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THE PREDICTABILITY OF SELECTED ACADEMIC DEMOGRAPHIC AND  
FAMILY RELATED FACTORS ON THE ACADEMIC ACHIEVEMENT OF MIDDLE  
SCHOOL STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for  
the Degree Doctor of Education in the Graduate School  
of Texas Southern University

By

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THE PREDICTABILITY OF SELECTED ACADEMIC DEMOGRAPHIC AND  
FAMILY RELATED FACTORS ON THE ACADEMIC ACHIEVEMENT OF MIDDLE  
SCHOOL STUDENTS.

Demetria Westmoreland, Ed.D.

Texas Southern University, 2021

Professor Ingrid. Haynes-Mays, Advisor

The purpose of this study was to examine the relationship and predictability of selected demographic, academic and family related factors on the academic performance of middle school students. Specifically, this study will be concerned with the predictability of the variables gender, ethnicity, standardized mathematics scores, standardized reading scores, family income, type of household, socioeconomic status and primary language spoken in the home on the academic performance of middle school students as measured by their STAAR's social studies scores.

A quantitative correlational research design (see Figure 1) was employed in the current investigation. A linear relationship was not found between the demographic factors of gender and ethnicity and the academic performance of middle school students regarding their social studies scores. Middle school students' gender and ethnicity were not independent predictors of their social studies scores. A statistically significant relationship was found between the academic factors of STAAR's mathematics scores, STAAR's reading scores and social studies scores of middle school students. The variable STAAR's mathematics scores did contribute significantly to the STAAR's social

studies scores of middle school students. The variable STAAR's reading scores was not an independent predictor of middle school students' STAAR's social studies scores. A significant linear relationship was not found between family related factors (family income, type of household, socioeconomic status (SES) and primary language spoken in home) and the STAAR's social studies scores of middle schools' students. The variables family income, type of household, SES and primary language spoken in home were not independent predictors of the STAAR's social studies scores among middle school students.

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## VITA

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## **DEDICATION**

I dedicate this to my parents Rogers and Betty Westmoreland, no matter how difficult the situation they were always there to remind me to trust in God and anything is possible.

I also dedicate this to my Uncle Charles Tobe Westmoreland, Jr., who prior to his death would everyday show how important it was to love life and care about others more than yourself. Thank you for your example and love.

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# CHAPTER 1

## INTRODUCTION

Public education in the United States has always had a significant impact on society and the development of upcoming generations. Due to this impact on the development of children, public education has been held more accountable. (Burt et al., 2014). With the emphasis on accountability, higher expectations are being placed on school districts across the country. With this, public schools also face the challenge of students having more and more expectations placed on them due to responsibilities away from school (Barton & Stepanek, 2009). This dynamic is making it increasingly difficult for schools to meet the needs of a diverse student population (Harlacher & Siler, 2011).

The relationship between academic achievement and the subjective academic demographic and family related factors on the academic achievement of middle school students has received increasing attention. However, previous research on the relationship between these variables has yielded inconsistent conclusions – possibly due to the presence of potential moderating variables.

Academic achievement can influence the future of education and career choices of children and adolescents (Rana & Mahmood, 2010; Flashman, 2012). Poor academic performance causes children and adolescents to feel pessimistic and disappointed about their future and leads teachers and parents to exert pressure, which negatively influences the subjective wellbeing of children and adolescents.

Family provides sustained and stable resources for the lifelong development of children and adolescents and is a major factor affecting their outcomes (Berkowitz et al., 2015; Hill, 2015). Many studies have indicated that parental factors play an important

role in the academic achievement (Cheung & Pomerantz, 2012; Stright & Yeo, 2014), life satisfaction (Leung et al., 2004), and emotional function (Cheung & Pomerantz, 2011; Wang et al., 2014) of children. School-based parental involvement is a factor of parental involvement in education that has received more attention. Students' academic achievement is enhanced by parents through parent-school interaction, which generally includes parent-school communication, involvement in volunteer activities in schools, and participation in school management (Hill & Tyson, 2009). School-based parental involvement can transmit the importance of education to children and can help children to understand the importance of academic achievements (Lareau, 2000).

Socio-economic characteristics – “such as health and nutrition status, home environments that provide access to academically related experiences, mobility rates, and financial assets can certainly influence academic achievements” (Laosa, 2005, p. 5). “The responsibility of training a child always lies in the hand of the parents” (Ogunshola & Adewale, 2012, p. 230). Parental educational background, profession and occupation affect their financial status. Family income is one major factor that affects their children's educational level, competitive ability and performance (Smith et al., 2002; Hill et al., 2004; Rothstein, 2004).

Yousefi et al. (2010) examined the effect of family income on test-anxiety and academic achievement. Their paper focused on 400 Iranian high school students. Statistical analysis of ANOVA was employed. The findings showed that family income significantly affected academic achievement of students. It was recommended that in enhancing academic achievement in school setting, supports strategies such as improving family income among families by the government. To decrease the rate of influence on



family income on depression and academic achievement among students, the government should organize practical programs to help families and also students in the areas of food, money and the other supports (Yousefi et al., 2010).

Lacour and Tissington (2011) examined the effects of poverty on academic achievement in the USA. They concluded their study that poverty directly affects academic achievement due to the lack of resources available for students' success; thus, low academic achievement is closely correlated with lack of resources, with emphasis on financial resources. They recommended that instructional techniques and strategies implemented in the classroom, school, district, and government levels can help close the achievement gap by providing students with necessary assistance in order to achieve high performance in academics.

Socioeconomic (SES), racial/ethnic, and gender inequalities in academic achievement have been widely reported in the US, but how these three axes of inequality intersect to determine academic and non-academic outcomes among school-aged children is not well understood. Within classes of advantage/disadvantage, racial/ethnic and gender inequalities are predominantly found in the most advantaged class, where Black boys and girls, and Latina girls, underperform White boys in academic assessments. Black boys and girls perform better than White boys. Latino boys show small differences as compared to White boys, mainly in science assessments. The contrasting outcomes between racial/ethnic and gender minorities in self-assessment and socioemotional outcomes, as compared to standardized assessments, highlight the detrimental effect that intersecting racial/ethnic and gender discrimination have in patterning academic outcomes that predict success in adult life. Interventions to eliminate achievement gaps

cannot fully succeed as long as social stratification caused by gender and racial discrimination is not addressed.

