The Home Impact on Self-Efficacy for Self-Regulated Learning During Mid-to-Late Adolescence

by

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ABSTRACT

School and educational psychologists have a shared imperative to understand the complex inter-play of a student's home life and perceived self-efficacy. Self-efficacy is the central facet of Bandura's social cognitive theory (SCT, 1986, 1997). The current study improved upon the extant literature by exploring how home life in Arizona, Arkansas, California, and Oklahoma impacts the self-efficacy for self-regulated learning of mid-to-late adolescents. Although it is difficult to identify how specific aspects of life (including home life) matter for particular areas of functioning, the present study explored self-efficacy for self-regulated learning through the lens of three scales of the Late Adolescence version of the Home Observation for Measurement of the Environment Inventory (LA-HOME) (Caldwell & Bradley, 2016). The LA-HOME documents actions, objects, events and conditions connected with the home environment of children ages 16 to 20, who are still residing at home with parents or guardians (Caldwell & Bradley, 2016). This paper addresses the following research question: How are various aspects of the home life of mid-to-late adolescents, namely (1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and (3) warmth, acceptance, and responsiveness, associated with self-efficacy for self-regulated learning? The sample of 333 adolescents is quite diverse demographically; it includes variations in family composition, race/ethnicity, household SES, language spoken in the home, and geography (rural, urban, suburban). The study utilizes a sub-sample of adolescents from the larger study who were 15 to 19 years of age (N = 333). Descriptive statistics, means, and standard deviations are reported for continuous variables, frequencies are reported for categorical variables, and correlations are presented. A hierarchical regression model was

estimated in two steps. The first step included the complete set of control variables (household income, ethnicity, gender, and adolescent general health and depressive symptoms), and the second step included the set of three home life indicators. The hierarchical regression model had good fit. Study assets and limitations, as well as alternate theories for consideration and directions for future research, are discussed.

I dedicate this dissertation

to God

to my beloved sons, Michael and Carson

to my incredible parents, Michael and Karen

to my soul sister, Lucinda Steffes

to Father Rusty Shaughnessy

to Jessica, Brandon, Melody, CJO, Heidi, Nicole, Sarah

to Jennifer, Michelle, Eden, Kristie, Carolyn, Siu Mei, Kevin

and to all of the steadfast friends and family who stood by me, believed in me,

prayed for me, and helped me so that I could be a single mom who earned her Ph.D.

I am eternally grateful.

I pray that my words and work honor my angels now watching from Heaven…

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CHAPTER 1

INTRODUCTION

In an ideal world, parents are supposed to guide and protect their children. Children are taught from the perspective of the parents' or primary caregivers' moral compass. In our digital age, it is readily apparent that adolescents are greatly influenced by society as a whole. At a time when technology appears to be pushing humans apart, with less actual in-person interaction, adolescents may rely more heavily on peers at school or digital "friends" than on their families for both emotional and academic support. At school, students bounce back and overcome academic and emotional hurdles in a variety of ways. Some students seek out social resources—asking for help from their parents, teachers, peers, tutors, or counselors. These teens may jump over hurdles quite easily and then keep on running, moving forward. When confronted with obstacles, other adolescents deny that they need any help, and some can barely scale the hurdles as the fear of failure overwhelms them. Overcoming hurdles is a daily challenge for most youth in the United States, often well into adulthood. But what makes some young people more efficacious than their peers? According to Albert Bandura (1986, 2012), self-efficacy is one's belief in one's ability to succeed in specific situations or accomplish a task. Self-efficacy enhances the quality of human functioning through cognitive, affective, motivational, and decisional processes. School is the primary setting in which cognitive capabilities are cultivated and evaluated (Bandura, 1997). It is also the primary setting in which academic self-regulatory practices are developed and maintained (Pajares & Schunk, 2001).

Since most adolescents in Western nations—particularly up to the age of 18 years—are in some form of school or educational system, there is a need to understand the academic adversities they face and the ways they deal with them (Martin, Colmar, Davey, & Marsh, 2010). Academic pressures and frustrations are everyday challenges in the lives of adolescents. Nevertheless, students do not spend all of their time at school. It is important for scholars, educators, policy makers, and service providers to develop a more thorough understanding of how adolescents' home environments may be implicated in their overall competence, adaptive behavior, and health (Caldwell & Bradley, 2016). Families provide experiences that influence children's self-efficacy from infancy through emerging adulthood. Research has provided insight into how home life in its myriad forms increases (or decreases) self-efficacy for self-regulated learning (SRL) during mid-to-late adolescence.

Context

The period of adolescence can be fraught with lagging motivation, poor study habits, and engagement problems. Research in schools has shown that adolescents tend to be lower in the positive aspects of motivation (self-confidence, valuing of school, persistence, and planning) and higher in the negative aspects of motivation (anxiety, fear of failure, learned helplessness, and disengagement) (Green et al., 2012). High school students often become more negative about themselves and school (Martin, 2017b), including school avoidance, chronic underachievement, or mental health issues, while other students drop-out of school entirely. From ages 16 to 18, students often take important examinations that can influence their opportunities for college or future employment. Late adolescence is the time of gradual transition to adulthood, and in the

United States, teenagers can even be emancipated after age 16 (Michon, n.d.). A lack of education will have long-term consequences; poor education can impact all aspects of a person's life. Not every human being is endowed with brilliance; some people must work harder and struggle more in school, and eventually, in the workplace. Education is a non-linear process that varies across a person's lifespan, and the age range of adolescents from 15 to 19 is an especially important time in the lives of these emerging adults.

Beliefs of personal competence and of self-worth ultimately become habits of thinking that are developed like any habitual behavior, and teachers are influential in helping students develop the habitual self-beliefs that will serve them throughout their lives (Pajares & Schunk, 2001). Hence, if educators are influential in the development of self-efficacy, then it should be extremely significant to consider how parents (or primary caregivers)—who are truly every child's first teachers—influence the self-efficacy of their children, as they progress through adolescence and emerging adulthood. Parent-adolescent relationships have long been deemed by researchers and clinicians as important for adolescent adaptation. Helping parents and adolescents understand how to achieve a warm and close relationship, while still developing an individuated sense of self, has been the goal of many parent-adolescent researchers (Beveridge & Berg, 2007; Bradley & Corwyn, 2001, 2005, 2013; Bradley et al., 2001; Bradley, 2006; 2015b; Yap & Baharudin, 2016). Generally, parents and adolescents who engage in friendly autonomous processes that display and encourage independence, and who provide appropriate levels of control characterized by warmth and guidance, have adolescents who experience positive adaptation (Beveridge & Berg, 2007). Accordingly, homes typically function as places where guidance and emotional nurturance are supplied, basic

necessities are provided, and adults offer the kinds of materials and social connections needed to foster competence and feelings of efficacy in the children (Bradley, Pennar, Fuligni, & Whiteside-Mansell, 2017).

There are four key people who remain central to high school students' learning and achievement: the student, the parent (or primary caregiver), the teacher, and peers—without question, the most influential of these is the student (Martin, 2017a, 2017b). It is the student who must engage in class, do homework, complete assignments, study, and take tests. According to Andrew Martin (2017b), research shows the next two most influential people are parents and teachers. The role of parents and guardians in high school students' learning and achievement is critical. Parents influence secondary school outcomes in numerous ways, including providing or arranging for help, encouraging the child, valuing effort and education, and creating a home environment conducive to study (Martin, 2017b). In addition, parents who can understand and accept their adolescent's temperament, abilities, strengths, weaknesses, and interests are in a far better position to know when and how to support them (Martin, 2017b). Indeed, social science researchers have suggested that humans have several fundamental needs that are critical to be met for our optimal functioning. One of these—the need to be taken seriously—is considered paramount, as is the importance of feeling understood and accepted by others (Martin, 2017b). Adolescents place a high value on being taken seriously, feeling understood, and feeling accepted. Parents who strive to understand and fully accept their child are well-positioned to provide tailored support as needs arise; this, of course, is also the basis for a good relationship and an adolescent's further growth and personal development (Martin, 2017a, 2017b).

Significance of the Study

Given the considerable challenges facing children and adolescents worldwide, school and educational psychologists have a shared imperative to understand the complex inter-play of a student's home life and perceived self-efficacy; this dissertation study helps explain this relationship, especially considering there is far less research on late adolescence than for earlier periods of childhood. In the United States, many teens excel in high school because they do not want to disappoint their parents, or because they want to be accepted to an excellent college or university. It is important to note that there are distinct differences between an adolescent's self-efficacy in terms of academic achievement and self-efficacy in terms of self-regulation. I have chosen to look at self-efficacy for SRL, as opposed to focusing on academic self-efficacy, for a variety of reasons. In reality, a 15- to 19-year old student could be highly efficacious in terms of his or her grades and overall academic work; yet, that same student may not have high self-regulatory self-efficacy. When an adolescent self-regulates, he or she tends to be a self-starter. For some parents and students, nothing is more important than receiving good grades, preferably straight As. For other adolescents, it is more important to be able to re-start and bounce back after setbacks, notwithstanding actual grade point average. Many teens who are highly efficacious in self-regulation do their homework and navigate academic challenges either on their own or with little assistance. Other teenagers must be pushed and prodded by their parents and teachers to study. Interestingly, many students who possess self-efficacy for SRL may not receive as high of grades as students who are efficacious in academic achievement. Students who value high grades and believe that

diligent studying will produce high marks may not be motivated to study if they doubt their capabilities to study effectively (Schunk, 1990).

Academic self-efficacy is measured in terms of belief in one's learning efficacy and self-regulatory efficacy to manage learning activities that eventuate in academic accomplishments (Bandura, 2012). Hence, it is clear that differences exist between self-efficacy of academic achievement and self-regulatory efficacy—and students may have one or both levels of efficaciousness. Of course, no amount of self-confidence can produce success in school if a student lacks required skills or background knowledge. It has been said that students need to have both the will and skill to be successful in school; academic self-efficacy appears to be more related to the skill in the classroom; whereas, self-efficacy of SRL is more about the will of students. Thus, it is not simply a matter of how academically accomplished a student may be, but more about how competent one believes oneself to be.

Present Study

The Late Adolescence version of the Home Observation for Measurement of the Environment Inventory (LA-HOME, Caldwell & Bradley, 2016) is a useful instrument to explore self-efficacy in the United States, since many aspects of home life potentially come into play as means of supporting the development of adolescents.

Thus, the current study will address the following research question**:** *How are various aspects of the home life of mid-to-late adolescents, namely (1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and (3) warmth, acceptance, and responsiveness, associated with self-efficacy for self-regulated learning?*

Theoretical Framework: Social Cognitive Theory

Self-efficacy is the central facet of Bandura's social cognitive theory (SCT, 1986, 1997). The self-efficacy portion of social cognitive theory addresses the origin of self-efficacy beliefs, their structure and functional properties, their diverse effects, the processes through which they work, and how to develop and enlist such beliefs for personal and social change (Bandura, 1997, 2012). Students can gain a sense of self-efficacy through the problem-solving modeling and supportive communication of significant others (Bandura, 1997). Furthermore, a key interpersonal influence on self-efficacy is the vicarious influence from others through social models (Bandura, 1997). According to Bandura, people's beliefs in their efficacy influence whether they think pessimistically or optimistically, in self-enabling or self-debilitating ways (Bandura, 2012). SCT asserts that human functioning has its foundation in the social environment and self-influences (in which self-efficacy is an integral component) concerning people's beliefs about their capabilities to exercise control over their functioning (Yap & Baharudin, 2016).

