

CONNECTION BETWEEN PARENTING ROLES AND FAMILIAL OBLIGATION IN  
REGARDS TO STUDENT MOTIVATION BASED ON SELF-DETERMINATION

THEORY

by

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Connection between Parenting Roles and Familial Obligations in Regards to Student Motivation Based on Self-determination Theory

Thesis directed by Professor Jung-in Kim

### **ABSTRACT**

Recent educational research has focused on student success in the classroom particularly revolving and concerning student motivation. Much of the previous research has concentrated on how dyadic relationships such as parent-child relationships and teacher-student relationships impact a student's motivation in the classroom. This current study aims to push past these relationships and encourage examining a student's motivation from a more holistic ecological view utilizing familial obligation.

For this study, secondary quantitative data that was previously collected was utilized and reanalyzed. This involved surveyed measures that utilized a 7-point likert scale. For this study surveyed data was collected from over 300 students. This sample was then limited to only looking at students from Latino American, European American and Asian backgrounds from self-reports. Findings of this study display that parental autonomy support and familial obligation were significantly correlated to motivation based on self-determination theory. In addition, it was found that familial obligation was a partial mediator between parental autonomy support and motivation at all varying levels based on self-determination theory. These results align with all three reported guiding research questions and corresponding hypotheses.

The form and content of this abstract are approved. I recommend its publication.

Approved: Dr. Jung-in Kim's & Dr. Jorge Chavez

**DEDICATION**

*To the ones who continue to learn.*

*To the ones who always strive for more.*

*To the ones who remain to have courage.*

*To the ones who have doubted but chose to conquer.*

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## CHAPTER 1

### INTRODUCTION

#### Overview

Roughly 3.5 million students are projected to graduate from high school during the 2016-2017 school year (NCES, 2016). Recently, high school graduation rates are at an all time high, peaking at 82% in the 2013-2014 school year (US Department of Education, 2016). Increased levels of academic success are also reflected in the lowering drop out rate, which has declined from 10.9% in 2000 to 6.5% in 2014 (NCES, 2016). Additionally, of those graduating from high school, roughly 40% will end up participating in some sort of collegiate education (NCES, 2016).

With these rising graduation rates, it is more important than ever to understand the changing climate of a student's educational experience. Contrastingly, there is also a need to have a better understanding of the consequences of not graduating from high school may have on a student. Specifically, having a well-rounded and well-developed idea of what intervention help motivate high school students and what factors may prevent students' from graduating. Educational research shows that promoting positive motivational practices is not only essential for student academic success but also results in higher levels of autonomy and free thought (Deci & Vallerand, 1991), which are important characteristics for future academic endeavors. However, much of motivational research thus far has focused on simple dyadic relationships, such as teacher-student relationships and parent-child relationships. While these dyadic relationships are important, they fail to provide a complete picture of the complex concept and construct of a student's motivation. In addition, many teachers only see their students for nine months

out of the year so it is imperative that other relationships such as familial relationships are explored more in depth.

In order to have a fuller, more in-depth understanding of motivational practices and outcomes for students, it is imperative to dig deeper past these dyadic relationships and examine learning and motivation through a more holistic ecological lens. Ecological theory can be utilized as overarching lens for this study. By understanding a student from separate systems such as their relationship to their microsystem and macrosystems, there can be a more clear understanding of outside holistic influencers on student academic success. A student's microsystem consists of the close relationships an individual may encounter on a day-to-day basis (Bronfenbrenner, 2009). This includes a student's close relationship to members of its family. Studying more complex outside factors as potential influences can help to develop a better understanding of micro- and macro- level factors that may effect student motivation. By examining more complex outside influences, we can open the door to understanding more about resiliency factors that impact a student's motivational tendencies in the classroom.

Specifically having a more in depth understanding of students' cultural and family backgrounds and what influences these may have on motivational practices in a classroom setting is essential to begin exploring. With a growing diverse population of American high school students from varying cultural identity and values, it is imperative we begin to examine how coming from diverse family backgrounds impacts a student's educational experience and practices. In recent years, research has emerged that challenges the question of how family background or a sense of family obligation plays into student's motivational success (Fuligni, 2001). Family obligation can be defined as "the extent to which family members feel a sense of duty to assist one another and to take

into account the needs and wishes of the family when making decisions” (Fulgini, Tseng & Lam, 1999).

### **Purpose of the Study**

The purpose of the study is to examine if family obligation has any connection or significant impact on a student’s motivation in the classroom. In addition, this study aims to begin exploring differing family backgrounds based on student self-reported identity. The relationship between family obligation and student’s classroom motivation will be examined using a racially and ethnically diverse sample of high school students who are likely to hold significantly different cultural perceptions of family obligation. Furthermore, this current research aims to challenge future researchers to look past the student-teacher dyadic relationship and begin to examine motivational tendencies from a wider more holistic and ecologically based lens.

### **Guided Research Questions**

For this thesis three primary research questions are presented:

1. Do parental practices that support autonomy predict motivation in the classroom based on self-determination theory?
2. Does familial obligation affect a students’ motivation in the classroom?
3. Does familial obligation mediate the relationship between autonomy supportive practices and motivation?

### **Significance of the Study**

There has been a vast amount of research done regarding self-determination theory and motivation in the classroom. There has also been some research regarding family obligation and parenting roles. However, there has been little to no research in regards to the connection between these three variables. With motivation being a critical

proven element to a student's success research must turn to a student's life at home as cause for motivation in the classroom or lack there of.

### **Personal Identification of the Topic**

In order to grasp the reasoning for this research study it is important to understand the author's relation to the topic. Being a graduate student at the University of Colorado Denver, I (Larissa Kelly) have had the ability to serve in the community in regards to college readiness and preparation. Primarily, I would serve in communities with diverse cultural backgrounds. I was able to see first hand how family can impact a student's success in the classroom and how family practices varied amongst students of different cultural backgrounds. Being able to witness first hand how the idea of upholding a family's honor or expectations in regards to academic success begins to challenge me to think about academic success more critically.

After learning more about motivation practices through my work with my fellow research team, I started to ponder the connections between classroom success and a student's family background. I began to wonder what factors, if any, from family life impacted a student's success in the classroom.

I believe that these specific connections and questions are relatively untouched in the research community within education, psychology, human development and family science. I hope that this research will open doors for future research to expand across disciplines and look at varying factors outside the realm of the classroom in regards to a student's success. Additionally, I plan to continue with my interest in this topic in my future research endeavors.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **Introduction**

The idea of a student's success based on their motivational tendencies date back to several decades of educational research. Moreover, understanding why a student feels motivated and what external factors influence their motivation has been successfully understood and further developed in recent years. Educational researchers have developed and evolved research in regards to teacher's impact on their student's motivation. Additionally developmental researchers have pushed to understand parental support in relation to student's academic success. However, how familial obligation may affect a student's overall motivation has received limited empirical attention in research.

Having a better understanding of what particular external factors impact not only a student's academic success but also overall motivation is imperative in order to promote healthy engagement. This summary of literature will discuss previous research in the areas of motivation, familial obligation and parental autonomy and uses self-determination theory as framework for linking current research.

#### **Self-Determination Theory and Student's Motivation**

Self-Determination Theory, or SDT, (Ryan & Deci, 2000) is a major and particularly promising theory of motivation that suggests that behaviors that are internalized or intrinsically motivated are more likely to be maintained than behaviors that are externalized or extrinsically motivated. It has been established from developmental psychologist that each individual is born with tendencies to be curious and playful despite any direct rewards (Harter, 1978). This exhibitions that from an early age individuals express the desire to be driven intrinsically rather

than extrinsically. In addition, it challenges research to think as to where true intrinsic motivation comes from and how it can be successfully promoted.

**Intrinsic motivation and extrinsic motivation.** Intrinsic motivation has been previously defined as “the doing of an activity for its inherent satisfactions rather than for some separable consequence” (Ryan & Deci, 2000). The ability to be intrinsically motivated is unique to humans as they move about cognitive, social and physical development (Ryan & Deci, 2000). However, it should be noted that most individuals have inclinations to be more intrinsically motivated towards certain activities over others. This is due to the fact that reward for the individual is in the task itself (Ryan & Deci, 2000). Thus, individuals are only intrinsically motivated towards tasks that they have a high internal interest towards. Moreover, it has been found that intrinsically motivated tasks were those that provided satisfaction of innate psychological needs (Ryan & Deci, 2000).

