

# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Andy Baldwin

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

## Review Committee

Dr. Jody Dill, Committee Chairperson, Psychology Faculty

Dr. Rachel Piferi, Committee Member, Psychology Faculty

Dr. Elisha Galaif, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost

Sue Subocz, Ph.D.

Walden University

2020

Abstract

Autonomy-Supportive Behavior and Academic Intrinsic Motivation as Mediators  
Between Parental Authority and Academic Achievement

by

Andy Baldwin

MA, Walden University, 2016

Bachelors of Psychology

Proposal Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Psychology

Walden University

August 2020

## Abstract

A lack of student skill acquisition has hindered students between the ages of 11 and 14, from being academically successful. In addition, parental authority (PA) has been shown to initiate or hinder the development of intrinsic motivation (IM) and autonomy-supportive behavior (ASB). Literature has shown that IM and self-autonomy positively predict academic achievement (AA). The purpose of this study was to determine whether academic intrinsic motivation (AIM) and autonomy-supportive behavior (ASB) mediate the relationship between PA and AA. The theoretical foundation was based on self-determination theory, which has previously been used to examine relationships between PA, IM, ASB, and AA. To date, however, no study has examined the relationship between PA and AA when AIM and ASB were mediators. Questionnaires were completed by 68 middle school students in the study. Regression analysis was used to quantitatively investigate the extent to which self-autonomy and AIM mediated the relationship between PA and AA. This study established the significant effect of AIM and ASB on the relationship between PA and AA. Results indicated that ASB mediated the relationship between PA and AA, however AIM did not. Findings of this study maybe used to enlighten educators, families, and school administrators about different parenting styles and their impact on the relationship between PA and AA.

Autonomy-Supportive Behavior and Academic Intrinsic Motivation as Mediators  
Between Parental Authority and Academic Achievement

by

Andy Baldwin

MA, Walden University, 2016

Bachelors of Psychology

Proposal Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Psychology

Walden University

August 2020

## Table of Contents

List of Tables.....	iv
List of Figures.....	v
Chapter 1: Introduction to the Study.....	1
Background.....	1
Problem Statement.....	5
Purpose of the Study.....	6
Research Questions and Hypotheses.....	7
Theoretical Framework.....	9
Nature of the Study.....	10
Definitions.....	11
Assumptions.....	11
Scope and Delimitations.....	11
Limitations.....	14
Significance.....	15
Summary.....	16
Chapter 2: Literature Review.....	16
Introduction.....	16
Literature Search Strategies.....	18
Theoretical Foundation.....	18
Conceptual Framework.....	20
Parenting Style.....	20

Autonomy-Supportive Behavior.....	20
Academic Intrinsic Motivation.....	21
Academic Achievement.....	21
Parenting Style and Autonomy-Supportive Behavior.....	22
Autonomy-Supportive Behavior and Academic Achievement.....	23
Parenting Style and Academic Intrinsic Motivation.....	24
Parenting Style and Academic Achievement.....	26
Parenting Style, Autonomy-Supportive Behavior, Intrinsic Motivation, and Academic Achievement.....	27
Methodologies for Examining STD Relationships.....	28
Summary and Conclusions.....	29
Chapter 3: Research Method.....	31
Introduction.....	31
Purpose of the study.....	31
Research Design and Rationale.....	32
Population and Sampling Procedures.....	33
Recruitment and Data Collection Procedures.....	34
Instrumentation and Operationalization.....	35
Reliability and Validity.....	36
Analysis.....	39
Threats to Validity.....	42
Protection of Participants.....	43

Summary.....	43
Chapter 4: Analysis and Presentation of Data.....	44
Introduction.....	44
Hypotheses and Research Questions.....	45
Data Collection Procedures.....	45
Descriptive Statistics.....	46
Inferential Statistics.....	49
Summary.....	52
Chapter 5: Discussion, Conclusions, and Recommendations.....	52
Introduction.....	52
Interpretation of Study Findings.....	55
Limitations.....	58
Recommendations of Action.....	59
Recommendations for Future Research.....	59
Implications for Social Positive Change.....	60
Conclusions.....	61
References.....	62

List of Tables

Table 1. Descriptive Statistics of the Study.....	49
Table 2. Relationship Between PA and Academic Achievement.....	50
Table 3. Relationship Between PA and Autonomy-Supported Behavior.....	50
Table 4. Relationship Between Autonomy-Supportive Behaviour and the AA in the Presence of PA.....	50
Table 5. Relationship Between PA and Academic Achievement.....	51
Table 6. Relationship Between PA and Autonomy-Supported Behavior.....	51
Table 7. Relationship Between Autonomy-Supportive Behaviour and the Academic Achievement in the Presence of PA.....	52



List of Figures

Figure 1. Testing for complete mediation.....9

## Chapter 1: Introduction to the Study

### **Introduction**

Academic achievement (AA) is a popular topic of study in educational psychology. AA is the extent to which a student achieves educational goals (Luftenegger, Klug, Harrer, Langer, Spiel & Schober, 2016). Scholars have investigated this phenomenon to better understand why a gap exists between low and high academic achievers, and how educational professionals can intervene to help students improve their academic performance (Benita, Roth & Deci, 2014). To measure AA, school administrators use grade point average (GPA) on a scale of 4.0. The following sections will cover the variables and their definitions, the current problem, the purpose, and nature of the study, will also be mentioned. The latter section will also consist of the research questions, theoretical framework, and limitations. The topic of this study is the relationship between parental authority (PA), academic intrinsic motivation (AIM), autonomy-supportive behavior (ASB), and AA. Specifically, I plan to determine where AIM and ASB mediate the relationship between PA and AA. Upon completing this investigation, the goal is to identify AIM and ASB as significant mediators-hence filling a gap in literature. This investigation's implication for positive social change is an increase in students' academic performance.

### **Background**

Through many years of extensive research, scholars have identified variables associated with AA, such as intrinsic motivation (IM), ASB, and PA (Rivers, Mullis, Fortner & Mullis, 2012; Milyavskaya, McClure, Ma, Koestner, & Lydon, 2012; Froiland,

Oros, Smith, & Hirchert, 2012). IM is an internal drive that triggers an individual to behave in a certain way. An individual who is intrinsically motivated is seen to engage in a behavior not only because of an internal drive, but also because of a sense of joy experienced when engaging in that behavior (Froiland, Oros, Smith & Hirchert, 2012). For this study, IM will be discussed in general terms as it connects to literature, however, for this investigation, I will focus on a specific form of intrinsic motivation, *academic intrinsic motivation (AIM)*, which reflects a person's desire to select an activity, curiosity to learn, or feeling of efficacy related to an activity (Ryan & Deci, 2000).

ASB is defined as a social behavior that encourages children to take a lead when making decisions (Benita, Roth & Deci, 2014). This behavior also encourages children to follow their own interests. A third factor with respect to children, identified by scholars, is PA. According to Baumrind's (1967) work, PA is composed of four parenting styles that define childrearing practices: authoritative, authoritarian, permissive, and neglectful.

Authoritative and authoritarian styles have been seen to generate different outcomes in child development, positive and negative outcomes, respectively (Rivers, Mullis, Fortner & Mullis, 2012). Depending on what approach a parent uses to raise a child, parents have been seen to either display or conceal ASB and promote or discourage IM (Milyavskaya, McClure, Ma, Koestner & Lydon, 2012). Scholars have discovered that authoritative parenting promotes cognitive competence in children (Liew et al., 2014), perhaps due to certain characteristics of authoritative parents. They are very supportive, set high standards for their children, and grant appropriate levels of

autonomy (Oryan & Gastil, 2013). Similarly, Furtak and Hunter (2012) discovered that authoritative parenting can induce self-autonomy in children, which subsequently enhances their performance with respect to student success.

Moreover, Froiland (2015) has found a significant link between PA and IM. Froiland discovered that children from authoritative families are more intrinsically motivated toward academic success. This is because authoritative parents allow children to fulfill their need for autonomy, competence, and relatedness (Froiland, 2015). When these psychological needs are met, IM is increased in children. In turn, children are able to show exceptional performance, conceptual learning, and persistent behavior (Areepattamannil, Freeman & Klinger, 2011). Unlike authoritative parenting, authoritarian parenting promotes cognitive incompetence (Froiland, 2011). According to Froiland (2011), authoritarian parents shape and control the behaviors of a child by means of enforcing strict expectations. This style of parenting prevents children from fulfilling their need for autonomy, competence, and relatedness (Froiland, 2011). As a result, children from authoritarian families are less likely to feel intrinsically motivated to succeed in school (Froiland, 2015).

According to Hayenga and Corpus (2010), students with high levels of IM tend to achieve higher grades when compared to students with low intrinsic motivation. In one study, Areepattamannil et al. (2011) revealed that IM has a positive, predictive effect on AA. In another study, Areepattamannil et al. (2013) discovered that students with high IM are more likely to show exceptional performance, conceptual learning, and persistent behavior. Moreover, pioneers like Benware and Deci (1984) revealed that non-

intrinsically motivated students display poor levels of learning and are unable to perform at exceptional levels.

Scholars have found an important link between ASB and AA. ASB is a social behavior that encourages children to take a lead when making decisions (Benita, Roth & Deci, 2014). Benita et al. (2014) distinguished between two different types of behavioral regulation. One approach is called *autonomous regulation*, which is when parents provide a sense of choice rather than impose strict measures on a child. According to Benita et al., giving a sense of choice is an important indicator of autonomous motivation. Another characteristic of ASB is provisional choice. Research has shown that ASB is associated with positive outcomes such as effective problem solving, creativity, flexibility, and exceptional performance (Assor, Kanat-Maymon, & Kaplan, 2006). In a recent study, Furtak and Kunter (2012) found that autonomy-supportive classrooms encourage students to choose more difficult tasks, hence acquiring a deeper understanding of the material and accomplishing higher achievement goals. The study also showed that controlling children is associated with lower AA. According to Williams et al. (2006), children who are held back from establishing autonomy are less likely to perform well in school.

This study addresses a gap in knowledge in the discipline. Much literature is based on the associations among PA, IM, self-autonomy, and AA. However, no study to date has investigated the extent to which ASB and IM mediate the relationship between PA and AA. This study is needed so scholars and parents can recognize the importance of mediating variables and how they dictate the relationship between PA and AA.

## **Problem Statement**

A lack of student skill acquisition hinders students from being academically successful. Clearly, student success has become a major concern for scholars, educators, and researchers (Dehyadegary, Divsalar, Esmaeili, Sadr, & Askari, 2012). According to the International Association for the Evaluation of Educational Achievement (2011), students in various parts of the world are unable to perform well in reading literacy, mathematics, and science. Two assessments were administered by this organization to students in 49 countries. Scores revealed that students in countries like Kuwait, Oman, Morocco, and Saudi Arabia struggle when carried out tasks that involved reading comprehension, mathematical computation, and scientific reasoning (International Association for the Evaluation of Educational Achievement, 2011). Dehyadegary et al. (2012) mentioned the importance of understanding the variables that contribute to academic failure and success. In recent years, students in Canada have experienced a greater risk of school failure (Dehyadegary et al., 2012). In California, 2.19 million males and 1.96 million females dropped out of school (Dehyadegary et al., 2012). In Iran, a study conducted by Ghasemi (2010) showed that 22% of students in Iran struggled in school because of family problems. A potential reason students in certain parts of the world are unable to succeed may be PA. This is because authoritarian parenting has been seen to hinder the development of AA. It could be that parents of unsuccessful students use an authoritarian approach to parenting. According to Strage and Brandt (1999), authoritarian parents are known to conceal ASB when interacting with children, which could discourage students from taking initiative and developing a sense of control. Strage

and Brandt also noticed that authoritarian parents discourage children from developing IM. Thus, authoritarian parenting could be causing a lack of ASB and IM, hence making it difficult for students to become successful. However, the existing literature has not considered the mediating role of ASB and IM when examining the relationship between PA and student success.