In addition to the complexity that arises from race/ethnicity, socioeconomic (SES) status, and intersections between them, different patterns in academic and non-academic outcomes by gender have also received longstanding attention. Comparisons across gender show that, on average, boys have higher scores in mathematics and science, whereas girls have higher scores in reading (Nowell & Hedges, 1998). In contrast to explanations for socioeconomic inequalities, gender differences have been mainly attributed to social conditioning and stereotyping within families, schools, communities, and the wider society (Steele, 1997). These socialization and stereotyping processes are also highly relevant determining factors in explaining racial/ethnic academic and non-academic inequalities (Sinclair, Hardin, & Lowery, 2006), as are processes of racial discrimination and stigmatization (Priest, et al., 2013). Gender differences in academic outcomes have been documented as differently patterned across racial/ethnic groups and across levels of socioeconomic status. For example, gender inequalities in math and science are largest among White and Latino students, and smallest among Asian American and African American students (McGraw, Lubienski, & Strutchens, 2006), while gender gaps in test scores are more pronounced among socioeconomically disadvantaged children [Entwisle, Alexander, & Olson, 2007).

One of the prime goals for public schools has always been civic development (Carnegie Corp. and Circle, 2003; Nie, Junn, & Shehlik-Barry, 1997; Patrick, 1998). Almost everyone agrees that civic education is essential for all children. All students should be able to participate fully in their local, state, national, and global communities.

Social studies is the most important curriculum area that covers civic development, although other curriculum areas and the classroom and school climate are also factors. Other agencies in society, such as family, religious institutions, associations, political parties, and the media, also influence students' civic education. What middle school children know about social studies has not been as thoroughly studied as their reading and mathematics knowledge. The history, geography, and civics results of the National Assessment for Educational Progress (NAEP) only start with the fourth grade (Persky, Reese, O'Sullivan, Lazer. Moore, & Skakrani, 1996). By fourth grade, substantial racial-ethnic differences favoring White and Asian American children were noted in social studies achievement. Fourth-grade boys also performed better than did girls in geography (Weiss, Lutkus, Hildebrant, & Johnson, 2002).

### **Statement of the Problem**

The purpose of this study was to examine the relationship and predictability of selected demographic, academic and family related factors on the academic performance of middle school students. Specifically, this study will be concerned with the predictability of the variables gender, ethnicity, standardized mathematics scores, standardized reading scores, family income, type of household, socioeconomic status and primary language spoken in the home on the academic performance of middle school students as measured by their STAAR's social studies scores. Answers to the following questions will be sought:

1. Do demographic factors (gender and ethnicity) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?

2. Do academic factors (standardized mathematics scores and standardized reading scores) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?
3. Do family related factors (family income, type of household, socioeconomic status and primary language spoken in home) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?

### **Research Hypotheses**

The following research hypotheses were formulated in this investigation:

- H<sub>1</sub>: There is a statistically significant predictable relationship between demographic factors (gender and ethnicity) and the academic performance of middle school students as measured by the STAAR's social studies scores.
- H<sub>2</sub>: There is a statistically significant predictable relationship between academic factors (standardized mathematics scores and standardized reading scores) and the academic performance of middle school students as measured by their STAAR social studies scores.
- H<sub>3</sub>: There is a statistically significant predictable relationship between family related factors (family income, type or household, SES and primary language spoken in the home) and the academic performance of middle school students as measured by their STAAR's social studies scores.

## **Theoretical Framework**

The present study will be based on the theory of academic performance (ToP) developed by Elger (2007). The theory emphasizes six foundational concepts to form a framework that can be used to explain performance as well as performance improvements. To perform is to produce valued results. A performer can be an individual or a group of people engaging in a collaborative effort. Developing performance is a journey, and level of performance describes location in the journey. Current level of performance depends holistically on six components: context, level of knowledge, levels of skills, level of identity, personal factors, and fixed factors. Three axioms are proposed for effective performance improvements. These involve a performer's mindset, immersion in an enriching environment, and engagement in reflective practice.

The theory of performance is a challenge to educators: by improving our own performance, we empower ourselves to help others learn and grow. As advocated by Harvard's Project Zero, performance is closely related to learning-for-understanding (Wiske, 1998). When people learn and grow, they are empowered to create results that make a difference. Working and learning together in ways that make the world better has been a primary goal of higher education throughout the ages.

## **Significance of the Study**

The significance of the present investigation is threefold. First, a study of this nature will provide public school officials, particular at the middle school level with pertinent information concerning the academic achievement of students. An understanding of those demographic, academic and family related factors which have a positive impact on the academic performance of middle school students will assist

administrators and other school personnel in developing academic interactions to enhance performance.

Secondly, this study will provide principals and other school officials with relevant data on how to improve the academic ability of all students. An awareness of selected academic, demographic and family related factors, which contribute to identify those middle school students who would most likely be successful, will help school officials where resources are needed to improve the performance of all students.

Finally, the data generated from the present investigation will provide school officials with those demographics, academic, and family related factors, which accounted for most of the variance in the academic achievement among middle school students. Being cognizant of those factors will help school officials who are responsible for the academic preparation of students with information to develop and implement strategies to enhance the overall academic program at this grade level.

### **Assumptions**

The following assumptions were made about this research investigation:

1. It will be assumed that selected demographic, academic, and family related factors of middle school students do have some predictive power concerning their academic performance in social studies.
2. It will be assumed that the archival data generating from the Texas Education Agency and the students' school records will be accurate.
3. It will be assumed that the student participants used in this investigation are representation of the middle school student population from the target school district.

4. Finally, it will be assumed that student data from the Texas Education Agency of those utilizing a free or reduced lunch program will reflect the student's socioeconomic status.

### **Limitation/Delimitation**

The following limitation/delimitation were observed in the current investigation:

1. The study will be limited to existing data generated from the Texas Education Agency's database for middle school students for 2018-2019 academic school year.
2. The study will be limited to a middle school located in a school district located in the southern region of the United States.
3. The study will be limited to eighth grade students attending a middle school in the target school district.
4. The study will also be limited to the academic achievement of middle school students on the State of Texas Assessment of Academic Readiness (STAAR).
5. Finally, the generalization drawn from the finding of this study will be limited to eighth grade students from similar middle schools.

### **Definition of Variable/Terms**

The following variables/terms will be operationally defined for the purpose of providing clarity and understanding about the focus of the present research investigation:

1. Academic Achievement – refers to a middle school student's social studies raw score on the STAAR examination.
2. Ethnicity – refers to whether a middle school student is African American, White American, Hispanic American, Asian American, or other American.

3. Family Income – refers to the annual financial resources of middle school student’s family.
4. Gender – refers to whether a middle school student is male or female.
5. Middle School – refers to an educational institution consisting of grades six through eight.
6. Middle School Student – refers to a student enrolled in grades six through eight in an educational institution.
7. Primary Language – refers to whether a middle school student primary language in the home is English or Spanish.
8. Public School – refers to a school educational institution that consists of kindergarten through twelfth grade.
9. Socioeconomic Status – refers to whether a middle school student participate in a free or reduced lunch program or he or she did not participate in a free or reduced lunch program.
10. STAAR’s Mathematics Score – refers to the middle school student’s raw score on the mathematics section of the STAAR examination.
11. STAAR’s Reading Score - refers to the middle school student’s raw score on the reading section of the STAAR examination.
12. STAAR’s Social Studies Score - refers to the middle school student’s raw score on the social studies section of the STAAR examination.
13. Type of Household – refers to whether a middle school student resided in one parent or two parent household.