In contrast, since the majority of tasks an individual partakes in are not solely addressing inner psychological needs, it is imperative we understand outside influences on motivation. For example, it has been found that intrinsic motivation becomes weaker with each advancing grade (Ryan & Deci, 2000). Extrinsic motivation takes into consideration any activity done in order to achieve some detachable outcome (Ryan & Deci, 2000). This then differs from intrinsic motivation, which focuses on innate and purely internal interests. The range for why an individual becomes externally motivated is wide and consists on a spectrum (Ryan & Deci, 2000). For example, a student may be extremely extrinsically motivated in the classroom due to the fact their parents have promised them a \$10 reward for each good grade they receive. This displays a direct reward influenced by extrinsic motivational practice. The student feels motivated to perform and do well so they can achieve the physical award. Contrastingly, a student may be externally motivated to do well and achieve high grades because they feel as

though their academic success will lead them to college acceptance. This too is an external influencer but looks highly different compared to the first example.

To better understand the full spectrum of extrinsic motivation it is important to analyze the various types of extrinsic motivation and where they fall on the continuum of motivation. This is important to have a clear understanding of because different types of motivation can predict various outcomes such as a student dropping out of high school or building resiliency. Researchers have identified three distinct types of extrinsic motivation, which fall on a continuum based on how external the motivation is to the individual. These three categories of extrinsic motivation that are pertinent to this study, are based on the varying amount of autonomy support fulfilled, which will be further examined and defined later. The first type of extrinsic motivation, “external regulation”, utilizes the least amount of autonomy needs. External regulation is synonymous with outside reward. Thus an individual feels the need to complete or “perform a task in order to satisfy and external demand or obtain an external imposed reward contingency” (Ryan & Deci, 2000). The example utilized earlier about a student performing well in school to obtain the \$10 reward from their parents is an excellent example of this type of extrinsic motivation. The student attempts to perform well and is motivated by the direct reward they will receive.

Continuing on the spectrum of extrinsic motivation, the next category of extrinsic motivation is introjected regulation. Although this category still has a high level of outside control it does not incorporate direct rewards. Instead the individual feels the “pressure to perform in order to avoid guilt or anxiety or to attain ego-enhancements or pride” (Ryan & Deci, 2000). An example of this category could be a student feeling pressure to perform well and achieve high grades in school in order to avoid their parents feeling disappointed in them.



Although there is no direct reward or consequence associated with the outcome of the student's grade, they feel an indirect pressure to perform to the standard their parents have placed.

A more autonomous form of extrinsic category of motivation, identification, concerns an increased awareness of the personal importance of the task for the individual. In this way, they understand the task is an imperative activity to achieve a certain goal. The example from before of a student attempting to do well in school and achieve high grades in order hopefully obtain college acceptance displays the stepping stone process of this category.

**Motivation and autonomy support.** Self-determination theory also analyzes a student's motivational tendencies on the foundation that three psychological needs are met of competency, autonomy and relatedness (Ryan & Deci, 2000). When each one of these psychological needs is met, a student is more likely to be successfully motivated in a classroom setting. However, when one of these needs is not fully met, a student may experience a lack in motivation, which could in turn fuel a student's drop out (Ryan & Deci, 2000). For this current study the psychological need of autonomy will be primarily focused on.

Understanding both intrinsic motivation and the varying spectrum of extrinsic motivation is imperative to understanding why students are motivated in the classroom and where this motivation comes from. Self-determination theory takes largely into consideration autonomy which concerns actions that are experienced as emanating from or congruent with one's self (Ryan & Connell, 1989). Moreover, it concerns an individual need to make decisions from a sense of internal and controlled confidence. Additionally, it has been found that when autonomous, student initiate and regulate their behavior with a high degree of volition and a sense of choice (Jang, Ryan & Kim, 2009). In order to gain autonomy however, a certain level of autonomy support needs to be incorporated into an individuals learning processes. This being

said, finding the balance between autonomy support in contrast to exhibiting control over a student's learning experience can be a challenging task for many educators.

In the past, there has been a vast amount of research done on the impact an educator may have on a student's motivation and academic achievement. Moreover, the implications of having a highly controlling learning environment vs. an autonomy supportive learning environment have additionally been researched and analyzed. It has been found that overall higher levels of autonomy support in the classroom in contrast to controlling tendencies in the classroom often end up promoting a greater level of intrinsic motivation for individual students (Ryan & Grolnick, 1986). By promoting autonomy support in a safe environment teachers are able to catalyze their student's desire to be more creative and over time promote their student's aspiration for a challenge (Ryan & Grolnick, 1986). Contrastingly, it has been found that students who attempt to learn in a more controlling environment that does not promote autonomy support, not only lose intrinsic motivation but also learn less overall (Grolnick & Ryan, 1987).

The effect of parental autonomy support rather than that of educators on a student's motivation has been studied less, but research suggests it is important in student academic success. Since parents are the primary socializing agent in a student's early life, it is expected that they would have a substantial influence on their autonomous regulation (Grolnick & Price, 2005). Parents who provide autonomy support allow them to have more choices and thus relinquish overarching control. When examining the role a parent's autonomy support may have on a student's motivation in the classroom, it is important to analyze reports from the student's perception. This is because understanding how the student perceives their parent's autonomy support in return helps to better understand their parent's influence on a student's internal or external motivation. Previous studies have found that, parental autonomy support, from either parent fosters feelings of autonomy at school (Grolnick & Ryan, 1989). Moreover, it has been

argued that the importance of parental autonomy support decreases as a child grows up and relies less on their parents to perform tasks. However, a variety of studies have found despite the child being in high school, elementary school or even in a college setting, students still highly value their parental autonomy support (Guay, Ratelle & Chanal, 2008). In fact, it has been found that parental autonomy support is valued even more from the child when they are going through stressful times such as transitioning to high school or college (Guay, Ratelle & Chanal, 2008).

In conclusion, SDT essentially is a theory of self-regulation. At times, individuals engage in behavior because of external factors, such as rewards or punishments, and at times, they engage in behavior because of internal factors, such as enjoyment. Because motivation exists on a continuum, individuals can also be motivated to engage in behavior for many reasons. However, the important aspects of SDT take in to consideration what overall influences a student's intrinsic and extrinsic motivation. By understanding what external factors influence motivation we can then have a better understand on how to influence and promote healthy extrinsic and intrinsic motivation.

### **Familial Obligation**

Previous research in regards to motivation has taken into careful consideration the dyadic relationships a student experiences, such as teacher-student relationships and parent-child relationships. However, to better understand external factors and influences a student may be experiencing it is imperative we expand research focuses outside of these dyadic relationships and into expanded ecological factors such as familial obligation. By examining the baseline of the little research done on the connections between familial obligation and adolescent developmental success and also familial obligation and school success, we can start to expand

our ideas and thoughts regarding the potential influence familial obligation may have on student motivation.

Familial obligation has been studied in length across disciplines related to family life, individual success and cultural obligation. Much of the current research on familial obligation has focused on duties surrounding focuses on duties surrounding children's assistance to the family or to sibling care (Fuligni, 2001). However, a child's familial obligation can extend to their decisions and activities outside of the household, in which a smaller amount of research has been examined. Furthermore, there has been little research to examining the direct connection between a student's family orientation and their motivational tendencies in the classroom.

Family obligation refers to "the extent to which family members feel a sense of duty to assist one another and to take into account the needs and wishes of the family when making decisions" (Fuligni, Tseng & Lam, 1999). Children's feelings of obligation towards their family may be a critical element towards their relationship with their family, which in return directly affects their feelings of autonomy (Fuligni & Pederson, 2002). Moreover, a sense of family obligation can change over time depending on the family's economic resources and changing family structure (Fuligni & Pederson, 2002).

Fuligni, Tseng and Lam (1999), have done extensive research in the area of familial obligation concerning adolescent's across Asian, Latin American and European backgrounds and how this impacts their overall development. In their study, Fuligni, Tseng and Lam aimed to better understand adolescent's attitude and connection to their family backgrounds by surveying over 1,000 twelfth graders students in the California region. Over 80% of the sample population was from five ethnic backgrounds including: Chinese, Filipino, Mexican, Central and South American and European. They found students of Asian And Latin American background held significantly stronger values and greater expectations in regard to respect and future obligations

to their families relative to their student peers of European backgrounds (Fuligni, Tseng and Lam, 1999).