Albert Bandura (1986) has always contended that human motivation and behavior influence each other reciprocally. According to Bandura's SCT, behavioral and environmental information create the self-beliefs that, in turn, inform and alter subsequent behavior and environments (Pajares & Schunk, 2001). This is the foundation of Bandura's (1978) conception of *triadic reciprocal causation*—the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocality of human functioning. Bandura provides a view of human functioning in which the beliefs

that people have about themselves are key elements in the exercise of control (Pajares & Schunk, 2001). These self-beliefs are influenced by human behavior and by environmental contingencies. In this social cognitive perspective, individuals are both products and producers of their own environments and of their social systems (Bandura & Kiesler, 1978; Bandura 1986, 1997). Bandura's view on the causal influence of self-beliefs is that "by exercising self-influence, individuals are partial contributors to what they become and do" (Bandura, 1978, as cited in Pajares & Schunk, 2001).

SCT also places great emphasis on the role of self-efficacy in self-regulation. Investigators working within a social cognitive theory framework view self-regulation as comprising three subprocesses: self-observation, self-judgment, and self-reaction (Bandura, 1986; Schunk, 1990). Learners initially may hold a sense of self-efficacy for learning, which motivates them to attend to models and practice skills. Learners are proactive and seek out ways to improve their skills (Schunk & Ertmer, 2000). As learners perceive that they are becoming more skillful and performing better, their self-efficacy for learning is strengthened, which leads to motivation for further improvement (Schunk, 2012). Finally, with its emphasis on reciprocal interactions between personal, behavioral, and social/environmental factors, SCT underscores the dynamic and changing nature of the development and refinement of self-regulation skills (Schunk, 2012). This cyclical nature of SCT is captured in Zimmerman's (1998, 2000) three-phase self-regulation model. The *forethought phrase* precedes actual performance and sets the stage for action; the *performance (volitional) control phrase* involves processes that occur during learning and affect attention and action; and then, during the third *self-reflection phase*, individuals respond to their efforts (Schunk & Ertmer, 2000).

In turn, people's perceptions of self-efficacy are assumed to play a major role in motivating them to self-regulate their health functioning (Israel et al., 2014). Individuals differ in their capacity for self-regulation and utilize various coping strategies in response to stress and mental health issues. If an adolescent is depressed or unmotivated, then he or she will not be efficacious in self-regulation. Everyday experiences and emotions are highly variable during mid-to-late adolescence, a time during which self-regulatory capacities may become particularly important for adapting to shifting social contexts. Research indicates that SCT processes entailed in regulating one's health can be taught through social modeling, supports, and feedback (Israel et al., 2014). Relatively few studies have examined the relationship between affective processes and self-efficacy and the consequence of this relationship on health behaviors.

There are two levels at which a sense of personal efficacy plays an influential role in human health (Bandura, 1992, 1997). Basically, the human belief in one's capability to cope with stressors activates biological systems that mediate health and disease. According to SCT (Bandura, 1982, 2001), if people believe they can deal effectively with potential stressors, then they do not become disconcerted by the stressors. On the other hand, if people believe that they cannot control worrisome events, then they become distressed, and this concern impairs their level of functioning as articulated by Bandura (1998, p. 626):

> The impact of beliefs of coping efficacy on biological stress reactions is verified in experimental studies in which people are exposed to stressors under perceived inefficacy, and after their beliefs of coping efficacy are raised to high levels through guided mastery experiences.

Because SCT views stress reactions in terms of perceived inefficacy to exercise control over threats and stressful environmental demands, it makes sense that one's self-efficacy for SRL would be influenced by mental and physical health during adolescence.

Bandura's (1997) emphasis that one's mastery experiences are the most influential source of self-efficacy information has important implications for the self-enhancement model of academic achievement, which contends that, to increase student achievement in school, educational efforts should focus on altering students' self-beliefs (Pajares & Schunk, 2001). This is usually accomplished through programs that verbally persuade students that they are capable and can acquire these skills. Social cognitive theorists focus on a joint effort to raise competence and confidence primarily through successful experience with the task at hand, through authentic mastery experiences (Pajares, 1997; Pajares & Schunk, 2001; Schunk, 1990, 2001). Bandura (1997) contends that the most functional self-efficacy judgments are those that slightly exceed what a person can actually do; this minor overestimation raises incentive and achievement (Schunk & Meece, 2006). SCT conceptualizes human development within an agentic conceptual framework (Bandura, 1997, 2001). In this view, adolescents are proactive agents of their self-development rather than just reactors to parental social management practices. Adolescents are producers, as well as products, of their social environment.

CHAPTER 2

LITERATURE REVIEW

According to Bandura (1986), individuals are viewed as proactive and self-regulating rather than as reactive and controlled by biological or environmental forces. In addition, individuals are understood to possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions. How people behave can often be better predicted by the beliefs they hold about their capabilities, which he called *self-efficacy* beliefs, than by what they are actually capable of accomplishing, since these self-perceptions help determine what individuals do with the knowledge and skills they have (Bandura, 1986; Pajares & Schunk, 2001). Bandura (1997) argued that, to predict academic outcomes from students' efficacy beliefs, "self-efficacy beliefs should be measured in terms of particularized judgments of capability that may vary across realms of activity, different levels of task demands within a given activity domain, and under different situational circumstances" (Bandura, 1997, 2006; Bandura et al., 1996; Bassi et al., 2007; Zimmerman, 1995; Zimmerman & Bandura, 1994).

Zimmerman and his associates have been instrumental in tracing the relationships among self-efficacy perceptions, academic self-regulatory processes, and academic achievement. This line of inquiry has demonstrated that self-efficacy beliefs influence self-regulatory processes such as goal setting, self-monitoring, self-evaluation, and strategy use (Zimmerman, 1989, 1990, 1994; Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1990). Self-efficacious students are said to embrace more challenging goals (Zimmerman et al., 1992). Students with high self-efficacy also engage in more effective self-regulatory strategies at differing levels of ability (Pajares & Schunk, 2001).

Every human being has strengths and weaknesses. Because there are many activities that individuals do well, and other things that individuals do poorly, one's self-efficacy does not change when he or she performs poorly in an activity in which self-concept is not invested. Students with low self-efficacy for learning may avoid tasks; whereas, those who feel efficacious are more likely to participate. When facing difficulties, self-efficacious learners expend greater effort and persist longer on coursework (Schunk, 1990). Self-efficacy consistently predicts academic achievement (Bong, 1996) due to its effects on effort and persistence, because students who demonstrate greater senses of self-efficacy are more likely to put forth the necessary effort and persist longer when facing academic challenges (Schunk & Zimmerman, 2006). Self-efficacy has been found to be the strongest predictor of academic performance in two meta-analyses (Panadero, Jonsson, & Botella, 2017; Richardson, Abraham, & Bond, 2012; Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004).

Efficacy beliefs also influence the amount of stress and anxiety individuals experience as they engage in an activity (Pajares & Miller, 1994, as cited in Pajares & Schunk, 2001); therefore, self-efficacy beliefs exercise a powerful influence on the level of accomplishment that individuals ultimately realize (Pajares & Schunk, 2001). High self-efficacy helps create feelings of serenity in approaching difficult tasks and activities; efficacious students more quickly recover their confidence after failures or setbacks, and they also attribute failure to insufficient effort or deficient knowledge and skills—which are acquirable (Pajares & Schunk, 2001). Efficacy appraisal is an inferential process wherein one balances and combines the contributions of personal and situational factors (Schunk, 1990). Self-assessment activates feelings of worth and a perception of improved

capability, which then impacts self-efficacy (Panadero et al., 2017; Paris & Paris, 2001). In assessing self-efficacy, students take into account such factors as perceived ability, task difficulty, expended effort, and teacher assistance, combined with other circumstances and past patterns of successes and failures (Schunk, 1990).

The causal influence of self-efficacy on students' academic achievement-related behaviors has been effectively demonstrated by Dale Schunk and his colleagues. In a series of studies (e.g., Schunk, 1983a, 1983b, 1984, 2001, 2008; Schunk & Swartz, 1993a, 1993b), Schunk increased students' self-efficacy beliefs by providing them with instructional strategies designed to enhance their competence (strategies such as modeling, strategy training, goal setting, and providing rewards, attributional feedback, or progress feedback). The increase in self-efficacy also resulted in improved performance. In several studies, Schunk assessed students' self-efficacy for learning novel tasks prior to instruction and then related that self-efficacy to subsequent achievement and motivation during instruction. Other findings show that efficacy beliefs influence academic achievement and mediate the effect of possessed skills on subsequent achievement by influencing effort, persistence, and perseverance (e.g., Collins, 1982).

There appears to be a lack of evidence-based detail explaining exactly what high self-efficacious individuals do that impacts positively on academic outcomes. One 2014 study used the national dataset of the Educational Longitudinal Study of 2002 (ELS: 2002), funded by the U.S. Department of Education, to illuminate the influences of family background, including parental support, income level, parental expectations for their children's postsecondary education, and parental involvement in academic planning for postsecondary education, on students' self-efficacy and career and life success

expectations (Kim, 2014). The higher the sense of efficacy, the greater the effort, persistence, and resilience. In educational studies, individual differences in perceived self-efficacy have often been shown to be better predictors of performance than either previous achievement or ability and seem particularly important when individuals face adversity (Cassidy, 2015). Despite an abundance of self-efficacy research, little work has examined how self-efficacy relates to resilient behaviors exhibited in response to adversity (Cassidy, 2015; Noltemeyer & Bush, 2013). Findings support the relevance of self-efficacy beliefs to individual psychological resilience; thus, having positive self-efficacy beliefs is likely to contribute toward increased resilience in students (Cassidy, 2015; Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999).

Likewise, academic motivation is thought to decline throughout childhood and into adolescence, and low academic motivation is of most concern in secondary schools (Doddington, Flutter, & Rudduck, 1999; McGeown et al., 2014). In the United Kingdom, a 2014 study of 455 secondary school aged students used self-report scales to measure academic motivation, self-efficacy, and personality (McGeown et al., 2014). Self-efficacy and conscientiousness were the strongest and most consistent predictors of intrinsic and extrinsic motivation; high levels of these traits were associated with increased intrinsic motivation and decreased extrinsic motivation (McGeown et al., 2014). Caprara, Barbaranelli, Pastorelli and colleagues in Italy have been examining how perceived self-efficacy operates in concert with socioeconomic, familial, educational, and peer influences in shaping the developmental trajectories of children. The findings of this body of research clearly show that different forms of efficacy beliefs—academic, social, self-regulatory, and empathic—make independent contributions to children's social,

emotional, moral, education, and career development (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996a, 1996b; Bandura, Barbaranelli, Caprara, Pastorelli, & Regalia, 2001; Caprara, Pastorelli, Regalia, Scabini, & Bandura, 2005; Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011; Pastorelli et al., 2001; Vecchio, Gerbino, Pastorelli, Del Bove, & Caprara, 2007).

The relationship among the constructs of self-assessment, SRL and self-efficacy has been the object of empirical research for over 20 years, and this relationship is both intricate and reciprocal (Panadero et al., 2017). To clarify, self-assessment is conceptualized as a learning regulatory strategy; SRL is dependent on self-assessment—via self-monitoring and self-evaluation—to support student learning; whereas, self-efficacy enhances student activation and use of regulatory strategies, such as monitoring and evaluation (Panadero et al., 2017).

Self-Efficacy and Self-Regulation

The question of how students become masters of their own learning processes emerged in the mid-1980s and continues to attract students, teachers, and researchers from diverse backgrounds during the 21st century (Zimmerman & Labuhn, 2012). The search for answers to this question has been labeled SRL. Self-regulation is envisioned as a key mediator between one's mental ability and one's acquisition of academic skills, such as proficiency in reading or math; more specifically, this construct refers to the self-directive processes through which learners transform their mental abilities into academic skills (Zimmerman & Labuhn, 2012). Self-regulation is conceived as a proactive activity in which students engage to help themselves learn; for example, deploying a strategy,

rather than as a passive reaction, such as just sitting in class absorbing knowledge from an instructor (Zimmerman & Labuhn, 2012).