### **Purpose of the Study**

I conducted a quantitative study to determine whether ASB and AIM act as mediating variables, influencing the relationship between PA and AA. Using self-determination theory as a lens has helped explain how motivation can impact a student's ability to succeed in school. In one study, scholars were able to identify a positive and significant connection between IM and AA (Van Nuland, Dusseldorp, Martens & Boekaerts, 2010). Strage and Brandt (1999) found that children from authoritative families are more intrinsically motivated than children from authoritarian families. They also discovered that children from authoritative parents have more control over their own behavior. Scholars have also revealed an important relation between ASB and AA. According to Deci, Koestner, and Ryan (1999), students who make their own choices and follow their own interests are more likely to become successful students. Hayenga and Corpus (2010) found that students with high levels of IM tend to achieve higher grades when compared to students with low IM. Strage and Brandt (1999) used self-determination theory to examine the relationship between PA and AA and found that PA can either promote or hinder the development of AA. Based on their research there is reason to test the relationship between PA and AA when ASB and AIM are mediators.

The proposed variables align into two pathways. The first pathway aligns as PA → ASB → AA, and the second as PA → AIM → AA. As mentioned, I planned determine whether ASB and AIM separately mediated the relationship between PA and AA. As a potential result, the mediating variables do in fact mediate this relationship; I will be able to contribute to the literature by expanding on the theory of self-determination.

### **Research Questions and Hypotheses**

To examine the mediating effects of ASB and AIM, formulated research questions were answered:

RQ1: Does ASB mediate the relationship between parenting style and AA?

*H<sub>01</sub>*: ASB does not mediate the relationship between PA and AA. ASB will be measured by means of administering the Perception of Parents Scale (POPS). PA will be measured by administering the PA Questionnaire (PAQ). AA will be measured through means of retrieving GPA scores of participants.

*H<sub>a1</sub>*: ASB does mediate the relationship between PA and AA. ASB will be measured by means of administering the Perception of Parents Scale (POPS). PA will be measured by administering the PA Questionnaire (PAQ). AA will be measured through means of retrieving GPA scores of participants.

RQ2: Does AIM mediate the relationship between PA and AA?

*H<sub>02</sub>*: AIM does not mediate the relationship between PA and AA. AIM will be measured by administering the Academic Intrinsic Motivation



Questionnaire (AIMQ). PA will be measured by administering the PA Questionnaire (PAQ). AA will be measured through means of retrieving GPA scores of participants.

*H*<sub>a2</sub>: AIM does mediate the relationship between PA and AA. AIM will be measured by administering the Academic Intrinsic Motivation Questionnaire (AIMQ). PA will be measured by administering the PA Questionnaire (PAQ). AA will be measured through means of retrieving GPA scores of participants.

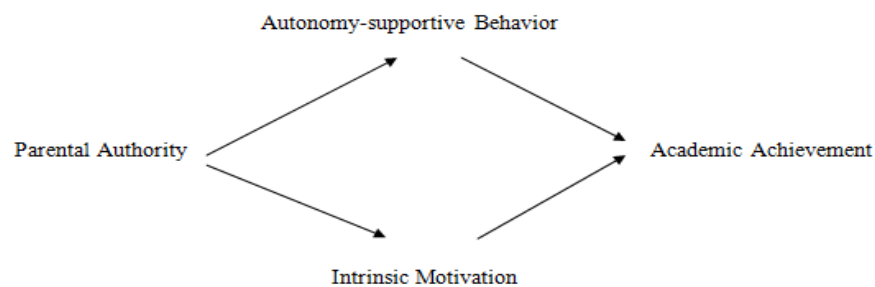
These hypotheses were tested by following Baron and Kenny's (1986) guidelines for testing for a mediating relationship between predictor and criterion variables. This model was suitable for this investigation because it assumed temporal precedence: specifically, I expected that a change in PA (antecedent) must precede a change in AA (consequent) when ASB and AIM act as mediating variables. Following Baron and Kenny's guideline will allow me to carry out a series of multiple regression analyses to determine the mediating effect of self-autonomy and AIM. Below is a description of the assumptions that need to be met for testing the mediating effect of self-autonomy and AIM on the relationship between PA and AA.

Step 1: There must be a significant relationship between PA and AA.

Step 2: The relationships between PA, autonomy-supportive behavior, and AIM are all significant.

Step 3: AIM and ASB are significantly related to AA when PA, AIM, and ASB are treated as predictors, and AA as the outcome variable.

Step 4: If all assumptions are met, the mediation test can be employed. This would require me to treat PA, ASB, and AIM as predictors, and AA as the outcome variable. In order to do so, I would have to set the unstandardized coefficient to 0. In other words, to conclude that the proposed variables mediated the relationship between IV and DV, the IV should have no effect on the DV after controlling for each mediating variable, i.e., path "C" should be 0 (see Figure 1. below).



### Theoretical Framework of Study

The theoretical base for this study originated in the work of Deci and Ryan (1985), who formulated self-determination theory, which is based on an internal drive that motivates a person to perform a task to fulfill psychological needs. Among these psychological needs are autonomy, competence, and relatedness (Ryan & Deci, 2000).

Using this theory as a lens, scholars have been able to explain how motivation can impact a student's ability to succeed in school. In one study, scholars were able to identify a positive, and significant connection between IM and AA (Van Nuland, Dusseldorp, Martens & Boekaerts, 2010). Scholars have also revealed an important relation between self-autonomy and AA. According to Deci, Koestner, and Ryan (1999),

students who make their own choices and follow their own interests are more likely to become successful students.

Self-determination theory was also used to examine the relationship between parenting styles and AA. Strage and Brandt (1999) used Baumrind's typology to determine whether a relationship between PA and AA exists. Results indicated that parenting styles can either promote or hinder the development of AA. For this study, I used Baumrind's typology on parenting styles to provide a theoretical framework for investigating PA as a predictor of AA among middle school students.

Prior research on AA is mostly based on self-determination theory. Previous studies have used this theory as a lens to explain academic phenomena through quantitative analyses. Research questions of previous studies have been structured to test for correlations between selected variables. The research questions and hypotheses for this study have been structured accordingly to variable-aligned pathways.

### **Nature of the Study**

The nature of this study was quantitative. Mediation regression analysis was introduced to describe the extent to which self-autonomy and AIM mediated the relationship between PA and AA. I will perform a series of regression analyses. First, a simple regression analysis with PA (authoritative and authoritarian) predicting AA was employed. Next, a simple regression analysis with PA (authoritative and authoritarian) predicting self-autonomy and IM was conducted. Finally, I will employ multiple regression analysis for parenting style (authoritative and authoritarian), self-autonomy, and AIM predicting AA. Based on these analyses, I was able to decide whether to reject

or fail to reject the null hypotheses. Moreover, all variables are continuous in nature. This is why I planned to move forward by performing a series of regression analyses using Baron and Kenny's (1986) guidelines. The following methods were used to collect the data required. The PA Questionnaire (PAQ) will measure the authoritativeness and authoritarianism of parents as appraised by their son or daughter. The Perceptions of Parents Scale (POPS) measured the degree to which parents grant children autonomy. AIM was measured with Academic Intrinsic Motivation Questionnaire (AIMQ). This scale was administered to the student to complete. Lastly, students' AA was measured based on their GPA scores, which was obtained from self-report questionnaires.

### **Definitions**

***Academic Achievement.*** The extent at which students achieve their education goals. Also defined in terms of GPA obtained from self-report questionnaires (Rivers, 2012).

***Parenting Style.*** Parenting style was defined in regard to Baumrind's typological categories: authoritarian and authoritative. Adolescents' perceived parenting style was measured by using the PA Questionnaire (Rivers, 2012).

***Parental Authority.*** Parental Authority is the power to direct and educate a child to do what parents want, or what parents believe is wise.

***Intrinsic Motivation.*** Intrinsic motivation is when a person engages in a behavior not only because of an internal drive, but also because of a sense of joy experienced when engaging in that behavior (Ryan & Deci, 2000).

***Academic Intrinsic Motivation.*** Academic Intrinsic motivation is when a person has a desire to select an activity, has the curiosity to learn, or to have a feeling of efficacy related to an activity (Ryan & Deci, 2000).

***Self-Autonomy.*** Self-autonomy is when individuals feel free to be who they are, express their opinions openly, and follow their interests-hence fulfilling their basic psychological needs (Milyavskaya, McClure, Ma, Koestner & Lydon, 2012).

***Autonomy-Supportive Behavior.*** ASB is a social behavior that encourages other individuals to take a lead when making decisions. (Benita, Roth & Deci, 2014). It allows others to feel free to be who they are, express their opinions openly, and follow their interests (Milyavskaya, McClure, Ma, Koestner & Lydon, 2012).

### **Assumptions**

It was assumed that all students participating in this study completed all questionnaires truthfully. It was also assumed that the participants of this study are strictly volunteers, and that if they wish to withdraw from this study, they are free to do so at any time.

### **Scope and Delimitations**

The purpose of this study was to determine the extent to which IM and ASB mediated the relationship between PA, and AA. The goal was to determine whether IM and ASB contribute to academic success. Understanding variables that contribute to academic failure and academic success are essential to promoting AA (Dehyadegary et al., 2012).

Previous investigations have focused on the mediating role of other variables between PA and AA. These include academic motivation, academic engagement, goal orientation, and self-efficacy (Rivers, Mullis, Fortner & Mullis, 2012; Dehyadegary, Divsalar, Esmaeili, Sadr & Askari, 2012; Areepattamannil, 2012). I had chosen IM and ASB as mediating variables because the mediating effect of IM and ASB have not been tested in the past. As Dehyadegary et al. (2012) mentioned, understanding variables that contribute to academic failure and academic success is essential to promoting AA. This will widen our understanding by investigating the mediating role of IM and ASB when tested between PA and AA. I may find that IM and ASB are more influential in terms of dictating the relationship between PA and AA. This will allow me to determine which variables are most influential in terms of promoting AA.

The participants of this study were a stratified sample of middle school students in the district of Fahaheel, located in the state of Kuwait. The population was divided into groups based on student grade levels (Grades 6 through 8). All students were male; for religious reasons, females were excluded because schools in Fahaheel do not allow the mixing of sexes in the classroom. As a result, the outcomes of this study pertained only to male students; hence, the outcomes were low on generalizability. Also, because they might not be able to comprehend and complete the questionnaires, students who suffer from learning difficulties were excluded from this study.

Researchers have looked into two different theoretical frameworks related to self-determination theory. These include the achievement goal theory and social cognitive theory (Rivers, Mullis, Fortuner & Mullis, 2012). Achievement goal theory has been used

to investigate the influence of mastery goal and performance goal orientations on PA and AA. Social cognitive theory has been used to examine the mediating influence of self-efficacy on the relationship between goal orientation and AA (Rivers, Mullis, Fortner & Mullis, 2012). Other researchers have used the attribution theory, expectancy-value theory, and self-efficacy theory to study the relationship between motivation and AA. As mentioned, this investigation used a perspective that is more pertinent to the study. This perspective is the self-determination theory. As mentioned, I used Baumrind's typology on parenting styles to provide a theoretical framework for investigating PA as a predictor of AA among middle school students.

### **Limitations**

I feel confident that the sample is highly representative to the population found in the city of Fahaheel. Members of the community found are known for its residents being tribal-hence sharing identical traditions and rituals. More importantly, members of the community are highly collective. Moreover, the external validity of this study is likely to be threatened by population validity. According to Hagger, Rentzelas, and Chatzisarantis (2014), the effects of individualistic and collective culture can distinctively impact the relationship under investigation. Therefore, results of this study will not be generalized to students of an individualistic culture, but only to students in a collective culture.

Generalizing results of this study to a collective culture will limit me from comparing the effect of different cultures on PA, academic intrinsic motivation, autonomy-supportive behavior, and AA. However, it is important to avoid an external

threat for the sake of representing a truthful population. To avoid this threat, I strictly generalized results to students of a collective culture.

Moreover, because teacher-student relationships can influence study outcomes, I planned to during recess hours. I intended to collect data from an unfamiliar body of students. This is because my relationship with my students may create bias because I was aware of my students' ability and performance--hence creating a mental representation of each student. This representation may conflict with results retrieved from questionnaires--taking away the truthfulness of this study.

Furthermore, I expected that a change in PA (antecedent) must precede a change in AA (consequent) when ASB and AIM act as mediating variables. I had allocated the variables in this particular order to fulfill the condition of temporal antecedence. Also, this study does not include a pretest and posttest. In effect, the internal threat of testing will not compromise the validity of this study. Other internal threat I has avoided is design contamination and selection. This is due to not selecting participants into experimental and comparison groups. Lastly, the administration of surveys will strictly be carried out by me-hence avoiding the internal threat of instrumentation.

