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## **Peers as a social-contextual factor on adolescents' academic and career motivation**

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PEERS AS A SOCIAL-CONTEXTUAL FACTOR  
ON ADOLESCENTS' ACADEMIC AND  
CAREER MOTIVATION

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A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Psychology:  
Child Development

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by  
Danyel Arlyssa Vargas

June 2010

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Danyel Arlyssa Vargas  
June 2010

Approved by:

  
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## ABSTRACT

During adolescence one typically makes many important educational and career decisions; an important factor in this decision making process is one's motivation. The purpose of this study was to examine the influence of peers on adolescents' academic and career motivation. Ninety juniors and seniors with a mean age of 16.48 from a local public high school participated in this study. Participants completed a self-report questionnaire which assessed background information, academic motivation, career motivation, and peer support. Regression analyses indicated that peer support predicted adolescents' academic and career motivation. Specifically, class belongingness was found to significantly predict academic motivation, and academic valuing was found to significantly predict career motivation. Mediation analyses concluded that academic motivation mediated the relationship between class belongingness and academic achievement as well as career motivation. These project's findings indicate that peers are an important social-contextual factor on adolescents' academic and career motivation. Implications for these research findings are discussed.

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## CHAPTER ONE

### INTRODUCTION

Adolescence is a pivotal time in one's life. During this developmental period, society typically encourages adolescents to consider what it is they want out of life, pushing them to make decisions that have the potential of altering their life permanently. Specifically, choices about one's high school education, whether one is interested in attending college versus a vocational school, and other career-related decisions are among the most common. An important aspect regarding whether individuals are effectively able to make these kinds of decisions is whether one is motivated to do so. Taking this into consideration, it is critical to identify social factors which influence adolescents' motivation to make decisions about their education as well as their careers.

This paper will first discuss the theoretical framework which will be used to examine the social factors which have an effect on both adolescents' academic and career motivation. Due to the significant decisions that adolescents must make in terms of their education and careers, it is also crucial to understand how social

influences can enhance their motivation to take action. To this end, parents, teachers, and peers will be discussed.

### Self-Determination Theory

Although simple in nature, motivation is complex by definition. Motivation can be defined as being moved or energized toward an accomplishment (Ryan & Deci, 2000). Movement and energy to do something varies both by degree and type. Levels (i.e., how much motivation) and orientation (i.e., what type of motivation) (Ryan & Deci, 2000) are key to understanding this construct and should not be overlooked. Orientation of motivation is related to the fundamental reasons underlying the action (Ryan & Deci, 2000). As an example, adolescents may be motivated to go to college and study engineering because this is what they are genuinely interested in studying. Alternatively, they may only be studying this in order to keep from disappointing their parents. Presumably, those who have genuine interests in studying engineering will have high levels of motivation whereas those who are only attempting to please their parents will have low levels. The orientation of motivation between these students is also very different, one is for seeking pleasure (e.g., intrinsic motivation) and the other is to avoid

disappointment (e.g., extrinsic motivation). Through these examples, it is evident that motivation is an intricate concept and further explanation is warranted.

### Competence, Autonomy, Relatedness

Self-Determination Theory (SDT) posits one's motivation is engendered through three inherent psychological needs - *competence, relatedness, and autonomy* (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991). When one is competent, he or she understands how to efficiently perform the necessary actions in order to achieve both internal and external outcomes (Deci et al., 1991). As an example, adolescents who aspire to study engineering in college understand that they must obtain good grades in high school because this will meet both their internal and external needs: a sense of achievement and admission into college. Relatedness involves developing connections within one's social environment which promote security and enjoyment (Deci et al., 1991). For instance, adolescents may strive to make connections with others at school for two reasons: to feel close to another person and to have someone to laugh with. One who is autonomous self-initiates and self-regulates one's own actions (Deci et al., 1991). Thus, adolescents who decide what they want to study in college on their own without

the pressures or persuasions of their parents are taking initiative to decide what it is they want and further self-regulate their actions. Consequently, they will feel good about themselves and the choices they have made. As these three needs (competence, relatedness, and autonomy) are satisfied, individuals become *motivated* and *self-determined* (Deci et al., 1991).

### Intrinsic Motivation

Together, competence, relatedness, and autonomy form the foundation for three distinct types of motivation which can be thought of as being on a continuum: *intrinsic motivation*, *extrinsic motivation* and *amotivation*. It is important to understand the differences between each type and how each contributes to whether a person is motivated and self-determined. On the far right of the continuum is *intrinsic motivation*, which is defined as the natural inclination to seek out novelty and challenges, to explore, and to learn (Ryan & Deci, 2000). This type of motivation drives individuals to participate in behaviors that do not require reinforcements beyond personal growth (Deci & Ryan, 2000). Individuals who engage in activities for the absolute pleasure of the activity and nothing more are intrinsically motivated to do so. As with many other inherent aspects of development (i.e., physical, language,

creativity), one's social environment can either hinder or enhance the development of motivation.

Deci and Ryan (1985) presented cognitive evaluation theory (CET) as a subtheory within SDT in terms of intrinsic motivation. CET posits that positive social-contextual factors which make one feel competent and autonomous can enhance intrinsic motivation. On the other hand, negative social-contextual factors may thwart competency and autonomy (Deci & Ryan, 2000). It is important for one to feel efficient, self-initiated, and self-regulated in order to be intrinsically motivated. Because many individuals may initiate intrinsic behaviors while alone, a sense of relatedness is not mandatory at that given point of time, but they must have an overall sense of security (Deci & Ryan, 2000; Ryan & Deci, 2000). Intrinsic motivation has been linked with positive traits such as high-quality learning and creativity (Ryan & Deci, 2000).

#### Extrinsic Motivation

At the center of the continuum is *extrinsic motivation*, which refers to the completing of an activity with the purpose of attaining an external gain (Ryan & Deci, 2000). Individuals who engage in activities for the sole purpose of gaining something in return are



extrinsically motivated. Unlike other theories which hypothesize that extrinsic motivation is entirely nonautonomous, SDT proposes that extrinsic motivation fluctuates with respect to autonomy (Ryan & Deci, 2000).

Deci and Ryan (1985) presented organismic integration theory (OIT) as a second subtheory within SDT in terms of extrinsic motivation. OIT posits that environmental factors can either support or impede internalization and integration of one's behaviors as part of the self (Ryan & Deci, 2000). *Internalization* is an active, innate process in which individuals make an effort to alter socially sanctioned norms into values and self-regulations which one can then endorse individually (Deci & Ryan, 2000). This allows individuals to assimilate external regulations into their integrated sense of self and accept them as their own, thus being self-determined (Deci & Ryan, 2000). For example, adolescents who have no interest in doing math homework are not intrinsically motivated to do so, therefore, requiring encouragement from their parents and/or teachers. As they complete their homework they learn the consequences are good grades. At this time the process of internalization begins and they assimilate these behaviors into their sense of self. The attainment

of good grades makes them feel good about themselves, thus, motivating them to further engage in math homework.

SDT posits that as individuals effectively go through the process of internalization they move along the motivation continuum towards self-determination because their behaviors become more autonomous (Deci et al., 1991). Hence, there are subcategories of extrinsic motivation with the first being the least internalized, therefore, the least motivated. The first subcategory of extrinsic motivation is *external regulation* which refers to behaviors that are performed to satisfy an external demand or to obtain an externally imposed reward (Ryan & Deci, 2000). Adolescents who do homework simply to avoid punishment or to gain monetary rewards from their parents are performing behaviors which are externally regulated. Those who perform behaviors for these types of reasons have not assimilated to the process of internalization, thus, are not self-determined.

The second subcategory of extrinsic motivation is *introjected regulation*, which is when one has partially internalized an external regulation, but still not entirely accepting it as one's own (Ryan & Deci, 2000). These types of behaviors are usually performed to avoid guilt or anxiety as well as to augment one's ego through

pride (Ryan & Deci, 2000). Adolescents who study for an exam in order to prevent themselves from feeling guilty are performing behaviors which are regulated by introjects. More specifically, these actions result from one being internally coerced and as a result the behavior is not of free choice (Deci et al., 1991). In comparison to external regulation, these behaviors are somewhat controlled; however, they are still quite external because the individual has not identified with the behavior, preventing it from becoming part of the self (Deci et al., 1991).

The third subcategory of extrinsic motivation is *identified regulation*, which is when one identifies the behavior as important, internalizes its regulation, and accepts it as its own (Deci & Ryan, 2000). As one sees the importance of behaviors, they are more willing to perform them by free choice, acting more autonomously (Deci et al., 1991). When adolescents recognize studying as beneficial to their future in terms of attending college, some do so out of free will. Because an external source initially drives the behavior, it is extrinsic; however, it is being performed for personal value, therefore, autonomous. Contrary to external and introjected

regulation, these behaviors are self-determined (Deci et al., 1991).