However, it was also found that the relations between adolescents' values, expectations and other aspects of their development tended to be quite similar across all cultural backgrounds (Fuligni, Tseng and Lam, 1999). For example, this may demonstrate that although there are strong differences between adolescents perception of familial obligation from varying cultural backgrounds, there may be more similarities than once thought.

**Family obligation and school success in relation to motivation.** Previous research has shown that particular cultures uphold their family orientation and academic success more than others. For example Fuligni (2001) found Asian and Latin American students reported they believe that school success is one of the most important ways an adolescent can assist their family. Moreover, in Fuligni (2001) suggested that the desire for students from Latin and Asian American backgrounds need to support, assist and respect their families, leads them to place more value on the importance and usefulness of education than do their European American peers (Fuligni, 2001). Additionally, in earlier research, Fuligni, Tseng and Lam's (1999) found some connection was that adolescents who had attitudes supportive of family obligations tended to be more academically motivated over all (Fuligni, Tseng and Lam, 1999). These findings suggest that perceptions of family obligation could have a significant impact on student motivational outcomes in the classroom.

Much of the connection between why certain cultures place larger emphasis on academic success versus other cultures could be related to the family's emigration. Many Latin and Asian Americans who have immigrated to the United States have done to provide their children with better opportunities and resources. Therefore, students from these cultural backgrounds have often cited indebtedness and responsibility to do well in school (Fuligni, 2001). Furthermore,

other students from diverse ethnic backgrounds have reported that they believe obtaining an education will help them find employment in the future and will give them the ability to support their family (Fuligni, 2001). Therefore, this may imply that an adolescent's obligation to their family may be based in a particular belief that the usefulness of their education surpasses just the practicality for their own life in but for their families life as well.

**Family obligation when considering cultural backgrounds.** Within a society that tends to emphasize adolescent autonomy and independence, the question is often raised as to whether or not adolescents from collectivism traditions will suffer from not practicing common individualistic tendencies of their peers. Fuligni, Tseng and Lam's (1999) study however demonstrates that adolescents from more collectivistic traditions who maintain their familial values do not face negative developmental outcomes as a consequence. In fact, a large number of adolescents from Asian and Latin American backgrounds felt a great obligation to demonstrate family support and respect towards their family (Fuligni, Tseng and Lam, 1999). Furthermore, when it came to supporting family members in the future once the adolescent became an adult, a decline in desire to continue to support was seen across generations and across all ethnic backgrounds (Fuligni Tseng and Lam, 1999). This may be due to latter-generations of families living in the United States may not need as much assistance from their children once they become adults. However, "third-generation adolescents from Asian and Latin American families still endorsed their future obligations more strongly than their European American peers" (Fuligni, Tseng and Lam, 1999).

**Strong family obligation and potential negative implications.** Although, familial obligation has been shown to promote positive development in adolescents, there have been certain outlying situations where a strong sense of family duty has been found to be associated with less positive adolescent development. Adolescent students who reported a very strong sense of family

obligation actually tended to receive lower grades compared to their peers who displayed a moderate level of family obligation (Fuligni, Tseng and Lam, 1999). This could be due to students who have a strong sense of familial duty feeling as though they need to cut back on academic studies while their family is going through difficult times financially (Suarez-Orozco, 1995). While education remains central to these adolescent's success, the family may provide more pressing issues that the adolescent with strong familial duty feels takes precedence. However, Fuligni, Tseng and Lam (1999) also reported that there was no real connection between having a high level of familial obligation negative developmental outcomes in adolescence. In fact, it was found that even in a society that places emphasis on autonomy and independent, youth from collectivistic traditions tend to retain their parents' familistic values and these values do not have a negative impact on their development (Fuligni, Tseng & Lam, 1999).

### **Current Study**

There has been an extensive amount of research examining students' motivation and academic success in the classroom. Much of this research that utilizes self-determination theory examines students' motivation has examined the effect of autonomy support on based on intrinsic and extrinsic motivation. Dyadic relationships such as teacher influences on student motivation and parental influence on student motivation have been heavily examined. However, the main purpose of this research study will aim to examine the connections between a student's perception of their familial obligation and their motivational tendencies in the classroom. Additionally, this study aims to challenge research to look past simple dyadic relationships that may influence a student's motivation and began looking at influences from a more holistic or ecological lens.

In return, this study adds to the current body of research on motivation that has previously examined motivational tendencies by drawing on the literature on familial obligation

to the existing literature on self-determination theory. More importantly, however, this study hopes to begin to connect the two areas and begin to better understand the importance familial obligation may have on students' motivational tendencies and thus academic success. Finally, this current study hopes to develop familial obligation as a mediator between parental autonomy supportive practices and motivational tendencies in the classroom.



## CHAPTER III

### METHODS

#### Research Design

For this research project, secondary quantitative data analysis was utilized. Secondary data can be defined as, existing data originally collected at an earlier time, which was utilized for a completely different research study (Johnson & Christensen, 2008, pg. 243). Dr. Jung-in Kim of University of Colorado Denver originally collected the data being utilized for this current study in Fall 2006. Though the data was previously collected, the current study will reanalyze the existing data in a way that varies greatly from the original analyses of the collected data. This type of data collection has been highly utilized by researchers within the discipline of Education and Human Development and Family Science.

The current research study was submitted to and approved by the Colorado Multiple Institutional Review Board (COMIRB) for exempt research category four. This approval became effective on February 14<sup>th</sup>, 2017 and the protocol approval number is 17-0126, (See Appendix A).

#### Participants

*(Students)*

The current data were drawn from a large, diverse population of high school students. Additionally, the measure utilized during the initial data collection was diverse in its selection of questions and optional responses. Data was collected utilizing a 7-point likert scale survey that consisted of hundred and six questions. For this study in particular roughly eighty of the hundred and sixty questions will be utilized. Additionally, responses in regards to the student's self reported ethnic identity was also utilized.

The sample consists of 331 ninth grade students (141=boys, 187=girls) who were currently enrolled at a high school in the southern California region. The age range of the students was from 13 years of age to 18 years of age, with 81% of the students reporting to be 14 years old. This school was utilized due to its high diversity in student population in terms of ethnic representation. Additionally, this school had high attendance rate (95%) and a low drop out rate (<1%).

The current study utilized only student participants who self-reported as identifying as Asian American, Latino or European American, were utilized for several reasons. First of all, this population made up the majority of the sample. Comprising 82.4% of the total collected sample. Secondly, limiting the sample to only three groups allowed the primary researcher to have a better understanding of these groups' specific connections to family obligation and motivation. After limiting the sample, the total number of participants in the study consisted of 240 participant; 75 of who identified as Asian American, 92 who identified as Latino and 73 who identified as European American. (See Table 1)

Table 1:

Student Background

<b>Student Reported Ethnic Background</b>	<b>Number</b>	<b>Percentage</b>
Asian American	75	31.25%
Latino	92	38.33%
European American	73	30.42%
<b>TOTAL:</b>	<b>240</b>	

## Procedures and Measures

During initial data collection, students completed a series of measures using a 7-point likert scale (1= not at all true, 7 = very true). This primary data was collected while students were in attendance during a math class their enrolled in for the mathematics class.

Approximately 30 mathematics classes participated in the study, with an estimated 11 students participating in each class.

While demographic information was collected, the only identifying criterion for the survey was the last name of the teacher who was teaching the mathematics course at the time. Furthermore, only student's whose parents had completed the consent form completed the survey instruments.

## Instrumentation

**Self-Regulation Questionnaire.** Four types of student self-regulated motivation were measured via the Ryan and Connell's (1989) Self-Regulation Questioner—Academics. Questions were focused around reasons why the student was motivated to study mathematics. In addition, these particular questions were utilized in assessing the type of motivation a student experienced based on self-determination theory (external regulation, introjected regulation, identified regulation, intrinsic motivation).

