41 | 1.70 |
| Need Frustration (RQ2b) | -.26** | .11 | .01 | .18† |
| *F* | 2.92* | 1.44 | .80 | 1.83† |
| Adjusted $R^2$ | .11 | .03 | -.02 | .05 |
| *F* change in $R^2$ | 11.97** | 2.08 | .01 | 5.53† |
| Step 4 | | | | |
| Need Frustration (RQ2a) | .18 | .25 | .25 | .29† |
| Need Satisfaction (RQ2b) | .55** | .17 | .30† | .13 |
| *F* | 4.67** | 1.45 | .99 | 1.76 |
| Adjusted $R^2$ | .21 | .03 | .00 | .05 |
| *F* change in $R^2$ (RQ2a) | 2.11 | 3.39 | 3.25 | 4.74† |
| *F* change in $R^2$ (RQ2b) | 20.04** | 1.50 | 4.67† | .96 |

[a] Gender was represented as 2 dummy variables with Female serving as the reference group. [b] Type of residence was represented as 3 dummy variables with Reside On-Campus serving as the reference group. †$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

Table 4.9 Standardized Beta Coefficients of Hierarchical Regression Analyses Predicting Strength of Achievement Goal Complex on the Bases of Overparenting and Autonomy, Competence, and Relatedness Satisfaction and Frustration

| | MAp Aut. | MAp Con. | PAp Aut. | PAp Con. |
|---|---|---|---|---|
| Step 3 | | | | |
| Autonomy Satisfaction (RQ2a) | .06 | -.21 | .05 | -.05 |
| Competence Satisfaction (RQ2a) | .37** | .11 | .21 | .01 |
| Relatedness Satisfaction (RQ2a) | .05 | .06 | -.15 | -.09 |
| *F* (RQ2a) | 4.50** | 1.26 | .99 | 1.24 |
| Adjusted $R^2$ (RQ2a) | .21 | .02 | .00 | .02 |
| *F* change in $R^2$ (RQ2a) | 11.90** | .93 | 1.89 | .69 |
| Autonomy Frustration (RQ2b) | -.21† | .10 | -.04 | .04 |
| Competence Frustration (RQ2b) | -.12 | -.02 | .10 | .07 |
| Relatedness Frustration (RQ2b) | .02 | .06 | -.05 | .11 |
| *F* (RQ2b) | 2.62* | 1.24 | .59 | 1.55 |
| Adjusted $R^2$ (RQ2b) | .11 | .02 | -.03 | .04 |
| *F* change in $R^2$ (RQ2b) | 4.65* | .86 | .23 | 1.90 |
| Step 4 | | | | |
| Autonomy Frustration (RQ2a) | -.07 | .11 | .07 | .08 |
| Competence Frustration (RQ2a) | .10 | .03 | .27† | .14 |
| Relatedness Frustration (RQ2a) | .18 | .13 | -.04 | .13 |
| Autonomy Satisfaction (RQ2b) | .10 | -.11 | .17 | .07 |
| Competence Satisfaction (RQ2b) | .42** | .17 | .33* | .11 |
| Relatedness Satisfaction (RQ2b) | .13 | .13 | -.14 | -.01 |
| *F* | 3.97** | 1.22 | 1.20 | 1.34 |
| Adjusted $R^2$ | .22 | .02 | .02 | .03 |
| *F* change in $R^2$ (RQ2a) | 1.52 | 1.04 | 2.02 | 1.67 |
| *F* change in $R^2$ (RQ2b) | 8.24** | 1.11 | 3.70* | .49 |

†$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

Table 4.10 Standardized Beta Coefficients of Hierarchical Regression Analyses Testing Need Satisfaction and Need Frustration as Moderators in the Relationship Between Overparenting and Achievement Goal Complex

| | MAp Aut. | MAp Con. | PAp Aut | PAp Con. |
|---|---|---|---|---|
| Step 5 | | | | |
| Overparenting x Need Satisfaction (RQ3a) | -.02 | .10 | -.02 | .01 |
| *F* (RQ3a) | 4.29** | 1.44 | .91 | 1.61 |
| Adjusted $R^2$ (RQ3a) | .20 | .03 | -.01 | .05 |
| *F* change in $R^2$ (RQ3a) | .06 | 1.39 | .09 | .03 |
| Overparenting x Need Frustration (RQ3b) | .04 | -.04 | .02 | .02 |
| *F* (RQ3b) | 4.31** | 1.35 | .91 | 1.62 |
| Adjusted $R^2$ (RQ3b) | .20 | .03 | -.01 | .05 |
| *F* change in $R^2$ (RQ3b) | .23 | .28 | .04 | .07 |

†$p \leq .05$. *$p \leq .01$. ** $p \leq .001$.

# Chapter 5

# Discussion

## 5.1 Overparenting and the Basic Psychological Needs

RQ1a: To what extent does the strength of emerging adults' perceived overparenting predict basic need satisfaction?

H1: Increased overparenting will negatively predict need satisfaction.

H1 was partially supported by the data. Overparenting was not correlated with and did not predict composite need satisfaction, competence satisfaction, or relatedness satisfaction. However, overparenting was a significant negative correlate and predictor of autonomy satisfaction.

My findings support previous research that found a negative relationship between overparenting and autonomy satisfaction among emerging adult populations (Hofer, 2008; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014). Notably, in Schiffrin and colleagues' (2014) research, overparenting was most strongly related to autonomy of the three psychological needs, a result that was also seen in my research.