The fourth and final subcategory of extrinsic motivation is *integrated regulation*, which is when one identifies behaviors as important and integrates them into the self, becoming aligned with one's values and needs (Deci & Ryan, 2000; Ryan & Deci, 2000). As this occurs, one has obtained complete internalization and become integrated psychologically and socially (Deci & Ryan, 2000). Although these types of behaviors have similar traits to intrinsically motivated behaviors, they are distinguished from such as they are still performed to attain external outcomes rather than for their inherent enjoyment (Ryan & Deci, 2000).

At the far left of the continuum, opposite of intrinsic motivation, is *amotivation*, which refers to having no intention to act whatsoever (Ryan & Deci, 2000). Amotivated individuals either do not take action at all or if they do, they go through the motions, performing in a perfunctory manner (Ryan & Deci, 2000). In comparison to intrinsic and extrinsic motivation, these behaviors completely lack self-determination with respect to the target behavior (Deci & Ryan, 2000).

In summary, SDT postulates that an individual's motivation can vary greatly. Individuals may be motivated by their innate needs to seek out new challenges with the only gain in sight being personal pleasure. At other times, others may not initially identify with the importance of the behavior, but in time they internalize these behaviors assimilating them into their sense of self. It is also possible for individuals to lack a motive of intent entirely, never identifying with the importance of the behavior, thus, performing behaviors not at all or in an automatic state of mind (Deci & Ryan, 2000; Ryan & Deci, 2000). Moreover, the concept of motivation is complex and there are variations in motivational levels and orientation. Through competence, relatedness, and autonomy, individuals become motivated to engage in activities. Although individuals may not internalize behaviors initially, assimilation can occur, fostering greater levels of motivation and self-determination.

#### Self-Determination Theory, Academic Motivation, and Career Motivation

Numerous research studies have used SDT as their theoretical foundation when examining adolescents' motivation to achieve academically (Vallerand, Fortier, & Guay, 1997; Niemiec et al., 2006; Guay, 2008; Chirkov &

Ryan, 2001; Hardré et al., 2007). Self-determination or for that matter, a lack of, has been found to be related to a variety of educational outcomes across development (Deci et al., 1991). On a broader perspective, studies have shown that greater self-determined individuals have more positive school outcomes such as greater academic achievement as well as a greater desire to attend (Boon, 2007; Nelson & DeBacker, 2009; Vallerand et al., 1997).

Conversely, only one study to date has used SDT as a theoretical background when investigating career motivation among adolescents (Guay, 2003). However, one can postulate that self-determination would be related to adolescents' career outcomes as it is to one's educational outcomes. It appears as though the concept of career motivation has not been thoroughly examined and more research is necessary. The remaining literature review will focus on social-contextual factors which have been found to influence high school students' academic and career motivation.

#### Academic Motivation

Every society has norms and its members are expected to follow them. In Western culture, adolescents are expected to learn, complete homework, study, and attain

good grades while in high school. For the purposes of this paper, academic motivation is defined as wanting to go to school, wanting to learn, and defining school as important. When adolescents are motivated they take action towards attaining these goals and their levels of motivation typically vary. Some key social factors that have been deemed to facilitate high school students' academic motivation are parents, teachers, and peers (Vallerand et al., 1997; Chirkov & Ryan, 2001; Guay, 2008; Niemiec, 2006; Hardré et al., 2007; Nelson & DeBacker, 2009).

#### Parents as a Facilitating Factor of Academic Motivation

Researchers have long been interested in the effects that parents have on their children. Using SDT as a theoretical foundation, many studies have examined how different aspects of parenting influence high school students' academic motivation. With a sample of 9<sup>th</sup> and 10<sup>th</sup> grade high school students, researchers found that parents who supported their adolescents by using more autonomy-supportive behaviors (i.e., parents who provided children with opportunities to make decisions about their school activities) had higher levels of self-determined academic motivation (Vallerand et al., 1997). In contrast,

adolescents of parents who used less autonomy-supportive behaviors had lower levels of self-determined academic motivation, thus, were at a greater risk to drop out of high school (Vallerand et al., 1997). Chirkov and Ryan (2001) also found that greater parental autonomy support was related to higher levels of self-determined academic motivation (i.e., intrinsic and integrated regulation) among adolescents. Another study by Guay et al. (2008) found that adolescents who reported having a secure and intimate relationship with their parents exhibited higher levels of self-determined academic motivation and conversely, lower levels of amotivation. While considering that autonomy and relatedness are two components which are fundamental to the development of one's motivation, these studies provide further support for this notion. Moreover, these studies provide evidence that parents influence their adolescent's academic motivation during high school.

Cross-cultural work has also shown parents to be a significant influence on their high school students' academic motivation. Comparing a sample of Russian high school students to American students, Chirkov and Ryan (2001) found results similar to those stated previously. Specifically, greater parental autonomy support was related to higher levels of self-determined academic



motivation. Researchers (Niemic et al., 2006) examined a group of Belgian high school students and found adolescents who reported a greater sense of support from their parents (i.e., they felt that they could count on their parents for help) were more autonomously motivated in terms of their academic goals. Clearly these studies support the notion that self-determined motivation and its specific components (i.e., autonomy and relatedness) are not exclusive to the Western culture, but present across others as well.

Aside from SDT, many researchers have used other theoretical foundations when investigating parental influences on adolescents' academic motivation. With a sample of students in grades 9<sup>th</sup> through 12<sup>th</sup>, researchers found parental involvement to be positively related to academic motivation (Ibañez, Kupermine, Jurkovic, & Perilla, 2004). When parents were more involved in their adolescents' education, the adolescents were more motivated to attend school and more likely to feel that school was an important part of their lives (Ibañez et al., 2004). Another study by Alfaro, Umaña-Taylor, and Bámaca (2006) found a positive significant relationship between academic support by mothers and adolescent girls' academic motivation. As mothers provided greater academic

support to their daughters, they were more likely to try hard in school and deem grades as important (Alfaro et al., 2006). Lastly, Boon's (2007) study identified authoritative parenting as a significant correlate of academic motivation among high school students. She found that adolescents of parents who provided warmth and autonomy reported greater academic motivation, and in turn, greater academic achievement in math and English (Boon, 2007). As adolescents felt a greater sense of support (i.e., academic support and warmth) which is essentially a sense of relatedness and had parents who supported their autonomy, they were more motivated. Although the theoretical bases for these studies are different than SDT, the facilitating factors are comparable along with the effects on high school students' academic motivation.

#### Teachers as a Facilitating Factor of Academic Motivation

Aside from parents, teachers have long been recognized as an important factor in children's lives. This may especially be true during adolescence because they as individuals increasingly identify with outside sources as they explore their own identities (Erikson, 1950). Using SDT, researchers have found similarities

between parental and teacher influences on academic motivation during the high school years. An early study by Vallerand et al. (1997) found that teachers' autonomy support was related to greater self-determined academic motivation. Adolescents who felt their teachers guided rather than controlled them, were motivated to do well in school. A more recent study by Chirkov and Ryan (2001) yielded identical results. Adolescents had higher levels of motivation when they had teachers that supported their autonomy rather than thwarted it. Another study by Hardré and Reeve (2003) found that an autonomy supportive climate was predictive of adolescents' level of self-determination and furthermore, their motivation to continue with their high school education versus dropping out. Collectively, these research findings support the notion that teachers are also an important social-contextual factor which can enhance one's self-determined motivation through the support of one's autonomy.

As with the parent variable, there is evidence of a cross-cultural effect, as well. Chirkov and Ryan's (2001) study, which used a comparative sample of American and Russian high school students, indicated that there are similarities of self-determined motivation across cultures. Just as with the Western sample, a significant

relationship was found between teacher autonomy support and academic motivation among the Russian sample. Adolescents who had teachers that provided greater autonomy support were more academically motivated (Chirkov & Ryan, 2001). With a sample of Taiwanese high school students, Hardré et al. (2006) found that classroom climate was related to academic motivation. Specifically, adolescents' perceptions of their teachers supportiveness in their learning environment (i.e., mistakes are considered a normal part of learning) predicted motivation, and furthermore, predicted engagement and effort (Hardré et al., 2006). Again, these findings support the notion that SDT and its components of autonomy and relatedness "are ubiquitous and not limited to the Western culture.