*External regulation* was measured utilizing nine questions of the Self-Regulation questioner; questions 2, 6, 9, 14, 20, 24, 25, 28, 32 (see appendix B). An example of a response from this section is when asked, "*Why do I try to do well in school?*" A student responding, "*Because that's what I am supposed to do*". Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The external regulation score consists of the sum of the responses to the nine questions divided by the total number of questions answered.

*Introjected regulation* was also measured utilizing the Self-Regulation questioner and also contained nine relevant questions; questions 1, 4, 10, 12, 17, 18, 26, 29, 31 (see appendix B). For introjected regulation an example of a pertaining response was when asked, “*Why do I work on my classwork?*” A student responding, “*Because I want the teacher to think I am a good student*”. Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The introjected regulation score consists of the sum of the responses to the nine questions divided by the total number of questions answered.

*Identified regulation* applied the Self- Regulation questioner as well and was comprised of seven different questions; questions 5, 8, 11, 16, 21, 23, 30 (see appendix B). In regards to identified regulation, when asked, “*Why do you do your homework?*” a student may respond, “*Because it is important to me to do my homework*”. Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The identified regulation score consists of the sum of the responses to the seven questions divided by the total number of questions answered.

*Intrinsic motivation* was measured utilizing seven responses of the Self-Regulation questioner; questions 3, 7, 13, 15, 19, 22, 27. An example of a response from this area of the measure was when asked, “*Why do I try to answer hard questions in class?*” a student responding, “*Because it’s fun to answer hard questions*” Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The intrinsic motivation score consists of the sum of the responses to the seven questions divided by the total number of questions answered.

**Perception of parents’ motivating style.** Student’s perception of their parents’ motivation style, either controlling or supportive, was measured utilizing thirteen out of fifteen items developed by Robbins (1994). Within this scale, two subscales were used perception of

parental controlling style and perception of parental autonomy support. Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The perception of parents' motivating style score consists of the sum of the responses to the fifteen questions divided by the total number of questions answered. An example of a response from this section was "*My parents help me choose my own direction*". For controlling items of the subscale, six responses were utilized with no responses being reverse coded. An example of a response from this section was, "*My parents are always telling me how to behave*".

**Familial Obligation.** Student's perception of their familial obligation was assessed utilizing four items following Fuligni (2001). Response options were based on a 7-point likert scale which ranged from 1= not true at all to 7 = very true. The familial obligation score consists of the sum of the responses to the four questions divided by the total number of questions answered. The responses asked of the students were the following: "*An important reason I try to do well in school is to please my parents-siblings*", "*I want to do well in school so that I can be better prepared to take care of my family*", "*The main reason I try to do well in school is to bring honor my family*", "*It is important to me that my parents-guardians are proud of my achievement in school*".

## **Hypotheses**

Guiding Research Question 1: Do parental practices that support autonomy predict students' various types of motivation in the classroom based on the four types identified by self-determination theory?

*Hypothesis 1:*

- A: Parental autonomy supportive practices predict external regulation in the classroom.
- B: Parental autonomy supportive practices predict introjected regulation in the classroom.
- C: Parental autonomy supportive practices predict identified regulation in the classroom.

D: Parental autonomy supportive practices predict intrinsic motivation in the classroom.

*Rationale:* The effect of parental autonomy support rather than that of educators on a student's motivation has been studied less, but research suggests it is important in student academic success. Since parents are the primary socializing agent in a student's early life, it is expected that they would have a substantial influence on their autonomous regulation (Grolnick & Price, 2005). This in return then should have some effect on a student's motivational tendencies in the classroom.

Guiding Research Question 2: Does familial obligation predict a students' various types of motivation in the classroom based on the four types identified by self-determination theory?

*Hypothesis 2:*

A: Familial obligation predicts external regulation in the classroom.

B: Familial obligation predicts introjected regulation in the classroom.

C: Familial obligation predicts identified regulation in the classroom.

D: Familial obligation predicts intrinsic motivation in the classroom.

*Rationale:* Much of the current research on familial obligation has focused on duties surrounding focuses on duties surrounding children's assistance to the family or to sibling care (Fuligni, 2001). However, a child's familial obligation can extend to their decisions and activities outside of the household, in which a smaller amount of research has been examined. Furthermore, there has been little research to examining the direct connection between a student's family orientation and their motivational tendencies in the classroom.

Guiding Research Question 3: Does familial obligation mediate the relationship between autonomy supportive practices and motivation?

*Hypothesis 3:*

A: Parental autonomy supportive practices predict family obligation.

B: The effect of autonomy support on motivation will be reduced when controlling for family obligation.

*Rationale:* There has been limiting research previously that has analyzed familial obligation as a mediator between autonomy support and motivation. This part of the study has limited support in previous research but presents itself as the unique aspect of the current study.

## CHAPTER IV

### FINDINGS

All tests and analyses were performed utilizing IBM SPSS Statistics Version 24 software. In order to test the various hypotheses of this study a correlation matrix was developed with descriptive statistics of standard deviation and mean provided for each variable. Multiple regression analyses were performed and partial mediation was established. The results of these analyses are reported in the following sections.

**Correlation between family obligation and motivation.** To exam the bivariate relationship between family obligation and extrinsic motivation (including introjected regulation and identified regulation), a correlation matrix was conducted (Table 2). As can be seen from Table 2, all variables were significantly and positively correlated with each other including family obligation and external regulation ( $r = .463, p < 0.01$ ). Family obligation and introjected regulation were also significantly and positively correlated ( $r = .558, p < 0.01$ ).

Intercorrelations between family obligation and intrinsic motivation or identified regulation, were also examined. As seen in Table 2, family obligation was significantly and positively correlated with intrinsic motivation ( $r = .263, p < 0.01$ ) and identified regulation ( $r = .374, p < 0.01$ ).

**Correlation between autonomy support and family obligation.** Connections between family obligation and parental practices that are supportive of autonomy was analyzed as well. As seen in Table 2, family obligation was significantly and positively correlated with parental practices that are supportive of autonomy ( $r = .291, p < 0.01$ ).



**Correlation between autonomy support and motivation.** Additionally, connections between autonomy support and of the four levels of motivation were also examined. All four levels of motivation were significantly and positively correlated with parental autonomy supportive practices. As seen in Table 2, autonomy support and external regulation ( $r = .267, p < 0.01$ ), autonomy support and introjected regulation ( $r = .382, p < 0.01$ ), autonomy support and identified regulation ( $r = .350, p < 0.01$ ), and autonomy and intrinsic motivation ( $r = .230, p < 0.01$ ) were all significantly and positively correlated to each other.

Table 2.1  
*Means, standard deviations and intercorrelations for Extrinsic Motivation, Introjected Regulation, Identified Regulation, Intrinsic Motivation, Family Obligation and Autonomy Support (N=237)*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Extrinsic Motivation	4.32	1.28	—	.624**	.417**	.328**	.463**	.267**
2. Introjected Regulation	4.1	1.45		—	.707**	.509**	.558**	.382**
3. Identified Regulation	4.91	1.38			—	.589**	.374**	.350**
4. Intrinsic Motivation	2.63	1.29				—	.263**	.230**
5. Family Obligation	5.2	1.5					—	.291**
6. Autonomy Support	4.37	1.33						—

\*\*  $p < 0.01$

### Multivariate Analysis

**Multivariate Analysis Predicting External Regulation.** Presented in Table 3.1 is the hierarchical multiple regression analysis examining the link between parental autonomy support, family obligation and external regulation. Previous bivariate results indicated a strong correlation between parental autonomy support, family obligation and external regulation. In step 1, external regulation is regressed on ethnicity and sex to serve as a baseline. No significant differences in external regulation were found between, Asian, Latino and European American students or between males and females. In step 2 of the analysis, sex and ethnicity are controlled for. Additionally in step 2, it was found that females negatively predicted external regulation ( $\beta$

= -0.132,  $p < 0.05$ ). However, in step 2 of the analysis, parental autonomy supportive practices significantly predicted external regulation ( $\beta = 0.277, p < 0.05$ ). In step 3 of Table 3.1, when controlling for ethnicity, gender and parental autonomy supportive practices family obligation significantly predicted external regulation ( $\beta = 0.457, p < 0.05$ ). Additionally, in step 3 females continued to stay negatively significant ( $\beta = -0.152, p < 0.05$ ), while parental autonomy supportive practices remained positively significant ( $\beta = 0.135, p < 0.05$ ).