### **Significance**

In the present study, ASB and IM were seen as mediating constructs that linked PA with AA. A small but growing body of research has examined the mediating effect of selective variables between PA and AA. In one study, Dehyadegary, Divsalar, Esmaceli, Sadr, and Askari (2012) found that academic engagement mediates the relationship between PA and AA for students in Iran. No study has examined whether ASB and IM



mediate the relationship between PA (authoritative and authoritarian) and AA. I determined whether ASB and IM act as mediators and discovered mean differences in IM, ASB, and AA serve as a function of PA. Using this information, I promoted positive social change through educating parents and educational professionals about the nature of these variables. Specifically, readers are aware of the extent to which ASB and IM dictate the relationship between PA (authoritative and authoritarian) and AA. This data does not only pinpoint ASB and IM as mediating variables, but also help parents decide whether their approach to childrearing needs to be altered for the sake of promoting AA.

### **Summary**

The next chapter will provide important detail on self-determination theory. Current literature will also be presented in relevance to the variables under investigation. I intend to examine the relationship between PA and AA when AIM and ASB act as mediators. Employing a series of regression analyses will allow me to determine whether AIM and ASB dictate the relationship under investigation. Chapter 2 will provide important detail on self-determination theory. Current literature will also be presented in relevance to the variables under investigation.

## **Chapter 2: Literature Review**

### **Introduction**

The International Association for the Evaluation of Educational Achievement (2011) has noted that students in various parts of the world are unable to perform well in reading literacy, mathematics, and science. A lack of student skill acquisition can hinder a student from being academically successful. A potential reason why students are unable to achieve academic success is PA. Depending on what approach a parent uses to raise a

child, parents have been seen to either display or conceal ASB and thus promote or discourage IM (Milyavskaya et al., 2012). Authoritarian parenting has been seen to hinder the development of AA. According to Froiland (2015), authoritarian parents are known to conceal ASB when interacting with children. This could discourage students from taking initiative when developing a sense of control. Froiland also noticed that authoritarian parents discourage children from developing AIM. On the other hand, authoritative parenting promotes cognitive competence in children (Liew et al., 2014). This phenomenon may be due to certain characteristics of authoritative parents. They are very supportive, set high standards for their children and grant appropriate levels of autonomy (Oryan & Gastil, 2013). The purpose of this quantitative study was to determine whether ASB and AIM act as mediating variables when testing the relationship between PA and AA.

In this literature review, I will examine relationships among PA, ASB, AIM, and AA. The objective was to determine whether ASB and AIM mediate the relationship between PA and AA. Doing so would allow me to identify potential variables that promote student achievement. If AIM and ASB mediated the relationship between PA and AA, then knowledge from this study could promote student achievement. To test for this relationship, I performed two separate analyses. The first tested for the mediating role of AIM between PA and AA, and the second tested for the mediating role of ASB between PA and AA. It is important to note that IM and ASB did not exist in a single analysis. They were analyzed individually to determine the mediating role of AIM and ASB when linked with PA and AA. Scholars have examined the relationship between

PA, AIM, ASB, and AA to understand why some students achieve higher results than others. According to the current literature, PA can influence a student's ability to achieve. This study sought to determine whether AIM and ASB mediated the relationship between PA and AA. Doing so will help educationalists understand the reasons for the lack of student skill acquisition in education.

### **Literature Search Strategy**

A literature search was performed electronically using the following psychology and education databases: PsycINFO, PsycARTICLES, SAGE Premier, PsycTESTS, PsycEXTRA, and ERIC. Peer-reviewed literature consists of studies conducted within the past 5 years. Seminal literature, which provides knowledge essential to the structure of this investigation, consists of work accomplished by pioneers like Deci and Ryan. The following keywords were used: self-determination theory, parental authority, autonomy-supportive behavior, academic intrinsic motivation, student success, and academic achievement.

### **Theoretical Foundation**

Self-determination theory (SDT) is a theory of motivation that explains the *what* and *why* of goal pursuits (Ryan & Deci, 2000). SDT explains human behavior by reflecting on the content of outcomes, and regulatory processes involved in pursuing those outcomes. An important component of SDT is the organismic dialect. According to Ryan and Deci, organismic dialect is based on the view that humans act on internal and external forces. Specifically, it suggests that humans are naturally inclined to exercise their own capacities, to pursue connectedness in social groups, and to feel in-control of their own

behavior. These descriptions formulate three psychological needs that drive human behavior: the need for (a) competence, (b) relatedness and, (c) self-autonomy (Deci & Ryan, 2000). An important variable identified by Deci and Ryan is ASB (ASB). ASB is a social behavior that encourages surrounding members to take a lead when making decisions. Moreover, Scholars interested in the relationship between PA and ASB found that authoritative parents show a higher degree of support for autonomy when compared to authoritarian parents (Rivers, Mullis, Fortner & Mullis, 2012). Research has also shown that ASB is positively associated with AA. According to recent literature, ASB generates positive outcomes that include: effective problem solving, creativity, flexibility, and exceptional performance (Furtak & Kunter, 2012). Self-determination theory provides sufficient knowledge about the relationship between PA and AA. Self-determination theory has been used to determine how goal orientation and academic self-efficacy impact this relationship. Using SDT as a lens, I planned to go further by exploring whether ASB and AIM mediate the relationship between PA and AA. The research questions challenge the existing theory because it tests whether AIM and ASB are essential mediators. Self-determination theory does not provide detail on whether the relationship between PA and AA is dictated by ASB and AIM. If this investigation shows that ASB and AIM are significant mediators, then I was able to build upon this existing theory.

## Conceptual Framework

### Parenting Style

Parenting style is the approach caregivers take when raising a child. According to Baumrind's (1967) work, there are four parenting styles that define childrearing practices. These are: (a) authoritative, (b) authoritarian, (c) permissive, and (d) neglectful parenting. Authoritative parenting is when caretakers accommodate a child's needs by providing support and encouraging acceptable behavior (Rivers, Mullis, Fortner & Mullis, 2012). Authoritarian parenting is a stricter approach to parenting. Parents that employ this approach shape and control behaviors of a child. They also establish strict expectations that a child is obliged to meet (Rivers, Mullis, Fortner & Mullis, 2012). Two other parenting styles identified by Baumrind (1967) are permissive and neglectful parenting. Permissive parents are less demanding than authoritarian parents and tend to set lower expectations. Lastly, neglectful parents tend to be uninvolved and express little concern toward their child's development (Keshavarz & Baharudin, 2013). Rivers et al. found that authoritative parents can be more responsive than authoritarian parents. According to Keshavarz and Baharudin, this difference in responsiveness is associated with different child outcomes, with authoritative parenting linked to positive developmental outcomes, and authoritarian parenting linked to negative developmental outcomes.

### Autonomy-Supportive Behavior

ASB is a social behavior that encourages other individuals to take a lead when making decisions (Benita, Roth & Deci, 2014). Considerable research has shown that ASB is associated with positive outcomes such as effective problem solving, creativity,

flexibility, and exceptional performance (Grolnick et al., 1991; Grolnick & Slowiaczek, 1994; Soenens & Vansteenkiste, 2005; Assor, Kanat-Maymon, & Kaplan, 2006). Current research by Benita, Roth, and Deci (2014) supports previous work as their study shows that ASB positively predicts adaptive psychological functioning.

#### Academic Intrinsic Motivation

AIM is when a person has a desire to select an activity, has the curiosity to learn, or to have a feeling of efficacy related to an activity (Ryan & Deci, 2000). Also, any change of behavior caused by AIM is solely determined by one's very own choice. This form of motivation is performed for the sake of experiencing a sense of joy and interest (Froiland, Oros, Smith & Hirschert, 2012). A factor found to decrease AIM is controlling behavior. Controlling an individual by means of setting expectations, allocating deadlines, and enforcing certain behaviors are found to decrease AIM (Froiland, Oros, Smith & Hirschert, 2012).

#### Academic Achievement

AA is the extent at which students achieve their education goals (Luftenegger, Klug, Harrer, Langer, Spiel & Schober, 2016). In some countries, AA is measured by means of using the General Certificate of Secondary Education exam. Grades are assigned to students-hence reflecting students' AA. In other countries, AA is measured by means of using grades of all current classes to calculate a score. This score is out of a 4.0 scale-also known as students' GPA . Strage and Brandt (1999) discovered a significant relationship between PA and AA. Results indicate PA as a strong predictor of AA. This claim is supported by peer-reviewed literature by Furtak and Hunter (2012). Furtak and

Hunter found that authoritarian and authoritative parenting styles produce different student outcomes. Unlike authoritarian parenting, authoritative parenting promotes cognitive competence in children. Authoritative parenting has also been seen to induce self-autonomy in children, thereby promoting AA (Furtak & Hunter, 2012).

#### Parenting Style and Autonomy-Supportive Behavior

Authoritative parenting is when caretakers accommodate a child's needs by providing support and encouraging acceptable behavior (Rivers, Mullis, Fortner & Mullis, 2012). Rivers et al. have found that authoritative parents allow children to fulfill the need for autonomy, competence, and relatedness. In contrast, authoritarian parenting is a stricter approach of parenting. Evidence reveals that authoritarian parents shape and control behaviors of a child by means of enforcing strict expectations that the child must meet (Rivers, Mullis, Fortner & Mullis, 2012).

Self-autonomy is when individuals are able to make their own choices, follow their own interests, and express their opinions (Milyavskaya, McClure, Ma, Koestner & Lydon, 2012). According to Furtak and Hunter (2012), this behavior is induced when parents show signs of support for self-autonomy. Parents can support children's autonomy by encouraging children to make their own choices. Authoritative parents are more likely to show support for autonomy because they encourage individuality and guide behavior in the absence of psychological control (Furtak & Hunter, 2012).

Psychological control is when a teacher or parent imposes restrictions on choice and sets unrealistic expectations. Preventing children from making a choice and expecting them to reach impractical goals are traits of authoritarian parenting. This form of parenting has

shown to predict children maladjustment (Miranda, Affuso, Esposito & Bacchini, 2016). Miranda et al. discovered that maladjusted children fail to maintain emotional stability, and experience difficulty in coping with social problems and relationships.

#### ASB and AA

Autonomy support is defined as a social behavior that encourages surrounding members to take initiative when making decisions. Autonomy-supportive figures refrain from imposing psychological pressure on other people (Rivers, Mullis, Fortner & Mullis, 2012). Those who set deadlines and, use rewards and/or pressuring language are experienced as controlling. According to Deci and Ryan (2016), ASB has been found to promote effective performance, psychological well-being, and autonomous regulation. In contrast, controlling behavior can undermine autonomous regulation and diminish academic performance (Deci & Ryan, 2016). According to self-determination theory, behavior can be regulated autonomously by promoting a sense of choice, or controlled by using external pressures such as punishments, deadlines, or tangible rewards.

Deci and Ryan (2016) have found ASB to be associated with creativity, flexibility, and effective problem solving. They also found controlling behavior to be associated with maladaptive behavior and poor performance. Benita, Roth, and Deci (2014) performed a study to test the effects of autonomy-supportive and autonomy-suppressive contexts on mastery goals and psychological outcomes. Mastery goals are accomplishments that improve levels of competency and promote skill development. Participants ( $n = 117$ ) were randomly assigned to three groups-autonomy-supportive, autonomy-suppressive, and neutral. According to results, individuals in the autonomy-



supportive group were more likely to improve levels of competency and experience psychological well-being when compared to other groups (Benita, Roth, & Deci, 2014).

### Parenting Style and Academic Intrinsic Motivation

According to Baumrind (1967), authoritative parenting promotes maturity, cognitive development, self-esteem, and independence. Ginsburg, Bronstein and Herrera (2005) discovered that children from authoritarian households exhibit higher levels of anxiety and inhibited behavior. These children also rely on figures of authority to make decisions, and were less likely to explore or seek out challenging situations. When examining the linkage between authoritative parenting and motivation, it was found that children from authoritative homes were more likely to be academically intrinsically motivated. These children were independent, curious, confident, and willing to explore and seek challenging behavior (Ginsburg, Bronstein & Herrera, 2005). A study by Rivers, Mullis, Fortner, and Mullis (2012) support classic work as findings suggest that authoritative parenting positively correlates with higher levels of AIM. Similarly, Froiland (2013) discovered that children of authoritative parents have higher levels of confidence, gain a high intrinsic focus, and experience high levels of enjoyment at school.