## **Organization of the Study**

This research investigation is organized into five chapters. Chapter 1 includes the introduction of the study, purpose of the study, significance of the study, theoretical framework, hypotheses, assumptions, limitation/delimitation, definition of variables, and the organization and summary of the study.

Chapter 2 consists of the review of related literature pertaining to the association between demographic and academic factors, and the academic achievement of students with regards to their performance in social studies. Likewise, this chapter consists of the review of literature pertaining to the relationship between family related factors and academic achievement of middle school students in social studies.

Moreover, Chapter 3 includes the research methodology that will be used to conduct the investigation. This chapter was concerned with the type of research design, population and research setting, sampling procedures, instrumentation, validity and reliability of the instrument, data collection, null hypotheses, identification of independent and dependent variables, statistical analysis and statistical assumptions.

Furthermore, Chapter 4 provides a detailed description of data in a tabular format with statistical interpretation. This chapter concluded with a summary of the hypotheses tested in the study. Finally, Chapter 5 contains an overall summary of the investigation with findings and conclusions. This chapter also provides a discussion of the results as well as implications and recommendations.

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

Public education in the United States has always had a significant impact on society and the development of upcoming generations. Due to this impact on the development of children, public education has been held more accountable in the past 20 years (Burt et al., 2014). With the emphasis on accountability, higher expectations are being placed on school districts across the country. Along with this, public schools also face the challenge of students having more and more expectations placed on them due to responsibilities away from school (Barton & Stepanek, 2009). This dynamic is making it increasingly difficult for schools to meet the needs of a diverse student population (Harlacher & Siler, 2011).

The purpose of this study will be to examine the predictable relationship between selected academic, demographic, and family related factors on the academic achievement of middle school students. Specifically, this study will be concerned with the predictability of the variables standardized mathematics scores, standardized reading scores, gender, ethnicity, socioeconomic status, family income, type of household, and the primary language spoken in the home on the social studies achievement scores of middle school students.

Early adolescence and entry into middle school reflect change on multiple levels. The middle school years coincide with key changes in adolescent development, including biological and cognitive growth, social development, and renegotiations of family relationships, especially the parent–adolescent relationship (Grolnick, Price, Beiswenger, & Sauck, 2007). Further, the middle school context reflects a significant change

compared to elementary school, including a larger, more bureaucratic system with many more teachers, peers, and curricular choices (Hill & Chao, 2009). In the context of such changes and development, adolescents' academic performance often declines (Barber & Olsen, 2004; Eccles, 2004).

### **Family Related Factors on Academic Achievement**

Parental involvement in children's education matters. It matters for their achievement, motivation and well-being at school. According to Smit, Driesen, Sluiter and Brus (2007), parental involvement in children's education does positively influence school achievement. Smit et al. (2007) defines parental involvement and parental participation concepts as: parental involvement is the involvement of parents in the upbringing and education of their own child both at home and at school and parental participation can be defined as the active contribution of parents in school activities.

Kassim, Kehinde and Abisola (2011) examined the causal-effects of parents' education, profession and mother's age on students' attainments. The results revealed that parents' education has the vital influence on the academic achievement of students. Vellymalay (2010) studied the relationship between parents' education level and their immersion in their children's education. Findings of the study suggested that there were no significant differences between parents' education level and parents' involvement plans for their children's education. Dubow et al. (2009) examined the forecast of individuals' educational and occupational success from related and personal variables assessed during their mid childhood and late adolescence. The results provided strong support for the unique predictive role of parental education on their children's

educational developmental factors such as late adolescent achievement and achievement-related ambitions.

Moreover, Kean (2005) examined the impact of socioeconomic status, especially parents' education and income on children's academic achievements. Socioeconomic factors were found to be associated with children's academic attainments. Fan (2001) explored the effect of parents' participation on their children's academic development. The results showed that parents' aspiration for their children's educational attainment had a consistent and positive effect on students' academic development.

In a similar study, Zhao and Bodovski (2020) examined the impact of family socioeconomic status and home educational resources on the academic achievement among middle school students in China. A large representative sample of 10,750 Chinese eighth grade students were selected to participate in the study. The data were generated from the China Educational Panel Survey during the 2014-2015 academic school year. Multiple linear regression and descriptive statistics in conjunction with the Pearson Product Moment Correlation were used to evaluate the data. Zhao and Bodovski found that family socioeconomic status was significantly related to the academic performance of middle school students. In addition, the data revealed that home educational resources were significantly positive predictors of the academic achievement among middle school Chinese students.

Educational achievement, and its relationship with socioeconomic background, is one of the enduring issues in educational research. The influential Coleman Report (1966) concluded that schools themselves did little to affect a student's academic outcomes over and above what the students themselves brought with them to school—

‘the inequalities imposed on children by their home, neighborhood and peer environment are carried along to become the inequalities with which they confront adult life at the end of school’ (p. 325).

Examining Sirin’s (2005) meta-analysis of the research into socioeconomic status and academic achievement finds that many studies use a combination of one or more of these, parental education, occupation and income, others include parental expectations, and many simply use whether the student gets a free or reduced-price lunch. The latter factor is most commonly used as it is readily available from school records rather than having to ask questions about occupation and education of students or parents, yet Hauser (1994) as well as Sirin have argued that it is conceptually problematic and should not be used. Other studies have used family structure, (Boggers, 1998), family size, (Downey, 1995), and even residential mobility (Scanlon, & Devine, 2001).

### **Socioeconomic Factor Relationship on Academic Achievement**

Academic achievement depends not only on the factors in school but also on the socioeconomic environment where students grow up. The environment impacts the families with high/low income to their children learning. Some students from low-income families have difficulties understanding or learning as fast as other students. Their vocabulary level can be less as the other students from different backgrounds. Also, their way of learning and understanding are different from others, because their parents may not help them at home or they have a single parent. If they are poor and their parents must work all day this will leave no time to help their children with homework. Another thing is the stress they have and their family at home. These may affect their grades

because no one helped them or even, sometimes, care about their success in schools (Jensen, 2013).

Literature has demonstrated that one of the strongest predictors of academic achievement is student and school SES (Sirin, 2005). Researchers throughout the world have found a significant correlation between SES and academic achievement, to the detriment of students and schools with lower SES backgrounds (National Center for Education Statistics, 2013). Chiu (2007), depending on the findings of 41 countries, investigated how socioeconomic status of family affected the academic achievement of 15-year-old students in science. According to that research, socioeconomic statuses of the family and educational resources (cultural structure of the family, educational level of the parents and of the siblings) have important effect on student's academic achievement in science.