Research not based on SDT has also found teachers to be a significant variable associated with motivation. With a group of high school students, Learner and Kruger (1997) found that adolescents who were more securely attached with their teachers reported greater intrinsic value for learning. Researchers Goodenow and Grady (1993) created a measure to examine a *Psychological Sense of School Membership* (PSSM; 1993b). They aimed to investigate whether a sense of school belongingness (i.e., most

teachers at this school are interested in me; I feel like a real part of this school) and friend's values (i.e., my friend's think it's important to do well in school) were predictors of academic motivation during the high school years. There were positive significant correlations between friend's values and school belongingness. However, whether one felt a sense of school belongingness was a stronger predictor of academic motivation than friend's values. Moreover, results indicated that adolescents who reported a greater sense of school belongingness were more academically motivated and engaged in school (Goodenow & Grady, 1993). Another study by Ibañez et al. (2004) also found that school belongingness was related to adolescents' academic motivation. Those who had teachers that made them feel like an important part of their school environment were more motivated to be successful in high school (Ibañez et al., 2004). Lastly, Alfaro and colleagues (2006) identified teachers' academic support to be related with academic motivation. Adolescents who felt their teachers supported them were more motivated to try harder in school and identified that getting good grades was important (Alfaro et al., 2006). All in all, adolescents who felt a greater sense of support and closeness (again closely tied to relatedness) with their

teachers were more motivated. As a whole, studies using SDT as well as other theoretical perspectives, have found that teachers are an important aspect of adolescents' academic motivation during the high school years.

#### Peers as a Facilitating Factor of Academic Motivation

High school students spend roughly 30 hours a week at school where they may be impacted by the influence of their peers. Considering this, it is crucial to examine whether peers are a significant factor in one's academic motivation. Although there is a large literature base which identifies parents and teachers as significant social predictors of adolescents' academic motivation, few studies have examined the influences of peers. Guay et al. (2008) used a sample of adolescents to examine peer relatedness and academic motivation. Surprisingly, results were not significant in that adolescents' sense of relatedness to peers did not predict academic motivation (Guay et al., 2008). The researchers stated that the absence of this relationship was very surprising given the fact that there is a plethora of research that supports the notion of peers being an influential factor in many aspects of adolescents' lives (Guay et al., 2008).

Although few Western studies have utilized SDT when investigating peers as an influence of academic motivation, it has been employed with Taiwanese high school students. Hardré and colleagues (2006) found that peer support predicted academic motivation among adolescents. That is, when adolescents perceived their peers to provide support within the classroom (i.e., in this class students care about each other), they were more self-determined to do well in the class (Hardré et al., 2006). It is also important to note that peer support was more significant than teacher support (Hardré et al., 2006). Given these findings, it does appear that a sense of relatedness to one's peers predicts academic motivation among Taiwanese adolescents.

Other researchers have used alternative methods when examining peer influences on adolescents' academic motivation and it is important to review these findings and to identify whether there are similarities. Similar to Ibañez et al. (2004) results found with teachers, she and colleagues also identified that when adolescents felt their peers were a supportive part of the environment, they were more academically motivated. Researchers Nelson and DeBacker (2009) were interested in whether belongingness, resistance to school norms, and academic

valuing influences adolescents' academic motivation. Because they were interested in examining multiple peer contexts, they used both classmates and best friends as predictors of motivation. Belongingness (i.e., an adolescent feeling that it is hard for people like them to be accepted by other students in a particular class) was found to be a significant predictor of academic achievement. Adolescents who felt as if their classmates valued and respected them, reported higher academic motivation in terms of higher self efficacy, mastery, and performance-approach goals (Nelson & DeBacker, 2009). In turn, these factors predicted greater academic achievement (Nelson & DeBacker, 2009). Conversely, adolescents who felt they may be teased for completing class work were more likely to have maladaptive forms of motivation, being motivated for external reasons rather than internal (Nelson & DeBacker, 2009). They also found that best friends influenced academic motivation. Adolescents who reported having an intimate, caring relationship with a best friend who valued academics, reported greater internal types of academic motivation (i.e., self efficacy and mastery goals). Again, it appears that a sense of support which can be coupled with the notion of relatedness within adolescents' environment is crucial to



one's academic motivation. Although it is clear that the literature is lacking in this area, current research suggests that peers may be an influential factor on adolescents' academic motivation.

### Career Motivation

In addition to the norms that society has set for adolescents' academic motivation, they are also expected to plan their futures. While still in high school, adolescents must decide whether they will go to college and work towards a career, enroll in vocational school, or search for a job. For the purposes of this paper, career motivation is defined as wanting to learn one's career goals, wanting to seek out a career, and wanting to learn information about a career. Presumably, one's academic motivation is related to career motivation; however, this relationship has not yet been thoroughly addressed. Although there is minimal research on adolescents' career motivation, two key social factors that have been known to be associated with adolescents' career motivation are parents and peers (Kracke, 2002; Guay, 2003).

### Parents as a Facilitating Factor of Career Motivation

Just as parents are an important influence on their adolescents' academic motivation, they most likely have a

similar impact on their adolescents' career motivation, as well. To date, there is only one study which uses SDT as a theoretical foundation when examining career motivation among adolescents. Guay and colleagues (2003) were interested in whether parents' autonomy support predicted their adolescents' career motivation. Results indicated that parental autonomy support was positively related to adolescents' career-decision making autonomy (Guay et al., 2003). As parents were more supportive of their adolescents' decisions rather than controlling, they were more intrinsically motivated to make career-decisions (Guay et al., 2003). These research findings are closely aligned to the studies identifying parents as an active influence on their adolescents' academic motivation.

Other studies have also examined career motivation, but have defined it differently. The behaviors of interest in these studies are closely related to career motivation in that adolescents are taking initiative to make decisions about their future careers as well taking as the necessary steps toward this accomplishment. Kracke (2002) examined the role of parents in adolescents' career exploration, which was defined as talking to others about personal career interests and seeking information about those interests. Her study found that adolescents' career

exploration was positively correlated with child-centered parental behaviors (i.e., autonomy, support of career development, parental openness, and authoritativeness). Although SDT was not used as a theoretical foundation, results are similar to research based on SDT in that an important aspect of motivation is for one to feel autonomous and as parents are more supportive rather than controlling, they encourage their adolescents' career motivation.

#### Peers as a Facilitating Factor of Career Motivation

Knowing that peers are an important aspect of development during adolescence, it is essential to understand how peers impact adolescents' career motivation. Just as peers are a facilitating social factor in adolescents' academic motivation, presumably they are significant in one's career motivation as well. Guay et al.'s. (2003) study is the only research to date which has examined peers as an influential factor on adolescents' career motivation using SDT. Results indicated that peers' autonomy support was positively related with career-decision making autonomy and conversely peers' control was negatively related to career-decision making autonomy (Guay et al., 2003). When adolescents had peers

who were supportive of their career decisions, they were more intrinsically motivated. Again, as adolescents' autonomy is supported, they are able to make free choices and are more eager to do so versus when being controlled.

Additionally, other researchers have examined career motivation through perspectives other than SDT. Although these studies do not specifically use the term *career motivation*, the behaviors of interest are the same in that they identify whether adolescents are motivated to seek information regarding career options. A qualitative study by Young and colleagues (1999) investigated whether adolescent-peer conversations would engender conversations about careers. Using an extensive qualitative analysis technique, results indicated that peer conversations helped adolescents clarify their internal goals and values, and in turn, promoted self-confidence about making career related decisions along with promoting further career exploration (Young et al., 1999). Another study by Kracke (2002) substantiated this evidence by yielding similar research findings. Kracke (2002) was also interested in whether peers influenced career decisions among adolescents. She found that as high school students perceived their conversations with friends about career-related issues to be helpful (in terms of

clarifying their ideas about careers), there was greater information seeking. Together, these two studies support the idea of supportive peers being an important social factor on adolescents' career motivation.

### Purpose of Study

Overall, there is empirical evidence that parents, teachers, and peers have a significant influence on adolescents' academic and career motivation. However, there is little research utilizing SDT as a theoretical perspective when examining the role of peers on adolescents' academic and career motivation. The purpose of this study was to add to the literature by examining the influences of peers on adolescents' academic and career motivation using SDT as a theoretical foundation.

### Research Questions and Hypotheses

The following hypotheses were examined in this project: 1) *Is classmate supportiveness related to adolescents' academic motivation?* It was expected that adolescents who felt a sense of belongingness (class belongingness scale) and perceived their classmates to be supportive (classmates' orientation toward learning scale & classmates' academic valuing scale) would display higher levels of academic motivation.