### Academic Intrinsic Motivation and Academic Achievement

Intrinsic and extrinsic motivation serves as a platform when investigating theories that pertain to student success. Academically intrinsically motivated students learn because they see learning as an interesting and enjoyable task (Ryan & Deci, 2000). Patall, Cooper, and Robinson (2008) argue that AIM predicts higher levels of effort and

performance during task engagement. Froiland and Oros (2014) discovered that AIM students demonstrate higher levels of conceptual learning and attain academic positive outcomes.

According to Froiland, Oros, Smith, and Hirschert (2012) AIM to learn can lead to academic and emotional improvements. In one study, researchers found that 73 % of children in the United States do not read for the sake of enjoyment (Perie, Grigg & Donahue, 2005). This is quite alarming because AIM to read has been associated with better performance in many aspects of literacy (Froiland & Oros, 2014). Children who see reading as an enjoyable task develop more reading strategies as compared to children who see reading as a daunting task. According to Froiland et al., AIM students were more likely to reread difficult passages, take notes while reading, and make inferences about the reading.

Froiland, Oros, Smith, and Hirschert (2012) discovered that AIM plays a vital role in promoting psychological well-being. Froiland et al. discovered that school can be a joyful experience for some, but a daunting experience for others. According to their research, AIM students feel the day pass by quicker than EM students. A possible explanation could be because AIM students experience a sense of joy when learning (Conti, 2001). Froiland et al. also found that EM students feel forced to learn (Froiland et al., 2012). Moreover, researchers have found that AIM is tied to prosocial behavior. This type of behavior portrays an agreeable, helpful, and caring person who looks after other people (Hardy, Dollahite, Johnson & Christensen, 2014). This behavior creates respect

and care amongst students, which in turn promotes psychological well-being (Froiland et al., 2012).

### Parenting Style and Academic Achievement

Researchers have also established associations between PA (PA) and AA (AA). Much of this research indicates a positive association between authoritative parenting and AA. Rivers, Mullis, Fortner, and Mullis (2012) examined the relationship between dimensions of PA (authoritative and authoritarian) and AA. Students' AA was measured by means of self-reported GPA scores. They hypothesized that authoritative parenting will predict higher gains in adolescent's AA. They also speculated that authoritarian parenting hinders the development of AA. They used correlational analyses to examine the relationship between the dimensions of PA and AA. According to results, authoritative parenting is associated with higher GPAs, and authoritarian parenting is associated with lower GPA (Rivers, Mullis, Fortner & Mullis, 2012). In another study, Inam, Nomaan & Abiodulla (2016) discovered the effect of parenting styles on AA of the underachiever and higher achiever. Study results indicate that high achieving students are more likely to have authoritative parents. Such parents are demanding and responsive to their children's needs (Inam et al., 2016). Inam et al. also discovered that students whose parents were fully authoritative achieved higher results in comparison to students whose parents were permissive or authoritarian. Permissive parents are known to be responsive but demand nothing from their children. Authoritarian parents are demanding, but are unresponsive to their children's needs (Inam et al., 2016).

## Parenting Style, Autonomy-Supportive Behavior, Intrinsic Motivation, and Academic Achievement

In this study, two parenting styles were examined. These include authoritative and authoritarian parenting. Authoritative parenting is when caretakers accommodate a child's needs by providing support and encouraging acceptable behavior (Rivers, Mullis, Fortner & Mullis, 2012). On the other hand, authoritarian parenting is a stricter approach. Authoritarian parents shape and control behaviors of a child. They also impose strict expectations that a child is obliged to meet (Grolnick & Ryan, 1989). According to Baumrind (1967), authoritative parents reflect a higher degree of responsiveness, and a lower degree of demandingness when compared to authoritarian parents.

According to Ishak, Low, and Lau (2012), parents prefer to use the authoritative approach because it produces desirable outcomes, such as increased academic performance and healthy psychological development (Ishak et al., 2012). Rivers, Mullis, Fortner, and Mullis (2012) examined the relationship between parenting styles and AA. They were motivated by a need to further investigate the relationship because researchers like Brown and Iyengar (2008) argue that authoritative parenting does not positively correlate with AA. Correlational analysis was used to determine the impact of authoritarian and authoritative parenting styles on student success. Findings suggest that adolescents of authoritative parents will perform academically stronger than children of authoritarian parents. Furthermore, researchers found a positive relationship between authoritative parenting and ASB (Deci and Ryan, 2016). Deci and Ryan concluded that

authoritative parents are more likely to show ASB as they encourage individuality and guide children's behavior.

#### Methodologies for Examining STD Relationships

Researchers have used correlational analyses to examine relationships between variables that relate to SDT. Areepattamannil, Freeman, and Klinger (2011) employed bivariate correlation analyses among variables such as intrinsic motivation (IM), extrinsic motivation, and AA. These analyses are based on data collected from two groups: Indian immigrant adolescents in Canada and adolescent Indians in India. Data from the analyses indicate that Indian immigrant adolescents in Canada have higher IM and were more successful at school when compared to adolescent Indians in India.

In a different study, Milyavskaya, McClure, Ma, Koestner, and Lydon (2012) examined how attachment anxiety and avoidance moderates the effects of priming an autonomy-supportive figure on IM and persistence. They conducted this study to determine whether the amount of autonomy-support and control could really enhance or hinder IM. A sample of participants ( $n = 90$ ) was primed with either an autonomy-supportive or controlling authority figure. Each participant engaged in a picture-search task. Milyavskaya et al. employed a technique known as multiple regression and discovered that attachment anxiety does moderate the effect of the primes on IM and persistence. Results indicate that participants low on attachment avoidance and attachment anxiety reported lower levels of IM and persistence when primed with a controlling figure. Data also reveals that participants low on attachment avoidance and

attachment anxiety experience higher levels of IM and persistence when primed with an autonomy-supportive figure.

Rivers, Mullis, Fortner, and Mullis (2012) discovered that children of authoritative parents experience higher levels of IM and are more likely to be successful at school. This particular study incorporated the same analyses that Milyavskaya et al. had used when determining the impact of autonomy-support and control on intrinsic motivation. Using multiple regression analyses, Rivers et al. compared all variables in the study and revealed a significant relationship between authoritative parenting, intrinsic motivation, and AA. A correlational approach employing multiple regression analyses is the most appropriate research method to use for this study. Using this method will allow me to examine the mediating effect of ASB and AIM on the relationship between PA and AA.

### **Summary and Conclusions**

Research has shown important relationships between PA, ASB, IM, and AA. For instance, Areepattamannil, Freeman, and Klinger (2011) revealed a positive predictive effect of IM on AA for Indian immigrant students in Canada and Indian adolescents in India. This evidence suggests that IM students are more likely to succeed in school when compared to their counterparts. Moreover, Ratelle, Baldwin, and Vallerand (2005) discovered that ASB plays an important role in the development and hindrance of IM. In one case, Ratelle et al. provided students with audio feedback as they put together a puzzle. The feedback provided to students was psychologically controlling. The audio declared the completion of the task as expected, and commanded the student to move to

the next puzzle. Ratelle et al. found that this audio had caused students to report lower levels of interest when completing the following puzzle. Ratelle et al. also realized that students' performance declined when moving to the next task. This suggests that autonomy-suppressive behavior can hinder a student from building interest to succeed at a particular task.

Scholars suggest that PA can have a strong impact on AA. Johnston and Chen (2010) discovered that authoritative parenting positively predicts AA. This is because authoritative parenting displays ASB, which in turn establishes child autonomy (Gottfried, 1990). Past research has comprehensively described relationships between PA, ASB, IM, and AA. However, the literature does not show any sign of testing the mediating effects of ASB and IM on PA and AA. The intention of this study is to build upon existing knowledge. The literature shows the relationship between different parenting styles and IM, ASB, and AA respectively. However, the literature does not provide knowledge on whether IM and ASB play a mediating role between PA and AA. I intended to build upon existing knowledge by revealing the impact of PA and AA when testing for mediation. In the next chapter, research design and rationale of this study, population and sampling procedures, method of collecting data, and instruments utilized will be presented. I will also discuss the reliability and validity of instruments used, and possible threats to the validity of this investigation.

## Chapter 3: Research Method

### **Introduction**

I conducted a quantitative study to determine whether ASB and IM act as mediating variables on the relationship between PA and AA. This chapter will describe the study's design, sample, instrumentation, data analysis, and ethical considerations. A summary for why this particular research design was selected will be depicted in this chapter along with sample characteristics and suggested size. Procedures for collecting and analyzing data were reported.

#### Purpose of the Study

Self-determination theory has been applied extensively in the field of educational psychology. Using this theory as a lens, scholars have been able to explain how motivation can impact a student's ability to succeed in school. In one study, scholars were able to identify a positive, significant association between IM and AA (Van Nuland, Dusseldorp, Martens & Boekaerts, 2010). Scholars have also revealed an important relation between ASB and AA. According to Deci, Koestner, and Ryan (1999), students who make their own choices and follow their own interests are more likely to become successful students. Scholars have also used SDT to examine the relationship between PA and AA. Strage and Brandt (1999) found that PA either promotes or hinders the development of AA. Using prior research, I intended to determine whether ASB and AIM act as mediating variables, influencing the relationship between PA and AA.

The proposed variables align into two pathways. The first pathway aligns as PA (predictor), ASB (mediator), AA (criterion), and the second as PA (predictor), AIM



(mediator), AA (criterion). As mentioned, I determined whether ASB and AIM separately mediate the relationship between PA and AA. If the mediating variables do in fact mediate this relationship, I was able to contribute to the literature by expanding on SDT. Also, this study will provide scholars and educators with a clear understanding on how to foster student success within the field of education-hence triggering positive social change through the application of educational psychology.

### **Research Design and Rationale**

This study sought to determine whether ASB and AIM separately mediate the relationship between PA and AA. Using a correlational design, I was able to explore relationships between variables to make predictions. Specifically, I will test for the mediating relationship between the predictors and criterion variables through utilizing Baron and Kenny's (1986) guidelines. This model is suitable for this investigation because it assumes temporal precedence: specifically, I expect that a change in PA (antecedent) must precede a change in AA (consequent) when ASB and AIM act as mediating variables. Studies have examined the mediating role of other variables when considering the relationship between PA and AA. In one study, Sangawi, Adams, and Reissland (2016) used Baron and Kenny's guideline to test whether academic self-concept mediates the relationship between parenting styles and AA. Following this model, Sangawi et al. were able to advance knowledge in the discipline of educational psychology. Using the same model, I carried a series of regression analyses to determine whether ASB and IM mediate the relationship between PA and AA. Below is a

description of the steps that need to be met for testing the mediating effect of ASB and IM on the relationship between PA and AA.

Step 1: Using simple regression analysis, I will test whether a significant relationship between PA and AA exists. If so, I may proceed to Step 2.

Step 2: Using simple regression analysis, I will test whether relationships between PA, autonomy-supportive behavior, and AIM are all significant. If so, I may proceed to Step 3.

Step 3: Using simple regression analysis, I will test whether ASB and AIM are significantly related to AA when PA, ASB and academic intrinsic motivation, are treated as predictors, and AA as the outcome variable. If so, I may proceed to Step 4.

Step 4: If all assumptions are met, I can test for mediation using multiple regression analysis. This will require me to treat PA, autonomy-supportive behavior, and AIM as predictors, and AA as the outcome variable (see Figure 4). In order to do so, I will have to set the unstandardized coefficient to zero. In other words, to conclude that the proposed variables mediate the relationship between IV and DV, the IV should have no effect on the DV after controlling for each mediating variable, i.e. path "C" should be zero.

### **Population and Sampling Procedures**

A power analysis revealed that for a linear multiple regression test at an  $\alpha$  error probability level of 0.05, to detect an effect size of .15 (medium effect size) with a power

of at least .80, the study would require a sample of at least 68 participants (Htway, 2015).

The participants of this study were a stratified sample of middle school students. The population was divided into groups based on student grade levels (Grades 6 through 8). Stratified random sampling is an appropriate mechanism for this study as it will allow me to treat each stratum (grade level) as a population. This will permit me to make separate inferences for each grade level and compare them. I requested permission from the principal of each school to conduct the study. Parental consent was acquired before administering surveys to students. It is understood that students are a vulnerable population, therefore, a written and verbal statement were individually provided to parents and students about the right of discontinuing the study. It will clearly mention that students were entitled to discontinue the study for any reason.