SRL has become one of the most prevalent educational theories to explain achievement (Panadero et al., 2017). Richardson et al. (2012) conducted a meta-analysis based on 11 different SRL components, showing that the use of SRL strategies was a significant predictor of academic performance (Panadero et al., 2017). Self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills (Zimmerman, 2002). SRL researchers have suggested that students are self-regulated to the degree that they are metacognitively, motivationally, and behaviorally active participants in their own learning processes (Zimmerman, 1986; Zimmerman & Labuhn, 2012). It is important to mention that self-regulation is not a trait that some students have and others do not. Rather, self-regulation involves the selective use of specific processes that must be personally adapted to each learning task (Zimmerman, 2002). SRL involves setting goals, selecting strategies to attain those goals, monitoring progress, restructuring if the goals are not being met, using time efficiently, self-evaluating the methods selected, and adapting future methods based on what was learned (Zimmerman, 2002; Locke & Latham, 2002). There is a relationship between self-regulation and perceived efficacy and intrinsic interest—learners need to believe that they can learn, whatever the task before them, and they must be motivated (Zimmerman, 2002).

Perceived self-efficacy involves learners' beliefs about their capabilities to learn or perform behaviors at designated levels (Bandura, 1986, 1997), and effective self-regulation depends on feeling self-efficacious for using skills to achieve mastery

(Bandura, 1986, 1997, 2006; Schunk & Ertmer, 2000; Zimmerman, 1994). Students gradually develop beliefs about their ability to exercise control in situations based on feedback from their performances, vicarious (observational) experiences, forms of persuasion, and physiological reactions (Schunk & Ertmer, 2000). Learners often receive persuasive information from teachers, parents, peers, and others, suggesting that they are capable of performing a task or assignment (e.g., "You can do this!")—this feedback may raise efficacy, but can be negated by subsequent performance failure (Bandura, 1997; Schunk & Ertmer, 2000). There is evidence that over-estimates of self-efficacy beliefs are linked to poorer academic outcomes, such as test results; Zimmerman contends that overconfidence may undermine students' motivation to study diligently (Zimmerman, 2002).

The developmental shift from being an inquisitive child to a more emotionally complex (and perhaps academically disinterested) adolescent has been attributed to several factors: poor fit between the adolescent and the school environment; hormonal changes; and, a growing awareness of social and academic competition (e.g., Eccles et al., 1993; Klassen, 2010). To address these challenges, adolescents must develop self-regulation skills. Their success in doing so is influenced by (a) cognitive factors, such as metacognitive knowledge awareness and working memory; (b) motivation and affective factors, such as interest and task value; and, (c) behavioral factors, such as time and effort management (Klassen, 2010). Students who possess the self-regulatory strategies to learn in school are apt to feel more self-efficacious and are, thus, more likely to be successful in accomplishing academic tasks (Schunk & Meece, 2006).

SRL is a total-engagement activity involving multiple parts of the brain. It encompasses full attention and concentration, self-awareness and introspection, honest self-assessment, openness to change, genuine self-discipline, and acceptance of responsibility for one's learning (Pintrich, 2000, 2003; Pintrich & Schunk, 2002; Zimmerman 2001, 2002; Zimmerman & Schunk, 2001). The hallmarks of self-regulation are choice and control: Students cannot self-regulate unless they have options available for learning and can control essential dimensions of learning (Zimmerman, 1994; Schunk & Ertmer, 2000). Self-regulation research has shown that self-regulated students are mentally active during learning—not just passively receiving information from teachers—and these self-regulated learners exert control by setting and attaining academic goals (Schunk, 1990; Schunk & Ertmer, 2000). A recent study of 408 psychology and economic sciences students in Europe showed that although students had quite advanced knowledge of SRL strategies, they did not put this knowledge into action (Foerst, Klug, Jöstl, Spiel, & Schober, 2017). This sample of university students stated that they lacked the time to use SRL strategies, would either not benefit from or would not be able use SRL strategies effectively, or found it too demanding to use SRL strategies (Foerst et al., 2017). Therefore, current research shows that among older adolescents there is a striking discrepancy between SRL knowledge and action/transfer of knowledge.

Gender and learning disabilities. One study investigated the replicability of the factor structure of the Children's Perceived Self-Efficacy scales (CPSE; Bandura, 1990) in Italy, Hungary, and Poland (Pastorelli et al., 2001). The findings of this cross-national study support the generalizability of the factor structure of children's social and academic

efficacy. Perceived efficacy to resist peer pressure to engage transgressive conduct had a somewhat different factor structure for Hungarian children. Gender and national differences in the pattern of efficacy beliefs underscore the value of treating perceived self-efficacy as a multifaceted attribute (Pastorelli et al., 2001). There were no overall gender differences in perceived social efficacy, but girls in all three societies have a higher sense of efficacy for academic activities and to resist peer pressure for transgressive activities. On the other hand, Italian children judge themselves more academically efficacious than do Hungarian children and more socially efficacious than their counterparts in both of the other two countries. An analysis of the facets of academic efficacy revealed that Hungarian children have a high sense of efficacy to master academic subjects, but a lower efficacy than their Italian and Polish counterparts to take charge of their own learning (self-efficacy for self-regulation). Polish children surpassed their counterparts in academic self-regulatory efficacy. Interestingly, the Polish children have a high assurance in their efficacy to exercise control over their own learning activities, even though this research was conducted in the midst of wrenching sociopolitical changes in Eastern Europe (Pastorelli et al., 2001). Evidence for the multifactorial nature of efficacy beliefs underscores the importance of treating self-conception of efficacy as a multifaceted attribute rather than as a global trait (Pastorelli et al., 2001).

Another study examined the self-efficacy for SRL of 146 Canadian adolescents with and without learning disabilities (Klassen, 2010). The adolescents with learning disabilities (LD) rated their self-regulatory efficacy lower than did their non-LD peers. Furthermore, girls rated the variable higher than boys, and this difference held true for

adolescent boys and girls with and without LD (Klassen, 2010). These results are consistent with previous research showing that female students have an edge in terms of confidence to regulate their learning over their male peers (Klassen, 2010). Past research with non-LD samples has revealed that comparatively more girls than boys employ strategies that optimize management of the learning environment (e.g., Ablard & Lipschultz, 1998; Klassen, 2010; Zimmerman & Martinez-Pons, 1990). Past studies have shown that adolescent girls show higher levels of metacognitive self-awareness and accuracy in calibrating their academic self-efficacy beliefs with performance, and girls tend to be less self-congratulatory than adolescent boys (Klassen, 2010).

According to Klassen (2010), self-efficacy to self-regulate can be further developed in students with LD if they are allowed opportunities for successful experiences, offered verbal persuasion, and provided with appropriate models. Consequently, it appears much the same with both LD and non-LD students. For both LD and non-LD students, poor academic performance may be the result of low confidence to manage learning, not actually low skill levels (Klassen, 2010). Klassen's study showed that learners who were low in self-regulatory efficacy came from families with lower levels of paternal educational attainment (2010). This finding appears consistent with that of Caprara et al. (2008), who claimed that low SES influences students' confidence to use self-regulated learning tools. In Caprara et al.'s (2008) longitudinal study, low levels of self-regulatory efficacy at Time 1 (early adolescence) influenced school grades at Time 3 (end of junior high), which—along with SES and self-regulatory efficacy at Time 4 (secondary/high school)—influenced the decision to drop out of school at Time 5.

Evidently, the accelerated pace of social and technological changes is placing a premium on self-regulatory capabilities (Bandura, 1997). For instance, modern educational technologies are transforming the educational system through easy electronic access to instruction on virtually any subject; this is creating vast learning opportunities that transcend time and place (Pastorelli et al., 2001). This learning process is being individualized and enables students to exercise considerable control over their own education (Pastorelli et al., 2001); learners have the best libraries, instructional sites, and museums at their fingertips. Students are educating themselves increasingly with multimedia instruction presented electronically by master teachers via the internet, and much learning will continue to occur outside the confines of schools (Pastorelli et al., 2001). Efficacious self-regulators will gain knowledge, skills, and intrinsic interests in intellectual matters; weak self-regulators will not achieve much progress in their self-development (Schunk & Zimmerman, 1994; Zimmerman, 1989, 1990).

Self-Efficacy and Home Life

It is important to understand how an adolescent's family influences academic outcomes and self-efficacy beliefs, and this could also have implications for school interventions. Many mid-to-late adolescents continue to look to home as a safe haven to calm their insecurities and anxieties (Bradley et al., 2017). According to Schunk and Miller (2002), adolescents acquire much of their self-efficacy information from their families and home environment. Because adolescents exist within social systems and are continuously interacting with their caretakers, parents not only influence the development of self-efficacy, but they also provide observational models that guide adolescents' adjustment of their self-efficacy (Fan & Williams, 2010). There is nearly universal

recognition within our society that parents serve as the primary socializing agents for their children (Luthar & Latendresse, 2002, 2005). Furthermore, researchers have demonstrated that the socializing influence of parents extends beyond childhood, to include mid-to-late adolescence, as well (Grusec & Kuczynski, 1997; Luthar & Latendresse, 2002, 2005). There is evidence in the literature to demonstrate the protective function of emotional closeness to parents in relation to children's and adolescent's well-being (Frank, Pirsch, & Wright, 1990; King, 2015; Luthar & Latendresse, 2002, 2005). Eccles and colleagues allege that differential influences of gender-role socialization serve to bolster the gender-specific effects of emotional closeness—with stronger effects for girls in relation to internal distress and for boys in relation to externalizing problems (Eccles, Wigfield, Harold, & Blumenfeld, 1993; Frome & Eccles, 1998; Luthar & Latendresse, 2002, 2005).

Using data from a prospective population cohort of 2,230 Dutch adolescents, researchers tested risk-buffering interactions between adolescent family adversity and self-regulation capacities on mental health (Bakker, Ormel, Verhulst, & Oldehinkel, 2011). Clearly, an important function of the family environment is to provide adolescents with stability, cohesiveness, and predictability during this often turbulent and demanding period (Forman & Davies, 2003; Gestsdottir & Lerner, 2008). Many adolescents experience a stable family environment; but some adolescents are exposed to family adversity. Family adversity can be defined as "the accumulation of common disruptive family events that undermine the predictability and stability of family life from the adolescents' perspective" (Bakker et al., 2011; Forman & Davies, 2003). Based on this description, family adversity is a cumulative risk measure that includes disruptive family

events or conditions that ‘happen’ to the adolescent, such as parental divorce, residential moves, parental addiction, parental illness, and changes in family composition (e.g., Forman & Davies, 2003). Adolescents with greater self-regulation demonstrate more flexible and adaptive behavior in the presence of family adversity (Bakker et al., 2011; Eisenberg & Spinrad, 2004).

Because youth often continue to live with parents and to rely on them for financial (and emotional) support during this period of emerging adulthood, successful youth development requires negotiating new relationships and roles while maintaining rewarding affective ties with members of the family (Caprara et al., 2005; Caprara, Scabini, & Sgritta, 2003; Egeland, Carlson, & Sroufe, 1993). A review of the literature reveals the importance of the home impact on self-efficacy for SRL. In this study, I am focusing on the following three aspects of home life primarily discussed in the literature: (1) modeling and encouragement of maturity; (2) family companionship and investment in the adolescent; and, (3) warmth, acceptance, and responsiveness—all of which are detailed below.