Table 3.1

*Hierarchical multiple regression analysis summary predicting External Regulation from Familial Obligation, when controlling for ethnicity, sex and parental autonomy support. (N=237)*

Variable	B	SEB	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1				0.014	0.001
(Constant)	4.464	0.169			
Asian	0.054	0.211	0.02		
Latino	-0.019	0.203	-0.007		
Female	-0.292	0.167	-0.115		
Step 2				0.089	0.074
(Constant)	3.277	0.315			
Asian	0.155	0.204	0.057		
Latino	0.042	0.196	0.016		
Female	-0.337	0.161	-0.132 *		
Autonomy	0.265	0.060	0.277 *		
Step 3				0.267	0.251
(Constant)	2.1	0.324			
Asian	-0.131	0.188	-0.048		
Latino	-0.282	0.181	-0.108		
Female	-0.389	0.145	-0.152 *		
Autonomy	0.129	0.057	0.135 *		
Family Obl.	0.387	0.052	0.457 *		

\* $p < 0.05$

**Multivariate Analysis Predicting Introjected Regulation.** Displayed in Table 3.2 is the results of the hierarchical multiple regression analysis examining the link between family obligation and introjected regulation. In step 1, introjected regulation is regressed on ethnicity and sex to serve as a baseline. No significant differences in introjected regulation were found

between, Asian, Latino and European American students or between males and females. In step 2 of the analysis, when controlling for sex and ethnicity, parental autonomy supportive practices remained significant ( $\beta = 0.385, p < 0.05$ ). It can also be interpreted from step 3 of Table 3.2 when controlling for ethnicity, gender and parental autonomy support, family obligation significantly predicts introjected regulation ( $\beta = 0.507, p < 0.05$ ). Additionally, when examining Table 3.2 in step 3, it can be seen that the Latino variable becomes significantly negatively associated with introjected motivation ( $\beta = -0.128, p < 0.05$ ).

Table 3.2  
*Hierarchical multiple regression analysis summary predicting Introjected Regulation from Familial Obligation, when controlling for ethnicity, sex and parental autonomy support.*  
( $N=237$ )

	Variable	<i>B</i>	<i>SEB</i>	$\beta$		$R^2$	$\Delta R^2$
Step 1	(Constant)	3.923	0.190			0.013	0
	Asian	0.127	0.237	0.041			
	Latino	-0.069	0.228	-0.023			
	Sex	0.285	0.188	0.099			
Step 2	(Constant)	2.064	0.341			0.159	0.145
	Asian	0.286	0.221	0.093			
	Latino	0.027	0.212	0.009			
	Sex	0.215	0.175	0.075			
	Autonomy	0.414	0.065	0.385	*		
Step 3	(Constant)	0.591	0.336			0.378	0.365
	Asian	-0.072	0.195	-0.023			
	Latino	-0.378	0.188	-0.128	*		
	Sex	0.15	0.151	0.052			
	Autonomy	0.245	0.059	0.228	*		
	Family Obl.	0.484	0.054	0.507	*		

\* $p < 0.05$

**Multivariate Analysis Predicting Identified Regulation.** Presented in Table 3.3 are the results of the hierarchical multiple regression analysis exploring the link between family

obligation and identified regulation. In step 1, identified regulation is regressed on ethnicity and sex to serve as a baseline. No significant differences in identified regulation were found between, Asian, Latino and European American students or between males and females. As seen in step 2 of Table 3.3, when controlling for sex and ethnicity, parental autonomy supportive practices significantly predicts identified regulation ( $\beta = 0.395, p < 0.05$ ). In step 3 of Table 3.3, when controlling for ethnicity, gender and autonomy supportive practices, family obligation significantly predicts identified regulation ( $\beta = 0.298, p < 0.05$ ). Additionally, in step 3 autonomy supportive practices remain significant ( $\beta = 0.267, p < 0.05$ ), indicating partial mediation of the family obligation between the autonomy supportive practices and identified regulation.

Table 3.3

*Hierarchical multiple regression analysis summary predicting Identified Regulation from Familial Obligation, when controlling for ethnicity, sex and parental autonomy support. (N=237)*

	Variable	B	SEB	$\beta$		R <sup>2</sup>	$\Delta R^2$
Step 1	(Constant)	4.725	0.183			0.015	0.002
	Asian	0.279	0.229	0.094			
	Latino	-0.017	0.220	-0.006			
	Sex	0.198	0.182	0.071			
Step 2	(Constant)	3.052	0.333			0.127	1.293
	Asian	0.422	0.215	0.142			
	Latino	0.069	0.206	0.024			
	Sex	0.135	0.170	0.049			
	Autonomy	0.373	0.064	0.359	*		
Step 3	(Constant)	2.218	0.364			0.2	1.237
	Asian	0.219	0.211	0.074			
	Latino	-0.16	0.203	-0.056			
	Sex	0.098	0.163	0.035			
	Autonomy	0.277	0.064	0.267	*		
	Family Obl.	0.274	0.058	0.298	*		

\* $p < 0.05$

**Multivariate Analysis Predicting Intrinsic Motivation.** Displayed in Table 3.4 are the results of the hierarchical multiple regression analysis examining the link between family obligation and intrinsic motivation. In step 1, intrinsic motivation is regressed on ethnicity and sex to serve as a baseline. No significant differences in intrinsic motivation were found between, Asian, Latino and European American students or between males and females. In step 2 of Table 3.4, when controlling for sex and ethnicity, parental autonomy supportive practices significantly predicts intrinsic motivation ( $\beta = 0.224, p < 0.05$ ). When controlling for ethnicity, gender and parental autonomy supportive practices in Step 3 in Table 3.4, family obligation significantly predicts intrinsic motivation ( $\beta = 0.229, p < 0.05$ ). Additionally, in step 3 parental autonomy supportive practices remains significant ( $\beta = 0.153, p < 0.05$ ).

Table 3.4

*Hierarchical multiple regression analysis summary predicting Intrinsic Motivation from Familial Obligation, when controlling for ethnicity, sex and parental autonomy support. (N=237)*

	Variable	B	SEB	$\beta$	R <sup>2</sup>	$\Delta R^2$	
Step 1	(Constant)	2.587	0.172		0.006	-0.007	
	Asian	-0.085	0.215	-0.031			
	Latino	-0.102	0.207	-0.038			
	Sex	0.195	0.171	0.075			
Step 2	(Constant)	1.61	0.326		0.056	0.04	
	Asian	-0.001	0.211	0			
	Latino	-0.051	0.202	-0.019			
	Sex	0.158	0.167	0.061			
	Autonomy	0.218	0.062	0.224			*
Step 3	(Constant)	1.009	0.365		0.101	0.081	
	Asian	-0.147	0.211	-0.053			
	Latino	-0.217	0.204	-0.081			
	Sex	0.132	0.163	0.051			
	Autonomy	0.149	0.064	0.153			*
	Family Obl.	0.197	0.058	0.229			*

\* $p < 0.05$

**Multivariate Analysis of Family Obligation and Autonomy Support.** Presented in Table 4 are the results of the hierarchical multiple regression analysis predicting family obligation when controlling for autonomy support. In step 2 of Table 4, when controlling for ethnicity and gender, autonomy support significantly predicts family obligation ( $\beta = 0.311, p < 0.05$ ). Additionally though, Latino and Asian ethnicity variables remain significant predictors ( $\beta = 0.271, p > 0.05; \beta = 0.229, p > 0.05$ ).

Table 4  
*Hierarchical multiple regression analysis summary predicting Familial Obligation with Autonomy Support when controlling for ethnicity and sex. (N=237)*

Variable	B	SEB	$\beta$		R <sup>2</sup>	$\Delta R^2$
Step 1					0.054	0.041
(Constant)	4.616	0.195				
Asian	0.605	0.244	0.188	*		
Latino	0.757	0.234	0.245	*		
Female	0.194	0.193	0.064			
Step 2					0.149	0.134
(Constant)	3.044	0.360				
Asian	0.74	0.233	0.229	*		
Latino	0.837	0.233	0.271	*		
Female	0.134	0.184	0.045			
Autonomy	0.35	0.069	0.311	*		

\* $p < 0.05$

**Family Obligation as a Mediator.** In hypothesis 3 it is proposed that family obligation mediating the effect between parental autonomy support for all four types of motivation proposed by self-determination theory. When analyzing Tables 3.1, 3.2, 3.3 and 3.4, through step 2 and step 3, it can be found that family obligation is significantly predicting motivation when controlling for ethnicity, gender and parental autonomy support.