### **Recruitment and Data Collection Procedures**

Participants were selected for the following reasons: (a) they are an accessible population; and (b) their educational background and mental ability allows them to comprehend and complete the questionnaires. Students who suffer from learning difficulties or emotional stability may not be able to comprehend and complete the questionnaires. Therefore, students that are mentally challenged and emotionally disabled were excluded from this study. I attained a list of student names from the school psychologist to identify mentally and emotionally disabled students.

I contacted parents of students to provide written information introducing the study, an informed consent form, and an empty envelope. The informed consent form will include brief background information on the study, procedures for participation, a

discussion of confidentiality, the voluntary nature of the study, and ethical concerns.

Parents were advised to contact me by phone so that any questions or concerns can be directed to me. Parents who show an interest in having their child participate in the study will need to sign and place the informed consent form in the envelope, making sure the form is properly sealed. Students are to return envelopes to the principle. Participants who agreed to take part in the study were allotted a time during recess to complete the questionnaire and instruction sheet. The questionnaire measured the independent, mediator and criterion variables. The questionnaire will also have a demographic section to collect students' age and parental status (living, deceased, divorced). Students interested in receiving results can indicate this on the questionnaire so I can share this information when available.

### **Instrumentation and Operationalization**

The parental authority questionnaire (PAQ) measures Baumrind's (1971) permissive, authoritarian, and authoritative parental prototypes. This questionnaire contains 10 items per prototype for a total of 30 questions. This questionnaire is generally available for public use. The questionnaire originally included 48 items. Scholars of psychology and sociology judged each item against Baumrind's (1971) description of each prototype--hence deciding to eliminate 18 items (Buri, 1991). This is because only 30 items were most accurate in regard to content validity. Two forms of this questionnaire have been constructed: one to evaluate the authority of the father, and the other to evaluate the authority of the mother. Responses on items are made on A five-point Likert scale was used with scores ranging from 1 (*disagree very much*) to 5 (*agree*

*very much*). The questionnaire created for the purpose of this study will yield six separate scores for each participant; mother's authoritarianism, mother's authoritativeness, mother's permissiveness, father's authoritarianism, father's authoritativeness, and father's permissiveness. Scores on each of these prototypes can range from 10 to 50. The higher the score, the greater the appraised level of the PA prototype measured (Buri, 1991). According to Buri, the PA Questionnaire continues to demonstrate respectable measures of reliability and validity when assessing measures of authoritativeness and authoritarianism.

**Reliability and Validity.** Adequate measures of reliability coefficients and Cronbach alpha values were acquired respectively through the use of test-retest reliability test, and internal consistency reliability test. Students from a psychology class (30 women, 32 men) completed the PAQ early during the semester. Two weeks later, students retook the PAQ (30 women, 31 men). The testing session over the 2-week period generated the following reliabilities (N= 61; mean age = 19.2); .86 for mother's authoritarianism, .78 for mother's authoritativeness, .85 for father's authoritarianism, and .92 for father's authoritativeness. An internal consistency reliability test also generated Cronbach (1951) coefficient alpha values above .80. The reliability test generated the following: .85 for mother's authoritarianism, .82 for mother's authoritativeness, .87 for fathers, and .85 for father's authoritativeness (Buri, 1991).

Acceptable measures of validity were also acquired through the use of discriminant-related validity test (Buri, 1991). If the authoritarian and authoritative scales of the PAQ provide an accurate measurement of Baumrind's two parental prototypes,

then one would expect divergent responses to the items when employing a discriminant-related validity test. According to results, scores on the PAQ do diverge. Mother's authoritarianism was inversely related to mother's authoritativeness ( $r = -.52, p < .0005$ ). Also, father's authoritarianism was inversely related to father's authoritativeness ( $r = -.52, p < .0005$ ; Buri, 1991).

The Perception of Parents Scale (POPS) was developed by Grolnick, Ryan, and Deci (1991), and is available for public use. This scale was developed to assess the children's perceptions of their parents' autonomy support, and involvement. The scale has two forms: mother form and father form-each containing 21 items. Three subscale scores are calculated for the father and mother. These include autonomy support, involvement, and warmth (Kocayoruk, Altintas, & icbay, 2015). For the purpose of this study, I is only interested to determine whether children perceive their parents as supportive figures when making their own choices and decisions. Therefore, a modified version of the original scale will include a total of 12 items for each parent to measure autonomy support. Kocayrouk et al. used this modified version of the POP scale to measure mother's autonomy support and father's autonomy support. The internal consistency of POPS was found to be 0.85 for mother autonomy support and 0.89 for father autonomy support (Kocayoruk, E., Altintas, E. & icbay, 2015).

A sample question that measures parental autonomy support is: “a. Some mothers (fathers) always tell their children what to do. b. Some mothers (fathers) sometimes tell their children what to do. c. Some mothers (fathers) sometimes like their children to decide for themselves what to do d. Some mothers (fathers) always like their children to

decide for themselves what to do". For this item, four options are ordered from being low on the subscale to being high. An item providing options with this ordering was scored on a scale from 1 to 4. Other items on this scale provide options that are ordered from being high on the subscale to being low. An example of an item like this is: "a. some mothers (fathers) always explain to their children about the way they should behave. b. some mothers (fathers) sometimes explain to their children about the way they should behave. c. some mothers (fathers) sometimes make their children behave because they're the boss. d. some mothers (fathers) always make their children behave because they're the boss." An item providing options with this ordering was scored on a scale from 4 to 1. Next, I will compute the following subscale scores by averaging all items within a given subscale. A high score on either subscale will indicate a high level of parental support for self-autonomy.

**Reliability and Validity.** The Perception of Parents Scale has been widely used due to its respectable measures of reliability and validity (Grolnick, Deci, & Ryan, 1997). This scale generated a high Cronbach alpha value when testing for internal consistency. The alpha reliability of the overall scales was .938 (Wintre&Yaffe, 1991). Wintre and Yaffe also mention how construct validity indicators confirmed most of their hypotheses when testing for validity.

The Academic Intrinsic Motivation Questionnaire (AIMQ) has been widely used in studies that relate to IM and AA (Shia; 1998; Pekrun, Goetz, Frenzel, Barchfeld & Perry, 2011). This is the most appropriate tool for this study because it measures IM within the realm of education. This questionnaire is made of 6 different factors: 2

intrinsic factors, and four extrinsic factors. Intrinsic factors include: mastery goals, and the need of achievement. Extrinsic factors include: authority expectations, peer acceptance, power motivations, and fear of failure. Each factor will have 10 statements- thus accumulating to 60 statements to complete the questionnaire. Each participant will give themselves a rating a seven-point Likert scale was used, with scores ranging from 1 (*disagree very much*) to seven (*agree very much*). Individuals rating themselves high on intrinsic statements and low on extrinsic statements were considered highly on intrinsic motivation. Individuals rating themselves low on intrinsic statements and high on extrinsic statements were considered a person with low intrinsic motivation.

**Reliability and Validity.** Moreover, Shia (1998) used 80 participants to conduct a reliability and validity test for AIMQ. Using reliability analysis to test for reliability, Shia obtained a coefficient alpha score of 0.7748-suggesting that AIMQ is reliable. She also used correlation analysis to test her hypothesis that the total IM score correlated negatively with the Motivated Strategies for Learning Questionnaire. The results from this analysis supported construct validity within AIMQ.

### **Analyses**

This study used a correlational research design using linear and multiple regression analyses. It is important to keep in mind that regression relationships may be unduly influenced by a single point, or a few points. Therefore, it is important to detect outliers before fitting the regression. Outliers are points that do not belong because the process that is generating most of the data does not apply to them. One technique to screen data for outliers is to use a predictive analytic software (SPSS) to visually observe



relationships among the data. Using SPSS, I will employ multivariate analyses to visually observe multivariate distances of every point to the middle of the distribution. Applying this analysis will generate 95% density ellipses-allowing me to identify extreme points. Another technique to screen data is to employ a Mahalanobis distances test. This technique will also generate a visual representation of data points to identify possible outliers.

A potential problem that may need to be addressed is multicollinearity. Multicollinearity is correlations of sufficient magnitude that have the potential to adversely affect regression analyses. Multicollinearity is observed when there are several correlations of sufficient magnitude that together predict a very large percentage of the variance in the independent variable. It is important to test for multicollinearity because multiple regression analyses can generate large  $R^2$  values when none of the beta weights are statistically significant. Another reason I should test for multicollinearity is because multiple regression analyses can produce beta weights that are in the opposite direction than I expected.

Using the selected instruments, I will collect and analyze data to test for the relationship between parenting style and AA when self-autonomy and AIM are mediators. To examine the mediating effects of self-autonomy and academic intrinsic motivation, I will have to answer the following questions:

RQ1: Does ASB mediate the relationship between parenting style and AA?

*H<sub>0</sub>*: ASB will not mediate the relationship between PA and AA. ASB was measured by means of administering the Perception of Parents Scale (POPS). PA was measured

by administering the PA Questionnaire (PAQ). AA was measured through means of retrieving GPA scores of participants.

*Ha*: ASB will mediate the relationship between PA and AA. ASB was measured by means of administering the Perception of Parents Scale (POPS). PA was measured by administering the PA Questionnaire (PAQ). AA was measured through means of retrieving GPA scores of participants.

RQ2: Does AIM mediate the relationship between PA and AA?

*Ho*: AIM will not mediate the relationship between PA and AA. IM was measured by administering the Academic Intrinsic Motivation Questionnaire (AIMQ). PA was measured by administering the PA Questionnaire (PAQ). AA was measured through means of retrieving GPA scores of participants.

*Ha*: AIM will mediate the relationship between PA and AA. IM was measured by administering the Academic Intrinsic Motivation Questionnaire (AIMQ). PA was measured by administering the PA Questionnaire (PAQ). AA was measured through means of retrieving GPA scores of participants.

Data were analyzed by using the Statistical Package for Social Sciences (SPSS). Using Baron and Kenny's (1986) guidelines, I will employ a series of regression analyses. The first step is to show that PA is correlated with academic success through employing simple regression with PA predicting AA

If PA does correlate with academic success, I will continue to use simple regression with PA predicting AIM and ASB respectively

If this guideline is fulfilled, I will employ a simple regression analysis with AIM and ASB predicting AA. This type of analysis will show whether the mediators affect the outcome variable. If the mediators (supportive-autonomy behavior, and intrinsic motivation) each correlate academic success, I has conditionally met Steps 1 through 3 of Baron and Kenny's (1986) guidelines--hence establishing partial mediation (see Figure 3).The last guideline set by Baron and Kenny tests for complete mediation. This is when I will employ multiple regression analysis with PA and each mediator predicting AA. This will test whether supportive-autonomy behavior and IM completely mediates the relationship between PA and academic success (see Figure 1).

### **Threats to Validity**

Threats to internal validity diminish my confidence when concluding that a relationship exists between the independent and dependent variables. I am aware that extraneous variables may compete with the independent variable in explaining the outcome of the study. Therefore, I selected measures that defined the independent variable. Those measures include: authoritative and authoritarian parenting styles. I was also aware that confounding variables can influence the dependent variable. This should not be an issue as this study strictly tests for mediation. To prevent an internal threat caused by instrumentation, I will ensure student's AA (DV) is measured consistently.

To ensure results of this investigation can be generalized to and across individuals, I selected a specific sample to represent the population. The population under investigation included middle-school adolescent students in Grades 6, 7, and 8. Adhering to these guidelines generated a sample population that is highly representative of the

population under study. However, the results may not be generalizable to students of individualistic cultures. This is because the effects of individualistic and collective cultures can distinctively impact the relationship under investigation (Hagger, Rentzelas & Chatzisarantis, 2014). Also, outcomes of this study pertained only to male students, and hence lowering generalizability.

### **Protection of Participants**

It is required that participants are capable of completing the survey on their own. Students that suffer from learning difficulties were excluded from the study. This was initiated by acquiring a list of students that suffer from learning difficulties from the school psychologist. Furthermore, I plan to recruit students within a classroom. I will make it clear to students that the research is voluntary and will not affect their grades. I will also clarify that students will not be stigmatized for not participating. Students will then be provided with a recruitment letter for parents to read. The recruitment letter will briefly describe the study and ask parents to call for additional information. If parents agree to the study, I will give students a sealed envelope containing consent forms.