2) *Is classmate supportiveness related to adolescents' career motivation?* It was expected that adolescents who perceived their classmates to be supportive of their education (class belongingness scale, classmates' orientation toward learning scale, & classmates' academic valuing) and career-related decisions (friend support scale) would display higher levels of career motivation.

3) *Does adolescents' academic motivation have an impact on their career motivation?* It was expected that higher levels of academic motivation would be associated with higher levels of career motivation.

4) *Is the effect of belongingness and classmate support on academic achievement and career motivation mediated by academic motivation?* It was expected that a greater sense of belongingness and support would be related to higher levels of academic motivation, which in turn, would be associated with higher levels of academic achievement and career motivation. Refer to *Figure 1*.

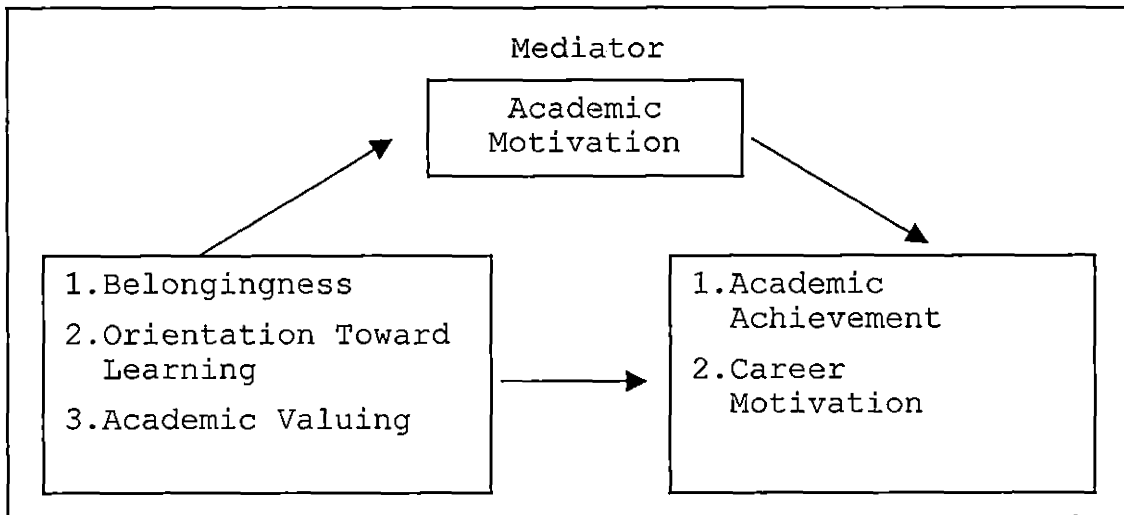


Figure 1. Hypothesis 4: Proposed Mediation for Peer Support Variables, Academic Motivation, Academic Achievement, and Career Motivation

## CHAPTER TWO

### METHOD

#### Participants

Ninety juniors (48.3%) and seniors (51.7%) from a southern California public high-school participated in this study. Sixty of the participants were female and 28 were male. Participants were predominately Latinos (67.8%) from intact families (57.8%) between the ages of 16 and 18 ( $M = 16.48$ ). Fifty-eight percent of participants' mothers and 43% of their fathers had at least a high school education. See Table 1 for demographic statistics.

Table 1. Demographic Information for Participants and their Parents (n = 90)

	Participants	Participants' Mother	Participants' Father
Ethnicity			
Latino	61 (67.8%)		
Caucasian	11 (12.2%)		
African-American	3 (3.3%)		
Pacific Islander	1 (1.1%)		
Biracial	14 (15.6%)		
Parent education			
Elementary school		15 (16.7%)	26 (28.9%)
Some high school		23 (25.6%)	23 (25.6%)
High school graduate		25 (27.8%)	18 (20%)
Some college		20 (22.2%)	12 (13.3%)
College graduate		7 (7.8%)	9 (10%)
Missing			2 (2.2%)



## Measures

### Demographic Questionnaire

Participants completed a measure developed by the researcher which asked for information on age, grade, gender, ethnicity, parents' education level, and parents' marital status. Refer to Appendix A.

### Academic Motivation Scale

Students' motivational orientation toward education was assessed using a 28-item self-report measure. The Academic Motivation Scale (AMS; Vallerand et al., 1989) is composed of seven subscales. Three subscales assessed types of intrinsic motivation: intrinsic motivation to know (e.g., "Because I experience pleasure and satisfaction while learning new things"), to accomplish things (e.g., "For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments"), and to experience stimulation (e.g., "For the "high" feeling that I experience while reading about various interesting subjects"). Three subscales assessed extrinsic motivation: external regulation (e.g., "In order to have a better salary later on"), introjected regulation (e.g., "Because I want to show myself that I can succeed in my studies"), and identified (e.g., "Because I believe my high school education will improve

my competence as a worker"). Refer to Appendix B. One subscale assessed amotivation (e.g., "I can't see why I go to school and frankly, I couldn't care less"). Items on the AMS are rated on a seven-point Likert scale ranging from 1 = *does not correspond at all* to 7 = *corresponds exactly*. A motivation score was obtained by computing four separate indexes of motivation. First, weights were assigned to each of indexes and then the products are summed. The self-determined motivation subscales (i.e., intrinsic motivation and identified) were assigned weights of 2 and 1, respectively. The less self-determined motivation subscales (i.e., amotivation and external regulation) are assigned weights of -2 and -1, respectively. The formula below was used to compute a composite index of self-determined motivation. The introjected regulation index was not included because the specific weights must be equally balanced (Guay & Vallerand, 1997). Alpha coefficients for each subscale range from .83 to .86 with the exception of the Identification subscale which is .62 (Vallerand et al., 1992).

$$[2(\text{IM knowledge} + \text{IM accomplishment} + \text{IM stimulation})/3 + (\text{identified regulation}) - ((\text{external regulation}) + 2(\text{amotivation}))]$$

### Career Decision-Making Autonomy Scale

Students' self perceptions regarding career-decision making motivation were assessed using a 20 item self-report measure, which was adapted from Guay's (2003) Career Decision-Making Autonomy Scale (CDMAS; Guay, 2003). The scale consists of ten activities related to career-decision making: (a) seeking information on careers, (b) seeking information on school programs, (c) identifying specific requirements for a career, (d) identifying specific requirements for a school program, (e) working hard to attain a career goal, (f) working hard to attain a school goal, (g) identifying options in line with a career goal, (h) identifying steps to take in order to complete a school program, (i) identifying what one values most in a career option, and (j) identifying a career option that is congruent with one's interest and personality. Refer to Appendix C. For each activity the participant indicated a reason why he or she would participate in that activity (i.e., he/she indicates whether the activity is undertaken for an intrinsic or extrinsic reason). Items on the CDMAS are rated on a seven-point Likert scale ranging from 1 = *does not correspond at all* to 7 = *corresponds exactly*. An overall motivation score was obtained by computing the

mean for each motivational construct (i.e., intrinsic versus extrinsic) and then the extrinsic mean is subtracted from the intrinsic mean. Positive scores indicated self-determined levels of motivation, while negative scores indicate non-self-determined levels of motivation. On Guay's (2003) original scale each activity was followed by two additional options (instead of only the current two) describing aspects of motivational orientation. In this study a two-option approach was utilized to more clearly assess intrinsic versus extrinsic motivation. Alpha coefficients for these motivational constructs for previous studies have been found to range from .91 to .94 (Guay, 2003).

#### Class Belongingness

Students' sense of belongingness within their classroom was assessed with a 14-item measure. This measure was adapted from the Psychological Sense of Membership Scale (PSSM; Goodenow, 1993b; Nelson & DeBacker, 2009). Item wording was changed from "people in this school" to "my classmates" (e.g., "My classmates notice when I'm good at something"). Refer to Appendix D. Items on the PSSM are rated on a five-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Negatively worded items are reverse scored and a total

score is obtained by averaging all item values. Thus, higher scores representing a greater sense of belongingness. Alpha coefficients for this scale were reported to be .80 (Goodenow, 1993b).

#### Classmates' Orientation Toward Learning

Classmates' negative orientation toward learning was assessed with a 5 item measure. This measure was adapted by Nelson and DeBacker (2009) from the Peers' Academic Support and Aspirations Scale (Murdock, 1999). Item wording was modified by the researcher from "my good friends" to "my classmates" (e.g., "My classmates tease students who do their homework"). Refer to Appendix E. Items are rated on a five-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. A total score was derived by averaging item values. Alpha coefficients for this scale have been reported to be .73 (Murdock, 1999). All items were reverse scored to reflect a positive orientation toward learning rather than a negative orientation.