The lack of relationships between overparenting and composite need satisfaction, competence satisfaction, and relatedness satisfaction was unexpected. Although no studies found to date have explored overparenting and composite need satisfaction, multiple studies have found negative associations between overparenting and the separate basic psychological needs (or related constructs). Schiffrin and colleagues (2014), using the same need satisfaction measure as my research, found significant negative

relationships between overparenting and all three psychological needs. Although the researchers did not compute a composite need satisfaction score, it is likely that a composite score would also have been significantly and negatively related to overparenting. Researchers also found a significant negative relationship between overparenting and self-efficacy, a construct related to competence (Bradley-Geist & Olson-Buchanan, 2014; van Ingen et al., 2015). Furthermore, other researchers found negative links between overparenting and healthy relationship indicators that may imply low relatedness satisfaction, such as family satisfaction (Segrin et al., 2012), open family communication (Kelly et al., 2017; Odenweller et al., 2014; Segrin et al., 2012), peer attachment (van Ingen et al., 2015), and social adjustment (Darlow et al., 2017). Indeed, Segrin and colleagues (2015) concluded that their "overall pattern of findings suggests that overparenting may contribute to a social psychological template in which relations with other people, not just the parents, become more difficult" (p. 477).

RQ1b: To what extent does the strength of emerging adults' perceived overparenting predict basic need frustration?

H2: Increased overparenting will positively predict need frustration.

H2 was partially supported by the data. Overparenting was not correlated with and did not predict composite need frustration, competence frustration, or relatedness frustration. However, overparenting was a significant positive correlate and predictor of autonomy frustration.

My findings yield a new contribution to overparenting research by directly linking overparenting to need frustration, specifically autonomy frustration. This finding bolsters my premise that emerging adults may experience overparenting as the active

undermining of their basic psychological need for autonomy rather than the more benign lack of autonomy satisfaction (Padilla-Walker & Nelson, 2012; Segrin et al., 2012). This finding is in line with previous research that showed maternal (Inguglia et al., 2018) and teacher (Amoura et al., 2015) psychological control predicted autonomy frustration. Additionally, the predictive relationship of overparenting and autonomy frustration supports prior research linking overparenting to other parenting behaviors characterized by low autonomy-support, such as authoritarian parenting (Odenweller et al., 2014; Segrin et al., 2012), conformity orientation parenting (Odenweller et al., 2014), and behavioral control (Leung & Shek, 2018; Padilla-Walker & Nelson, 2012).

The lack of relationships between overparenting and composite need frustration, competence frustration, and relatedness frustration was unexpected. Multiple studies have linked parenting and teaching behaviors related to overparenting, such as maternal psychological control (Inguglia et al., 2018; Mabbe et al., 2016), authoritarian parenting styles (Roman et al., 2015), and controlling teaching (as opposed to autonomy-supportive teaching) (Amoura et al., 2015; Haerens et al., 2015; Jang et al., 2016; Liu et al., 2017) to composite need frustration (Amoura et al., 2015; Haerens et al., 2015; Jang et al., 2016; Liu et al., 2017, Mabbe et al., 2016; Roman et al., 2015), competence frustration (Amoura et al., 2015), and relatedness frustration (Amoura et al., 2015; Inguglia et al., 2018). Moreover, a plethora of research findings have linked overparenting positively to unhealthy relationship indicators, such as: problematic parent-child communication (Kelly et al., 2017; Odenweller et al., 2014); interpersonal dependency (Odenweller et al., 2014); social anxiety (Kouros et al., 2017); interpersonal sensitivity (Rousseau & Scharf,

2015; Scharf et al., 2017); child withdrawal from the family; and a critical family environment (Segrin et al., 2012; Segrin et al., 2013).

In examining why H1 and H2 were only partially supported by my results, I identified three relevant concerns: the use of proxy constructs, differences in measures, and sample issues. First, because no prior research found to date examined overparenting and need frustration, my research was largely informed and guided by studies that used constructs related to overparenting. While some features of parental psychological and behavioral control and authoritarian parenting may overlap with overparenting, these constructs are empirically distinct from overparenting (Odenweller et al., 2014; Padilla-Walker & Nelson, 2012; Segrin et al., 2012). For example, parenting characterized by behavioral or psychological control was associated with adverse parenting and parent-child relationship variables (Padilla-Walker & Nelson, 2012). In contrast, overparenting represented a mixed pattern of both adaptive (e.g., guidance, involvement, emotional support, and responsiveness) and maladaptive features (e.g., high control and lack of autonomy) (Padilla-Walker & Nelson, 2012). Therefore, the relationship between overparenting and need frustration may differ from the relationships between psychological control or authoritarian parenting and need frustration. Likewise, because of limited research on overparenting and the basic psychological needs, my research was partially informed and guided by studies that used constructs similar to need satisfaction or need frustration (e.g., self-efficacy, family satisfaction, social anxiety, etc.). Although on face value, these constructs seem like reasonable proxy indicators for need satisfaction or need frustration, they, in fact, may not be.

Second, the unexpected lack of relationships between overparenting and the basic psychological needs in my research may be due to differences in measures. As discussed in Chapter 2, at least seven separate measures of overparenting have been used since 2011; however, little effort has been made to evaluate these instruments. Of the studies that found a link between overparenting and need satisfaction, none used the same overparenting measure as that used in my research. It is possible that a different overparenting measure may have yielded different results more in line with previous research. Until a methodical examination of overparenting instruments is conducted, it is difficult to evaluate which instrument produces the most reliable and valid measure of overparenting.