Modeling and encouragement of maturity. According to Pajares and Schunk (2001), “If there is one finding that is incontrovertible in educational psychology it is that children learn from the actions of models” (p. 264). Schunk and his colleagues have demonstrated that varying modeling practices can differently affect self-beliefs (Schunk, 1981, 1987, 1999; Schunk & Gunn, 1986; Schunk & Hanson, 1985; Schunk et al., 1987; see also Zimmerman & Ringle, 1981).

The transition from adolescence to adulthood presents special challenges because teenagers must manage not only major biological, educational, and social role changes,

but they must also cope with the growing strains of independence. In terms of encouragement of maturity, a vast literature underscores the importance of familial relationships in supporting adolescents' efforts to gain increasing independence and to manage the many challenges they face (Bandura & Walters, 1959; Fisher & Feldman, 1998; Noller, 1994; Steinberg & Morris, 2001; Youniss & Smollar, 1985). Parents support socio-emotional development and adaptive behavior of adolescents not only by how they treat the adolescent, but also by modeling behaviors that demonstrate positive adjustment and social commitment (i.e., by being calm and demonstrating resolve in the face of challenge, by showing civility to others and dedication to work, by being engaged in valued activities and social institutions, or by avoiding behavior that increases risk) (Bradley et al., 2017).

During adolescence, parents continue to be salient within the adolescent social environment (Schwarz et al., 2012). Past studies have demonstrated that parental advice and encouragement have positive impacts on adolescent academic self-efficacy (Fan & Williams 2010; Mena, 2011). In addition, research has shown that parental guidance for social problem-solving and the social opportunities provided by parents predicted children's social competence (McDowell & Parke, 2009). Although parental modeling of physical activity does not seem to be a major factor in adolescent physical activity, parental encouragement to be active and their support of the adolescent's efforts are important factors (Bradley et al., 2017; Sallis, Prochanska, & Taylor, 2000). Parental efforts to provide guidance may be especially critical in the case of adolescents who are already engaged in risky or non-productive behaviors (Dishion, Nelson, & Bullock, 2004). In turn, adolescents whose parents did not abuse alcohol were themselves less

likely to misuse alcohol (Barnes, Reifman, Farrell, & Dintsheff, 2000), whereas adolescents whose parents smoked and consumed alcohol were more likely to do the same in adulthood (Bradley et al., 2017; White, Johnson, & Buyske, 2000). Adolescents whose parents modeled prosocial behavior were themselves more likely to act in a prosocial manner (Aufseeser, Jekielek, & Brown, 2006; Barry et al., 2008).

Parents may contribute to adolescent emotional competence by being healthy role models, by providing encouragement, and by guiding adolescents in the areas of expressing and regulating emotions (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Hence, it may be through positive involvement in various aspects of the lives of adolescents that parents communicate efficacious beliefs—via being a role model, providing guidance, and being encouraging when adolescents are facing hurdles. One way in which parents can provide academic support to their youth is by engaging in home-based involvement. Home-based involvement can be operationalized as providing structure at home to do schoolwork (Mena, 2011), monitoring homework, and talking to children about school (Bhargava, Bámaca-Colbert, Witherspoon, Pomerantz, & Robbins, 2017; Sweet, Mandell, Aniser, & Admuti-Trache, 2007). By engaging in home-based involvement, parents may model learning behaviors, reinforce effort and learning in youth, and promote youth positive academic outcomes (Bhargava et al., 2017). The extent to which parents engage in home-based involvement may, however, change across elementary and high school as youth develop and seek more autonomy from their parents (Hill & Chao, 2009). Bhargava and colleagues (2017) conducted a study examining the potential change in involvement strategies of parents; they showed that across elementary and high school, mothers' involvement strategies

changed differentially. The decline in home-based involvement from childhood through adolescence in this recent (2017) study is consistent with prior research on African American and European American parents (Bhargava & Witherspoon 2015; Wang & Sheikh-Khalil, 2014), suggesting that it is a normative pattern that generalizes across ethnic groups.

Another study examined parental aspirations for their children's educational attainment in relation to ethnicity (African American, Asian, Caucasian, Hispanic), parental education, children's academic performance, and parental perceptions of the quality and climate of their children's school with a sample of 13,577 middle and high school parents from a large public school system within a culturally diverse county in the United States (Spera & Wentzel, 2010). Parental involvement may be particularly important for ethnic minority youth, especially Mexican-origin youth, as they are more likely to perform poorly in school and have higher school dropout rates (Motel & Patten, 2012). There is currently only a small amount of research showing how parental modeling and guidance contribute to adaptive functioning in late adolescence. Nevertheless, the broader literature on self-efficacy suggests that modeling and encouragement of maturity by parents is positively related to self-efficacy beliefs for self-regulated learning during adolescence.

Family companionship and investment in the adolescent. Offspring with high quality relationships with their parents are generally more satisfied with their competence levels and are more confident in their ability to achieve or obtain desired outcomes. Teenagers who have poor quality relationships with parents report low levels of self-esteem, external locus of control, and low self-perceived academic competence (Fass &

Tubman, 2002). Also, individuals who receive more support and encouragement from their parents report higher levels of self-efficacy compared to those who do not (Cutrona, Cole, Colangelo, Assouline, & Russell,1994; Grolnick & Ryan, 1989). Positive relationships with parents may also reduce adolescent anxiety in new and stressful situations, plus these teens would be more likely to develop a higher sense of self-efficacy (Cutrona et al., 1994; Spivak, 1994). During adolescence, parents typically become less involved in children's activities; yet, parents who stay involved can exert indirect influence on children's growth. For example, parents who offer their home as a place where friends are welcome continue the course of steering their children in positive directions (Schunk & Meece, 2006).

Research suggests that parents form perceptions of their children's academic abilities, which in turn affect their children's own competence beliefs (Schunk & Meece, 2006). Parents communicate their beliefs through explicit statements about their child's ability, causal attributions for their child's performance, the types of learning activities they encourage or discourage, and their immediate and long-term expectations for their child (Eccles, Wigfield, & Schiefele, 1998). In the literature, little attention has been given to the effects that an adolescent's beliefs about his/her capacity to relate effectively with his/her parents may exert on the adolescent's feelings of satisfaction with family life and self-efficacy (Caprara et al., 2005). Caprara and leading Italian researchers contend that filial efficacy and family companionship are associated with adolescent self-efficacy for self-regulation, primarily through better communication with parents, positive management of conflicts, and parental monitoring (Caprara et al., 2005). Parents should set fair boundaries and have at least some involvement in their child's education and

school activities (Collie et al., 2016; Martin, 2017b). In turn, parental communication and support of the adolescent as an individual positively impacts self-efficacy.

In societies in which educational systems are heavily structured around authority relationships, students may develop a high efficacy for academic achievement under the close guidance of teachers and parents, but they may lack efficacy for self-regulation to manage their own educational development (Pastorelli et al., 2001). Thus, it may be that in homes where the parents are more controlling, students have lower self-efficacy for self-regulation. But in autonomy-supportive homes, a sense of perceived control among adolescents is likely to promote self-efficacy for self-regulation. Research has shown that students who thrive at school often have access to strong support networks (e.g., Martin & Dowson, 2009) and experience low amounts of academic adversity (e.g., Martin, 2013, 2014; Putwain, Connors, Symes, & Douglas-Osborn, 2012; Putwain, Daly, Chamberlain, & Saddredini, 2015).

Adolescence can be a tumultuous time, but when teenagers feel wanted and supported, they thrive. Previous studies have shown that parent–child relationship quality is associated with the development of self-efficacy, since parents themselves are the primary sources of much of this information. For example, parents who provide emotional support for their children while they are struggling to complete a difficult task can help facilitate self-efficacy. This act of positive encouragement indicates to offspring that their parents are both emotionally available and invested in their wellbeing. Children of all ages need to be convinced that they possess the skills to accomplish the task at hand (Yuan, Weiser, & Fischer, 2016). In home conditions that pose risks for development (e.g., poverty, household instability, living in a dangerous neighborhood), ongoing

communication between adolescents and their parents enables adolescents to focus on productive activities and avoid maladaptive behavior (Roche, Ensminger, & Cherlin, 2007; Bradley et al., 2017). Central to the association between parent–child relationship quality and self-efficacy is that parents allow children a certain degree of independence so that the young people may undertake tasks themselves (Yuan, Weiser, & Fischer, 2016). Within the literature, there are many studies that find strong associations between parent-child relationships and school outcomes, as well as self-efficacy and school performance (Multon, Brown, & Lent, 1991; Weiser & Riggio, 2010). Research also indicates that high quality parent-child relationships continue to influence offspring academically throughout adolescence and young adulthood (Kenny & Donaldson, 1991). Parents and primary caregivers must take the time to talk to and listen to their children. Safety, security, and feeling like one's voice matters within the family likely influence efficaciousness and self-regulation. Research shows that time spent together with family fosters adolescent self-worth and social competence (Lam, McHale, & Crouter, 2012; Milkie, Nomaguchi, & Denny, 2015). Spending time with family in the home environment, even for older teens as they enter early adulthood, likely impacts self-efficacy for SRL.

Warmth, acceptance, and responsiveness. The literature reveals that when parents are warm and responsive, and are frequently available to talk with their child, it improves students' perception of home support (Collie et al., 2016; Collie, Malmberg, Hall, & Ginns, 2015). Adolescents often look to parents as sources of sensitivity and warmth, as they yearn for parental acceptance and support. Research indicates that adolescents who maintain secure attachments and positive relationships with parents are

less likely to show adjustment problems, are better able to cope with challenges, and are more likely to manifest both social and academic competence (Bradley et al., 2017; Cooper, Shaver, & Collins, 1998; Feldt, Kokko, Kinnunen, & Pulkkinen, 2005; Hoskins, 2014; Moretti & Peled, 2004; Nakash-Eisikovits, Dutra, & Westen, 2002; Sartor & Youniss, 2002; Sund & Wichstrom, 2002). By contrast, when adolescents perceive their parents as more rejecting, they tend to become more anxious (Waite, Whittington, & Creswell, 2014). In addition, high levels of parental sensitivity and warmth appear to promote adolescent socialization into ways of behaving that increase the likelihood of productive engagement in the larger society (Rohner, Khaleque, & Cournoyer, 2005).

Yuan and colleagues examined how parent-child relationship quality relates to young adults' academic achievement and self-efficacy among European Americans and Asian Americans (Yuan, Weiser, & Fischer, 2016). The parent-child relationship quality was assessed by indicators of parental warmth, emotional support, and facilitation of independence. Participants were 258 undergraduate students (85 male, 173 female) who completed a survey in California and Nevada (Yuan et al., 2016). Research suggests that children with higher quality relationships with their parents are more likely to perform better at school, including improved social and academic adjustment (Melendez & Melendez, 2010; Yuan et al., 2016). Yuan, Weiser, and Fischer (2016) proposed that offspring who have high quality relationships with their parents will have higher academic performance. Specifically, the researchers believe that self-efficacy mediates the relationship between parent–child relationship quality and academic achievement (Yuan et al., 2016). The findings suggest that family background plays an essential role in academic outcomes. More specifically, without self-efficacy in the model, parent–child

relationship quality was directly and positively related to students' academic performance (Yuan et al., 2016). Although there have been studies on the effect of parent–child relationship quality on children's academic performance among European Americans, more needs to be understood cross-culturally (Yuan et al., 2016). The results from this recent study contribute to the scholarly literature by providing insight into the associations of parent-child relationships and self-efficacy with emerging adults' academic outcomes (Yuan et al., 2016). Ethnicity, parental education, and SES were also crucial to self-efficacy and academic performance in the Yuan et al. (2016) study. For European American students, quality of parent-child relationships was not associated with self-efficacy level; however, for Asian Americans, parent–child relationships were predictive of self-efficacy (Yuan et al., 2016). Understanding the interrelationships of parental warmth, emotional support, and facilitation of independence could help educators and parents better understand the challenges facing children and young adults and enhance intervention programs aimed at improving school performance and persistence (Yuan et al., 2016).