Rothman (2003) states that children from low socioeconomic status do not have a study condition at home which would affect their academic achievement at school. However, Davis-Kean (2005) argues that socioeconomic status of the family has an indirect rather than direct effect on academic achievement of the student. Chevalier and Lanot (2002) also state that students' academic achievement and family income are closely related, but this is not a clear finding indicating its effects on the child's educational output. Blanden and Gregg (2005) argue that family income is influential on children's educational gains. It can be said that the students whose family incomes are high are more successful than those whose are low.

Corwyn and Bradley (2002), using a national sample of families, found that household income effects seemed to vary the most by race, with European Americans

showing no effects of income and other minority groups (African American, Hispanics) showing small effects. Racial differences did exist in this study but were small and appeared to have little differential impact on any particular child outcome. People generally believe that there is a strong and stable correlation between SES and children's academic achievement and cognitive development. However, the conclusions from studies are inconsistent (Bradley & Corwyn, 2002; Lareau, 2011). Many researchers have found that family background factors can explain most of the variance in students' academic achievement and play a more important role than schools (Arnold & Doctoroff, 2003; Reardon, 2011; Berkowitz et al., 2017; Lawson & Farah, 2017). Berkowitz et al. (2017) study showed that positive school and classroom climates mitigate the negative effect of poor SES background on academic achievement.

The family income is a serious problem that may impact the student's success. Duan, Guan, and Bu (2018) study aims to promote the development of children and adolescents by examining the relationship between parental involvement, socioeconomic status (SES), and junior school students' performance (e.g., academic achievement and school behavior). The survey consisted of 19,487 Chinese junior school students taken from the 2013–2014 Chinese Educational Panel Survey (CEPS) that was administrated by the National Survey Research Center at Renmin University of China. The results demonstrate that SES negatively moderates both the relationship between academic socialization and academic achievement, and the relationship between home-based involvement and school behavior. Findings imply that parental involvement activities are highly beneficial for junior school students in families with low SES.

According to the theory of cultural reproduction, a high SES family provides more educational resources to their offspring, and promotes adolescents' educational achievement (Bourdieu, 1973; Bourdieu & Passeron, 1990). Coleman (1988) considered that a family with high SES can provide a better living environment and more educational resources for their child or children. For example, with a longitudinal data of 2,744 adolescents, Morris et al. (2018) found that children from low SES families tended to live in low SES neighborhoods.

Socioeconomic status significantly affects the relationship between parental involvement and adolescent performance (Byun et al., 2012). Parents with low SES typically practice low levels of academic socialization with their children (Carolan & Wasserman, 2015). By contrast, families with high SES usually engage in high-quality activities of home-based involvement (Fantuzzo et al., 2004). For instance, Conger and Donnellan (2007) found that parents with high SES had better communication with their children. In an expansion study on children's communicative-pragmatic ability, with a sample of 390 Italian-speaking children Bosco et al. (2013) found that family SES has small yet significant positive effect on children's pragmatic ability, and the effect was still existed during the middle part of their childhood. In addition, other studies suggested that SES is linked with the academic achievement of adolescents (Hill & Tyson, 2009; Byun et al., 2012). Adolescents from families with high SES tend to display good academic achievement (Sirin, 2005; Reardon, 2011).

Zhang (2012) examined students and their families' income in China. He studied almost 407 students in their early years. The study measures student's reading skills and observed families in their home. Also, it took part in the families' home and in the



student's skills. Moreover, it was well-organized study with the chosen children and the process of measuring them and their families. The results with numbers were very clear and showed how the families' income affected their children learning (Zhang, 2012).

Reardon (2013) represents in his study how students from families with high income are having better performance than low-income families' students. His study took place in the United States for several years. He shows how timing is important for the families' income. The impact of the income can be shown in the early days of the student's learning. This may show better results to the student's academic achievement. Moreover, students from high income have the opportunity to get into any colleges or universities.

There is a robust, though somewhat inconsistent, literature demonstrating the detrimental impact of poverty and its many correlates on academic achievement (Lindo, 2014; Sirin, 2005). There have been two major systematic reviews of the literature on SES impact on academic achievement. White (1982) reviewed studies published before 1980 and found varying relationships between SES and academic achievement, largely because of inconsistent measurements of SES and achievement. In a meta-analysis of the empirical research carried out from 1990 to 2000, Sirin (2005) found a medium level of association between SES and academic achievement. When Sirin (2005) replicated White's (1982) methodology, there was a smaller correlation between SES and academic achievement than White (1982) had reported.

Much of the literature on the school-level impact of SES on academic achievement comes from data that is more than 20 years old (Palardy, 2013). Literature since Sirin (2005) meta-analysis has largely focused on mediators and moderators of the

poverty and achievement relationship, for example, parental involvement (Altschul, 2012); homelessness and high mobility (Herbers et al., 2012), as well as specific indicators of poverty and individual milestones of academic achievement; for example, income impact on brain structures and cognitive functioning (Duncan & Magnuson, 2012; Noble et al., 2015); parental education on cognitive development (Reardon, 2011); neighborhood poverty and academic achievement (Sanbonmatsu, Kling, Duncan, & Brooks-Gunn, 2006; Sharkey & Elwert, 2011).

A study conducted by Zhang et al. (2020) investigated the influence of family socioeconomic status and gender on the academic achievement of elementary and middle school Chinese students. A sample of 815 fourth – sixth grade students were selected to participate in the study. The students attended five rural public schools in the northern and southern regions of China. The Standard Multiple Regression procedure along with the on-way ANOVA and independent sample t-test were used to treat the data. Zhang and his associates found that female Chinese students had significantly higher achievement scores than their male peers. In addition, family SES was found to be positively related to the academic achievement of students.

More recently Zhou and McLellan (2021) studied the effect of socioeconomic status on the academic achievement of middle school students in an urban area of China. A sample of 818 eighth grade Chinese students attending three middle schools, two of which were public and one private participated in the study. The data were collected during the first semester of the 2019 academic year. The ANOVA was used to examine the data. Zhou and McLellan found that low socioeconomic status of middle school students obtained the lowest academic achievement among their SES counterparts.

### **Relationship Between Household Status and Academic Achievement**

A potential negative factor that could negatively impact academic success was the lack of exposure to two parents in the home. The effect of family structure on educational outcomes has continued to elicit a lot of interest among scholars (Browne & Battle, 2018; Frisco, Muller, & Frank, 2007; Hampden-Thompson, 2013; Santin & Sicilia, 2016; Sun & Li, 2011; Wu, Schimmele, & Hou, 2015). Some scholars have tended to agree that it has a significant effect (Browne & Battle, 2018; Frisco et al., 2007; Heard, 2007; Sun & Li, 2011) and that the link is causal (Amato, Patterson, & Beattie, 2015; Frisco et al., 2007). Research indicated that children who have a mother and father present in their homes performed better in school than those children with one parent or none at all (DeBell, 2008). Although children were becoming more resistant to this effect, the research pointed out that children were better off when two parents were at home. In his study about fatherless homes, DeBell (2008) found that in single parent situations, the overwhelming percentage of these homes were fatherless (DeBell, 2008). More than half of all children were growing up with only one parent at home and most of those homes were at, or near, the poverty line. He pointed out another alarming statistic. The percentage of one-parent homes was growing every year. DeBell's most important finding was that, in fatherless homes, psychologists found a significant correlation between this factor and the diagnosis of an emotionally dysfunctional child.