Finally, sample issues may have attributed to my inability to replicate previous results. Overparenting has been shown to be less prevalent than commonly thought (Somers & Settle, 2010a) with prevalence estimates of 10% to 21% (Shoup et al., 2009; Fingerman et al., 2012) and to have measurement range restriction (Kwon et al., 2015; LeMoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Schiffrin & Liss, 2017). Indeed, in my own sample, the mean overparenting score was low, reflecting that most participants reported perceiving minimal overparenting. It is possible that larger sample sizes are required to adequately investigate this uncommon parenting approach. Of the studies cited earlier that found a negative link between overparenting and need satisfaction, all had larger samples, some double or triple in size, than my sample (Bradley-Geist & Olson-Buchanan, 2104; Kelly et al., 2017; Segrin et al., 2012). Additionally, the cited research on need frustration primarily used younger samples comprised of secondary students rather than emerging adults. It is possible that as

children age and develop more independence from their parents, their social circles widen beyond their immediate family and they gain more sources from which they can meet their psychological needs. A final possibility is that overparenting is not as detrimentally related to emerging adults' psychological needs as previous research showed. This possibility is unlikely, however, given the multitude of research showing maladaptive patterns associated with overparenting.

In summary, H1 and H2 were largely unsupported in that overparenting did not predict composite need satisfaction or frustration, competence satisfaction or frustration, and relatedness satisfaction or frustration. Overparenting did positively predict autonomy frustration and negatively predict autonomy satisfaction. Possible explanations for these unexpected results include the reliance on proxy indicators, the overparenting measure used, sample size, and age of participants.

**5.2 Predicting Achievement Goal Complexes**

RQ2a: To what extent do the strength of emerging adults' perceived overparenting and basic need satisfaction predict the achievement goal complexes they adopt?

RQ2b: To what extent do the strength of emerging adults' perceived overparenting and basic need frustration predict the achievement goal complexes they adopt?

H3: Increased overparenting will positively predict the adoption of less adaptive goal complexes.

Of the four achievement goal complexes included in my research, the MAp Autonomous goal complex represented the most adaptive goal complex. MAp goals have been almost universally associated with adaptive patterns, for example self-determination, engagement, and deep processing (Elliot & McGregor, 2001; Hulleman et

al., 2010; Pastor et al., 2007; Pintrich, 2000; Senko et al., 2011). Additionally, autonomous regulation has been linked to a variety of positive outcomes, such as intrinsic motivation, persistence, and goal attainment (Delrue et al., 2016; Gaudreau & Braaten, 2016; Gillet et al., 2017; Gillet, Lafreniere, et al., 2015; Gillet et al., 2014; Michou et al., 2016; Spray et al., 2006; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010). In contrast, the PAp Controlled goal complex represented the least adaptive goal complex in my research. PAp goals have been associated with a mix of adaptive and maladaptive patterns, for example persistence and achievement but also anxiety and surface learning strategies (Brophy, 2005; Elliot, 2005; Elliot & McGregor, 2001; Elliot & Moller, 2003; Hulleman et al., 2010; Midgley et al., 2001; Pintrich, 2000; Senko et al., 2011). Additionally, controlled regulation, has been linked to negative patterns, such as anxiety, pressure, and decreased effort regulation (Gillet, Lafreniere et al., 2015; Gillet et al., 2014; Michou et al., 2014; Oz et al., 2016). The remaining two goal complexes, MAp Controlled and PAp Autonomous, represent a mix of adaptive and maladaptive features. The MAp Controlled goal complex includes the adaptive content of MAp goals but maladaptive controlled regulation. Sommet and Elliot (2017) found that "[m]astery and performance goals do not seem to provide supplementary benefits when combined with controlled reasons," (p. 1156); therefore, the adaptive MAp goal content may not matter if the regulation is controlled. The PAp Autonomous goal complex includes the less adaptive PAp goal content but adaptive autonomous regulation, raising the questions of if one of these components (goal or regulation) will override the other and if this goal complex will be related to positive predictors, negative predictors, both, or neither. Notably, however, as Sommet and Elliot

(2017) found, goal complexes represent more than the sum of their content and regulation. Rather they form a new Gestalt whole which may operate vastly differently than their separate parts. For example, separately both MAp goals and autonomous reasons positively predicted interpersonal help-seeking. However, the MAp Autonomous goal complex did not significantly predict interpersonal help-seeking (Sommet & Elliot, 2017). Therefore, because research on goal complexes is limited, making accurate predictions of their relationships with other variables is difficult and largely uncharted.

H3 was not supported. Overparenting was not a significant predictor of the PAp Controlled goal complex. This result was not expected given past research that has linked overparenting (and similar constructs) to both performance goals (Elliot & McGregor, 2001; Schiffrin & Liss, 2017) and variables that imply controlled regulation, such as decreased autonomy (Hofer, 2008; Kwon et al., 2017; Schiffrin et al., 2014), an external locus of control (Kwon et al., 2015), decreased self-regulation (Hofer, 2008; Hong et al., 2015), decreased ability to set one's own goals (Hong et al., 2015), decreased school engagement (Padilla-Walker & Nelson, 2012), and decreased enthusiasm for learning (Hofer, 2008). As a notable exception, however, a study of Chinese adolescents found no relationship between perceiving one's parents or teachers to be psychologically controlling and adolescents' autonomous and controlled motivation (Li et al., 2018). Differences in overparenting and achievement goal measures may explain my unexpected result. Schiffrin and Liss (2017) used a different measure of overparenting compared to the measure I used in my research; and Elliot and McGregor (2001) did not examine overparenting. Rather, they used parenting behaviors such as positive and negative person- and behavior-focused feedback, parental conditional approval, and parental

worry about mistakes. Furthermore, both Schiffrin and Liss (2017) and Elliot and McGregor (2001) used an older version of the AGQ that utilized an omnibus measure of achievement goals, nor did they examine underlying regulation. In contrast, I used a measure of integrated goal complexes that accounted for both the goal and the underlying regulation (Sommet & Elliot, 2017).