Additionally, when examining Step 2 of Tables 3.1, 3.2, 3.3 and 3.4, it can be found that parental autonomy support also significantly predicts varying levels of motivation. Furthermore, in Table 4, parental autonomy support is found to positively and significantly predict family obligation. Finally, in Tables 3.1, 3.2, 3.3 and 3.4, although the effect of parental autonomy support is still significant when family obligation is added to step 3 of each table, the effect is considerably reduced in each regression analysis. In Table 3.1, from step 2 to step 3, parental autonomy support is reduced by 51%. In table 3.2, from step 2 to step 3, parental autonomy support is reduced by 41%. In table 3.3, from step 2 to step 3, parental autonomy support is reduced by 26%. In table 3.4, from step 2 to step 3, parental autonomy support is reduced by 32%. Through the analysis of Tables 3.1, 3.2, 3.3 and 3.4 and by following Baron and Kenny's (1986) model and definition of mediation, it can be determined that family obligation mediates a considerable portion of the effect of parental autonomy support on each of the four types of motivation examined here.

## CHAPTER V

### DISCUSSION AND IMPLICATIONS FOR RESEARCH

#### Discussion

The current study was a secondary quantitative analysis study that utilized previously collected likert scaled survey data. The purpose was to begin to better understand the connections between familial obligation and motivation regarding students in a classroom environment. It was found that familial obligation was a mediator between parental autonomy supportive practices and motivation at varying levels. Furthermore, there were additional notable correlations between variables including that of ethnicity and sex.

#### Interpretation of Results

**Research Question 1: Parental autonomy supportive practices and motivation.** As was hypothesized, parental autonomy supportive practices are significant predictors of motivation at all four types of identified by self-determination theory (external regulation, introjected regulation, identified regulation, intrinsic motivation). These results were in alignment with prior research that suggested positive parental autonomy support encouraged student motivation in a classroom setting (Grolnick & Ryan, 1989). The current findings suggest that parental autonomy support is an important consideration and factor when attempting to understand a student's motivation and academic success in the classroom. However, previous research has shown that parental autonomy support would be assumed to predict autonomous forms of motivation such as intrinsic motivation and identified regulation. It is slightly unexpected that parental autonomy supportive practices would also predict more controlled forms of motivation such as introjected regulation and external regulation. Further research is needed to advance these particular results and analyses.



**Research Question 2: Familial obligation and motivation.** The results of the study align with the original hypotheses that familial obligation would be a predictor of motivation. This was the case for four distinct types of motivation identified by self-determination theory (external regulation, introjected regulation, identified regulation, intrinsic motivation). Previous research had shown that adolescents who had attitudes supportive of family obligations tended to be more academically motivated over all (Fuligni, Tseng and Lam, 1999).

However, the current study expanded on previous research and showed that familial obligation has a significant impact on four distinct types of motivation identified by self-determination theory, which previously had not been studied. The importance of these results shows a more detailed connection between a student's perception of family obligation and motivation in the classroom. In particular, the finding that intrinsic motivation and familial obligation were significantly and positively correlated is contrary to the finding by Fuligni (2001), which found no association, and merits further study.

These particular results bring new insight into the research area of motivation and family science. It exhibitions that studying the connections between familial obligation and motivation is a vital factor to consider. Moreover, this highlights the need to consider factors external to the classroom, which may impact motivation.

**Research Question 3: Familial Obligation as a Mediator.** Hypothesis 3 dealt with familial obligation as a mediator of the relationship between parental autonomy supportive practices and motivation at all four varying levels. As was hypothesized, familial obligation was a successful partial mediator between parental autonomy supportive practices and motivation. This was the most noteworthy outcome of the current study because familial obligation has not been examined as a mediator between these two variables in previous research.

The importance of these results displays that familial obligation successfully partially mediates the relationship between parental autonomy supportive practices and motivation. By establishing familial obligation as a partial mediator, we can determine that familial obligation has some sort of impact on a student's motivation. Thus, we can establish that the connections between a student's perception of familial obligation and their motivational tendencies should be explored in more depth.

In addition, these results in particular support the overarching goal of the current study that motivation needs to begin to be analyzed utilizing a more holistic ecological approach (Bronfenbrenner, 2009). By looking past dyadic relationships in the classroom, motivational research can be challenged at looking at addition micro-level and macro-level influencing relationships such as a student's family obligation. These results have displayed that looking at these more complex relationships are vital to future research projects and developments.

### **Limitations of the Current Study**

There were several limitations to the current study. The research design of this study exhibited some limitations. Originally, the data for this study was collected during a one-time data collection utilizing likert scaled survey response. This means that the data collected only represents the students' thoughts, feelings and perceptions at the given time of the survey. The format of the survey and its questions may have served as a limitation as well since it mainly utilized likert scaled questions. Consequently, it is probable that utilizing an additional form of data collection, such as interviewing student participants, could lead to more conclusive results. This would allow for future studies to have a better rounded and in depth analysis of the developed connections.

Additionally, the sample was another main limitation of the study. The sample was limited to only one school for data collection. Thus, it is possible that the results could have been

changed if more schools in the region were surveyed. This means that the results of the study could be just generalizable for the school studied in particular but could potentially not reflect student opinions across all schools in the region. Furthermore, the sample size was relatively small once it was reduced by the researcher to just looking at Asian American, Latino and European American students' from the original sample.

### **Strengths of the Current Study**

A primary strength of this study was that it examined the connections between several variables that had not been looked at closely before. In previous research, familial obligation had been connected to motivation but never analyzed specifically utilizing self-determination theory. Furthermore, this study was unique because it was able to examine familial obligation as a mediator between parental autonomy support and varying levels of motivation based on self-determination theory. Exploring familial obligation as a partial mediator between parental autonomy supportive practices and motivation utilizing self-determination theory had not been investigated in previous research.

In addition, this current study extended the body of research within motivation past the scope of relationships inside the classroom to interactions outside of the classroom, such as familial obligation.

Also, even though the study's data was collected at one school. The school chosen for the study was extremely diverse in its student population. This adds to the strength of the study by allowing for a diverse sample population.

### **Future Research**

There were several unanswered questions that arose in the current study which were not foreseen by the author's original research questions and hypotheses. Specifically, there were multiple correlations between variables studied that were not anticipated. In particular

differences in sex and ethnic background, which only appeared in multivariate analyses showed a need for additional investigation in future research.

When running the multiple regression analyses predicting extrinsic motivation, it was found that females were positively and significantly correlated. Meaning that overall females had higher levels of extrinsic motivation than males. This displays that there are possible sex differences when considering extrinsic motivation in the classroom, which are suppressed until you consider parental autonomy support. It is feasible this may be due to different environmental settings or different gender socialization between males and females. Future research could provide more insight as to why these sex differences exist and further explore this topic in more depth.

Additionally, while running the multiple regression analyses predicting introjected regulation, it was found that Latinos reported significantly lower levels of introjected regulation after controlling for familial obligation. This exhibits there may be significant differences in ethnic backgrounds when it comes to familial obligation. There is a possibility; this may be due to cultural differences across the student sample. In future research, these differences could be further explored to better understand why these differences may exist.

Furthermore, future research could adapt the results and implications of the current study to a larger population. This could include expanding the sample across multiple schools in the same region or examining different age groups.

### **Implications and Conclusions**

The current study has extensive implications not only across the field of motivation but in regards to the field of family science as well. Many of the questions of this study were only partially addressed and surfaced many new questions to be further explored. In addition, this

study aimed to address many of the unanswered questions in previous research regarding the connections between a student's family life at home and motivational outcomes in the classroom.

There were significant connections between a student's perception of their own familial obligation and motivation at varying levels based on self-determination theory. This exhibits that a student's motivation is a more complicated construct than previous research may have perceived. A student's motivation is perhaps more complex than just analyzing the effects of a teacher's positive or negative teaching influence. It is also more complicated than simply analyzing the basic dyadic relationship a student may experience between teachers, peers or caregivers. To fully understand a student's motivation, all aspects of an individual's ecological environment needs to be further explored and analyzed including familial obligation.