Research continues to show that children who live with their two biological parents in a traditional family tend to outperform those who live in other family structures (Hofferth, 2006; Martin, 2012; Wu et al., 2015). Children who grow up in single-parent families or with stepparents have lower educational attainment than those who grow up

with both biological parents (Martin, 2012; Sun & Li, 2011). Single parenthood increases educational inequality among children born in these family types, especially if other family members have little education (Amato et al., 2015; Wu et al., 2015). Although most studies conclude that children that live with only one of their parents fare worse than their peers that live with both biological parents, Steele et al. (2009) noted there is no agreement on either the size of this effect or on what its real cause may be.

About half of American children will spend part of their childhood in a single-parent family (Andersson, 2002), and most of these children will be living without their father. Though most research has not measured father absence per se, there is indirect evidence that children living without fathers may be disadvantaged on a wide range of indicators of well-being, including health, educational experiences, and academic performance. Researchers generally agree that some of the outcomes associated with father absence are explained by income differences. Income is relatively strongly associated with child well-being, and children living with two parents benefit from higher average household income and lower poverty rates than children in other family arrangements (Ricciuti, 2004). There is evidence that when welfare states provide resources to single-parent families, children improve academically (Pong et al., 2003).

As early as 1986, it was found that expectations of parents are an important factor in determining the outcome of academic success in children. In her study of families with single parents and working mothers, Milne et al. (1986) showed that these expectations create a reason for the action of children. When there were two parents there were more expectations to uphold. When only one parent was in the home, these parental expectations could be reduced by a half and in most cases were reduced far more than

that. Her study pointed out that parental guidance was vitally important. The more quality guidance that was provided to a child, the better off that child would be. The most important influence upon a child was that of the parent. When those influences were bad, the child suffered. When those influences were missing altogether, the impact upon the child could have been devastating. The impact of positive influences, contributing to the guidance of the child could not be overstated (Milne et al., 1986).

Achievement has been found to vary by both the type of family that a child lives in and the child's age at the time of the experience (Sutherland, 2015; Wu et al., 2015). Boggess (1998) found that living in a mother-headed household or a stepfather-mother family has a negative effect on educational levels due to reduced resources. Others relate growing up with only one parent to lower levels of educational attainment, becoming a parent earlier, being more likely to have premarital births, marrying earlier, and being more likely to divorce compared with living with both biological parents throughout childhood (Astone & McLanahan, 1991; Haurin, 1992). These correlations have continued to arouse concern among policymakers and scholars. Because education is a key factor in determining long-term economic success, the association between family disruption and lower educational attainment raises questions about whether the sharp increase in family instability will have lasting negative consequences on the educational attainment of the next generation.

Scholars argue that spending time in a single-parent family, typically mother-headed, reduces children's educational attainment. Overall, investment in children's human capital is reduced due to less time and fewer resources. The mother is usually the sole breadwinner for the family. She must spend more time working and less time in

enhancing the children's learning process. Single parents who are the sole breadwinner often do not have disposable income to spend on the household resources that reinforce education (Sutherland, 2015). Parents' provision of social capital, in turn, is positively associated with children's school success. Children who live with single parents, however, have less access to these social resources, in general, than do children with two parents in the household.

There are several good reasons for assuming that the number of parents in a household affects children's academic achievement (Amato, 2010; Brown 2010; McLanahan & Percheski, 2008). First, children in single-parent households have a lower standard of living than do children in two-parent households. Family income, in turn, is a good predictor of children's school grades and test scores. Second, parents are important sources of social capital and provide many resources to children, including emotional support, encouragement, everyday assistance, and help with homework.

Research shows that children living with two biological parents outperform those raised in other family structures. A growing number of children do not live with two biological parents in sub-Saharan Africa. According to socialization theory, the effects of family structure on educational attainment vary with the age of the child. On one hand, if direct parental supervision is more important at older than at younger ages, as some evidence suggests, then the longer a child has spent in a single-parent family, the greater the negative effect. On the other hand, during school years, teachers and peers supplement the parents' role in encouraging achievement (Monserud & Elder, 2011).

Unique to academic outcomes, however, is that academic achievement may be a way to honor one's family. In fact, for many Latino adolescents, academic achievement is

specifically tied to family obligations and parental sacrifice, and familial values serve to buttress the academic motivation of these youth (Esparza & Sa´nchez, 2008; Gonzalez et al. 2012). Consistent with this notion, familial cultural values have been shown to lead to greater academic engagement and effort, and, in specific contexts (low mother education), higher academic grades (Esparza & Sa´nchez, 2008). However, no past studies have tested whether this effect holds more strongly for females. Given the resilience that Latina females demonstrate in academics, it may be that this resilience is fostered by strong endorsement of familial cultural values, as has been found for Asian American youth (Kiang et al., 2012).

If family structure is correlated with other family characteristics, for example, parents' education, immigrant status or income level, then it will not be randomly distributed across all individuals, and comparisons based on mean results would be unfair. In this case, these other characteristics need to be taken into account in order to consistently compare and be able to capture the effect of family structure on academic performance. After accounting for unobserved differences between the two-family structures, some authors find that family structure is no longer a significant variable.

Abuya et al. (2019) carried out a study in two informal urban settlements, Korogocho and Viwandani, in Nairobi, Kenya to establish the effect of family structure on the educational attainment of children. Data was collected from the African Population and Health Research Center in the slums of Nairobi. Overall, the researchers found that two-parent households had a higher percentage of children in the right age for grade (74%) compared with single parent households (66%). It was further found that living in a two-parent household is an important predictor for children's educational

attainment. In essence, the effect of family structure on educational attainment of children persists even after controlling for gender of the household head, pupil's gender, the household head's education level, family income, and number of children in the household. Abuya et al. (2019) findings reaffirm that resources within a family depend on the number of members and the amount of disposable income available to obtain resources for producing a child's achievement.

Santin and Sicilia (2016) sought to identify the effect of non-nuclear family membership on academic performance of Spanish children in fourth-year primary education and adolescents in second-year secondary education in terms of mathematics test scores and grade retention. Two family structures were compared to non-nuclear families, and nuclear families. To do this, a matching approach was used to compare the impact of family structure on student performance, measured through grade retention and mathematics scores, with the results of standard econometric models. The results show that non-nuclear family membership has a significant negative impact on student grade retention with more significant differences among older students. In addition, this family structure is only found to have a consistently negative effect on mathematics scores for secondary education students. With respect to 14-year-olds, the results showed that there was a significant but moderate difference in favor of students belonging to nuclear families at public schools.