Overparenting had no relationship with the most adaptive goal complex, MAp Autonomous, a result that was expected. My research also found no relationship between overparenting and the MAp Controlled or the PAp Autonomous goal complexes. The relationships between overparenting and these goal complexes were more difficult to predict due to the complexes' mix of adaptive and maladaptive features. For example, on one hand, overparenting was expected to be associated with the PAp Autonomous goal complex, but not the MAp Controlled goal complex, due to previous research linking overparenting and similar controlling parenting behaviors to performance goals (Elliot & McGregor, 2001; Schiffrin & Liss, 2017). On the other hand, overparenting was expected to be associated with the MAp Controlled goal complex, but not the PAp Autonomous goal complex, due to previous research linking overparenting to variables that imply controlled regulation (Hofer, 2008; Hong et al., 2015; Kwon et al., 2017; Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014). Beyond looking at the separate components of these goal complexes, how these goal complexes as integrated wholes would relate to overparenting was difficult to predict.

H4: Increased need satisfaction will positively predict the adoption of more adaptive goal complexes.

H5: Increased need frustration will positively predict the adoption of less adaptive goal complexes.

In support of H4, both composite need satisfaction and competence satisfaction positively predicted the MAp Autonomous goal complex and remained significant predictors after controlling for the effects of need frustration. Composite need frustration and autonomy frustration initially negatively predicted the MAp Autonomous goal complex, but these relationships rose above significance when controlling for the effects of need satisfaction, supporting earlier research that showed that need satisfaction, compared to need frustration, better predicted adaptive patterns (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Chen et al., 2015; Longo et al., 2018; Longo et al., 2016; Nishimura & Suzuki, 2016). Additionally, my findings are supported by previous research that showed that need satisfaction was associated with greater endorsement of mastery goals (Duchesne et al., 2017; Michou et al., 2016), MAp goals (Michou et al., 2016), and MAp Autonomous goals (Michou et al., 2016) and with autonomous regulation (Amoura et al., 2015; Haerens et al., 2015; Martinent et al., 2015; Michou et al., 2016; Vandenkerckhove, Soenens, et al., 2019). Additionally, self-determination, which according to SDT can only be experienced when one's psychological needs are satisfied (Deci et al., 1991; Deci & Ryan, 2000), was a positive predictor of MAp goals (Elliot & McGregor, 2001).

In my analyses, I found no significant relationships between any of the need satisfaction or frustration variables and the MAp Controlled goal complex. On the one hand, the lack of a relationship between composite need frustration and the MAp Controlled goal complex was unexpected given that prior research found that need

frustration positively predicted MAp Controlled goals (Michou et al., 2016). However, that research used a flawed measure of the MAp Controlled goal, failing to study the goal and underlying reasons as an integrated goal complex (Sommet & Elliot, 2017). My results may reflect the mixed adaptive and maladaptive nature of the MAp Controlled goal complex and be evidence in support of Sommet and Elliot's (2017) argument that goal complexes function differently than its separate components of content and reasons.

For the PAp Autonomous goal complex, composite need satisfaction was a significant positive predictor but only when controlling for the effect of composite need frustration. Composite need frustration approached but failed to reach significance ($p$ = .07). These results support prior research that found that composite need satisfaction, but not composite need frustration, was associated with autonomous regulation (Amoura et al., 2015; Haerens et al., 2015; Martinent et al., 2015; Michou et al., 2016; Vandenkerckhove, Soenens, et al., 2019) and PAp goals for autonomous reasons (Gillet et al., 2014).

Notably, my results also showed that both competence satisfaction and competence frustration were positive predictors of the PAp Autonomous goal complex when all need satisfaction and frustration subscores were included in the regression equation. Initially, these results may seem unusual; however, the PAp Autonomous goal complex represents a mix of adaptive and maladaptive features. Prior research showed that PAp goals were simultaneously positively associated with both adaptive (i.e., need for achievement) and maladaptive (i.e., fear of failure) motives (Elliot & McGregor, 2001; Michou et al., 2014). Moreover, need for achievement positively predicted need satisfaction and fear of failure positively predicted need frustration (Michou et al., 2016).

Taken together, the previous research supports my results that both competence satisfaction and competence frustration positively predicted the PAp Autonomous goal complex. In partial support of my findings, Gillet and colleagues (2014) found that competence satisfaction predicted PAp goals for autonomous reasons among college students (competence frustration was not investigated with this population); however, they did not replicate this result with a sample of police officer trainees, nor did they find a predictive relationship between competence frustration and PAp goals for autonomous reasons with that population. Population differences or measurement differences may have impacted their differing results. Additionally, Gillet and colleagues (2014) used a flawed measure of the PAp Autonomous goal, failing to study the goal and underlying reasons as an integrated goal complex (Sommet & Elliot, 2017). Therefore, their results may differ from mine where an integrated goal complex measure was used.