Research shows that the associations among variables of parent–child relationships, self-efficacy, and academic performance may differ by cultures (Yuan et al., 2016; Spera & Wentzel, 2010.) The Yuan et al. (2016) study examines whether such relationships are consistent across Asian Americans and European Americans. The effects of family background on children's school outcomes are well-documented among European Americans (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Ginsburg & Bronstein, 1993), but not across cultures. Yuan and colleagues (2016) selected these two cultures, European American and Asian American, because of a vivid

contrast between individualistic and collectivist values. As compared to European American individualists, Asian American collectivists tend to be more involved in the family and be more influenced by parents (Hofstede, 1980). Thus, associations among family background, self-efficacy, and academic performance could likely vary across cultures. Understanding these interrelationships could help educators and parents better understand the challenges facing children and young adults and enhance intervention programs aimed at improving school performance and persistence.

A study in Malaysia examined the mediation roles of academic self-efficacy, social self-efficacy, and emotional self-efficacy on the relationships between parental involvement (i.e., paternal involvement and maternal involvement) and subjective well-being (i.e., positive affect, negative affect, and life satisfaction) (Yap & Baharudin, 2016). The sample included 802 Malaysian high school students (age range 15 to 17 years old) from 14 public schools. The Malaysian study suggests that paternal involvement is just as crucial to adolescent positive development as maternal involvement (Yap & Baharudin, 2016). According to the researchers, higher self-efficacy establishes a sense of control about beliefs that positive outcomes are achievable; the adolescents expressed less vulnerability to stress and disturbing thought patterns, and perseverance in the face of difficulty, thus promoting accomplishments (Yap & Baharudin, 2016). Developmental researchers have identified four major types of parenting styles that differ in levels of warmth, responsiveness, and control (Schunk & Meece, 2006). In general, an authoritative parenting style has the best combination of warmth, responsiveness, and control to support children and adolescents, since it is associated with many positive developmental outcomes including school achievement

(Schunk & Meece, 2006). These positive effects generally are found across different ethnic groups in the United States, although European American and Hispanic American adolescents may benefit the most from authoritative parenting practices (Schunk & Meece, 2006).

Adolescence has been recognized as a particularly stressful period of life (Hostinar & Gunnar, 2013), and increased academic demands are one of the achievement-related stressors reported at this life stage (Hankin et al., 2007; Mezulis et al., 2010). Additionally, time spent in academic learning accounts for a large portion of adolescent life; plus, during adolescence, relationships with nonparental figures such as peers take on increased meaning (Roeser et al., 1998). Thus, positive parental behavior creates opportunities for efficacious actions and support of mastery experiences, which are then internalized by adolescent children to develop their own efficacy level (Yap & Baharudin, 2016; Weiser & Riggio, 2010; Whitbeck, 1987). Therefore, evidence shows that the relation between warmth, acceptance, and responsiveness in the home environment and self-efficacy for SRL is positive.

Summary and Study Goals

Self-efficacy is grounded in the larger theoretical framework of social cognitive theory (SCT). According to Bandura's SCT (1997), there are four factors that increase an individual's self-efficacy: one's actual successful performances, watching others or vicarious experiences, familial or social encouragement, and physiological or emotional responses (Niditch & Varela, 2012; Panadero, Jonsson, & Botella, 2017; Schunk & Meece, 2006) Theory and research suggest that one's self-efficacy beliefs are sensitive to differences in contextual, environmental, and personal factors, and there is far less

research on late adolescence than for earlier periods of childhood. Given the considerable challenges facing children and adolescents worldwide, school and educational psychologists have a shared imperative to understand the complex inter-play of a student's home life and perceived self-efficacy.

Research question. The current study addresses the following research question**:** *How are various aspects of the home life of mid-to-late adolescents, namely (1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and (3) warmth, acceptance, and responsiveness, associated with self-efficacy for self-regulated learning?*

Hypothesis

I hypothesize that each of the three aspects of adolescents' home lives (i.e., (1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and (3) warmth, acceptance and responsiveness) will positively predict adolescents' self-efficacy for SRL. As less is known about how each aspect matters relative to one another, I do not have specific hypotheses about which predictors will be the strongest.

Control variables. My analysis controls for the following variables: (1) household income, (2) ethnicity, (3) gender, and (4) adolescent health. Each of these variables is important for self-efficacy of SRL; but, while I do believe that said variables predict some variation in self-efficacy, they are not of central interest to my argument, which is why I have controlled for them.

CHAPTER 3

METHODS

Sampling and Recruitment Strategy

Data for the current study come from a larger study of mid-to-late adolescents' home lives. In the larger study, families living in Arizona, Arkansas, California, and Oklahoma were recruited for the project. Because of concerns about the applicability of LA-HOME to diverse populations, there was deliberate oversampling of key socio-economic and cultural groups (Bradley et al., 2017). However, due to limitations pertaining to measures available and language competencies of data collectors, only participants who were conversant in either Spanish or English were enrolled. Moreover, the sample does not contain an ideal distribution of poor rural European Americans or Asian Americans.

As it happened, the Native American sample was quite varied, both with respect to maternal education and household income: 25% had a high school degree or less, but 30% had a college degree or more; more than one-third (40%) had household incomes less than $30,000, but 17% had incomes greater than $70,000. In the Asian American sample, all mothers had at least a high school degree and more than half had a college degree or more. Correspondingly, more than half had household incomes greater than $50,000. Hispanic families were also quite diverse by educational status: about one-quarter had a high school degree or less, but 40% had a college degree or more; 40% of households had incomes under $40,000, but nearly 15% had incomes greater than $80,000. African American families were diverse as well. About one-quarter (25%) of mothers had a high school degree or less, but 40% had a college degree or more; while

40% had household incomes under $30,000, 15% had incomes of at least $80,000. The European American sample was less heterogeneous. More than half of mothers had at least a college degree and only about one-quarter (30%) of households had incomes less than $60,000.

Somewhat different approaches were used to obtain samples at each site; there was variation within sites as well. In Arizona, a multiplicity of procedures was used, such as: (a) passing out flyers in select neighborhoods and events, (b) using established processes to recruit participants at Arizona State University (ASU), (c) personal presentations during classes at ASU, (d) a web site and a Facebook page, (e) having research assistants provide information on site at health facilities and public organizations such as Boys and Girls Clubs, (f) use of mass emailing lists, and (g) word of mouth. In Arkansas, (a) flyers were distributed throughout the community, (b) personal connections at University of Arkansas for Medical Sciences, University of Arkansas at Little Rock, and various community agencies were enlisted, and (c) professional data collectors in rural communities who had assisted with prior projects were enlisted. At Cherokee Nation in Oklahoma, recruitment was (a) by means of personal communication, and (b) by placement of announcements in local public service agencies. In California, families were recruited (a) by means of personal contacts, and (b) by snowball sampling.

The current sample. The current study utilizes a sub-sample of adolescents from the larger study who were 15 to 19 years of age (N = 333). Descriptive statistics are reported in Table 1. Means and standard deviations are reported for continuous variables and frequencies are reported for categorical variables. Adolescents were on average about 17 years old (M = 17.12, SD = 0.77), and about half were female (54.5%). Adolescents

were from diverse ethnic backgrounds, with the largest representations identifying as Black (36.9%), Hispanic (23.2%), and White (22.8%). Most adolescents had two parents in the home (61.7%), parents were largely U.S.-born (79.5%), and parents' median education level was having attended some college or received an associate's degree. Median family incomes were between $50,000 and $59,900.

Table 1

Demographics and Descriptive Statistics

Demographics	**Frequency or *M*(*SD*)**		
Age	17.12(0.77)		
Female	54.5%		
Ethnicity			
White	22.8%		
Native American Indian	8.7%		
Asian	6.9%		
Black	36.9%		
Hispanic	23.2%		
Other	1.5%		
Number of parents in home			
One parent	38.3%		
Two parents	61.7%		
Parents' education			
Less than high school	9.0%		
High school degree	18.0%		
Some college	36.3%		
College degree	22.4%		
Graduate degree	14.3%		
Parent country of origin			
Foreign-born	20.5%		
U.S.-born	79.5%		
Annual Income (MDN)	$50K-$59.9K		
Main Study Variables		**Skewnesss**	**Kurtosis**
Independent variables			
Parental modeling and encouragement	7.78(1.95)	-0.35	-0.27
Parental companionship and investment in adolescent	6.79(2.06)	-0.49	-0.39
Parental warmth and acceptance	8.52(1.87)	-1.61	2.20
Dependent variables			
Self-efficacy for self-regulated learning	308.56(74.06)	-0.90	0.21

Measures

Dependent variable. The dependent variable in this study is *Self-Efficacy for Self-Regulated Learning.* A 30-item measure of perceived self-efficacy was constructed for the study (both English and Spanish language versions). Most of the items were taken from the measure used in studies with the Early Adolescent version of HOME (EA-HOME) (Bradley & Corwyn, 2001; Bradley et al., 2000; Bradley, 2012) and in other studies of adolescents (Eccles et al., 1993). The items were constructed following the guide for constructing self-efficacy scales by Bandura (2005). The items were designed to capture feelings of efficacy with respect to family, school, and peers. In those cases where the adolescent was employed, he or she was also given three items designed to assess self-efficacy with respect to work. Each of the self-efficacy items was rated on a 100-point scale, from "0 = cannot do at all" to "100 = highly certain can do."

The *Self-Efficacy for Self-Regulated Learning* scale consists of the following four items: (1) Finish my school or work assignments by deadlines; (2) Get myself to concentrate on school or work task when there are other interesting things to do; (3) Plan my work for the day; (4) Get myself to perform school or job-related work as required. The scale is a mean aggregate of the four items and has adequate reliability in this sample (Chronbach's alpha = .83).

Independent variable(s). Three of the LA-HOME item clusters (dimensions) are used to document aspects of home life of interest in this study; specifically, (1) *modeling and encouragement of maturity*, (2) *family companionship and investment in adolescent*, and (3) *warmth, acceptance, and responsiveness.*

The LA-HOME documents actions, objects, events and conditions connected with the home environment of children ages 16 to 20, who are still residing at home with parents or guardians (Caldwell & Bradley, 2016). LA-HOME contains 59 items designed to assess six broad aspects (dimensions) of home life for mid-to-late adolescents who are still living at home. The three areas of primary interest to this study are described in greater detail below. Data to score the items are gathered during a visit to the family home at a time when the target adolescent and primary caregiver are present—other family members may be there for the interview, but their presence is not required. Data are gathered using a combination of direct observation and semi-structured interview. Data collectors are trained so that they attempt to allow for normal interactions to occur during the visit, and so that they engage family members in ways that are not potentially threatening or embarrassing; this protocol allows family members to act and speak in ways that are normal and comfortable. The LA-HOME allows broad coverage of those aspects of home life that theory and research suggest matter for adolescents, while at the same time keeping the burden on families and data collectors manageable (Caldwell & Bradley, 2016). LA-HOME is administered in either Spanish or English based on the wishes of the participants.