#### Classmates' Academic Valuing

Classmates' academic valuing was assessed with a seven item measure. This measure was adapted by Nelson & DeBacker (2009) from Voelkl's (1996) Identification with School Questionnaire. Item wording was modified from "I"

to "my classmates" (e.g., "My classmates feel like the things he or she does in school are a waste of time"). Refer to Appendix F. Responses are rated on five-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Negatively worded items were reverse scored and a total score is obtained by averaging all item values. Alpha coefficients for this measure have been reported as .76 (Nelson & DeBacker, 2009).

#### Friend Support Scale

Classmates' support in regards to career-related decisions was assessed using a 16-item measure. The researcher modified the item wording from "friends" to "classmates" (e.g., How are your classmates' attitudes toward you choosing an occupation that requires you to go to college?). Refer to Appendix G. Items are rated on a 5-point Likert scale ranging from 1 = *strongly discouraging* to 5 = *strongly encouraging*. An overall score was obtained by summing item responses. Scores may range from 16 to 80 with higher scores indicating a higher level of support from classmates. Alpha coefficients for the scale are reported to be .69 (Ali & Saunders, 2009).

#### Academic Achievement

Participants' GPAs was provided to the researcher by the teacher. The researcher was provided with a list of

student identification numbers and GPAs for each participant. In order to ensure anonymity, researcher assigned an arbitrary research number to each questionnaire. When students completed the questionnaire, they verbally gave their student identification numbers to the researcher. The researcher then replaced their student identification number with the arbitrary research number that is on their questionnaire. The researcher destroyed the list that contained the student identification numbers.

### Interviews

Randomly selected participants were asked to participate in a semi-structured interview (e.g., "Why is school important to you?"). The purpose of the interviews was to gain a more authentic perspective of how adolescents feel about school, possible careers, and who motivates them. Refer to Appendix H.

### Procedure

This study was approved by California State University, San Bernardino's Institutional Review Board. The researcher communicated with two principals about the study and was granted permission to collect data at two local public high schools. The recruitment flyer and

informed consent form was sent home with potential participants for parents' signature. Participants were asked to turn the signed consent form into their teacher. Once all of the consent forms were returned, the researcher set up an appointment with the teacher to conduct data collection. This occurred during a regular class period at the participants' high school. Prior to collecting data, the teacher provided the researcher with the participants' GPA. Before distributing the questionnaire to participants, the researcher explained the study to participants and answered any questions and/or concerns they may have had. Participants had approximately 50 minutes to complete the demographic questionnaire, AMS, CDMAS, and the peer support scales. If randomly selected, the researcher conducted a 30 minute interview with the student. All information collected has been kept confidential and participant identification numbers have replaced any identifiable information (e.g., student ID numbers). As an incentive, participants were entered into a drawing to win a \$10 gift card to Starbucks.



## CHAPTER THREE

### RESULTS

Means and standard deviations for the academic and career motivation variables, peer support variables, and participants' GPA are displayed in Table 2. In terms of one's academic motivation score, positive scores indicate that one is more intrinsically motivated, thus being more self-determined, whereas negative scores indicated one is extrinsically motivated, thus being less self-determined. Participants' scores ranged from -40.00 to +50.33, with an average academic motivation score of 22.91. Overall, this indicates that participants were, on average, intrinsically academically motivated. In regards to one's career motivation score, positive scores also indicated one to be intrinsically motivated and more self-determined, while a negative score indicated one to be extrinsically motivated and less self-determined. Participants' career motivation scores ranged from -4.25 to +6.00, with an average of 2.47. Thus, on average, participants reported intrinsic career motivation. The level of peer support reported by participants was generally very high.

Table 2. Means and Standard Deviations for All Variables  
(n = 90)

Variable	Mean (SD)
Academic Motivation	22.91 (16.12)
Career Motivation	2.47 (2.17)
Class Belongingness	3.83 (.58)
Orientation Toward Learning	4.00 (.65)
Academic Valuing	3.39 (.67)
Friend Support	57.76 (9.94)
Grade Point Average	2.80 (.74)

Correlations among the motivation and peer support variables (i.e., belongingness, orientation toward learning, and academic valuing) are reported in Table 3. Class belongingness was moderately correlated with academic motivation,  $r(88) = .28, p < .01$ . Those who felt a sense of belongingness from their classmates reported higher and more self-determined levels of academic motivation. However, there were no significant correlations found among classmates' orientation toward learning, academic valuing, and academic motivation. Classmates' support in regard to career-related decisions was moderately correlated with one's career motivation,  $r(88) = .25, p < .05$ . This indicates that as participants perceived their classmates to be supportive in terms of

Table 3. Correlations for Academic and Career Motivation and Peer Support Variables (n = 90)

Variable	1.	2.	3.	4.	5.	6.	7.
1. Academic Motivation	1						
2. Career Motivation	.45**	1					
3. Class Belongingness	.28**	.20	1				
4. Orientation Toward Learning	.09	.28**	.39**	1			
5. Academic Valuing	.20	.31**	.22*	.48**	1		
6. Friend Support	.20	.25*	.34**	.15	.33**	1	
7. Grade Point Average	.43**	.17	.27**	.07	.23	.20	1

\*  $p \leq .05$

\*\*  $p \leq .01$

their career-related decisions, they reported greater levels of career motivation. Classmates' orientation toward learning,  $r(88) = .28$ ,  $p < .01$  and academic valuing,  $r(88) = .31$ ,  $p < .01$  were also moderately correlated with career motivation. More specifically, when participants reported their classmates to have a positive orientation towards learning and high levels of academic valuing, they reported having greater career motivation. However, class belongingness was not significantly related to one's career motivation. Results also indicate that there is a positive relationship between participants' academic motivation and career motivation. In particular, as participants reported higher levels of academic

motivation, they also reported higher levels of career motivation.

Multiple regressions were performed in order to evaluate hypothesis one and two. It was expected that adolescents who feel a sense of belongingness and perceive their classmates to be supportive would display higher levels of academic motivation. The step-wise regression was significant,  $F(1, 88) = 7.316, p \leq .01$ ; eight percent of the variance was accounted for by the significant predictor (adjusted  $R^2 = .07$ ). Among the three peer support variables entered in the step-wise analysis, only belongingness was found to significantly predict academic motivation ( $t = 2.705, p = .008$ ); the standardized beta coefficient was .277. It was also expected that adolescents who perceive their classmates to be supportive of their education and career-related decisions would display higher levels of career motivation. The step-wise regression was significant,  $F(1, 88) = 9.078, p \leq .01$ ; nine percent of the variance was accounted for by the significant predictor (adjusted  $R^2 = .08$ ). Of the four peer support variables entered in the step-wise analysis, only academic valuing was found to significantly predict career motivation ( $t = 3.013, p = .003$ ); the standardized beta coefficient was .306.

A simple-regression was conducted in order to examine hypothesis three. It was expected that higher levels of academic motivation would be associated with higher levels of career motivation. The regression analysis was significant,  $F(1, 88) = 22.394$ ,  $p \leq .001$ ; 20 percent of the variance was explained by academic motivation (adjusted  $R^2 = .19$ ). The standardized beta coefficient for the predictor was .450.

A mediation analysis was conducted in order to examine hypothesis four. It was expected that a greater sense of belongingness and support would be related to higher levels of academic motivation, which in turn, would be associated with higher levels of academic achievement and career motivation. A total of six mediation effects were possible given the peer variables and the two dependent variables (i.e., academic achievement and career motivation). Five of the six mediation analyses were not conducted because pre-requisite criteria were not met. Specifically, a significant correlation did not exist between the independent variable and mediator. Thus, the following mediation relationship was examined: 1) Whether the effect of perceived belongingness on academic achievement was mediated by academic motivation and. The Sobel test was used in order to determine if the mediation