In support of H5, composite need frustration was a significant positive predictor of the PAp Controlled goal complex, the least adaptive goal complex in my study. This predictive relationship remained significant even when controlling for the effect of composite need satisfaction. Composite need satisfaction had no relationship with the PAp Controlled goal complex. These results are supported by previous research that found that need frustration, but not need satisfaction, was associated with controlled regulation (Haerens et al., 2015; Michou et al., 2016) and PAp goals for controlled reasons (Gillet et al., 2014). As an exception, one study did find a negative association between need satisfaction and controlled regulation (Vandenkerckhove, Soenens, et al., 2019). Notably, none of the separate need frustration subscores significantly predicted the PAp Controlled goal complex. Gillet and colleagues (2104) found similar results

with a predictive positive relationship between PAp goals for controlled reasons and composite need frustration but no direct relationship between PAp goals for controlled reasons and the separate frustration subscores. Perhaps the combined experience of composite need frustration is more salient than the frustration of any one particular need.

In summary, H3 was not supported by the data. Overparenting did not predict any achievement goal complexes. These unexpected results may be explained by differences in overparenting and achievement goal measures compared to previous research. H4 and H5 were primarily supported by the data. Composite need satisfaction and competence satisfaction were positive predictors of the MAp Autonomous goal complex, the most adaptive goal complex. The explained variance was highest when all six psychological need variables were included. None of the need satisfaction and frustration variables predicted the MAp Controlled goal complex. Composite need satisfaction, competence satisfaction, and competence frustration were positive predictors of the PAp Autonomous goal complex, reflecting the mix of adaptive and maladaptive features of the goal complex. Again, the explained variance was highest when all six psychological need variables were included, although the value remained near zero and the overall regression equation was not significant. Composite need frustration was a positive predictor of the PAp Controlled goal complex. The explained variance was highest when composite need frustration, but not composite need satisfaction, was included. This equation was also the only significant equation associated with the PAp Controlled goal complex. Taken together, these results support prior research that showed need satisfaction better predicted adaptive attributes and outcomes and that need frustration better predicted maladaptive attributes and outcomes (Bartholomew, Ntoumanis, Ryan, & Thøgersen-

Ntoumani, 2011; Chen et al., 2015; Longo et al., 2018; Longo et al., 2016; Nishimura & Suzuki, 2016). Also, these results showed unique predictive patterns for each of the achievement goal complexes, supporting prior research that argued that the integrated Gestalt achievement goal complex is more important than its individual parts (Gaudreau & Braaten, 2016; Sommet & Elliot, 2017; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014).

**5.3 Need Satisfaction and Frustration as Moderators**

RQ3a: Does emerging adults' need satisfaction moderate the relationships between overparenting and achievement goal complexes?

RQ3b: Does emerging adults' need frustration moderate the relationships between overparenting and achievement goal complexes?

The data showed no evidence of composite need satisfaction or composite need frustration moderating the relationship between overparenting and strength of achievement goal complex for any of the four achievement goal complexes. It is possible that no moderating relationships exist; however, given the primarily small effect sizes found, it is also likely that my study lacked the statistical power to detect small significant interaction effects.

**5.4 Limitations and Future Research**

My research has several important limitations. First, the sample was not random; therefore, my results may not be generalizable beyond the sample used. Several factors related to sampling weakened the generalizability of my research: only certain courses were targeted for participant recruitment; not all instructors in the targeted courses elected to inform their students of the survey; extra credit was not uniformly offered

across courses or instructors; not all students who were informed of the survey chose to take the survey; and not all students who started the survey finished it. Finally, my sample was taken from a single university in the Southeastern U.S. It is unknown if the same results would have been obtained with a higher participation rate, with a different recruitment method, at a different university, in other regions of the U.S., or in other countries. Also related to sampling, the sample size was near the minimum number that the a priori power analysis recommended to yield medium effect sizes; however, many of the effect sizes were small, increasing the possibility that my study lacked the necessary statistical power to avoid Type II errors.

Additionally, my research used a survey design, relying solely on self-reported data. It is unknown if participants were truthful or biased in their responses. Moreover, because I used a survey design, my research was correlational in nature and unable to determine causality. When interpreting results, relationships between variables should not be construed as causes and effects. For example, it is possible overparenting causes both low autonomy satisfaction and high autonomy frustration, but it is also possible that parents resort to overparenting in response to seeing their emerging adults struggle with autonomy development. A third possibility is that these relationships are cyclical, constantly reinforcing the other: autonomy difficulties lead to overparenting which lead to more autonomy difficulties which lead to more overparenting (Segrin et al., 2013). Likewise, need satisfaction may cause emerging adults to adopt the MAp Autonomous goal complex while need frustration may lead them to adopt the PAp Controlled goal complex. However, it is also possible that adopting the MAp Autonomous goal complex

causes emerging adults to experience need satisfaction and adopting the PAp Controlled goal complex causes emerging adults to experience need frustration.

My research was an initial exploration of overparenting, basic psychological needs, and achievement goal complexes. All three topics represent under-researched constructs, both separately and combined, and offer many avenues for future research. A top priority should be a thorough and systematic evaluation of overparenting instruments to determine which instruments are the most valid and reliable. Until such an evaluation is conducted, it is unknown if the various overparenting instruments measure the same construct. The results of my research yielded a good starting point linking overparenting and autonomy satisfaction and frustration; however, the relationships between overparenting and the basic psychological needs warrant further in-depth exploration. Replication is especially important given that my research represents an early attempt to understand the relationship between overparenting and need frustration and the unexpected lack of significant relationships between overparenting and the satisfaction and frustration of composite needs, competence, and relatedness in my results.