Reliability and validity of the LA-HOME scale has been established in a previous study of the original scale (Bradley et al., 2017). Bradley and colleagues (2017) established validity through correlations with various aspects of adolescent well-being, including school performance, health status, and adaptive behavior. There was also evidence of inter-observer agreement of the original scale (Bradley et al., 2017), such that agreement between multiple observers (percentage agreement > 94%) and Kappa

coefficients (k = .81) reached acceptable ranges (Landis & Koch, 1977). Consistent with Bradley et al. (2017), alpha coefficients were not examined as an indicator of reliability because the indicators used for LA-HOME are formative, not reflective, indicators; thus they compose indices rather than scales. That is, the items that compose each dimension were not assumed to have been caused by the same underlying latent phenomenon and, thus, the assumption that the items should be highly correlated is inappropriate (e.g., MacKenzie, Podsakoff, & Jarvis, 2005).

The three dimensions included in the present study (see Table 2 for complete item list):

(1) *Modeling and encouragement of maturity* (11 items) includes items such as, "Parent offers advice and guidance on how to deal with challenges that arise at work, school, neighborhood, peer groups, teams, etc." and "Parent routinely engages in fitness activities at least 2 days per week."

(2) *Family companionship and investment in adolescent* (10 items) includes items such as, "Family plans time on most weekends for some sort of 'family time'" and "Parents have assisted adolescent in short- or long-term planning as regards school or career or identified life plan in past year."

(3) *Warmth, acceptance, and responsiveness* (10 items) includes items such as, "During the visit, when speaking of or to the child, the parent's voice conveys positive feeling" and "Parent mentions a particular skill, strength, or accomplishment of adolescent during interview."

Table 2

The Three LA-HOME Dimensions Used in this Study

Modeling and Encouragement of Maturity
Parent has read at least 4 books during the past year.
Parent regularly participates in social organizations.
Parent has friends with whom s/he regularly interacts outside of work.
Parent routinely engages in fitness activities at least 2 days per week.
Parent uses complex sentence structure and some long words in conversing.
Parent does not violate rules of common courtesy (ignoring Visitor, derogatory comments, hitting) during the visit.
Parent has discussed current events with adolescent during past 2 weeks.
Parent teaches adolescent basic cooking or cleaning skills.
Parent periodically discusses the hazards of alcohol and drug abuse with adolescent.
Parent offers advice and guidance on how to deal with challenges that arise at work, school, neighborhood, peer groups, teams, etc.
Parent encourages adolescent to participate in charitable or community service activities.
Family Companionship and Investment in Adolescent
Family member has arranged for adolescent to attend some type of live musical or theater performance during the past year.
Family member has taken adolescent to a live organized athletic or sporting event during the past year.
Adolescent spends some time with father (or father figure) three days a week.
In the past 2 weeks, parent and adolescent engaged in a “fun” activity together.
Parent and adolescent share some joint hobby or activity that they routinely engage in together.
Adolescent has access to automobile or other means of motorized transportation at home.
Adolescent is encouraged to participate in organized activities.
Parents have assisted adolescent in short- or long-term planning as regards school or career or identified life plan in past year.
Parent or adolescent has arranged for adolescent to go to the dentist for routine care in the past year.
Parents support the adolescent’s hobbies, artistic or musical interests.

Table 2 (cont'd)

The Three LA-HOME Dimensions Used in this Study

Warmth, Acceptance & Responsiveness
Parent has not lost temper with adolescent more than once during last week.
Parent asks adolescent's opinion or gets adolescent's input as regards family activities.
When parent and adolescent disagree about something, parent works with adolescent to find some common ground.
Parent mentions a particular skill, strength, or accomplishment of adolescent during interview.
Parent shows some positive emotional response to praise of adolescent by Visitor.
During the visit, when speaking of or to the child, the parent's voice conveys positive feeling.
Parent encourages adolescent to contribute to the conversation during visit.
Parent shows some positive affective response to something the adolescent says or does during visit.
Parent does not attempt to speak for adolescent during the visit (mind reading, invasiveness)
Parent does not ridicule or express hostility or refer to the adolescent in a derogatory manner during the visit.

Source: Caldwell & Bradley, 2016

Control variables. I included four sets of control variables to account for known adolescent and family background characteristics that matter for self-efficacy for SRL. Demographic variables came from an adapted version of the American Community Survey (U.S. Department of Commerce, 2013), which was completed by the primary parent.

Household income is included as a control variable to reduce the likelihood of spurious findings. Prior research with HOME generally shows moderate correlations between household income and HOME scores (Bradley, 2012). As there is some evidence that there are gender differences in processes regarding self-efficacy, I conducted an independent samples *t*-test to determine if there were gender differences in self-efficacy for SRL. The *t*-test was statistically significant, so gender was used as a

covariate in the model, t (329) = 2.17, p = 0.031. In addition, given evidence that relations between experiences at home and perceptions of self-efficacy may vary in different ethnic groups, ethnicity was included in the model. In turn, as there is evidence that self-efficacy for self-regulation beliefs are related to health, the model included general health and depressive symptoms as control variables.

Parents reported on three variables related to adolescents' demographic background: ethnicity, gender, and age. Ethnicity was coded as six dummy variables (Native American, Asian, Black, Hispanic, White, and Other) with White as the reference group. Gender was coded 1 for *female* and 0 for *male*. Age was coded as a continuous variable ranging from 15.18 to 19.99 years.

Parents reported on four variables related to parent and home characteristics: number of parents (or primary caregivers) who were in the home (1 = *two parents or caregivers*, 0 = *one parent or caregiver*); parents' education level (1 = *less than high school*, 2 = *high school*, 3 = *some college*, 4 = *college degree*, 5 = *graduate degree*); household income (1 = *$0-$9.9K*, 2 = *$10K-$19.9K*, 3 = *$20K-$29.9K*, 4 = *$30K-$39.9K*, 5 = *$40K-$49.9K*, 6 = *$50K-$59.9K*, 7 = *$60K-$69.9K*, 8 = *$70K-$79.9K*, 9 = *$80K-$89.9K*, 10 = *$90K-$99.9K*, 11 = *$100K or higher*); and parents' country of origin (1 = *foreign-born*, 0 = *US-born*).

Adolescents completed a 23-item survey dealing with health and quality of life. Items were taken from the Child Health and Illness Profile—Adolescent Edition (CHIP-AE) (Starfield et al., 1994). Included in the survey were 13 items dealing with health problems, each rated on a five-point scale based on number of days in the past month the adolescent has experienced a particular condition (no days to 15+ days). For this study, I

selected one item from the CHIP-AE to assess what the adolescents construed as feelings of depression: “Did you feel depressed or blue?” (hereafter termed Depressive Symptoms). In turn, I selected one item from the CHIP-AE to measure general adolescent health: “How is your health in general?” (hereafter termed General Health; this item used a five-point scale from Poor to Excellent.)

Data Analysis Plan

All data analyses were conducted in SPSS. First, descriptive statistics were computed for all study variables, followed by bivariate correlation between all study variables. Next, hierarchical linear regressions were estimated in two steps. The first step included all control variables; namely, the adolescents’ background characteristics, parent and home characteristics, and adolescent health. The second step included the three independent variables that were indicators of the adolescents’ home life: 1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and, 3) warmth, acceptance, and responsiveness. Given that there were significant bivariate correlations between scores on the three LA-HOME dimensions, regression models were checked for multi-collinearity by examining Tolerance and the Variance Inflation Factor (VIF). Tolerance is a measure of collinearity reported by SPSS, and Variance Inflation Factor (VIF) measures the impact of collinearity among the variables in a regression model. The VIF is 1/Tolerance, and it is always greater than or equal to 1; there is no formal VIF value for determining presence of multicollinearity, but various recommendations for acceptable levels of VIF have been published in the literature (Hair, Anderson, Tatham, & Black, 1995). Most commonly, a value of 10 has been

recommended as the maximum level of VIF (e.g., Hair et al., 1995; Kennedy, 1992; Marquardt, 1970; Neter, Wasserman, & Kutner, 1989).

Model fit was examined through the model *F*-statistics, with significant values indicating a good model. *R* square values were examined to assess the proportion of variance in the dependent variable (i.e., self-efficacy for SRL) accounted for by the set of control variables, as well as the set of independent variables (i.e., modeling and encouragement of maturity; family companionship and investment in adolescent; and warmth, acceptance, and responsiveness). *R* square changes were examined to assess the proportion of variance accounted for by the set of independent variables, above and beyond the control variables. Standardized beta coefficients and respective significance levels were examined to assess the strength of associations between the dependent variable and each independent variable.

CHAPTER 4

RESULTS

Descriptive Statistics

Frequencies and distributions of all study variables are shown in Table 1. The main study variables (i.e., independent and dependent variables) were all continuous and exhibited normal distributions, with skewness and kurtosis in acceptable ranges (i.e., ± 3 and ± 4, respectively; see Kline, 2011; Tabachnick & Fidell, 2007). Correlations between the control variables, between the control and main study variables, as well as between main study variables are presented in Table 3.

Among the control variables, moderate to strong correlations emerged between two of the control variables and the main study variables; namely, parents' education level and family income. Parents' level of education and family income were moderately associated with all three of the home life indicators, with one exception: the relation between family income and parental warmth and acceptance was positive, but weak (see Table 3). Interestingly, there was a negative moderate correlation between depressive symptoms and general health (r (326) = -.36, $p < .001$; d = -.78). General health was positively correlated with both self-efficacy for SRL (r (328) = .28, $p < .001$; d = .59) and with family companionship and investment in adolescent (r (330) = .20, $p < .001$; d = .40). The relationship between general health and parent modeling and encouragement of maturity was positive but weak (r (330) = .13, $p < .01$; d = .25), as was the relation between gender and both depressive symptoms and self-efficacy for SRL (r (327) = .14, $p < .01$; d = .28 and r (329) = .12, $p < .01$; d = .24, respectively). The depressive symptoms variable was negatively correlated with self-efficacy for SRL

(r (325) = -.20, p < .001; d = -.41) and with all three of the home life indicators (see Table 3).

There were several moderate associations between the main study variables. For instance, correlations between the three indicators of adolescents' home life and self-efficacy for SRL were all relatively small (rs ranged from .14 - .26, ps < .01; ds ranged from .28 - .54). Correlations among the three indicators of adolescents' home life were all moderate, except that the correlation of parental modeling and encouragement with family companionship and investment was relatively strong (r = .57, p < .001; d = 1.39). The effect size for this analysis (d = 1.39) was found to exceed Cohen's (1988) convention for a large effect (d = .80).

Table 3

Correlations among Control and Main Study Variables

	Female	Nat. Am.	Asian	Black	Hisp.	White	Other	Parents in home	Parent born out of U.S.	Parent educ.	Income	Age	Gen health	Depressive Symptoms	Self-efficacy for SRL	Parent mod.	Comp. and investment
Control Variables																	
Native American	.05																
Asian	-.01	-.08															
Black	-.04	-.24***	-.21***														
Hispanic	.00	-.17***	-.15**	-.42***													
White	.04	-.17***	-.15**	-.42***	-.30***												
Other	-.09	-.04	-.03	-.09	-.07	-.07											
Parents in home (1 = *two*, 0 = *one*)	.02	-.02	.13***	-.41***	.19***	.27***	-.11										
Parent born out of US (1 = *yes*, 0 = *no*)	-.02	-.16***	.39***	-.37***	.60***	-.26***	.06	.13**									
Parent education	-.04	-.05	.08	.04	-.32***	.26***	.05	-.02	-.27***								
Income	-.07	-.11	.10	-.31***	-.05	.46***	-.06	.49***	-.14**	.48***							
Age	-.06	.06	.03	.02	-.04	-.05	.02	-.00	.11	-.08	-.00						
General health	-.07	-.10	-.00	.07	-.12**	.09	.06	.04	-.14**	.14**	.20***	.09		-.36***	.28***	.13**	.20***
Depressive Symptoms	.14**	-.04	-.07	-.06	.10	.06	-.08	-.04	.05	.10	.03	-.06	-.36***		-.20***	-.12**	-.21***
Dependent Variable																	
Self-efficacy for self-regulated learning	.12**	-.08	-.05	.04	-.03	.05	.05	.02	-.02	.15**	.13**	.09	.28***	-.20***		.22***	.26***
Independent Variables																	
Parent modeling and encouragement	-.07	-.09	-.04	.16***	-.07	-.01	-.08	-.03	-.15**	.40***	.23***	-.08	.13**	-.12**	.22***		.57***
Family companionship and investment	-.00	-.02	-.06	-.00	-.03	.09	-.06	.16**	-.16**	.30***	.29***	-.14**	.20***	-.21***	.26***	.57***	
Parental warmth and acceptance	-.02	-.11*	.01	-.01	-.02	.11*	-.03	.03	-.07	.29***	.18***	-.07	.03	-.04	.14**	.41***	.40***

$^{*}p<.05$. $^{**}p<.01$. $^{***}p<.001$.