Amato, Patterson, and Beattie (2015) examined associations between the percentage of children living in single-parent households and children's state mathematics and reading test scores between 1990 and 2011 and on the National Assessment of Educational Progress (NAEP). Because mathematical and reading skills



are central to children's school success, the researchers focused on trends in math and reading scores. The researchers concluded that since 1990 the percentage of children living in single-parent households increased, as did children's mean NAEP scores. However, the percentage of children living with single parents was not associated with children's mathematics scores. It was also revealed that the results for reading scores support the conclusion that increases in single parenthood did not lower children's aggregate-level school performance. Given these findings, many observers have assumed that the increase in single parenthood has placed downward pressure on children's school performance and educational achievement. Although the increase in single-parent households does not appear to have affected children's test scores appreciably, it is possible that family structure has had stronger effects on behavior than on cognitive ability, as suggested by McLanahan, Tach, and Schneider (2013).

In a cross-national study, Pong, Dronkers, and Hampden-Thompson (2003) found that single-parent family status was negatively associated with math and science achievement scores in nine out of 11 countries. Moreover, the gap in achievement between children with one rather than two parents was smaller in countries with more supportive social policies, such as family and child allowances and parental leave. These studies are useful in showing that single parenthood and academic performance are associated within schools and countries.

Hung et al. (2020) conducted a study to examine the influence of family structures and socioeconomic status on the academic achievement between White and African American students. The sample consisted of students across six grade levels (grades third to eighth) from 2,868 diverse school districts across the United States. The data were

generated from the Stanford Education Data Archive from several publicly available data files. Correlational and multiple linear regression procedures were employed to analyze the data. Hung and his associates found that economic inequality, racial inequality, and household adult education attainment were significant predictors of White and African American student achievement gaps. In addition, the results revealed that household adult SES was the most significant predictor of the achievement gaps among African American and White students.

Motamedi (2020) conducted a similar study on the effect of family environment on the academic performance of middle school students from different parts of a Middle East country. A multistage random sample of 9,728 middle school students was selected to participate in the study. The ANOVA and the Scheffé multiple comparison test were used to analyze the data. Motamedi found that middle school students from healthy family structures performed better academically than those from unhealthy family structures.

### **Language Spoken in the Home and Academic Achievement**

The role of the school system is increasingly crucial for large segments of Hispanic youth whose parents cannot speak English and do not understand the inner workings of the complex United States education system. Unlike other racial/ethnic groups that have experienced increases in educational attainment since the 1960s, Hispanics remain the population with the least amount of education because of disproportionate representation in dysfunctional schools, limited opportunities to acquire pre-literacy skills, poor relationships with teachers, and lack of guidance in secondary schools (National Research Council, 2006).

Children living in immigrant families are the fastest growing demographic of children in the US (Hernandez, Denton, & Macartney, 2008). Most of these children are born into homes in which English is not the primary language spoken and enter school as English Language Learners (ELLs) (Morse, 2005). Currently, about one-third of children in the U.S. live in a household in which the family speaks a language other than English (Child Trends Databank, 2014). It is important to consider students' native languages when examining their academic performance

Yeung et al. (2000) introduce socioeconomic status and family background as decisive factors explaining educational performance and find that language either has a small or nonexistent effect on grades and test scores. Yeung et al. (2000) examine the relationship of home language proficiency to factors such as achievement in English and other curriculum areas. Yeung et al. demonstrated that home language use has a significant negative effect on science tests. In contrast, any negative effects from home language disappear as years of schooling increases. As educators across the country become the instructional leaders of increasingly Latina/o student bodies, it is imperative that they understand which factors are most related to Latina/o student academic achievement.

Moreover, speaking Spanish at home during elementary school has been shown to positively affect high school completion (Zarate & Pineda, 2014) and being bilingual in both Spanish and English is also positively related to achievement (Supple et al., 2006). However, speaking English in the home has been shown to increase college enrollment (Weiher et al., 2006).

Abraham, Crais, and Vernon-Feagans (2013) reviewed low-income family and their children education. The study shows how the mother language can affect her children education. The languages differences are results of the low income and environments of the mothers. This study took months from children and homes. The results were very clear and show how students can learn from their mothers. The percentage represents how students learning are connected to their homes. The language that mothers used with their children can affect their education skills. In the study, mothers with low income are using simple sentences and vocabularies with their children. On the other hand, complex sentences and vocabularies are used from high-income mothers with their children.

### **Demographics (Gender) Factors Related to Academic Achievement**

Gender is a specially constructed phenomenon that is brought about as society ascribes different roles, duties, behaviors, and mannerisms to the two sexes, (Mangvwat, 2006). It is a social connotation that has sound psychological background, and it is used to refer to specific cultural patterns of behavior that are attributed to human sexes. Gender relates to cultural attributes of both males and females (Akpochafo, 2009). Gender according to Lebey (2003) is a psychological experience of being a male or female. It has to do with personality and central components of self-concept. Avulata and Oniyama (1999) described gender stereotype in school as “hidden curriculum” which send out messages to girls to conform to role expectation.

Okeke (2007) observed that the Nigerian school curriculum is not gender fair since its contents reflect mainly on the concerns of males; science careers portray masculine images in the curriculum; and more still, female suffer discrimination from

teachers overtly & covertly, knowingly and unknowingly. These actions automatically put the girls in a disadvantaged position for achievement in classroom interaction especially in social studies and science related subjects. Lie and Syoberg (2004) observed that invisible rules within the society have provided what is feminine and what is masculine. This could also be found in social studies classroom interaction as male students dominate the female folk in all sorts of curricula activities.

Achievement test results conducted by Onekutu (2002) has shown that boys and girls in the early ages perform equally in all subjects including English language, and as they grow to higher classes, the girls begin to get more interested in language arts, while the boys take more to sciences and social sciences. This has resulted in a situation where there are more boys than girls taking social studies. However, the issue of gender and students' academic achievement has remained a controversial one. While some propose that males perform better than females in academics, others argue that, the reverse is the case. Vernon (2002) reported that many comparisons show average scores of boys and girls to be the same on general intelligence test.

Gessell (2004) asserted that girls under the age of fourteen years usually perform better in English language than boys of the same age. In addition, after that age, the boys usually overtake the girls. Denga (1998) posited that no evidence is clear as to whether differences exist between males and females in academic achievement. He opines that girls tend to do better than boys in language arts like English language and music, while boys tend to outperform the girls in mathematics and sciences. In the same manner, it has been pointed out that attempting to relate specific intellectual abilities to achievement in specific subject areas is prone to considerable problems. Gender differences in

intellectual abilities can be a result of gender role stereotyping. Gender differences in academic performance cannot therefore be assumed to be due to inherent biological differences between the genders even if they exist.