Only one other study found to date investigated overparenting and achievement goals. However, this study (Schiffrin & Liss, 2017) used an outdated omnibus measure of achievement goals. Future research should work on replicating my findings as well as expanding the scope by including mastery avoidance and performance avoidance goal complexes (i.e., MAv Autonomous, MAv Controlling, PAv Autonomous, and PAv Controlling). At the suggestion of Sommet and Elliot (2017), I included only MAp and PAp goals to keep the survey from becoming too cumbersome and repetitive to participants and to give priority to goal types that are prevalent in academic contexts and

widely debated in AGA research (Brophy, 2005; Midgely et al., 2001; Pintrich, 2000; Senko et al., 2011). However, given the more maladaptive nature of avoidance goals (Elliot & McGregor, 2001; Hulleman et al., 2010; Pintrich, 2000; Senko et al., 2011), particularly PAv goals, including these goals would have provided a more contrasting dichotomy among the goal types and been an interesting addition to my research.

My research exclusively used emerging adult college students; however, future research should include emerging adults not enrolled in college. It is possible that the relationships between overparenting, the basic psychological needs, and achievement goals differ among emerging adults enrolled college, emerging adults working full-time, and emerging adults who are neither in college or working. Overparenting may have stronger relationships with the psychological needs and achievement motivation if emerging adults are more physically proximal to their parents with fewer independent outlets (e.g., college or employment) to explore their identities. Proximity may allow for more opportunities to overparent and greater perceptions of overparenting.

I used three characteristics as proxy measures of emerging adulthood: age, marital status, and having children. However, these proxy measures did not indicate if participants met the emerging adult characteristics (i.e., identity explorations, instability, a focus on self, feeling in-between, and optimism for one's future) proposed by Arnett (2015) or how far progressed they were in the transition to adulthood. Future research should use Reifman, Arnett, and Colwell's (2007) Inventory of Dimensions of Emerging Adulthood (IDEA) to more directly measure the characteristics of emerging adulthood and to investigate how these characteristics relate to overparenting, basic psychological needs, and achievement goals. The IDEA includes six subscales that measure emerging

adults on the following characteristics: identity exploration, experimentation/possibilities, negativity/instability, other-focused, self-focused, and feeling "in-between". Using this scale may show if and how overparenting, the basic psychological needs, and achievement motivation change as emerging adults transition to adulthood and better clarify how overparenting relates to emerging adults' basic psychological needs and motivation. Perhaps overparenting in early emerging adulthood is less harmful or even beneficial but becomes more detrimental as emerging adults age. Perhaps overparenting is associated with a delayed transition to full adulthood.

More work is also needed to clarify the relationships between the basic psychological needs and achievement goal complexes. Perhaps more support will be found for the Gestalt view of the achievement goal complex (Sommet & Elliot, 2017). Moderating relationships should be explored further, including interactions between need satisfaction and need frustration. Prior research found small but significant interactions between corresponding need frustration and need satisfaction subscales, supporting the argument that need frustration and need satisfaction can co-occur (e.g., a person who offers their friendship but only if one complies with their demands) and that buffering effects are possible between these constructs (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011).

Other research designs should be employed to study overparenting, psychological needs, and achievement goals. A person-centered design may yield comprehensive information about how these constructs are related and tend to occur together among emerging adults and how different achievement profiles and contexts link to various outcome measures. A time series design would allow for the examination of the basic

psychological needs as mediating variables and may clarify causal questions that my research was unable to address. Additionally, a time series design using the IDEA (Reifman et al., 2007) may especially clarify how the relationships among these variables change as emerging adults transition to adulthood.

Finally, my research examined only contextual antecedents to achievement goal adoption, while most of the research I cited examined primarily outcome variables. Future research should examine both antecedent and outcome variables. Examining outcome measures like academic achievement and well-being measures would more clearly situate the practical relevance of this research by determining if overparenting, the satisfaction or frustration of emerging adults' psychological needs, and/or achievement goal complexes matter in emerging adults' achievement or well-being. Academic achievement as an outcome measure is particularly warranted given the limited but conflicting extant research on overparenting and academic achievement (Bradley-Geist & Olson-Buchanan, 2014; Hoffer, 2008; LeMoyne & Buchanan, 2011; Shoup et al., 2009).

**5.5 Implications**

The practical implications of my results are two-fold. First, my study found evidence of a relationship between overparenting and emerging adults' basic psychological need for autonomy. Autonomy development is a key developmental task in emerging adulthood (Arnett, 2015). Having this need not only unmet but also actively thwarted may interfere with emerging adults' successful shifts to adulthood. It may behoove college personnel to identify ways to help parents and their emerging adult children successfully navigate the transition from high school to college and the transition from college to the workforce. Parent education should include the key developmental

tasks of emerging adulthood, maladaptive patterns and outcomes associated with overparenting, boundary-setting, the roles and responsibilities of college students (e.g., the student, not the parent, should communicate with instructors) and developmentally appropriate ways to support their emerging adults and their achievement (Wartman & Savage, 2008). Additionally, colleges should provide student support services explicitly designed to help students through the transitions to college and the workforce, such as information on boundary-setting, counseling services, the roles and responsibilities of college students, legal issues regarding student educational privacy (e.g., college students may be unaware of laws and policies in place to protect their privacy even from their parents), and workforce etiquette. First-year introduction to college-type courses would provide ideal settings to discuss emerging adulthood characteristics and developmental tasks and to provide opportunities for self-reflection on college students' own personal transitions to adulthood through assignments and class discussions.