Note. SRL = self-regulated learning.

Hierarchical Linear Regression Model

The model was examined for multi-collinearity among predictor variables and outliers. There was no indication of multi-collinearity among the set of control variables and home life indicators. That is, Tolerance was greater than .2 for all variables (*Tolerance* = .35 - .91) and the VIF was less than 3 for all variables (*VIF* = 1.09 - 2.82). Outliers were identified using the standardized residuals. There were two adolescents with relatively high standardized residuals (i.e., standardized residual = -3.34 and -3.10) outside of the acceptable range (i.e., ±3). The regression model was estimated with and without the two outliers and yielded the same results. Thus, the outliers were left in the data set.

A hierarchical regression model was estimated in two steps. The first step included the complete set of control variables and the second step included the set of three home life indicators. The hierarchical regression model had good fit. That is, the set of control variables significantly predicted adolescents' self-efficacy for SRL (F (13, 293) = 3.99, $p < .001$). The control variables explained 15% of the variance in self-efficacy for SRL. After including the set of home life indicators, the model continued to significantly predict adolescents' self-efficacy for SRL (F (16, 290) = 4.65, $p < .001$). The home life indicators explained an additional 5.4% of variance in self-efficacy for SRL and, thus, the full model explained a total of 20.4% of the variance.

Unstandardized and standardized beta coefficients were examined for each individual control variable and each home life indicator. As shown in Table 4, among the control variables, the three statistically significant predictors of self-efficacy for SRL were gender, general health, and depressive symptoms. That is, being female and overall general physical health were associated with increases in self-efficacy for SRL. In turn,

overall general health and lack of depressive symptoms among adolescents were associated with increases in self-efficacy for SRL. The control variables showed a similar pattern of associations with self-efficacy for SRL in Step 1 and Step 2 of the hierarchical regression (i.e., gender, general health, and depressive symptoms were significant before including the home life indicators). However, in Step 2, only gender and general health were significant—not depressive symptoms—after including the home life indicators.

All three indicators of home life were positively associated with adolescents' self-efficacy for SRL. However, the only statistically significant predictor was *family companionship and investment in adolescent* (see Table 4). Increases in family companionship and investment were associated with increases in self-efficacy for SRL ($\beta = .21$). Neither parental modeling and encouragement nor parental warmth and acceptance was significantly associated with self-efficacy for SRL, and the associations were very small ($\beta = .08$ and $\beta = .02$, respectively).

Table 4

Hierarchical Regression Model of Adolescents' Self-Efficacy for Self-Regulated Learning

	R	R^2	R^2 Change	b	SE	B
Step 1	.388	.150				
Female				25.00**	8.24	.17
Native American				-12.27	17.10	-.05
Asian				-35.43	27.58	-.09
Black				6.37	12.42	.04
Hispanic				.01	15.58	.00
White						
Other				8.65	37.75	.01
Parents in home				-2.90	10.51	-.02
Parent born out of U.S.				18.22	16.17	.10
Parent education				6.49	4.42	.10
Income				1.75	1.81	.08
Age				5.44	5.48	.06
General health				18.96***	5.10	.22
Depressive symptoms				-11.38*	4.68	-.15
Step 2	.452	.204	.054			
Female				22.75**	8.06	.15
Native American				-15.42	16.77	-.06
Asian				-35.06	26.83	-.09
Black				1.37	12.36	.01
Hispanic				-8.96	15.36	-.05
White						
Other				27.47	36.82	.03
Parents in home				-5.41	10.29	-.04
Parent born out of U.S.				23.38	15.77	.13
Parent education				1.47	4.59	.02
Income				.85	1.68	-.01
Age				9.06	5.42	.09
General health				17.29***	4.98	.21
Depressive symptoms				-8.17	4.63	-.10
Parent modeling and encouragement				2.95	2.76	.08
Family companionship and investment				7.58**	2.61	.21
Parental warmth and acceptance				.70	2.37	.02

*$p < .05$. **$p < .01$. ***$p < .001$

CHAPTER 5

DISCUSSION

Summary

Self-efficacy is the central facet of Bandura's social cognitive theory (SCT, 1986, 1997). The confidence, or self-efficacy, to regulate learning may be built from Bandura's four hypothesized sources of self-efficacy (1997): (1) learners' interpretations of their mastery experiences or previous successful experiences; (2) observation of others who are successful, also known as vicarious experiences; (3) social persuasion; and, (4) physiological and affective states when undertaking self-regulated learning activities. Likewise, the influence of self-efficacy on the conceptualization and development of self-regulated learning has made a major impact on education and educational psychology (Panadero et al., 2017; Zimmerman, 2000).

The current study addressed the following research question**:** *How are various aspects of the home life of mid-to-late adolescents, namely (1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and (3) warmth, acceptance, and responsiveness, associated with self-efficacy for self-regulated learning?* I hypothesized that each of the three aspects of adolescents' home lives—(1) modeling and encouragement of maturity, (2) family companionship and investment in adolescent, and, (3) warmth, acceptance and responsiveness—would positively predict adolescents' self-efficacy for self-regulated learning. As less is known about how each aspect matters relative to one another, I did not have specific hypotheses about which predictors would be the strongest. The control variables in my study were: (1) household income, (2) ethnicity, (3) gender, and (4) adolescent general health and

depressive symptoms. As detailed in Chapter 2, research has shown that each of these variables can be important for self-efficacy of self-regulated learning. Given the considerable risk factors facing children and adolescents worldwide, school and educational psychologists have a shared imperative to understand the complex inter-play of a student's home life and perceived self-efficacy.

Review of Findings

There is very little research pertaining to some aspects of the home experience during late adolescence and emerging adulthood. There is also a dearth of research that combines information on parenting behaviors with aspects of the physical, structural, and recreational features of home life in an effort to better characterize how these disparate aspects of home life jointly contribute to particular characteristics of adolescent development (Bradley et al., 2017). The current study improved upon the extant literature by exploring how home life in Arizona, Arkansas, California, and Oklahoma impacts the self-efficacy for self-regulated learning of mid-to-late adolescents. Although the sample of 333 adolescents was not fully representative of the U.S. population, it is quite diverse demographically. It included variations in family composition, race/ethnicity, household SES, language spoken in the home, and geography (rural, urban, suburban). Although it is difficult to identify how specific aspects of life (including home life) matter for particular areas of functioning (Bradley et al., 2017), the present study explored associations between self-efficacy for self-regulated learning and three different aspects of home life taking care to control for family context and adolescent characteristics.

When *modeling and encouragement of maturity* occurs at home, it translates to "Please show me"—modeling reinforces who a family is/how the family appears to

outsiders; there is a focus on what maturity looks like within a certain familial cultural context. Through modeling, the adolescent's character is emphasized, and parents try to develop the type of person who they hope the adolescent will strive to become. Next, when *warmth, acceptance, and responsiveness* occur at home, it translates to "Please care for me"—parental warmth and acceptance reinforces that the parent loves the adolescent, while accepting him or her as an individual; this home factor emphasizes that an adult caregiver will respond appropriately to the adolescent's needs. In turn, when *family companionship and investment in the adolescent* occur at home, it translates to "Please be there for me"—companionship and investment reinforce that parents still enjoy spending time with their emerging adult, and that the parents actually believe in and support their adolescent with his or her endeavors. This home factor emphasizes that the family is invested in the adolescent's future.

Parent-adolescent relationships: A higher-order family dimension. My study's findings pertaining to family companionship and investment were expected given prior research showing that perceived support and involvement from family is associated with higher positive mood and lower risk of mental and physical health problems during mid-to-late adolescence (Bradley et al., 2017; Resnick et al., 1997; Weinstein, Mermelstein, Hedeker, Hankin, & Flay, 2006). A prior study found that spending mealtime and leisure time with parents was associated with greater emotional well-being among children ages 11 to 18, even after controlling for the overall quality of family relationships (Offer, 2013). In another study, the relation between having family dinners and adolescent adaptive behavior was conditioned upon the quality of relationships present in the family (Meier & Musick, 2014). The research showed that family dinners

have little benefit when parent-child relationships are weak, but eating dinners together does contribute to fewer depressive symptoms and less delinquency among adolescents when family relationships are strong (Meier & Musick, 2014).

Therefore, why is family companionship and investment in the adolescent so important? If parents do not spend time with their teenager, the adolescent will begin to shut the parents out of their lives. The longer this goes on, the worse the relationship becomes. Teenagers need to feel like a parent cares enough to invest in him or her: invest time and energy, not necessarily invest money. In families who strive to provide companionship and investment, if a teen needs help or advice, the adolescent would call the parent first before calling a friend. Emerging adults do not want to "need their parents," yet they still want to know in their hearts that their parents are there for them.

All three indicators of home life were positively associated with adolescents' self-efficacy for self-regulated learning. However, when all three aspects of the home environment were included in the same model, the only statistically significant predictor was *family companionship and investment in adolescent*. The lack of significant findings pertaining to *modeling and encouragement of maturity* may not suggest that modeling is unimportant in the lives of adolescents. It just may be that the component of *family companionship and investment* better connects to a broader, higher-order family dimension that does matter for home life: the overall quality of the parent-child relationship. The strong correlations among the three home domains (all above $r = .40$) suggests such a possibility. Essentially, modeling, companionship, and warmth may all be components of this higher-order factor. It is interesting that other home demographics did not change the picture in my sample. Parents' level of education and family income

were moderately associated with all three of the home life dimensions. The findings pertaining to family composition (one versus two parents) were not as expected, based on prior literature. I did not have enough evidence in my sample to explore this aspect of home life, but it is clearly an area for future research and may help further explain what is going on at home.

Peer modeling during adolescence. In addition to parental modeling in the home environment, adolescents are particularly sensitive to the performances of social models that they perceive share similar characteristics with them (e.g., gender, race, age, learning ability) (Klassen, 2010). For example, when peer models make errors, engage in coping behaviors in front of fellow students, and verbalize emotive statements reflecting low confidence and achievement, low-achieving students perceive the models as more similar to themselves and experience greater achievement and self-efficacy (Pajares & Schunk, 2001). Social cognitive theorists recommend that teachers engage in effective modeling practices, and that they select peers for classroom models judiciously so as to ensure that students view themselves as comparable in learning ability to the models (Pajares & Schunk, 2001). When adolescents are encouraged and affirmed of their capability, they are more likely to experience less self-doubt, exercise greater effort, and persist when facing difficulties (Bakhshaee, Hejazi, Dortaj, & Valiollah, 2017). I believe that one of the reasons that *parental modeling and encouragement of maturity* was not significant when *family companionship and investment* was also in the model has to do with the importance of peer modeling during mid-to-late adolescence.