This research challenges future research to look past dyadic relationships in the classroom and encourage researchers to begin exploring motivation from a more ecological standpoint. Students' in the United States are more diverse than ever before and come from a multitude of backgrounds, families and communities. It is imperative that future research aims to explore these differences to have a better understanding of what motivates students and how to maximize their learning potential in the classroom.

The result of this study has found connections between relationships that in previous research have not been explored in much depth. In particular, finding significant connections between family obligation and motivation challenges future research to push past dyadic relationships to begin studying student motivation from a more holistic ecological lens. Additionally, this study has found that there is connection between family obligation and motivation that needs to be studied further in depth. By having a better and fuller understanding of student perception of their own family obligation, more successful motivational techniques can be persuaded in the classroom.

Likewise, exploring ethnic background and sex differences is also essential to having a better understanding as to why students' learn the way they do and how to optimize motivational potential in the classroom. Moving forward, researchers within the field of motivation and family science should continue observing students as individuals and consider all the ecological systems that may influence a student's motivation and academic success.

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Children's Hospital Colorado  
University of Colorado Denver  
Colorado Prevention Center

## **Certificate of Exemption**

15-Feb-2017

**Investigator:** Larissa Kelly  
**Subject:** COMIRB Protocol 17-0126 Initial Application  
**Review Date:** 15-Feb-2017  
**Effective Date:** 14-Feb-2017  
**Anticipated Completion Date:** 14-Feb-2020  
**Sponsor(s):** No Sponsor~  
**Title:** Connection between Parenting Roles and Familial Obligations in Regards to Student Motivation Based on Self-determination Theory

**Exempt Category: 4**

**Submission ID:** app

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### **SUBMISSION DESCRIPTION:**

Exemption determination

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**Your COMIRB Initial submission app has been APPROVED FOR EXEMPTION.** Periodic continuing review is not required. For the duration of your protocol, any change in the experimental design/content/personnel of this study must be approved by COMIRB before implementation of the changes.

The anticipated completion date of this protocol is 14-Feb-2020. COMIRB will administratively close this project on this date unless otherwise instructed by e-mail to [COMIRB@ucdenver.edu](mailto:COMIRB@ucdenver.edu). If the project is completed prior to this date, please notify the COMIRB office in writing or by e-mail once the project has been closed

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Throughout the surveys, you will be asked to respond about yourself in one MATHEMATICS CLASS that you are taking this semester. What type of MATHEMATICS CLASS will you be using as the basis for your responses to the surveys? Please write down the name of the class, class time, and last name of the teacher.

- (1) Name of the class \_\_\_\_\_  
 (2) Class time \_\_\_\_\_  
 (3) Last name of the teacher \_\_\_\_\_

**Here are some questions about yourself as a student in the context of the MATH CLASS you are taking this semester.**

Each question has a scale from 1 (not at all true) to 7 (very true).

Please circle the number that best describes what you think.

There is no right or wrong answer on these items, so please be honest in answering questions.

No one at school or home will see your answers.

Example:

	Not at All True	2	Somewhat True	3	4	Very True	6	7
I enjoy reading my textbook.	1	2	3	4	<input type="checkbox"/>	6	7	

Please put a checkmark in the boxes (  ) and fill in the blanks with your responses.

1. Your Sex:  Male  Female

2. Your Age: \_\_\_\_\_ years old

3. What is yours and your parents' ethnic background? Check off the best description below:						
	Asian, Asian American	American Indian Native American	Black, African American	Latino/a, Mexican, Mexican American	White, Euro- American	Mixed or Other (write in below): _____
(1) You	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) Father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) Mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Is English your native/home language?  Yes  No (If not, please specify: \_\_\_\_\_)

5. Did you immigrate or move to the U.S. from elsewhere?  Yes (Then, how old were you? \_\_\_\_ years old)  
 No

6. Where were you and your parents born (State or Country)? Please answer as specifically as you know.

(1) Your Birthplace: \_\_\_\_\_

(2) Your father's Birthplace: \_\_\_\_\_ (or check here if you don't know )

(3) Your mother's Birthplace: \_\_\_\_\_ (or check here if you don't know )

7. Generation - Check off the best description below:

1<sup>st</sup> generation (I and my mother were born in another country.)

2<sup>nd</sup> generation (I was born in the US, and my mother was born in another country.)

3<sup>rd</sup> generation (I and my mother were born in the US, and my grandparents were born in another country.)

4<sup>th</sup> generation (I and my mother were born in the US. And, as far as I know, my grandparents were born in the US.)

8. What is your approximate grade in your math class? Letter grade (A, B, C, D, etc.): \_\_\_\_\_

9. Who is your primary care-giver during the day, for most of the week?

Your Mother  Your Father  Your Grandmother  Your Grandfather  Your older sibling

Other (write in): \_\_\_\_\_

**Here are some questions about yourself as a student in the context of the MATH CLASS you are taking this semester.**

Each question has a scale from 1 (not at all true) to 7 (very true).

Please circle the number that best describes what you think.

There is no right or wrong answer on these items, so please be honest in answering questions.

No one at school or home will see your answers.

	Not at All True	2	Somewhat True	4	Very True	6	7
<b>Example.</b> I enjoy reading my textbook.	1	2	3	4	<input type="checkbox"/>	6	7

<i>In my math class...</i>	Not at All True	2	Somewhat True	4	5	6	7
1. It's important to me that I learn a lot of new concepts this year.	1	2	3	4	5	6	7
2. It's important to me that other students in my class think I am good at my class work.	1	2	3	4	5	6	7
3. It's important to me that I don't look stupid in class.	1	2	3	4	5	6	7
4. One of my goals in class is to learn as much as I can.	1	2	3	4	5	6	7
5. One of my goals is to show others that I'm good at my class work.	1	2	3	4	5	6	7
6. One of my goals is to keep others from thinking I'm not smart in class.	1	2	3	4	5	6	7
7. One of my goals is to master a lot of new skills this year.	1	2	3	4	5	6	7
8. One of my goals is to show others that class work is easy for me.	1	2	3	4	5	6	7
9. It's important to me that I thoroughly understand my class work.	1	2	3	4	5	6	7
10. One of my goals is look smart in comparison to the other students in my class.	1	2	3	4	5	6	7
11. It's important to me that my teacher doesn't think that I know less than others in class.	1	2	3	4	5	6	7
12. It's important to me that I improve my skills this year.	1	2	3	4	5	6	7
13. It's important to me that I look smart compared to others in my class.	1	2	3	4	5	6	7
14. One of my goals in class is to avoid looking like I have trouble doing the work.	1	2	3	4	5	6	7

**Here are more questions about yourself as a student in the context of the MATH CLASS you are taking this semester.**

There is no right or wrong answer on these items, so please be honest in answering questions.

No one at school or home will see your answers.