Gender is a strong predictor of human conduct and many differences have been documented on attitude and behavior that affect academic performance in between males and females, (Block, 2006). Academic performance differs between boys and girls in basic subjects like social studies both in primary and secondary levels. Calsmith (2007) explained that, the influence of gender and differences in academic performance is a complex task, thus many studies appear to be contradictory. A tremendous amount of work has been done in an attempt to find out potential causes of differences between girls' and boys' academic performances in social sciences and this has clearly demonstrated that male students are superior to their female counterparts in qualitative courses.

Empirical literature by Baker (2010) and Fortin et al. (2015) has suggested that girls are expecting to attend college to a greater extent than boys, which might explain why girls are leaving boys behind at school in present-day society. However, the lack of information on children's educational expectations has prevented researchers from analyzing the effect of this variable on children's academic results. Fortin et al. (2015) showed—for the United States—that the growing gender educational gap in favor of girls is mainly due to gender differences in children's plans for the future. In particular, they found that girls are leaving boys behind at school because more girls than boys expect to attend college. This follows a consensus in the psychology literature suggesting that

students form reliable perceptions of their academic competency around fifth grade and already can form some expectations about years of schooling (Herbert & Stipek, 2005).

Empirical socioeconomic literature has focused on gender differences in children's behavioral skills and their role in educational outcomes. Entwisle et al. (2007) argue that boys with poor conduct were more likely to be retained in first grade than were girls. The researchers concluded that the effect of a change in behavior has a greater impact on educational achievement for boys than for girls. Research on gender differences in academic achievement in various subjects has reported mixed results. Some studies have shown that girls have higher overall achievement, except in physical education (Lekholm & Cliffordson, 2009; Spinath et al., 2014), whereas others have found that boys outperform girls in mathematics and science (Driessen & van Langen, 2013) or that there are no gender differences in mathematics (Lachance & Mazzocco, 2006). Despite these mixed results, researchers seem to hold a general view that the greatest gender differences are in literacy and language, favoring girls over boys (De Gaer, Pustjens, Damme, & Munter, 2007; Marks, 2008).

Past research suggested that girls are in general more successful in school than boys. Hartley and Sutton (2013) reported that boys develop gender stereotypes however, girls are perceived as academically superior with regard to motivation, ability, performance, and self-regulation. However, previous studies revealed rather inconsistent results concerning gender differences in different domains of school achievement. Although there is variability across academic subjects, overall boys are underachieving in the education systems. Boys' academic performance can be improved by counteracting

stereotypes about gender and performance. Boys will perform better when told that they were expected to perform equally as well as girls.

Lapayese, Huchting, and Grimalt (2014) conducted a quantitative study investigates the interplay between gender and biliteracy in a diverse urban school district in Southern California. The district had a total population of 88,186 students. Latina/o students represent 51% of the student population. Standardized test data and district reading assessments were collected for Latina/o language learners attending two-way immersion programs. The findings indicated that gender does play a role in the biliteracy achievement of Latina/o ELLs. The quantitative data demonstrated gender variations across all years and grade levels and on both English and Spanish assessments noting boys considerably underperformed their female counterparts. Although females' scores were consistently higher than those of their male counterparts, in 2009 only 14 out of 31 girls (45%) were on grade level. The findings indicate that biliteracy achievement varies for Latina and Latino ELLs. These findings corroborate the literature on the performance of Latino males in schools. In today's educational context, most indicators of academic achievement (i.e., standardized test scores, grades, graduation rates, college completion, and career tracking) for Latino male students suggest that these students are underperforming academically (College Board, 2009). The researchers suggested further research to include qualitative studies to explore the influence of gender in biliteracy teaching and learning in the two-way immersion classroom. Research could also include how girls and boys are socialized to play gender-specific roles in literacy activities.

Young et al. (2018) studied the academic achievement of African American middle school female students in various domains in U. S. History. These researchers



employed two samples of African American 8<sup>th</sup> grade females from the 2006 and 2010 National Assessment of Educational Progress. A total of 4,490 female middle school students participated in this quantitative study. The ANOVA was used to analyze the data. Young, Foster, and Druery (2018) found a statistically significant growth overall in History among these students as well as on the democracy and world role domains. Specifically, the African American female students had significantly higher scores on the democracy and culture domain than on the technology and world role domain.

### **Ethnicity Related to Academic Achievement**

The “achievement gap” is commonly used to refer to the disparity in levels of academic achievement and attainment between students of different races, socioeconomic classes, and genders. Because of the oppressive treatment and lack of educational opportunities for minority racial groups, the negative effects of education inequality on these groups have persisted through the generations (Ladson-Billings, 2006, p.5). After *Brown vs. Board of Education* in 1954, equal education to all children was guaranteed by law. However, the collection and analysis of national student test score data in the 1960’s proved that education inequality was still statistically significant (Sadovnik, 2013, p. 372-373; Horvat, & O’Connor, 2006, p. 1). These results made the “gap” a proven and prominent issue in American society that still remains today (Sadovnik, 2013, p. 372-373; Horvat, & O’Connor, 2006, p. 1). Finding ways to raise the academic performance of minority students is important to many stakeholders, including public officials, future employers, school administrators, teachers, parents, and, most importantly, the students themselves, as their performance will affect the economic, political, social, and cultural environment of our nation in the years to come (Buck, 2010). Differences between

Whites and African Americans, as well as males and females, relating to academic performance, are well documented in the research literature (Mattern & Patterson, 2013). Prior background research pertaining to race has shown that African Americans are less likely to achieve their full academic potential (Mattern & Patterson, 2013).

African American students have historically encountered significant barriers to receiving an equitable and high-quality education (Diemer, Marchand, McKellar, & Malanchuk, 2016), although there are considerable gaps in the research in understanding the mechanisms impacting success. Throughout the last several decades, Black and African American students are reported to underperform in academic settings, and research often focuses on racial disparities in education outcomes, rather than taking context, such as community and family, into consideration (O'Connor, Lewis, & Mueller, 2007). Consequently, many Black and African American students have underperformed on standard measures of academic achievement, such as grades and standardized tests (Ladson-Billings, 2006).

Mary, Calhoun, Tejada, and Jenson (2018) examined perceptions of academic achievement among a sample of African American elementary and middle school students using a phenomenological approach. Participants were recruited from four public housing neighborhoods in a large Western U.S. city. The study aimed to gain a deeper understanding of the factors that promote and inhibit academic achievement among low-income African American students. Four main themes emerged regarding participants' responses. Findings indicated that youth begin developing a sense of racial tension between themselves and their environment at an early age. Findings from this study also indicated the importance conveyed by students about a perceived power

differential between themselves and their teachers, peers, schools, and society, often resulting in the internalization of negative messages. The results of this study promote increased knowledge of the factors impeding or facilitating educational success, and considering the continual lower academic achievement for African American students, understanding these aspects in greater detail can aid educators, practitioners, and families in providing context specific support.