The influence of peers can be compelling for adolescents. Peer influence on self-efficacy occurs because adolescents are unfamiliar with certain tasks, so they look to their

friends' behaviors to gauge their own self-efficacy (Schunk & Meece, 2006). Peer influence functions primarily through peer networks, which are groups of peers with whom students associate (Schunk & Meece, 2006). Because mastery experience is the most influential source of self-efficacy information, social cognitive theorists focus on the important task of raising both competence and confidence in tandem through authentic mastery experiences (Pajares & Schunk, 2001). Social comparisons are critical to the development of self-concept and self-efficacy beliefs. However, self-efficacy and self-concept researchers agree that social-comparative school practices that emphasize standardized, normative assessments, involve ability grouping, focus on competitive grading practices, and encourage students to compete and compare their achievement with that of their peers can destroy the fragile self-beliefs and efficacy of those who are less academically gifted (Pajares & Schunk, 2001). As Bandura (1997) said it so well: "These are practices that convert instructional experiences into education in inefficacy" (p. 175).

Adolescent health. Even over 25 years later, the work of Clark and Zimmerman (1990) still holds true: self-regulation in the context of SCT is a concept that may hold particularly strong promise as the basis of education programs to aid individuals with prevention of health problems or to better manage chronic disease. In my sample, there was a positive correlation between depressive symptoms, overall health, and self-efficacy for self-regulated learning; overall health was significant in the final model. With family companionship in the model, depressive symptoms were no longer significant. If an adolescent feels down or physically lousy, he or she may not feel efficacious. Similarly, individuals interpret various indicators of stress, anxiety, and fatigue when considering

their capabilities to handle everyday challenges, and this impacts one's efficaciousness. Mid-to-late adolescents are struggling with hormonal changes, and without overall good health, a teen will have little to no motivation in any area of life. Perhaps family companionship can make adolescents feel less depressed, because the young people feel loved and wanted; the adolescent feels like he or she is not alone. This key fact reiterates the importance of family ties, companionship, and investment.

On the other hand, one must assume that common reporter bias is a factor, since the adolescent was the reporter for both self-efficacy and health data. Consequently, some complications for interpreting the findings arise: First, it is not clear that less than satisfactory health leads to lower self-efficacy in a causal sense. Second, by controlling for health, the residual for self-efficacy for self-regulated learning may only partially reflect self-efficacy beliefs. However, this does not mean that the observed connection with LA-HOME factors does not reflect the "true relation" with self-efficacy, but it is highly likely that it is not a simple, straightforward connection.

Gender and self-efficacy for SRL. Whereas recent findings suggest that gender differences in academic achievement are diminishing, gender differences in the academic self-beliefs and self-efficacy of Western students may still be prevalent (Eccles et al., 1993; Pajares & Schunk, 2001). In a study of 292 Dutch students, fear of failure played a more inhibitory, detrimental role on effective self-regulation for female than for male students (Minnaert, 1999). For females, the tendency to avoid failure was substantially but negatively related to effective self-regulation over time, while it was not for male students (Minnaert, 1999). Previous work has shown that differences in the use of self-regulatory activities were found in favor of female students (i.e., Zimmerman &

Martinez-Pons, 1990). The gender difference may explain the indeterminate status of the relationship between fear of failure and self-regulation (Minnaert, 1999). Nevertheless, in this study, being female and overall general physical health were associated with increases in self-efficacy for self-regulated learning. As such, the results are consistent with prior research mentioned in Chapter 2: female students have an edge in self-efficacy for SRL over their male peers. Future research could yield fuller investigation of the significant differences between gender and self-efficacy for SRL.

Limitations. The design of the study was cross-sectional, which precludes any inferences about causality. In turn, this study captured only one snapshot in time. Although the sample of 333 adolescents were from four states (Arizona, Arkansas, California, and Oklahoma), the one day of data collection with each of these adolescents may not have been reflective of everyday life for that particular family. Heavy reliance on self-reported measures leaves open the possibility of rater bias. The likelihood that findings reflect at least some level of common reporter bias is high, given that the adolescent was the reporter, and all data were gathered in a single session. The answers provided by the adolescents are open to both purposeful and non-purposeful distortions, which could reduce validity. Although self-report data is widely used in studies of human development, it might be beneficial for future research to examine similar constructs using data from teachers and parents. Likewise, in my sample, there might be ethnic group differences, but I did not have the statistical power to test for this in my study.

These limitations and challenges acknowledged, the findings suggest the importance of scholars continuing to look at relations between experiences in the home environment and the broad array of skills deemed important for late adolescence and

emerging adulthood, including self-efficacy for self-regulated learning (Bradley et al., 2017; Scales et al., 2016).

Alternate Theories for Consideration: Broaden-and-Build and Academic Buoyancy

When individuals are familiar with the demands of a task or activity, they are likely to call on their self-efficacy beliefs that have been developed as a result of previous experience with similar tasks (Pajares & Schunk, 2001); this concept can certainly be related to the broaden-and-build theory of positive emotions (Fredrickson, 2001). Fredrickson's broaden-and-build theory proposes that positive emotions and processes provide the potential to broaden the momentary thought-action repertoires of individuals, plus increase one's capacity to enhance his or her personal resources (Fredrickson, 2001; Martin & Marsh, 2008). These self-belief confidence judgments are called *self-efficacy for learning* because they are, in actuality, inferences made about one's capability to learn what is required to successfully accomplish the task (Pajares & Schunk, 2001; Zimmerman, Bandura, & Martinez-Pons, 1992). Existing empirical literature provides developing support for the broaden-and-build theory, indicating that positive emotions do indeed broaden attention, cognition, and behavior, as well as build physical, intellectual, and social resources (Fredrickson, 2001; Fredrickson, 2013a, 2013b). To enhance self-efficacy, research suggests helping students to link new work to recent successes, reinforcing effort and persistence, and helping students create personally important goals (Martin, 2017; McGeown et al., 2014).

Subsequently, studies have shown that students who are academically buoyant are also higher in self-efficacy, valuing of school, mastery orientation, planning, task management, and persistence (e.g., Martin, Yu, & Hau, 2014). Academic buoyancy is

grounded in the resilience literature and originated in the work of Martin and Marsh (2006, 2008, 2009). Academic buoyancy is defined as students' capacity to successfully overcome setbacks and challenges that are typical of the ups and downs of everyday academic life (e.g., poor grades, competing deadlines, performance pressure, difficult tasks, threats to self-confidence because of negative feedback) (Martin, 2013; Martin & Marsh, 2009; Martin et al., 2010). Although there are some similarities between buoyancy and the motivational construct of self-efficacy, it is important to note how they are different. Buoyancy refers to an appraisal of reactions to prior adverse experiences; in contrast, self-efficacy refers to a sense of agency with respect to future experiences (Collie, Martin, Malmberg, Hall, & Ginns, 2015).

Hence, it has been suggested that an important element lies in a student's capacity to be buoyant in the face of academic challenge (Martin et al., 2010). Academic buoyancy may represent an important factor on the psycho-educational landscape assisting students who experience difficulties in their academic life (Martin, 2014). Academic buoyancy has been shown to predict a range of educational outcomes. For instance, it has been positively associated with adaptive motivation and engagement factors such as self-efficacy, planning, and persistence (Martin, 2014; Martin et al., 2010; Martin, Nejad, Colmar, & Liem, 2013; Martin, Yu, Ginns, & Papworth, 2017).

Martin and Marsh (2008) argue that a focus on academic buoyancy would thus build on strengths by emphasizing proactive rather than reactive responses to challenges. Moreover, research in the field of academic buoyancy typically tries to better understand the many and the healthy. Academic buoyancy has been called "the positive psychology version of resilience" (Martin & Marsh, 2008, p. 55). The positively-oriented buoyancy

concept aligns with recent developments in positive psychology that hypothesize about the scope for positive dimensions of individuals' lives to address aspects of their lives that are not so adaptive (Martin & Marsh, 2008). An asset-oriented or strengths-based approach to students' responses to academic adversity complements research into positive psychology, well-being, and mental health (Fredrickson, 2001; Seligman & Csikszentmihalyi, 2000).

Future Directions

In almost all schools in the U.S., educators evaluate their students' skills and knowledge through quizzes, tests, and similar assessment instruments. However, self-efficacy for self-regulated learning is not often addressed or evaluated. Schunk and Usher (2011) proposed that teachers could administer self-efficacy assessments that would provide diagnostic information allowing both teachers in class and parents at home to build students' self-regulated learning capabilities and confidence (Klassen, 2010; Schunk & Usher, 2011).

Future studies could supplement self-reported self-regulatory efficacy data with observational data from parents and teachers. In turn, Klassen (2010) suggests daily logs in which students keep track of their confidence to self-regulate over the course of a semester or academic year. In addition, the self-regulatory efficacy of mid-to-late adolescents with learning disabilities (LD) or cognitive impairments will most likely not follow the patterns in this study, since only adolescents without LD were included in my sample. Therefore, child characteristics remain important to address in future work. For example, self-efficacy for SRL will function differently in homes with ADHD students or students on the Autism spectrum. *Family companionship and investment in the*

adolescent will likely remain paramount in students with and without LD; however, more work needs to be done. Future research should explore the effectiveness of self-regulation interventions provided to adolescents with and without LD or special learning challenges. Teachers and parents alike can certainly guide students with goalsetting, evaluating their learning progress, and seeking out social resources. It is important for parents to ensure that the home environment is conducive to studying. Adolescent students will begin to focus on self-regulatory capabilities when their parents and teachers regularly discuss the importance of self-regulated learning, and when these adults offer verbal encouragement for students to practice self-regulatory thinking and activities (Klassen, 2010).

Evidently, it appears that students need hands-on training to learn how and when to apply self-regulated learning strategies for specific learning situations; in addition, students need guidance to grasp the realization that the SRL techniques could both save time and cultivate learning outcomes (Foerst et al., 2017). An important component of SRL involves educators and parents providing enough freedom for the learner to experience choice and control (as explained in Chapter 2), while understanding that too much freedom may be overwhelming for the student, so age-related guidance is required. Likewise, collaborative learning without a competitive element may be beneficial for students. The literature is rife with studies about self-efficacy and self-regulation, but there are still numerous unanswered questions about self-efficacy for SRL and the home environment. Those questions are part of a larger set of unanswered questions about the impact of context on self-efficacy for SRL, including the interplay of home environment and contexts such as school, neighborhood, and work environment. Relatively few studies on group differences in self-efficacy have examined the role of socioeconomic or

ethnic background (Schunk & Meece, 2006). Beyond the scope of this study, future work could explore the interplay between and among ethnicity, socioeconomic status, gender, mental and physical health, academic buoyancy, and self-efficacy for self-regulated learning.

Conclusion

Parents are a child's first teachers. In life, an individual's beliefs provide a kind of navigation system. A lighthouse can represent a particular value (Martin, 2017b) – this lighthouse illuminates the way in the dark for the ships lost at sea, especially when motivation is low or when a person faces an obstacle. Values-based reflections and discussions with a parent or trusted adult can help adolescents to clarify their personal best goals in their academic and personal life (Martin, 2011, 2012, 2017a; Martin & Liem, 2010). Similarly, parents can guide and model effective self-efficacy for self-regulation strategies for these emerging adults. Adolescence can be a tumultuous time. Whether the student is a big ship or a tiny boat, a lighthouse can help chart the course. Family companionship and investment in the adolescent appears to be the beacon.

Even so, when technology and our digital age are increasingly isolating us as humans, people still crave personal contact, one-on-one interaction, and family companionship. Parents may erroneously feel that mid-to-late adolescents no longer depend on them for emotional support and behavioral guidance, but this is clearly not the case. Parents ought to be like a screen saver on their adolescent's cell phone or tablet: always present, but in the background; a subtle reminder that, when accessed, a caring family member is only a click away.

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