### **Summary**

As mentioned, I intended conduct a quantitative study to determine whether ASB and IM act as mediating variables, influencing the relationship between PA and AA. This study will employ a correlational design using linear and multiple regression analyses. Data were collected through administering a survey that calibrates type of parenting style (PA), level of intrinsic motivation, and level of autonomy-supportive behavior. AA was

based on student GPA scores. Chapter 4 will present the collected data and a statistical analysis of this data.

## Chapter 4: Analysis and Presentation of Data

### **Introduction**

According to the International Association for the Evaluation of Educational Achievement (2011), a lack of student skill acquisition has hindered students from being academically successful. Clearly, student success has become a major concern for scholars, educators, and researchers (Dehyadegary, Divsalar, Esmaeili, Sadr, & Askari, 2012). A potential reason to why students are unable to succeed may be due to PA.

According to Strage and Brandt (1999), authoritarian parenting has been seen to hinder the development of AA. Strage and Brandt (1999) support the notion that authoritarian parents are known to conceal ASB when interacting with children. In effect, this discourages children from developing a sense of control. Authoritarian parents also discourage children from developing AIM (Strage & Brandt, 1999). All in all, authoritarian parenting could be causing a deficiency of ASB and academic intrinsic motivation--hence making it hopeless for students to become successful.

The purpose of this study was to quantitatively determine whether ASB and AIM act as mediating variables, influencing the relationship between PA and AA. This chapter will describe the analyses of data followed by a discussion of the research findings; the findings relate to the research questions that guided the study. Data were analyzed to identify, and determine whether ASB and AIM mediate the relationship between PA and AA.

### **Hypotheses and Research Questions**

I had questioned whether ASB mediates the relationship between PA and academic success, and if AIM mediates the relationship between PA and AA. The following

Hypotheses were generated to test these Research Questions:

*H<sub>01</sub>*: ASB does not mediate the relationship between PA and AA.

*H<sub>a1</sub>*: ASB does mediate the relationship between PA and AA?

*H<sub>02</sub>*: AIM does not mediate the relationship between PA and AA.

*H<sub>a2</sub>*: AIM does mediate the relationships between PA and AA.

The proposed variables align into two pathways. An illustration of the following text can be viewed in the appendix. The first pathway aligns as PA → ASB → AA, and the second as PA → AIM, and → AA. Using Baron and Kenny's (1986) mediation model, I was able to determine if ASB and AIM mediate the relationship between PA and AA.

### **Data Collection Procedures**

Data were collected in a 90-minute session on November 23, 2019. Participants completed three questionnaires during this time-frame; at a school located in the city of Fahaheel, Kuwait. Power analysis revealed that for a linear multiple regression test at an  $\alpha$  error probability level of 0.05, to detect an effect size of .15 (medium effect size) with a power of at least .80, the study would require a sample of at least 68 participants (Htway, 2015). The questionnaires were completed by 68 middle school students ( $n = 68$ ) with a 100 % response rate on June 2, 2018. Participants were from a stratified sample of male middle school students. Female participants were excluded from this study because schools in Fahaheel do not allow the mixing of the opposite sex within classrooms due to

religious views. As a result, outcomes of this study will only pertain to male students reducing generalizability. Even though results can only be generalized to the male gender, I feel confident that the sample is highly representative to a particular population of Kuwaiti Citizens. Fahaheel is an area known for its residents being tribal—hence sharing identical traditions and rituals. More importantly, members of the community are highly collective. I was aware that the external validity of this study was likely to be threatened by population validity. According to Hagger, Rentzelas, and Chatzisarantis (2014), the effects of individualistic and collective culture can distinctively impact the relationship under investigation. Therefore, results of this study will not be generalized to students of an individualistic culture, but only to students in a collective culture.

Generalizing results of this study to a collective culture will limit me from comparing the effect of different cultures on PA, AIM, ASB, and AA. However, it is important to avoid an external threat for the sake of representing a truthful population. To avoid this threat, I will strictly generalize results to students of a collective culture. All in all, no discrepancies in collecting data were evident in comparison to the plan depicted in Chapter 3. Lastly, findings and analyses derived from the questionnaires have been analyzed using the Statistical Package for Social Science (SPSS).

### **Descriptive Statistics**

Three variables were measured through administering participants a series of questionnaires: PA, ASB, and AIM. Data for the fourth variable in this study, AA, was based on GPA scores, retrieved from the school administration. Results for PA allowed me to determine whether a participant was raised by authoritative or authoritarian



caretakers. Responses on items are made on a five-point Likert scale ranging from 1 (*disagree very much*) to 5 (*agree very much*). Scores greater than the value of zero indicate that the parent exhibits authoritative styles of parenting. On the other hand, scores below the value of zero indicate that the caretaker exhibits authoritarian styles of parenting. This questionnaire was given to a sample of 68 students. The questionnaire identified 38 sets of parents as authoritative and 30 sets of parents as authoritarian. The descriptive statistics (Table 1) show that the mean score of 11.97 ( $SD = 5.13$ ) for authoritative parenting style, and -14.53 ( $SD = 6.10$ ) for authoritarian parenting style.

Results for ASB allowed me to determine whether the parent(s) encouraged the participant to develop self-autonomy. All values for this variable are positive and range from 1 to 4. The numerical value of 2.00 indicates a neutral point at which parents neither encouraged, nor hindered the child from experiencing support to develop self-autonomy. Values above 2.00 indicate that the parent exhibits behavior that allows for the development of self-autonomy. On the other hand, values below 2.00 indicate that the parent exhibits behavior that suppresses the child from developing self-autonomy. This questionnaire was given to a sample of 68 students. The questionnaire identified 37 participants who do experience autonomy-supportive behavior, and 31 participants who do not experience autonomy-supportive behavior. The descriptive statistics (Table 1) show that the mean score for participants who experience ASB was 3.05 ( $SD = 0.37$ ), and participants who do not experience ASB 1.45 ( $SD = 0.27$ ) for participants do not experience autonomy-supportive behavior.

Results for AIM allowed me to determine whether a participant is, or is not, intrinsically motivated. This questionnaire is made of 6 different factors: 2 intrinsic factors, and 4 extrinsic factors. Intrinsic factors include: mastery goals, and the need of achievement. Extrinsic factors include: authority expectations, peer acceptance, power motivations, and fear of failure. Each factor will have ten statements-thus accumulating to 60 statements to complete the questionnaire. Each participant will give themselves a rating on a 7-point Likert scale (1 = *does not describe me*; 7 = *absolutely describes me*). Individuals rating themselves high on intrinsic statements and low on extrinsic statements were considered highly on intrinsic motivation. Individuals rating themselves low on intrinsic statements and high on extrinsic statements were considered low on low intrinsic motivation. The questionnaire was given to a sample of 68 students, and identified 37 intrinsically motivated students and 31 nonintrinsically motivated students. The descriptive statistics (Table 1) show that the mean score for participants that are intrinsically motivated is 27.13 ( $SD = 4.20$ ) and, nonintrinsically motivated -25.94 ( $SD = 4.86$ ).

GPA scores allowed me to determine whether a student is a high or low academic achiever. GPA scores above 1.9 indicate that the student is performing at exceptional levels, hence suffice to be considered as a high academic achiever. On the other hand, scores below 1.9 indicate that the student is not performing at exceptional levels; hence considered a low academic achiever. Out of a sample of 68 students, the assessment identified 48 high academic achievers and 20 low academic achievers. The descriptive

statistics (Table 1) show that the mean score for high AA is 3.12 ( $SD = 0.55$ ) and low AA 1.44 ( $SD = 0.20$ ).

### *Descriptive Statistics*

**Table 1.** Descriptive Statistics

Characteristics	N	Mean	Std. Deviation	Location	Gender Male
Authoritative	68	11.97	5.13	Fahaheel	100 %
Authoritarian	68	-14.53	6.10	Fahaheel	100%
Intrinsically Motivated	68	27.13	4.20	Fahaheel	100%
NonIntrinsically Motivated	68	-25.94	4.86	Fahaheel	100%
Low Self-Autonomy	68	1.45	0.27	Fahaheel	100%
High Self-Autonomy	68	3.05	0.37	Fahaheel	100%
High Academic Achiever	68	3.12	0.55	Fahaheel	100%
Low Academic Achiever	68	1.44	0.20	Fahaheel	100%

I determined whether ASB and AIM mediate the relationship between PA and AA. In the next section, data from a series of regression analyses were shown in fulfillment of supporting or rejecting the research questions, and hypotheses of this investigation.

### **Inferential Statistics**

A series of regression analyses were employed to determine whether ASB mediated the relationship between PA and AA. In Step 1 of the Baron and Kenny's (1986) mediation model, the regression of PA with the AA (Table 2), ignoring the mediator, was significant,  $b = 0.04$ ,  $t(66) = 5.49$ ,  $p = <.001$ . Step 2 showed that the regression of PA on the mediator, ASB (see Table 3), was also significant,  $b = 0.46$ ,  $t(66) = 9.41$ ,  $p = <.001$ . Step 3 of the mediation process showed that the mediator (autonomy-supportive behavior), controlling for PA (Table 4), was significant,  $b = .456$ ,  $t(65) =$

2.98,  $p = .0041$ . Step 4 of the analyses revealed that, controlling for the mediator (autonomy-supportive behavior) (Table 4), PA scores were a significant predictor of AA,  $b = 0.014$ ,  $t(66) = 1.54$ ,  $p = .0041$ . According to Baron and Kenny's regression model, if all steps are complete, then we can claim that mediation is established between the independent and dependent variable. In this case, ASB does mediate the relationship between PA and AA, supporting Hypothesis 1.

Table 2. *Relationship Between PA and AA (X → Y)*

	Coeff	Sd		P	LLCI	ULCI
Constant	2.6137	.0913	28.6310	.0000	2.4315	2.7960
Parental	.0351	.0064	5.4869	.0000	.0223	.0479

Table 3. *Relationship Between PA and Autonomy-Supported Behavior (X → M)*

	Coeff	Sd	T	P	LLCI	ULCI
Constant	2.3063	.64	33.2288	.0000	2.1677	2.4449
Parental	.0458	.0049	9.4128	.0000	.0361	.0555

Table 4. *Relationship Between Autonomy-Supportive Behaviour and the AA in the Presence of PA (M|X → Y)*

	Coeff	Sd	T	P	LCI	ULCI
Constant	1.5620	.3633	4.2994	.0001	.8364	2.27
Parental	.0142	.0093	1.5371	.1291	-.0043	.0327
Autonomy	.4560	.1530	2.9800	.0041	.1504	.7616

Next, I employed the same set of regression analyses to determine whether AIM mediated the relationship between PA and AA. In Step 1 of the mediation model, the regression of PA with the AA (Table 5), ignoring the mediator, was significant,  $b = 0.04$ ,  $t(66) = 5.49$ ,  $p = <.001$ . Step 2 showed that the regression PA on the mediator (Table 6),

academic intrinsic motivation, was also significant,  $b = 1.57$ ,  $t(66) = 12.46$ ,  $p = <.001$ .

Step 3 of the mediation process showed that the mediator (AIM), controlling for PA (Table 7), was significant,  $b = .0217$ ,  $t(65) = 3.81$ ,  $p = .0003$ . Step 4 of the analyses revealed that, controlling for the mediator (AIM; see Table 7), PA scores were not a significant predictor of AA,  $b = 0.0010$ ,  $t(66) = 0.10$ ,  $p = .9245$ . According to Baron and Kenny's regression model, if all steps are complete, we can claim that mediation is established between the independent and dependent variable. In this case, AIM does not mediate the relationship between PA and AA.