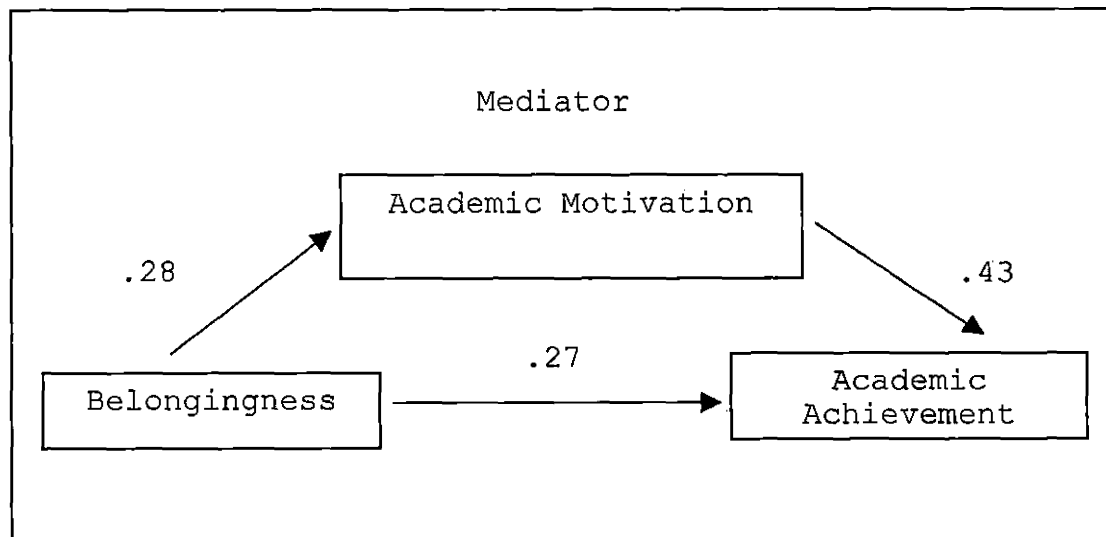


Figure 2. Academic Motivation as a Mediator on the Relationship between Belongingness and Academic Achievement

effect was significantly different from zero. The mediation analysis for participants' academic achievement was significant ( $Z = 2.23$ ,  $p = .026$ ). This indicates that the effect of belongingness on academic achievement is mediated by participants' academic motivation. Refer to Figure 2.

### Student Interviews

In order to gain a more authentic perspective on adolescents' academic and career motivation, semi-structured interviews were conducted. Nine participants were randomly selected to take part in an interview. During this time, participants offered comments

on why school and a career is important to them, what it meant to get good grades, what it meant to have a good career, and who motivates them to do well in school and to seek out information on their future careers. Brief demographic summaries are provided for each of the interviewees before their responses are summarized.

Interviewee number one is a fifteen-year-old Latino male who is from a single-parent home. His current GPA is 1.88 and he believes that school is important so that in the future he can get a better job. His idea of a good career is doing something you love doing and not being bored. Among his mom, teachers, and peers he felt that his mom motivates him the most academically. However, he felt that no one motivates him to plan for a career because they don't know what he likes. In terms of peers, he felt they did not motivate him at all.

Interviewee number two is a seventeen-year-old Latina female who lives with both of her parents. Her current GPA is 2.17 and she believes that school is important because it will allow her to become someone. Her idea of a good career is doing something that you are really interested in. Among her parents, teachers and peers she felt that her teachers motivated her most to do well academically

and to plan for a career. She felt as if her peers did not motivate her at all.

Interviewee number three is fifteen-year-old African-American female who lives with both of her parents. Her current GPA is 3.08 and she believes that school is important because it determines her future. Her idea of a good career is something that can make you happy, be satisfying, and make you money. Academically, she perceived her parents to motivate her the most; career wise, her teachers motivate her most. She felt that her peers motivated her academically because they communicate about completing their homework. As they talk about possible career paths they may take, her peers offer her advice on what her strengths and weaknesses are and whether a particular career is a good match.

Interviewee number four is sixteen-year-old Latina female who lives in a single-parent home. Her current GPA is 1.73 and she feels that school is important because it will help her get a good job in the future and give her more opportunities in the future. In her opinion, a good career is well paying job that must be enjoyable. She feels that you have to be doing something that you really want to do. She perceives her parents to motivate her the



most both academically and in terms of a career. Overall, she reported that her peers do not motivate her.

Interviewee number five is a sixteen-year-old Latina female whose parents are divorced. Her GPA is currently 1.73 and school is important to her because she wants to have a better future, be something in life, and have a good career. She feels that her parents, teachers, and peers all motivate her, but in different ways. Her peers offer her tutoring if she does not understand something and remind her that she has to go to school in order to have money for the future. She defines a good career as something that is fulfilling and brings you money. However, she noted that the money is not as important as liking what you do. She felt that her AVID teacher motivated her most in terms of a career because she provided her with career assessments.

Interviewee number six is a sixteen-year-old Latino male who lives with his married parents. His current GPA is 4.33 and he feels that school is important because he knows that it is a key to success. He feels that he is self-motivated and that he keeps himself going when there is no one there for him; however, his mom engages in conversations with him about school and he says that this shows him she cares which also motivates him. He feels

that he motivates his peers to do well in school rather than they motivating him. He defines a good career as doing something that you enjoy and that it is important to have a career because it will allow you to have a better lifestyle. His mom motivates him more so than his teachers and peers because she is constantly questioning him and getting him to think about what it is he likes.

Interviewee number seven is a seventeen-year-old Latina Female who lives with her married parents. Her GPA is currently 3.83 and school was initially important to her because of her parents, but then it became more self-fulfilling because she did not want to be lazy. Although her parents motivate her by providing external rewards, her peers motivate her the most. They motivate her by being competitive. She is in AP classes and she says that it is embarrassing if everyone but her is getting good grades. A career is important to her because she does not want to be poor; however, she defines a good career as doing something you really enjoy. She feels that her peers motivate her most in terms of her future career because they talk about how to successfully complete classes and how to get good grades.

Interviewee number eight is a seventeen-year-old Latina female who lives with her married parents. Her

current GPA is 1.53 and she feels school is important because it is a step closer to being successful in life. She feels that her peers motivate her most because they talk about college and offer her help with studying. Her definition of a good career is something you enjoy in life and will not call work. Although she feels that her parents, teachers, and peers motivate her, she feels that her parents motivate her most.

Interviewee number nine is a sixteen-year-old Latino male who lives with his married parents. Currently, his GPA is 3.82 and he feels that school is important because he wants to be able to get a good job, be stable, and not have to worry financially. He defines a good career as something that he enjoys every day. He feels that his parents motivate him most both academically and in terms of a career.

#### A Summary of the Research Findings

Overall, participants were intrinsically motivated, perceived their peers to be very supportive, and maintained a GPA in the lower to mid B range. The academic and career motivation variables were moderately correlated with the peer support variables, which highlights the role of peers in adolescents' lives. Moreover, belongingness

significantly predicted academic motivation, while academic valuing significantly predicted career motivation. Finally, there was a significant association between academic motivation and career motivation. They hypothesized mediation effect was partially supported in this project. The interviews provided an authentic perspective to how adolescents feel about their education and careers. Most participants indicated that school is very important because it determines their futures. Additionally, most defined a good career as being happy with what you are doing, and doing something you like. While most participants felt their parents or their families as a whole motivated them, few students gave examples of how their peers motivated them.

## CHAPTER FOUR

### DISCUSSION

Some of the most salient decisions one may make during adolescence is whether one will succeed in high school, attend college, and what career path may be taken. A pressing factor when considering whether one is able to effectively make these types of decisions is one's motivation. Research has heavily focused on parents and teachers as the primary social-contextual factors which influence adolescents' academic motivation; however, few studies have focused on whether there is a similar relationship with respect to peers. Additionally, there is an overall need for research which focuses on the realm of adolescents' career motivation. More specifically, few studies have yet to identify whether peers serve as a social-contextual factor related to adolescents' career motivation. Considering this, the purpose of the current study was to more clearly identify whether peers impact adolescents' academic and career motivation using SDT as a theoretical perspective.

A primary objective of this study was to determine whether classmate supportiveness was related to adolescents' academic motivation; it was expected that

adolescents who felt a sense of belongingness and perceived their classmates as supportive would display higher levels of academic motivation. Results partially supported this hypothesis in that adolescents who reported a greater sense of belongingness also reported higher levels of academic motivation. However, classmates' orientation toward learning and academic valuing did not predict one's academic motivation. The lack of this relationship is surprising given that these two variables are aligned with the aspect of relatedness (e.g., social connections). Although somewhat surprising, the current results are not inconsistent with previous work. For example, Hardré et al. (2006) found that adolescents in Taiwan reported higher levels of self-determination to do well academically when they had peers who provided support within their classroom. In fact, the consistent findings across cultures may indicate the salience of peer-related influence on academic motivation. Contrary to these findings, Guay and his colleagues (2008) found that peers (in terms of peer relatedness) were not significantly related to adolescents' academic motivation. The authors themselves stated that the lack of this relationship was unexpected given the body of literature which denotes peers as extremely important in the lives of adolescents

(Guay et al., 2008). Since they also examined parents in terms of predicting adolescents' academic motivation, they speculated that perhaps during this time ~~is~~ this relationship which is of most importance (Guay et al., 2008). Although the current study only examined peers, it may be useful for future studies to examine both parents and peers in order to thoroughly explore the effects of both social-contextual factors on adolescents' academic motivation.