<b>A. Why do I do my math homework?</b>	Not at All True		Somewhat True		Very True		
15. Because I want the teacher to think I'm a good student.	1	2	3	4	5	6	7
16. Because I'll get in trouble if I don't.	1	2	3	4	5	6	7
17. Because it's fun.	1	2	3	4	5	6	7
18. Because I will feel bad about myself if I don't do it.	1	2	3	4	5	6	7
19. Because I want to understand the subject.	1	2	3	4	5	6	7
20. Because that's what I'm supposed to do.	1	2	3	4	5	6	7
21. Because I enjoy doing my homework.	1	2	3	4	5	6	7
22. Because it's important to me to do my homework.	1	2	3	4	5	6	7
<b>B. Why do I work on my math class work?</b>	Not at All True		Somewhat True		Very True		
23. So that the teacher won't yell at me.	1	2	3	4	5	6	7
24. Because I want the teacher to think I'm a good student.	1	2	3	4	5	6	7
25. Because I want to learn new things.	1	2	3	4	5	6	7
26. Because I'll be ashamed of myself if it didn't get done.	1	2	3	4	5	6	7
27. Because it's fun.	1	2	3	4	5	6	7
28. Because that's the rule.	1	2	3	4	5	6	7
29. Because I enjoy doing my class work.	1	2	3	4	5	6	7
30. Because it's important to me to work on my class work.	1	2	3	4	5	6	7
<b>C. Why do I try to answer hard questions in math class?</b>	Not at All True		Somewhat True		Very True		
31. Because I want the other students to think I'm smart.	1	2	3	4	5	6	7
32. Because I feel ashamed of myself when I don't try.	1	2	3	4	5	6	7
33. Because I enjoy answering hard questions.	1	2	3	4	5	6	7
34. Because that's what I'm supposed to do.	1	2	3	4	5	6	7
35. To find out if I'm right or wrong.	1	2	3	4	5	6	7
36. Because it's fun to answer hard questions.	1	2	3	4	5	6	7
37. Because it's important to me to try to answer hard questions in class.	1	2	3	4	5	6	7
38. Because I want the teacher to say nice things about me.	1	2	3	4	5	6	7
<b>D. Why do I try to do math well in school?</b>	Not at All True		Somewhat True		Very True		
39. Because that's what I'm supposed to do.	1	2	3	4	5	6	7
40. So my teachers will think I'm a good student	1	2	3	4	5	6	7
41. Because I enjoy doing my school work well.	1	2	3	4	5	6	7
42. Because I will get in trouble if I don't do well.	1	2	3	4	5	6	7
43. Because I'll feel really bad about myself if I don't do well.	1	2	3	4	5	6	7
44. Because it's important to me to try to do well in school.	1	2	3	4	5	6	7
45. Because I will feel really proud of myself if I do well.	1	2	3	4	5	6	7
46. Because I might get a reward if I do well.	1	2	3	4	5	6	7

**Below are examples of things students sometimes feel about their parents when the students study math. Please think of whichever parent or parents or guardian with whom you live or you think of as your primary care-giver as your reference.**

There is no right or wrong answer on these items, so please be very honest in answering questions.

Parents will never see your answers.

<i>In terms of studying math...</i>	Not at All True		Somewhat True		Very True		
47. My parents want me to spend time thinking about concepts.	1	2	3	4	5	6	7
48. My parents don't like it when I make mistakes in my class work.	1	2	3	4	5	6	7
49. My parents would like it if I could show that I'm better at class work than other students in my class.	1	2	3	4	5	6	7
50. My parents want my work to be challenging for me.	1	2	3	4	5	6	7
51. My parents would like me to show others that I am good at class work.	1	2	3	4	5	6	7
52. My parents would like it if I didn't look stupid in class.	1	2	3	4	5	6	7
53. My parents would like me to do challenging class work, even if I make mistakes.	1	2	3	4	5	6	7
54. My parents think getting the right answers in class is very important.	1	2	3	4	5	6	7
55. My parents think that it's important not to do worse than other students.	1	2	3	4	5	6	7
56. My parents want me to understand my class work, not just memorize how to do it.	1	2	3	4	5	6	7
57. My parents think that it's important that my teacher doesn't think that I know less than others in class.	1	2	3	4	5	6	7
58. My parents want me to see how my class work relates to things outside of school.	1	2	3	4	5	6	7
59. My parents would be pleased if I could show that class work is easy for me.	1	2	3	4	5	6	7
60. My parents want me to understand concepts, not just do the work.	1	2	3	4	5	6	7
61. My parents want me to avoid looking like I have trouble doing the work in class.	1	2	3	4	5	6	7

**Below are some more examples of things students sometimes feel about their parents. Please think of whichever parent or parents or guardian with whom you live or you think of as your primary care-giver as your reference.**

There is no right or wrong answer on these items, so please be very honest in answering questions. Parents will never see your answers.

	Not at All True		Somewhat True		Very True		
62. My parents seem to know how I feel about things.	1	2	3	4	5	6	7
63. My parents whenever possible, allow me to choose what to do.	1	2	3	4	5	6	7
64. My parents expect me to act right away when they make a request.	1	2	3	4	5	6	7
65. My parents try to tell me how to run my life.	1	2	3	4	5	6	7
66. My parents try to understand how I see things.	1	2	3	4	5	6	7
67. My parents are always telling me how I should behave.	1	2	3	4	5	6	7
68. My parents tell me exactly how to do my work.	1	2	3	4	5	6	7
69. My parents listen to my opinion or perspective when I've got a problem.	1	2	3	4	5	6	7
70. My parents try to tell me what kinds of friends I should have.	1	2	3	4	5	6	7
71. My parents allow me to contradict or disagree with their opinion.	1	2	3	4	5	6	7
72. My parents insist upon my doing things their way.	1	2	3	4	5	6	7
73. My parents are usually able to consider things from my point of view.	1	2	3	4	5	6	7
74. My parents can always tell how I feel about important matters.	1	2	3	4	5	6	7
75. My parents help me to choose my own direction.	1	2	3	4	5	6	7
76. My parents aren't very sensitive to my own needs.	1	2	3	4	5	6	7

**Below are examples of things students sometimes feel about their family.**

There is no right or wrong answer on these items, so please be very honest in answering questions. Family will never see your answers.

	Not at All True		Somewhat True		Very True		
77. An important reason that I try to do well in school is to please my parents-siblings.	1	2	3	4	5	6	7
78. I want to do well in school so that I can be better prepared to take care of my family.	1	2	3	4	5	6	7
79. The main reason I try to do well in school is to bring honor to my family.	1	2	3	4	5	6	7
80. It is important to me that my parents-guardians are proud of my achievement in school.	1	2	3	4	5	6	7

**Below are examples of things students sometimes feel about their MATH teachers.**

There is no right or wrong answer on these items, so please be very honest in answering questions.

Teachers will never see your answers.

<i>In my math class...</i>	Not at All True	2	Somewhat True	3	4	Very True	5	6	7
81. My teacher in math class seems to know how I feel about things.	1	2	3	4	5	6	7		
82. My teacher in math class whenever possible, allows me to choose what to do.	1	2	3	4	5	6	7		
83. My teacher in math class expects me to act right away when he/she makes a request.	1	2	3	4	5	6	7		
84. My teacher in math class tries to understand how I see things.	1	2	3	4	5	6	7		
85. My teacher in math class is always telling me how I should behave.	1	2	3	4	5	6	7		
86. My teacher in math class tells me exactly how to do my work.	1	2	3	4	5	6	7		
87. My teacher in math class listens to my opinion or perspective when I've got a problem.	1	2	3	4	5	6	7		
88. My teacher in math class allows me to contradict or disagree with his/her opinion.	1	2	3	4	5	6	7		
89. My teacher in math class insists upon my doing things his/her way.	1	2	3	4	5	6	7		
90. My teacher in math class is usually able to consider things from my point of view.	1	2	3	4	5	6	7		
91. My teacher in math class helps me to choose my own direction.	1	2	3	4	5	6	7		
92. My teacher in math class isn't very sensitive to my own needs.	1	2	3	4	5	6	7		

**Here are some questions about the MATH CLASS you are taking and about the work you do in the class this semester.**

There is no right or wrong answer on these items, so please be honest in answering questions.

No one at school or home will see your answers.

<i>In my math class...</i>	Not at All True	2	Somewhat True	3	4	Very True	5	6	7
93. In our class, trying hard is very important.	1	2	3	4	5	6	7		
94. In our class, showing others that you are not bad at class work is really important.	1	2	3	4	5	6	7		
95. In our class, how much you improve is really important.	1	2	3	4	5	6	7		
96. In our class, getting good grades is the main goal.	1	2	3	4	5	6	7		
97. In our class, really understanding the material is the main goal.	1	2	3	4	5	6	7		
98. In our class, getting right answers is very important.	1	2	3	4	5	6	7		
99. In our class, it's important that you don't make mistakes in front of everyone.	1	2	3	4	5	6	7		



memorize it.							
101. In our class, it's important not to do worse than other students.	1	2	3	4	5	6	7
102. In our class, learning new ideas and concepts is very important.	1	2	3	4	5	6	7
103. In our class, it's very important not to look dumb.	1	2	3	4	5	6	7
104. In our class, it's OK to make mistakes as long as you are learning.	1	2	3	4	5	6	7
105. In our class, it's important to get high scores on tests.	1	2	3	4	5	6	7
106. In our class, one of the main goals is to avoid looking like you can't do the work.	1	2	3	4	5	6	7

**Thank you so much for your help!**

**Please check if you have completed all 8 pages before you turn in!**