Table 5. Relationship Between PA and AA ( $X \rightarrow Y$ )

	Coeff	Sd	T	P	LLCI	ULCI
Constant	2.6137	.0913	28.6310	.0000	2.4315	2.7960
Parental	.0351	.0064	5.4869	.0000	.0223	.0479

Table 6. Relationship Between PA and Autonomy-Supported Behavior ( $X \rightarrow M$ )

	Coeff	Sd	T	P	LLCI	ULCI
Constant	2.494	1.8021	1.3840	.1710	-1.1038	6.0922
Parental	1.5745	.1263	12.4620	.0000	1.3222	1.8267

Table 7. Relationship Between Autonomy-Supportive Behaviour and the AA in the Presence of PA ( $M|X \rightarrow Y$ )

	Coeff	Sd	T	P	LLCI	ULCI
Constant	2.5597	.0844	30.3442	.0000	2.3912	2.7282
Parental	.0010	.0107	.0951	.9245	-.0203	.0223
Autonomy	.0217	.0057	3.8132	.0003	.0103	.0330

## Summary

ASB was found to mediate the relationship between PA and AA when using the Baron and Kenny model. I determined that the need of including ASB was more critical than academic intrinsic motivation-to be explained below. Statistical support shows support for Hypothesis 1. All in all, ASB will mediate the relationship between PA and AA. In Chapter 5, further interpretation of the results was illustrated. Moreover, I will also provide detail on the limitations, recommendations, and implications of this investigation.

### **Introduction**

I intended to conduct a quantitative study to determine whether ASB and AIM act as mediating variables, influencing the relationship between PA and AA. Using self-determination theory as a lens has helped scholars explain how motivation can impact a student's ability to succeed in school. In one study, scholars were able to identify a positive and significant connection between IM and AA (Van Nuland, Dusseldorp, Martens & Boekaerts, 2010). Strage and Brandt (1999) found that children from authoritative families are more intrinsically motivated than children from authoritarian families. They also discovered that children from authoritative parents have more control over their own behavior. Scholars have also revealed an important relation between ASB and AA. According to Deci, Koestner, and Ryan (1999), students who make their own choices and follow their own interests are more likely to become successful students. In a recent study, Hayenga and Corpus (2010) found that students with high levels of AIM tend to achieve higher grades when compared to students with low academic intrinsic motivation. Scholars have also used self-determination theory to examine the relationship between PA and AA (Strage & Brandt, 1999). Strage and Brandt found that PA either promotes or hinders the development of AA. Scholars have also discovered that authoritative parenting promotes cognitive competence in children (Liew et al., 2014). A potential reason to this phenomenon may be due to certain characteristics that authoritative parents possess. Authoritative parents are very supportive. They set high standards for their children and also grant appropriate levels of autonomy (Oryan & Gastil, 2013). Similarly, Furtak and Hunter (2012) discovered that authoritative parenting

can induce self-autonomy in children, which will subsequently enhance children's performance and student success.

Moreover, Froiland (2015) found a significant link between PA and intrinsic motivation. Children from authoritative families are more intrinsically motivated toward academic success. This is because authoritative parents allow children to fulfill their need for autonomy, competence, and relatedness (Froiland, 2015). When these psychological needs are met, IM is forwarded to children. In turn, children are able to show exceptional performance, conceptual learning, and persistent behavior (Areepattamannil, Freeman & Klinger, 2011). Unlike authoritative parenting, authoritarian parenting promotes cognitive incompetency (Froiland, 2011). According to Froiland, authoritarian parents shape and control behaviors of a child by means of enforcing strict expectations that the child must meet. This style of parenting prevents children from fulfilling their need for autonomy, competence, and relatedness. As a result, children from authoritarian families are less likely to feel intrinsically motivated to succeed in school (Froiland, 2015).

In one study, scholars were able to identify a positive and significant connection between IM and AA (Van Nuland, Dusseldorp, Martens & Boekaerts, 2010). Strage and Brandt (1999) found that children from authoritative families are more intrinsically motivated than children from authoritarian families. They also discovered that children from authoritative parents have more control over their own behavior. Scholars have also revealed an important relation between ASB and AA. According to Deci, Koestner, and Ryan (1999), students who make their own choices and follow their own interests are more likely to become successful students. In a recent study, Hayenga and Corpus (2010)



found that students with high levels of IM tend to achieve higher grades when compared to students with low intrinsic motivation. Scholars have also used self-determination theory to examine the relationship between PA and AA (Strage & Brandt, 1999). Strage and Brandt found that PA either promotes or hinders the development of AA. Based on this research, I tested the relationship between PA and AA when ASB and AIM are mediators--hence finding ASB to be a significant mediator.

I conducted a quantitative study to determine whether ASB and AIM acted as mediating variables, influencing the relationship between PA and AA. Two research questions and associated hypotheses were developed. Each of these questions was addressed using mediation analysis as described by Baron and Kenny (1986). Outcomes of this study indicate that ASB did mediate the relationship between PA and AA.

### **Interpretation of Study Findings**

According to the findings of this investigation, ASB confirmed previous studies to be valid in terms of the impact of parenting style, academic intrinsic motivation, and autonomy-supportive behavior on AA. Previously indicated, intrinsic and extrinsic motivation serves as a platform when investigating theories that pertain to student success. Academically intrinsically motivated students learn because they see learning as an interesting and enjoyable task (Ryan & Deci, 2000). Patall, Cooper, and Robinson (2008) argue that AIM predicts higher levels of effort and performance during task engagement. Froiland and Oros (2014) discovered that AIM students demonstrate higher levels of conceptual learning and attain academic positive outcomes.

According to Froiland, Oros, Smith, and Hirschert (2012) AIM to learn can lead to academic and emotional improvements. In one study, researchers found that 73% of children in the United States do not read for the sake of enjoyment (Perie, Grigg & Donahue, 2005). This is quite alarming because AIM to read has been associated with better performance in many aspects of literacy (Froiland & Oros, 2014). Children who see reading as an enjoyable task develop more reading strategies as compared to children who see reading as a daunting task. According to Froiland et al. (2015), academic intrinsic motivated students were more likely to reread difficult passages, take notes while reading, and make inferences about the reading.

Froiland, Oros, Smith, and Hirschert (2012) discovered that AIM plays a vital role in promoting psychological well-being. Froiland et al. discovered that school can be a joyful experience for some, but a daunting experience for others. As previously indicated, ASB is a social behavior that encourages other individuals to take a lead when making decisions. (Benita, Roth & Deci, 2014). It allows others to feel free to be who they are, express their opinions openly, and their interests (Milyavskaya et al., 2012).

Moreover considerable research has confirmed that ASB is associated with positive outcomes such as effective problem solving, creativity, flexibility, and exceptional performance (Grolnick et al., 1991; Grolnick & Slowiaczek, 1994; Soenens & Vansteenkiste, 2005; Assor, Kanat-Maymon, & Kaplan, 2006). In a current study, research by Benita, Roth, and Deci (2014) supports previous work as their study shows that ASB positively predicts adaptive psychological functioning. In another study, Deci and Ryan (2016) have found ASB to be associated with creativity, flexibility, and

effective problem solving. They also found controlling behavior to be associated with maladaptive behavior and poor performance. Benita, Roth, and Deci (2014) performed a study to test the effects of autonomy-supportive and autonomy-suppressive contexts on mastery goals and psychological outcomes. Mastery goals are accomplishments that improve levels of competency and promote skill development. Participants ( $n = 117$ ) were randomly assigned to three groups--autonomy-supportive, autonomy-suppressive, and neutral. According to results, individuals in the autonomy-supportive group were more likely to improve levels of competency and experience psychological well-being when compared to other groups (Benita, Roth, & Deci, 2014). For this instigation, parents that encourage their children to take the lead when making decisions, and allow them to express their opinions and follow their interests promote their child to establish self-autonomy. Self-autonomy is when individuals feel free to be who they are, express their opinions openly, and follow their interests-hence fulfilling their basic psychological needs (Milyavskaya, McClure, Ma, Koestner & Lydon, 2012). All in all, findings concluded that ASB was a significant mediator that allows a positive and significant relationship to materialize between parenting authority and AA. Moreover, findings also revealed that there was a specific style or approach of parenting for this positive and significant relationship to occur. In other words, the manner in which a parent directs and educates a child to do what parents want, or what parents believe is wise; is an important key to promoting this significant and positive relationship to occur. This parenting style is authoritative in nature. Authoritative parents are more than likely to show support for self-autonomy-hence promoting a child to academically prosper and achieve his/her

academic goals. Much of this research indicates a positive association between authoritative parenting and AA. Rivers, Mullis, Fortner, and Mullis (2012) examined the relationship between dimensions of PA (authoritative and authoritarian) and AA. Students' AA was measured by means of self-reported GPA scores. They hypothesized that authoritative parenting will predict higher gains in adolescent's AA. They also speculated that authoritarian parenting hinders the development of AA. They used correlational analyses to examine the relationship between the dimensions of PA and AA. According to results, authoritative parenting is associated with higher GPAs, and authoritarian parenting is associated with lower GPA (Rivers, Mullis, Fortner & Mullis, 2012). In another study, Inam, Nomaan, & Abiodulla (2016) discovered the effect of parenting styles on AA of the underachiever and higher achiever. Study results indicate that high achieving students are more likely to have authoritative parents. Such parents are demanding and responsive to their children's needs (Inam et al., 2016). Inam et al. also discovered that students whose parents were fully authoritative achieved higher results in comparison to students whose parents were permissive or authoritarian.

### **Limitations**

I feel confident that the sample was representative to the population of found in the area of Fahaheel, Kuwait. As mentioned, Fahaheel is an area known for its residents being tribal-hence sharing identical traditions and rituals. More importantly, members of the community are highly collective. The external validity of this study is likely to be threatened by population validity. Population validity describes how well the sample can be extrapolated to the population as a whole. According to Hagger, Rentzelas, and

Chatzisarantis (2014), the effects of individualistic and collective culture can distinctively impact how well results of this investigation can be generalized. Therefore, to avoid this threat, I will not generalize results to students of an individualistic culture, but only to students in a collective culture that is of a certain age, sex, and geographical location-the City of Fahaheel, in the state of Kuwait.

Moreover, a certain degree of self-report bias was expected when dealing with a collective culture. Participants from a collective culture may have chosen a response that is more socially acceptable amongst collective societies-hence making results bias. Lastly, a report bias to be commented on is sampling bias. Due to the selection of participants from Fahaheel, Kuwait, the results will not represent the general population of students in Kuwait. This is because Fahaheel citizens are culturally different than students south just eleven kilometers south of Fahaheel. Even though such a limitation of this category exists, we can still initiate a start to positive change. Educators, scholars, and educational psychologists can educate this particular population of Kuwaiti citizens, and by applying recommendations in schools for teachers and parents for the purpose of enhancing students' level of AA.

### **Recommendations for Action**

Based on the analyses and interpretation of results, educators, and school administrators should educate parents on the relationship studied in this investigation. Parents need to become aware of the impact of parenting styles on AA. It is recommended that parents become familiar to terms like authoritative parenting, authoritarian parenting, autonomy-supportive behavior, and academic intrinsic motivation. More importantly, it is recommended that parents understand how ASB and AIM can dictate the relationship between parenting styles and AA. The intended positive change this investigation strives to accomplish is to educate parents on parenting styles; in hope of parents making necessary changes to their approach of parenting-for the sake of promoting their child's AA.

### **Recommendations for Future Research**

In the present study, ASB and IM are seen as mediating constructs that link PA with AA. A small growing body of research has examined the mediating effect of selective variables between PA and AA. In one study, Dehyadegary, Divsalar, Esmaeili, Sadr, and Askari (2012) found that academic engagement mediates the relationship between PA and AA for students in Iran. No study has examined whether ASB and IM mediate the relationship between PA (authoritative and authoritarian) and AA. Determining whether ASB and IM act as mediators will allow me to discover if mean differences in intrinsic motivation, autonomy-supportive behavior, and AA serve as a function of PA. Using this information, I can promote positive social change

### **Implications for Positive Social Change**

According to Walden University (2020), positive social change implies a transformation that results in positive outcomes. This can happen at many levels, for example: individual, family systems, neighborhoods, organizations, nationally and globally; and can occur at different rates: slow and gradual or fast and radical. Walden University's approach to social change is interdisciplinary and multicultural. Any aspect of theory or research that relates to ideas and efforts to engender positive social change, and focuses on real-world applications of these ideas and efforts has positive social change implications. For this investigation, educators and school administrators can familiarize parents on the relationship between parenting styles and AA, parents will be able to reflect and decide whether they need to make any changes to promote AA. Once parents see the evidence that this study presents, they are likely to make changes for the sake of their child's benefit. I hope this study reaches as many scholars, educational psychologists, educators, and parents for the sake of making a positive social change to future generations. A social change of this nature can play a vital role in our community as members will use this knowledge to promote a brighter future for our children. Doing so will establish Walden's vision of creating and applying ideas, strategies, and actions to promote the worth, dignity, and development of individuals, communities, organizations, institutions, cultures, and societies. In other words, educating students of the results, interpretation, and recommendations will initiate positive social change, which then results in the improvement of human and social conditions.