Additionally, other studies which have used theoretical perspectives other than SDT have reported results similar to those from the current study. A study by Ibañez et al. (2004) found that when adolescents identified their peers as being a more supportive part of the classroom environment, they were more academically motivated to do well in school. Another study by Nelson and DeBacker (2009) found that adolescents who reported a greater sense of belongingness with their classmates reported higher levels of academic motivation. In contrast to the current results, Nelson and DeBacker (2009) also reported there to be a relationship between peers' orientation toward learning and academic valuing. On the other hand, Alfaro et al. (2006), found that peers did not impact adolescents' academic motivation. It is important

to note that while there have been multiple studies which reinforce the notion that peers are an important social-contextual factor in the lives of adolescents' academic motivation, there is also ambiguity within the literature. Overall, the empirical literature highlights the notion that peers do indeed serve as an important aspect of adolescents' academic motivation; however, more research is needed in this area to more clearly delineate this relation.

A second objective of this study was to examine whether classmate supportiveness was related to adolescents' career motivation. It was expected that adolescents who perceived their classmates to be supportive of their education and career-related decisions would display higher levels of career motivation. Again, the hypothesis was partially supported in that adolescents who reported higher levels of career motivation reported their friends to: be supportive of their career-related decisions, have a positive orientation toward learning, and value academics. However, no relationship was found between a sense of belongingness and career motivation. These results are very interesting given the fact that a sense of belongingness was related to academic motivation while orientation toward learning and academic valuing



were not. Future research will need to more closely examine peer-related variables as there may be only specific dimensions of those peer interactions that impact adolescents' motivation. If that is the case, it will be important to identify which dimensions and attempt to explain why that is the case.

The minimal research that has examined adolescent career motivation using a SDT perspective has reported findings consistent with the present results. Guay et al. (2003) found that when adolescents had peers who were supportive of their autonomy in terms of their career-related decisions, they were more intrinsically motivated, than when their peers were more controlling of their career-related decisions. Although this study (i.e., Guay et al, 2003) did not examine classmates' orientation toward learning and academic valuing in relation to one's career motivation, these results support the notion that peers are an important factor when examining adolescents' career motivation.

Few studies have examined the same relation but have not utilized SDT as a theoretical basis. Young and colleagues' (1999) found that when adolescents had peer conversations related to making career decisions they felt more confident about making career-related decisions and

were more likely to explore their career options. In line with this research, Kracke (2002) found that when adolescents deemed their career-related conversations with their peers as significant, they made more of an effort to seek out career-related information. These results are similar to the responses that adolescents gave in the semi-structured interviews in the current study. Although few adolescents felt their peers motivated them, some noted that their peers encouraged them to go to college and communicated with them about their futures which motivated them. Overall, the idea that peers are in some way related to adolescents' career motivation is evident both in the literature and in the current study; however, future studies should more thoroughly address this issue.

A third objective of this study was to investigate whether adolescents' academic motivation was related to their career motivation. It was expected that higher levels of academic motivation would be associated with higher levels of career motivation. Results supported the hypothesis. Adolescents who reported higher levels of academic motivation also reported higher levels of career motivation. To date, there have been no additional studies which have looked at these two variables simultaneously.

The fourth and final objective of this study was to investigate whether the effect of belongingness and classmate support on academic achievement and career motivation was mediated by academic motivation. It was expected that a greater sense of belongingness and support would be related to higher levels of academic motivation, which in turn, would be associated with higher levels of academic achievement and career motivation. Results supported this hypothesis in that the effect of perceived belongingness on adolescents' academic achievement was mediated by one's academic motivation. Additionally, the effect of perceived belongingness on adolescents' career motivation was also mediated by one's academic motivation. There have been no studies to date which have examined these relationships and further research should be conducted in order to substantiate these findings.

#### Limitations

While this study's findings are important in adding to the body of literature examining the relationship between adolescents' academic and career motivation and peers, a number of limitations should be noted. First, a more diverse sample in terms of ethnic background would be useful in determining whether there are group differences

in regards to adolescents' academic and career motivation and whether there were differences in the way that peers may impact motivation. Second, because this study's participants were mostly female, it would be beneficial to have a larger group of male participants. Addressing both of these limitations would likely increase the generalizability of the current findings. Third, it would also be valuable to consider adolescents' socioeconomic status and parents' education as a predictor of one's academic and career motivation.

### Conclusions

Together, these findings indicate that peers do serve as an important social-contextual factor on adolescents' academic and career motivation. Parents, teachers, and other educators may find this information useful when developing intervention programs that focus on enhancing adolescents' motivation, which in turn, impacts their overall development.

APPENDIX A  
DEMOGRAPHIC QUESTIONNAIRE

## Demographic Questionnaire

Please answer the following questions to the best of your knowledge. Please place a ✓ next to your answer. Remember to be honest.

1. How old are you?                      ☐ 15 ☐ 16 ☐ 17 ☐ 18
2. What grade are you in?    ☐ Junior    ☐ Senior
3. What is your gender?            ☐ Male        ☐ Female
4. What is your ethnicity?  
☐ African American            ☐ Caucasian  
☐ Pacific Islander            ☐ Native American  
☐ Latino                        ☐ Other \_\_\_\_\_
5. What is the highest level of education your mother completed?  
☐ Elementary (0-8)  
☐ Some high school (1-3 years)  
☐ High school graduate (4 years)  
☐ Some college (1-3 years)  
☐ College graduate
6. What is the highest level of education your father completed?  
☐ Elementary (0-8)  
☐ Some high school (1-3 years)  
☐ High school graduate (4 years)  
☐ Some college (1-3 years)  
☐ College graduate
7. What is your parents' marital status?  
☐ Married  
☐ Living together as if married  
☐ Separated  
☐ Divorced  
☐ Widowed  
☐ Single

APPENDIX B  
ACADEMIC MOTIVATION SCALE

# Academic Motivation Scale

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

	Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly		
	1	2	3	4	5	6	7
1.	Because I need at least a high-school degree in order to find a high-paying job later on.						
	1	2	3	4	5	6	7
2.	Because I experience pleasure and satisfaction while learning new things.						
	1	2	3	4	5	6	7
3.	Because I think that a high-school education will help me better prepare for the career I have chosen.						
	1	2	3	4	5	6	7
4.	Because I really like going to school.						
	1	2	3	4	5	6	7
5.	Honestly, I don't know; I really feel that I am wasting my time in school.						
	1	2	3	4	5	6	7
6.	For the pleasure I experience while surpassing myself in my studies.						
	1	2	3	4	5	6	7
7.	To prove to myself that I am capable of completing my high-school degree.						
	1	2	3	4	5	6	7
8.	In order to obtain a more prestigious job later on.						
	1	2	3	4	5	6	7
9.	For the pleasure I experience when I discover new things never seen before.						
	1	2	3	4	5	6	7



- |  | Does not<br>correspond<br>at all |  | Corresponds<br>a little |  | Corresponds<br>moderately |  | Corresponds<br>a lot |  | Corresponds<br>exactly |
|--|----------------------------------|--|-------------------------|--|---------------------------|--|----------------------|--|------------------------|
|  | 1                                |  | 2                       |  | 3                         |  | 4                    |  | 5                      |
|  |                                  |  | 6                       |  | 7                         |  |                      |  |                        |
- 
10. Because eventually it will enable me to enter the job market in a field that I like.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  11. Because for me, school is fun.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  12. I once had good reasons for going to school; however, now I wonder whether I should continue.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  14. Because of the fact that when I succeed in school I feel important.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  15. Because I want to have "the good life" later on.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  17. Because this will help me make a better choice regarding my career orientation.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  18. For the pleasure that I experience when I am taken by discussions with interesting teachers.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  19. I can't see why I go to school and frankly, I couldn't care less.  

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly		
1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.						
1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.						
1	2	3	4	5	6	7
22. In order to have a better salary later on.						
1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about many things that interest me.						
1	2	3	4	5	6	7
24. Because I believe that my high school education will improve my competence as a worker.						
1	2	3	4	5	6	7
25. For the "high" feeling that I experience while reading about various interesting subjects.						
1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.						
1	2	3	4	5	6	7
27. Because high school allows me to experience a personal satisfaction in my quest for excellence in my studies.						
1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.						
1	2	3	4	5	6	7

APPENDIX C  
CAREER DECISION-MAKING AUTONOMY SCALE

### Career Decision-Making Autonomy Scale

Here is a list of activities one can do with respect to an eventual career vocational choice. Indicate on a 7-point scale the extent to which you do, or would do, these activities for each of the reasons listed below.