Second, my research linked increased need satisfaction to the adaptive MAp Autonomous goal complex and linked increased need frustration to the maladaptive PAp Controlled goal complex. Because of the beneficial patterns and outcomes associated with MAp goals with autonomous regulation (Elliot & McGregor, 2001; Delrue et al., 2016; Gaudreau & Braaten, 2016; Gillet et al., 2017; Gillet, Lafreniere, et al., 2015; Gillet et al., 2014; Hulleman et al., 2010; Michou et al., 2016; Pastor et al., 2007; Pintrich, 2000; Senko et al., 2011; Spray et al., 2006; Vansteenkiste, Lens, et al., 2014; Vansteenkiste, Mouratidis, & Lens, 2010; Vansteenkiste, Smeets, et al., 2010), fostering environments in which emerging adults' needs are satisfied rather than frustrated should be a priority for both parents and college personnel. Again, educating parents about the

developmental tasks of emerging adulthood and supporting them and their emerging adults during this transition may be helpful (Wartman & Savage, 2008). However, college personnel should also examine how need satisfaction can be promoted in the classroom, such as educating faculty about autonomy-supportive teaching practices, strategies to encourage student competence, and guidelines for fostering open, healthy instructor-student relationships. Moreover, colleges should undertake initiatives to promote need satisfaction in residence halls and other aspects of collegiate life to include sponsoring anti-bullying programs, training college personnel to identify signs of psychological distress in students and effectively refer students for help, and teaching counseling staff to assess their student clients for need satisfaction and frustration (Wartman & Savage, 2008).

My study also revealed three significant implications for researchers. First, my results showed that both need satisfaction and need frustration are relevant constructs in the investigation of overparenting. The newly demonstrated relationship between overparenting and need frustration supports prior research arguing that overparenting may not originate, as was previously thought, from parents' benevolent, well-intentioned desires to help (Nelson et al., 2015; Padilla-Walker & Nelson, 2012; Segrin et al., 2015; Segrin et al, 2012; Segrin et al., 2013). Second, my research supported the importance of considering both need satisfaction and need frustration when investigating the basic psychological needs (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; Chen et al., 2015; Longo et al., 2018; Longo et al., 2016; Nishimura & Suzuki, 2016). Need frustration is not simply the lack of need satisfaction. Rather, these constructs showed distinct patterns when predicting the achievement goal complexes. Finally, my

research provided further support for the use of the hierarchical model of achievement motivation to study achievement goals and their underlying regulation: Each of the goal complexes in my study demonstrated unique relationship patterns with the predictor variables. These results support previous studies that found that both the goal content and its underlying reason are important factors in achievement motivation, bolster the argument for the Gestalt achievement goal complex (Gaudreau & Braaten, 2016; Sommet & Elliot, 2017; Thrash & Elliot, 2001; Vansteenkiste, Lens, et al., 2014), and corroborate the use of the goal complex measure recently developed by Sommet and Elliot (2017).

**5.6 Conclusions**

In recent years, "helicopter parent" has become a seemingly ubiquitous phrase on college campuses. Research has linked overparenting to a wide array of negative patterns and outcomes (Bradley-Geist & Olson-Buchanan, 2014; Darlow et al., 2017; Hofer, 2008; Hong et al., 2015; Kouros et al., 2017; Kwon et al., 2015; Kwon et al., 2017; LeMoyne & Buchanan, 2011; Leung & Shek, 2018; Padilla-Walker & Nelson, 2012; Reed et al., 2016; Rousseau & Scharf, 2015; Schiffrin et al., 2014; Schiffrin & Liss, 2017; Segrin et al., 2015; Segrin et al., 2012; Segrin et al., 2013; Shoup et al., 2009). Likewise, my research showed that overparenting was associated with increased autonomy frustration and decreased autonomy satisfaction among emerging adult college students. According to self-determination theory, the need for autonomy is one of the three basic psychological needs that must be satisfied for a person to feel motivated and to develop and perform optimally (Deci et al., 1991; Vansteenkiste & Ryan, 2013). Additionally, the need for autonomy is especially crucial during emerging adulthood when autonomy and identity development are key developmental tasks (Arnett, 2015).

Autonomy frustration may lead to delays or moratoria in the accomplishment these developmental tasks (Cordiero et al., 2018). My findings suggest the need on college campuses for parent education on the characteristics and developmental tasks of emerging adulthood as well as the placement of supports for parents and their emerging adult students during the transitions from high school to college and from college to the workforce. Other key findings of my research include predictive relationships linking increased need satisfaction to the adaptive MAp Autonomous goal complex and the PAp Autonomous goal complex and linking increased need frustration to the maladaptive PAp Controlled goal complex. These findings suggest the importance of fostering, both at home and on college campuses, contexts in which emerging adults' needs are satisfied and adaptive achievement goals are nurtured. Although my hypotheses were primarily supported, some results were unexpected based on prior research, particularly the lack of a relationship between overparenting and composite need satisfaction, composite need frustration, and the achievement goal complexes. My research has several limitations that require care when interpreting and applying its results, such as use of a non-random sample, reliance on self-reported data, and a correlational design. Further research is needed to replicate my results, to delve deeper into these topics, and to expand beyond the scope of this initial exploratory investigation.

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## Appendix A

### Survey

Below is the survey administered to participants in my research.