## **Conclusion**

The aim of this investigation was to determine the relationship between PA and AA when supportive-autonomy behavior and AIM act as mediating variables. According to the results of this investigation, a positive and a significant relation can exist when ASB mediates the relationship between PA and AA. I hope that this study promotes awareness within different communities around the world. I hope that educators and school administrators educate parents on the outcomes of different parenting styles. Moreover, scholars and educational psychologists can further this study for the purpose of study results being generalized to different student populations.



## References

- Areepattamannil, (2012). Mediation role of academic achievement in the association between school self-concept and school achievement among Indian adolescents in Canada and India. *Social Psychology of Education*, 15, 367-386.  
doi:10.1007/s11218-012-9187-1
- Areepattamannil, S., Freeman, J. G., & Klinger, D. A. (2011). Intrinsic motivation, extrinsic motivation, and academic achievement among Indian adolescents in Canada and India. *Social Psychology of Education*, 14(3), 427-439.  
doi:10.1007/s11218-011-9155-1
- Areepattamannil, S., Freeman, J. G., & Klinger, D. A. (2015). Influence of motivation, self beliefs, and instructional practices on science achievement of adolescents in Canada. *Social Psychology of Education*. Advance online publication.  
doi:10.1007/s11218-010-9144-9.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, 75, 43–88. doi :10.2307/1127295
- Baumrind, D. (2005). Patterns of parental authority and adolescent autonomy. *New Directions for Child and Adolescent Development*, (108), 61-69.
- Becker, M., McElvany, N., & Kortenbruck, M. (2010). Intrinsic and extrinsic reading motivation as predictors of reading literacy: A longitudinal study. *Journal of Educational Psychology*, 102(4), 773-785.

- Benita, M., Roth, G., & Deci, E. L. (2014). When are mastery goals more adaptive? It depends on experiences of autonomy support and autonomy. *Journal of Educational Psychology, 106*(1), 258-267. doi:10.1037/a0034007
- Benware, C., & Deci, E. L. (1984). The quality of learning with an active versus passive motivational set. *American Educational Research Journal, 21*, 755–766.
- Berger, D. (2003). Introduction to multiple regression. Retrieved from <http://wise.cgu.edu>
- Bronstein, P., Ginsburg, G. S., & Herrera, I. S. (2005). Parental predictors of motivational orientation in early adolescence: A longitudinal study. *Journal of Youth And Adolescence, 34*(6), 559-575. doi:10.1007/s10964-005-8946-0
- Brown, L., & Iyengar, S. (2008). Parenting styles: The impact of student achievement. *Marriage & Family Review, 43*, 14–38.
- Buri, J. R. (1991). parental authority questionnaire. *Journal of Personality Assessment, 57*(1), 110-119.
- Conti, R. (2001). Time flies: Investigating the connection between intrinsic motivation and the experience of time. *Journal of Personality, 69*, 1-26.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125*, 627–668. doi:10.1037/0033-2909.125.6.627
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

- Deci, E. L., & Ryan, R. M. (2000). *The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior*. *Psychological Inquiry, 11*, 227–268. doi:10.1207/S15327965PLI1104\_01
- Deci, E.L, Ryan, R. (2016). *Optimizing students’ motivation in the era of testing and pressure: A self-determination theory perspective*. Springer Singapore.
- Deci, E.L., Vallerand, R.J., Pelletier, L.G., & Ryan, R. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist, 26*(3-4), 325-346.
- Dehyadegary, E., Divsalar, K., Esmaeili, N. S., Sadr, A. J., & Askari, A. (2012). Academic engagement as a mediator in relationship between parenting style and academic achievement among adolescents in Sirjan-Iran. *Life Science Journal, 9*(4), 1-13.
- Kocayoruk, E., Altintas, E. & icbay, M. A. J. (2015). The perceived parental support, autonomous-self and well-being of adolescents: A cluster-analysis approach. *Journal of Child and Family Studies, 24* (6), 1819–1828. doi: 10.1007/s10826-014-9985-5
- Eisenberg, N., Gershoff, E. T., Fabes, R. A., Shepard, S. A., Cumberland, A. J., Losoya, S. H., Murphy, B. C. (2001). Mothers’ emotionalexpressivity and children’s behavior problems and social competence: Mediation through children’s regulation. *Developmental Psychology, 37*, 475–490. doi:10.1037/0012-1649.37.4.475\

- Froiland, J. M. (2011). Parental autonomy support and student learning goals: A preliminary examination of an intrinsic motivation intervention. *Child & Youth Care Forum, 40*(2), 135–149.
- Froiland, J. M. (2013). Parents' weekly descriptions of autonomy supportive communication: Promoting children's motivation to learn and positive emotions. *Journal of Child and Family Studies*. doi:[10.1007/s10826-013-9819-x](https://doi.org/10.1007/s10826-013-9819-x).
- Froiland, J.O. & Oros, E. (2014). Intrinsic motivation, perceived competence and classroom engagement as longitudinal predictors of adolescent reading achievement. *Journal of Experimental and Educational Psychology, 119*-132.
- Froiland, J. M. (2015). Parents' Weekly Descriptions of Autonomy Supportive Communication: Promoting Children's Motivation to Learn and Positive Emotion. *Journal of Child & Family Studies, 24*(1), 117-126.  
doi:[10.1007/s10826-013-9819-x](https://doi.org/10.1007/s10826-013-9819-x).
- Froiland, J. M., Oros, E., Smith, L., & Hirschert, T. (2012). Intrinsic motivation to learn: the nexus between psychological health and academic success. *Contemporary School Psychology, 16*, 91-99.
- Ghasemi, P. (2010). Negative aspects of academic failure among student, Ghodes Newspaper, Mashhad, Iran.
- Gottfried, A.E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of educational Psychology, 82*, 525-538.

- Grant, A.M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance and productivity. *Journal of Applied Psychology, 93*(1), 48-58.
- Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self regulation and competence in school. *Journal of Educational Psychology, 81*, 143–154.
- Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The self-determination theory perspective. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (pp. 135–161). New York, NY: Wiley.
- Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology, 83*(4), 508-517.
- Hagger, M. S., Rentzelas, P., & Chatzisarantis, N. L. (2014). Effects of individualist and collectivist group norms and choice on intrinsic motivation. *Journal of MotivEmot, 38*, 215-223.
- Hardy, S. A., Dollahite, D.C., Johnson, N., Christensen, J.B. (2014) Adolescent motivations to engage in pro-social behaviors and abstain from health-risk behaviors: A self-determination theory approach. *Journal of Personality, 83* (5), 479-490. doi: 10.1111/jopy.12123

- Hayenga, A. O., & Corpus, J. H. (2010). Profiles of intrinsic and extrinsic motivations: A person-centered approach to motivation and achievement in middle school. *Motivation and Emotion, 34*(4), 371-383. doi:10.1007/s11031-010-9181-x
- Htway, Z. (2015). *G\*Power with Dr. Zin Htway. Calculating Required Sample Size Multiple Linear Regression* [Video podcast].
- Inam, A., Nomaan, S. & Abiodullah, M. (2016). Parents' parenting styles and academic achievement of underachievers and high achievers at middle school level. *Bulliten of Education and Research, 38* (1), 57-74.
- International Association for the Evaluation of Educational Achievement (2011). TIMSS & PIRLS. Retrieved from [http://http://timssandpirls.bc.edu/](http://timssandpirls.bc.edu/)
- Ishak, Z., Low, S. F., & Lau, P. L. (2012). Parenting style as a moderator for students' academic achievement. *Journal of Science Education and Technology, 21*(4), 487-493. doi:10.1007/s10956-011-9340-1
- Keshavarz, S., & Baharudin, R. (2013). Perceived parenting style of fathers and adolescents' locus of control in a collectivist culture of Malaysia: The moderating role of fathers' education. *The Journal of Genetic Psychology: Research and Theory on Human Development, 174*(3), 253-270.  
doi:10.1080/00221325.2012.678419
- Liew, J., Kwok, O., Chang, B. W., & Yeh, Y. (2014). Parental autonomy support predicts academic achievement through emotion-related self-regulation and adaptive skills in Chinese American adolescents. *Asian American Journal of Psychology, 5*(3), 214-222. doi: 10.1037/a0034787

- Milyavskaya, M., McClure, M. J., Ma, D., Koestner, R., & Lydon, J. (2012). Attachment moderates the effects of autonomy-supportive and controlling interpersonal primes on intrinsic motivation. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, 44(4), 278-287.  
doi:10.1037/a0025828.
- Miranda, M.C., Affuso, G., Esposito, C. & Bacchini, D. (2016). Parental acceptance–rejection and adolescent maladjustment: Mothers’ and fathers’ combined roles. *Child Family Studies* (2016) 25: 1352. doi: 10.1007/s10826-015-0305-5
- National Institute of Child Health and Human Development Early Child Care Research Network (2008). Mothers' and fathers' support for child autonomy and early school achievement. *Developmental Psychology*, 44(4), 895-907.  
doi:10.1037/0012-1649.44.4.895
- Nesteruk, O., & Marks, L. D. (2011). Parenting in immigration: Experiences of mothers and fathers from Eastern Europe raising children in the United States. *Journal of Comparative Family Studies*, 42(6), 809-826.
- Oryan, S., & Gastil, J. (2013). Democratic Parenting: Paradoxical Messages in Democratic Parent Education Theories. *International Review of Education*, 59(1), 113-129.
- Patall, E.A., Cooper, H. & Robinson J.C. (2008). The effects of choice on intrinsic motivation and related outcomes: a meta-analysis of research findings. *Psychological Bulletin*, 134(2), 270-300.

- Pekrun, R., Goetz, T., Frenzel, A.C., Barchfeld, P., & Perry, R.P. (2011). Measuring Emotions in Students' Learning and Performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology*, 36(1), p. 36-48.
- Perie, M., Grigg, W. & Donahue, P. (2005). *The nation's report card: Reading 2005* (U.S. Department of Education, National Center for Educational Statistics, NCES 2006-451). Washington, DC: U.S. Government Printing Office.
- Ratelle, C. F., Guay, F., Vallerand, R. J., Larose, S., & Senécal, C. (2007). Autonomous, controlled, and amotivated types of academic motivation: A person-oriented analysis. *Journal of Educational Psychology*, 99, 734–746.
- Rivers, J., Mullis, A. K., Fortner, L. A., & Mullis, R. L. (2012). Relationships between parenting styles and the academic performance of adolescents. *Journal of Family Social Work*, 15(3), 202-216.
- Ryan, R. M., Connell, J. P., & Plant, R. W. (1990). Emotions in non-directed text learning. *Learning and Individual Differences*, 2, 1-17.
- Ryan, R.M. & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, 43, 450-461.



- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the class-room: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology*, 50, 550–558
- Ryan, R. M., Mims, V., & Koestner, R. (1983). Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. *Journal of Personality and Social Psychology*, 45, 736-750.
- Sangawi, H., Adams, J. and Reissland, N. (2016), The impact of parenting styles on children developmental outcome: The role of academic self-concept as a mediator. *Int J Psychol.* doi:10.1002/ijop.12380
- Self-Determination Theory (2011). An approach to human motivation and personality. Retrieved from <http://www.selfdeterminationtheory.org/questionnaires/10-questionnaires/47>
- Self-Determination Theory (2015). An approach to human motivation and personality.
- Shia, R. M. (1998). Assessing Academic Intrinsic Motivation: A Look at Student Goals and Personal Strategy. Retrieved from <http://www.cet.edu/pdf/motivation.pdf>
- Van Nuland, H. J. C., Dusseldorp, E., Martens, R. L., &Boekaerts, M. (2010). Exploring the motivation jungle: Predicting performance on a novel task by investigating constructs from different motivation perspectives in tandem. *International Journal of Psychology*, 45(4), 250–259. Retrieved from the Walden Library using the Business Source Complete database.
- Williams, G. C., McGregor, H. A., Sharp, D., Levesque, C., Kouides, R. W., Ryan, R. M., & Deci, E. L. (2006). Testing a self-determination theory intervention for

motivating tobacco cessation: Supporting autonomy and competence in a clinical trial. *Health Psychology*, 25, 91–101. doi:10.1037/0278-6133.25.1.91