Does not correspond at all	Corresponds very slightly	Corresponds slightly	Moderately corresponds	Mostly Corresponds	Strongly Corresponds	Very Strongly corresponds
1	2	3	4	5	6	7

Seeking information (e.g., going online to look at different types of careers, talking to your school counselor, going to the career center, talking with a professional in the field you're interested in, etc.) on careers (e.g., school teacher, auto mechanic, doctor, plumber, etc.):

1. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1                      2                      3                      4                      5                      6                      7

2. For the pleasure of doing it.

1                      2                      3                      4                      5                      6                      7

Seeking information (e.g., going online to look at different types of college programs, talking to your school counselor, talking with someone who attends college, etc.) on school programs (e.g., liberal studies, auto mechanics, biology, plumbing, etc.):

3. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1                      2                      3                      4                      5                      6                      7

4. For the pleasure of doing it.

1                      2                      3                      4                      5                      6                      7

Does not correspond at all	Corresponds very slightly	Corresponds slightly	Moderately corresponds	Mostly Corresponds	Strongly Corresponds	Very Strongly corresponds
1	2	3	4	5	6	7

Identifying specific requirements (e.g., education needed, work experience needed, etc.) for a career:

5. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

6. For the pleasure of doing it.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Identifying specific requirements (e.g., minimum GPA, extracurricular activities needed, etc.) needed for a school program:

7. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8. For the pleasure of doing it.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Working hard to attain your school goals:

9. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

10. For the pleasure of doing it.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Working hard to attain your career goals:

11. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

12. For the pleasure of doing it.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Does not correspond at all	Corresponds very slightly	Corresponds slightly	Moderately corresponds	Mostly Corresponds	Strongly Corresponds	Very Strongly corresponds
1	2	3	4	5	6	7

Identifying career options in line with a career goal:

13. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1            2            3            4            5            6            7

14. For the pleasure of doing it.

1            2            3            4            5            6            7

Identifying steps to follow in order to enter a school program:

15. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1            2            3            4            5            6            7

16. For the pleasure of doing it.

1            2            3            4            5            6            7

Identifying what one values the most in a career option:

17. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1            2            3            4            5            6            7

18. For the pleasure of doing it.

1            2            3            4            5            6            7

Identifying a career option that is congruent with one's interest and personality:

19. Because somebody else wants me to do it or because I would get something from somebody if I do it- rewards, praise, approval.

1            2            3            4            5            6            7

20. For the pleasure of doing it.

1            2            3            4            5            6            7

APPENDIX D  
CLASS BELONGINGNESS SCALE

### Class Belongingness Scale

Below are statements of what you might think of your classmates and how you feel in class. Read each statement and indicate whether you agree that your classmates are like this. Please answer honestly.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
1	2	3	4	5	
1. My classmates notice when I'm good at something.	1	2	3	4	5
2. It is hard for people like me to be accepted by classmates.	1	2	3	4	5
3. My classmates make me feel as if I don't belong here.	1	2	3	4	5
4. There is at least one classmate I can talk to if I have a problem.	1	2	3	4	5
5. My classmates are friendly to me.	1	2	3	4	5
6. I am included by my classmates in class activities.	1	2	3	4	5
7. I feel very different from most of my classmates.	1	2	3	4	5
8. I can really be myself around my classmates.	1	2	3	4	5
9. My classmates respect me.	1	2	3	4	5
10. My classmates know I can do good work.	1	2	3	4	5
11. Because of the way my classmates treat me I wish I were in a different class.	1	2	3	4	5



Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	2	3	4	5
12. My classmates like me the way I am.				
1	2	3	4	5
13. My classmates take my opinion seriously.				
1	2	3	4	5
14. My classmates are not interested in people like me.				
1	2	3	4	5

APPENDIX E  
CLASSMATES' ORIENTATION TOWARD LEARNING SCALE

### Classmates' Orientation Toward Learning Scale

Below are statements of what you might think of your classmates and how you feel in class. Read each statement and indicate whether you agree that your classmates are like this. Please answer honestly.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	2	3	4	5

1. A lot of my classmates tease students who do their homework.

1	2	3	4	5
---	---	---	---	---

2. A lot of my classmates won't work with students who study.

1	2	3	4	5
---	---	---	---	---

3. My classmates make fun of students who are concerned about grades.

1	2	3	4	5
---	---	---	---	---

4. My classmates really don't care about school.

1	2	3	4	5
---	---	---	---	---

5. A lot of my classmates don't like to be around students who work hard in school.

1	2	3	4	5
---	---	---	---	---

APPENDIX F  
CLASSMATES' ACADEMIC VALUING SCALE

### Classmates' Academic Valuing Scale

Below are statements of what you might think of your classmates and how you feel in class. Read each statement and indicate whether you agree that your classmates are like this. Please answer honestly.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	2	3	4	5
1. My classmates feel like the things they do in school are a waste of time.				
1	2	3	4	5
2. My classmates think that most of the things they learn in class are useless.				
1	2	3	4	5
3. My classmates think they can get a good job even if their grades are bad.				
1	2	3	4	5
4. My classmates think that school is more important than most people think.				
1	2	3	4	5
5. My classmates think that what they do in school will be useful for getting a job.				
1	2	3	4	5
6. My classmates believe that it would be a mistake to drop out of school.				
1	2	3	4	5
7. School is important in the life of my classmates				
1	2	3	4	5

APPENDIX G  
FRIEND SUPPORT SCALE

### Friend Support Scale

Please circle the letter that best represents your classmates' reactions to the activities listed. Please answer honestly.

Strongly discouraging	Discouraging	Neutral	Encouraging	Strongly encouraging
1	2	3	4	5

1. How are your classmates' attitudes toward you choosing an occupation that pays you a lot of money?

1	2	3	4	5
---	---	---	---	---

2. How are your classmates' attitudes toward you choosing an occupation that gives you job security?

1	2	3	4	5
---	---	---	---	---

3. How are your classmates' attitudes toward you choosing an occupation that requires you to go to college?

1	2	3	4	5
---	---	---	---	---

4. How are your classmates' attitudes toward you choosing an occupation that requires you to leave the state?

1	2	3	4	5
---	---	---	---	---

5. How are your classmates' attitudes toward you choosing an occupation that they believe you will succeed in?

1	2	3	4	5
---	---	---	---	---

6. How are your classmates' attitudes towards you getting good grades in school?

1	2	3	4	5
---	---	---	---	---

7. How are your classmates' attitudes toward you making decisions about what to do after high school?

1	2	3	4	5
---	---	---	---	---

8. How are your classmates' attitudes toward you choosing classes that fit your interests?

1	2	3	4	5
---	---	---	---	---

Strongly discouraging	Discouraging	Neutral	Encouraging	Strongly encouraging
1	2	3	4	5

9. How are your classmates' attitudes toward you deciding upon a career path and then working to become a leader in that field?

1	2	3	4	5
---	---	---	---	---

10. How are your classmates' attitudes toward you studying for your exams?

1	2	3	4	5
---	---	---	---	---

11. How are your classmates' attitudes toward you getting involved in extracurricular activities (such as academic clubs or athletics)?

1	2	3	4	5
---	---	---	---	---

12. How are your classmates' attitudes toward you getting a fulltime job rather than going to college after high school?

1	2	3	4	5
---	---	---	---	---

13. How are your classmates' attitudes toward you taking entrance exams for college, the military, or trade schools?

1	2	3	4	5
---	---	---	---	---

14. How are your classmates' attitudes toward you completing your homework each night?

1	2	3	4	5
---	---	---	---	---

15. How are your classmates' attitudes toward you completing advanced training or schooling after you finish high school?

1	2	3	4	5
---	---	---	---	---

16. How are your classmates' attitudes toward helping you get alternative funding sources for your future vocational or educational plans (for example: getting scholarships for college, part-time employment, etc.)?

1	2	3	4	5
---	---	---	---	---



APPENDIX H  
SEMI-STRUCTURED INTERVIEW QUESTIONS

## Semi-Structured Interview Questions

### Achievement Motivation

1. Why is school important to you?
2. What is your definition of good grades?
3. How do you think school is important to plan for your future?
4. How do your parents motivate you to do well in school?
5. How do your teachers motivate you to do well in school?
6. How do your peers motivate you to do well in school?
7. Out of parents, teachers, and peers, who do you think motivates you the most?

### Career Motivation

1. Why is a career important to you?
2. What is your definition of a good career?
3. How do you think planning a career is important to your future?
4. How do your parents motivate you to plan for a career?
5. How do your teachers motivate you to plan for a career?
6. How do your peers motivate you to plan for a career?
7. Out of parents, teachers, and peers, who do you think motivates you the most?

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