**Below are goals you might choose to pursue in college, together with explanations for why you might pursue these goals. Please indicate how true each goal statement is for you personally.**

I am striving to understand the content of my courses as thoroughly as possible **because** I find this a highly stimulating and challenging goal.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to understand the content of my courses as thoroughly as possible **because** I find this a personally valuable goal for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to understand the content of my courses as thoroughly as possible **because** I have to prove myself.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to understand the content of my courses as thoroughly as possible **because** others (e.g., teacher, parents, friends, etc.) expect or require me to do so.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am paying attention to these questions **because** it is important to answer accurately. Please choose Somewhat for this item.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to perform better than the other students **because** others (e.g., teacher, parents, friends, etc.) expect or require me to do so.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to perform better than the other students **because** I find this a personally valuable goal for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to perform better than the other students **because** I have to prove myself.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to perform better than the other students **because** I find this a highly stimulating and challenging goal.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to do well compared to other students **because** I have to prove myself.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to do well compared to other students **because** others (e.g., teacher, parents, friends, etc.) expect or require me to do so.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to do well compared to other students **because** I find this a highly stimulating and challenging goal.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am striving to do well compared to other students **because** I find this a personally valuable goal for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to learn as much as possible in my college courses **because** I find this a personally valuable goal for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to learn as much as possible in my college courses **because** others (e.g., teacher, parents, friends, etc.) expect or require me to do so.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to learn as much as possible in my college courses **because** I have to prove myself.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My goal is to learn as much as possible in my college courses **because** I find this a highly stimulating and challenging goal.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Please indicate how each statement below describes your parent(s). If you were not raised by your parent(s), please answer these items about whomever had the primary role of caring for and raising you in your youth.**

At least one of my parents . . .

makes important decisions for me (e.g. where I live, where I work, what classes I take)

| Not at all like my parent | | Somewhat like my parent | | A lot like my parent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

intervenes in settling disputes with my roommates or friends

| Not at all like my parent | | Somewhat like my parent | | A lot like my parent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

intervenes in solving problems with my employers or professors

| Not at all like my parent | | Somewhat like my parent | | A lot like my parent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

solves any crisis or problem I might have

| Not at all like my parent | | Somewhat like my parent | | A lot like my parent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

looks for jobs for me or tries to find other opportunities for me (e.g., internships, study abroad)

| Not at all like my parent | | Somewhat like my parent | | A lot like my parent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you.**

I feel like I am free to decide for myself how to live my life.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I really like the people I interact with.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel prevented from making choices with regards to the way I live.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Often, I do not feel very competent.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel other people dislike me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel pressured in my life.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I am paying careful attention to these items. Please choose Completely.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

There are times when I am told things that make me feel incompetent.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

People I know tell me I am good at what I do.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I get along with people I come into contact with.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel pushed to behave in certain ways.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I pretty much keep to myself and don't have a lot of social contacts.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel other people are envious when I achieve success.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I generally feel free to express my ideas and opinions.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel others can be dismissive of me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I consider the people I regularly interact with to be my friends.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I have been able to learn interesting new skills recently.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

In my daily life, I frequently have to do what I am told.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel inadequate because I am not given opportunities to fulfil my potential.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

People in my life care about me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Situations occur in which I am made to feel incapable.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Most days I feel a sense of accomplishment from what I do.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel I am rejected by those around me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

People I interact with on a daily basis tend to take my feelings into consideration.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

In my life I do not get much of a chance to show how capable I am.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

There are not many people that I am close to.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel forced to follow decisions made for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please select Not at all for this item.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel like I can pretty much be myself in my daily situations.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

There are situations where I am made to feel inadequate.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

The people I interact with regularly do not seem to like me much.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I often do not feel very capable.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I feel under pressure to agree with plans others make for me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

There is not much opportunity for me to decide for myself how to do things in my daily life.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

People are generally pretty friendly towards me.

| Not at all | | | Somewhat | | | Completely |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

What is your age in years? _____

In what year and semester did you **first** enroll in college?

| **Year** | **Semester** |
|---|---|
| 2018 | Fall |
| 2017 | Spring |
| 2016 | Summer |
| 2015 | |
| 2014 | |
| 2013 or before | |

Where do you **currently** live?

On-campus housing (residence halls, on-campus apartments, Greek Village)
Off-campus with roommates or alone
With my parents or other relatives
Other (please specify) _____

Which option best describes your grades in **high school**?

Mostly As
Mix of As and Bs
Mostly Bs
Mix of Bs and Cs
Mostly Cs
Mix of Cs and Ds
Mostly Ds
Below Ds

Which option best describes your grades in **college**?

Not applicable - This is my first semester in college
Mostly As
Mix of As and Bs
Mostly Bs
Mix of Bs and Cs
Mostly Cs
Mix of Cs and Ds
Mostly Ds
Below Ds

The following items ask you about the education of your parent(s). If you were not raised by your parent(s), please answer these items about whomever had the primary role of caring for and raising you in your youth.

What is the highest level of education COMPLETED by your parents, guardians, or caregivers?

| | Less than high school | High school | Some college but no degree | Associate degree | Bachelor's degree | Graduate degree | Don't know | Not applicable (please explain) |
|---|---|---|---|---|---|---|---|---|
| Parent 1 | | | | | | | | |

| | Mother/stepmother | Father/stepfather | Other (please specify) |
|---|---|---|---|
| What is this person's relationship to you? | | | |

| | Less than high school | High school | Some college but no degree | Associate degree | Bachelor's degree | Graduate degree | Don't know | Not applicable (please explain) |
|---|---|---|---|---|---|---|---|---|
| Parent 2 | | | | | | | | |

| | Mother/stepmother | Father/stepfather | Other (please specify) |
|---|---|---|---|
| What is this person's relationship to you? | | | |

With which gender identity do you most identify?

Female
Male
Transgender Female
Transgender Male
Gender Variant/Non-Conforming
Other _____

Are you married?

Yes
No

Do you have any children?

Yes
No

Are you of Hispanic, Latino, or Spanish origin?

Yes
No

How would you describe yourself? (check all that apply)

American Indian or Alaska Native
Asian
Black or African American
Native Hawaiian or Other Pacific Islander
White
Not listed _____