Throughout the last several decades, research focused on educational disparities among African American students (O'Connor et al., 2007). These youth, specifically those residing within low-income communities, encounter disproportionate rates of risk exposure (Vega et al., 2015), which greatly impacts their ability to learn in school. In addition, prior research has focused on the perceptions of high schools and colleges of African American students (Williams & Bryan, 2013). Mary et al. (2018) study concentrated on the views of elementary and middle school students, primarily to provide a greater understanding into the current issues surrounding academic attainment for these students. Based on a phenomenological approach, the focus group responses generated from the youth in this study depict a dialectal reality; sources of fostering or impeding success were varied and contextual dependent. Findings suggest that young people of African American descent living in low-income neighborhoods may be at elevated risk of internalizing negative messages about their own academic potential and achievement.

Empirical findings indicate that several demographic variables influence Latina/o academic achievement, including gender, ethnicity, generational status, native language, and socioeconomic status. In regard to the relationship between gender and academic achievement, with few exceptions related to mathematics test scores (e.g., Hong & You,

2012; Mosqueda & Maldonado, 2013), being female is overwhelmingly associated with the academic success outcomes of school readiness (Furlong & Quirk, 2011), grades (Cupito, Stein, & Gonzalez, 2015), test scores (Lapayese, Huchting, & Grimalt, 2014).

Bécares and Priest (2015) investigated the impact of ethnicity and gender on the academic outcomes of middle school students. These researchers utilized data from the U.S. Early Childhood Longitudinal Study- Kindergarten. A sample of 10,115 eighth grade students were selected by the researchers using a multistage probability sample design from middle schools across the United States, to participate in the study. Mixture model's analyses were done to analyze the data. Bécares and Priest found that White male middle school students out performed middle school African American male and female students as well as Latino female students. Furthermore, Latino middle school male students showed small differences when compared with White male students.

Moreover, Thomas et al. (2021) investigated the influence the ethnic-racial identity on the academic self-efficacy among Latino middle school students. The sample consisted of eighth grade students from 329 Latino families attending schools located in five school districts in the southwest region of the United States during the 2015 -2016 academic school year. Structural equation modeling was used to treat the data. Thomas and his colleagues found that academic self-efficacy was related to middle school students' ethnic-racial identity.

### **Academic Factors (High Stake Testing) Related to Academic Achievement**

A growing body of research supports the view that high stakes accountability, with its emphasis on testing in reading and math, exacerbates the historically low status of social studies, especially in elementary schools (Fitchett & Heafner, 2010). The

learning environment is impacted in several ways by high-stakes testing. First, high-stakes testing increases test anxiety among students. Secondly high-stakes testing reduces creativity and variety of subjects taught. Testing has been in public education for numerous years, but it has changed in several different ways since it first appeared in education. It is meant to be used to determine a student's achievements, growths, and progress. However, today standardized testing is not used for the exact same purposes it was created for. The purposes of standardized testing have turned into a system that is segregating and separating students by their intelligence, socioeconomic status, wealth, and privilege (Holmes, 2011).

According to two reports (Au, 2007), the "squeeze" on social studies and other untested subjects is not affecting all students. Narrowing of curriculum occurs disproportionately in low-performing schools with large minority populations, thereby contributing to educational inequity in the name of narrowing the achievement gap. One study of a poor, rural school in California struggling to raise test scores (Wills, 2007) provides qualitative evidence of this problem. Wills found that teachers managed the problem of how to teach the social studies curriculum without adequate instructional time differently but with a common consequence. Wills asks whether accountability results, paradoxically, in squeezing content knowledge and thoughtfulness "disproportionately from the education of poor students and students of color" (Wills, 2007, p. 2042). He proposes that researcher's study whether the social studies squeeze is occurring in middle class schools serving mostly White students.

Pace (2011) conducted two studies on the influence of high stakes accountability on social studies teaching across schools with varying performance status and student

demographics. The first was a pilot study (Pace, 2008) consisting of interviews with nine teachers in three districts who taught in schools ranging from very low performing, poor, and 97% minority to very high performing, affluent, and 28% minority. The second study was conducted using a qualitative study in five California classrooms spanning grades four through seven. In these grades social studies students receives significantly more attention than in the primary grades, but its curricular status is still uncertain, in part because history-social science is not tested by the state of California until eighth grade. From the findings it was concluded NCLB did not have as heavy an impact on social studies as reported in other studies. However, even in mid- and higher performing urban schools, literacy and testing concerns did intrude on the social studies curriculum, and this intrusion varied according to school context. NCLB's impact was direct and indirect, dependent upon teachers' purposes, and shaped by multiple factors including school context. As in Sloan's (2006) study of the impact of high stakes accountability on language arts instruction, the consequences of accountability were neither all bad nor all good, but mixed. For example, although the study of history was dominated by literacy strategies in the classroom located in the lowest performing, lowest income school, that classroom afforded social studies a stable place in the class schedule.

Although ideals for social studies curriculum and instruction are contested, scholars from different camps agree that high stakes testing endangers the subject (Levstik, 2008). This qualitative study, set in five California classrooms located in relatively higher performing and higher income schools, supports two claims. First, accountability intensifies pre-existing curricular trends that marginalize social studies, and second, it contributes to educational inequality by imposing greater constraints on

social studies teaching in lower performing schools. But its findings are mixed (Sloan, 2006)

In the United States education system students do not have an equal chance at becoming 'successful' based on how hard they work or study (Berlinder, 2011). Students face a wide variety of barriers that give students a lesser chance of academically succeeding such as: gender, economic class, language barriers, and/or culture (Segool, Carlson, Goforth, Von Der, & Barterian, 2013).

Schools with larger populations of minorities and low-income students are less likely to pass high-stakes standardized tests (Krieg, 2011). One study reported that students in low poverty schools, are 22 times more likely to reach high academic achievement, when compared to students that are in high poverty schools. Schools measure students living in poverty by how many students are registered for free and reduce lunch (Segool, Carlson, Goforth, Von Der Embse, & Barterian, 2013). Schools that have less minority students and lower poverty rates are 89 times more likely to reach a passing level on high-stakes testing than that of schools with a larger population of minorities and low-income families (Klenowski, & Wyatt-Smith, 2012). Schools with high poverty rates and minorities students tend to have fewer resources already and are struggling to find ways to improve student learning.

Sixty percent of out of school variables account for how a student achieves academically. Such factors include; family income, housing, family/community violence rate that one sees or is part of, food security, language barriers, and so forth (Au, 2011). These factors are important in understanding how high-stakes testing is causing minority students and students living in economic hardships to be negative academically. If high-

stakes testing was effectively closing the achievement gap then in fact it would show equal numbers of rich and poor students passing and failing, and equal numbers of White students and African American kids passing and failing, unfortunately this is not the case (Au, 2011). Today and historically high-stakes standardized testing continues to show critical race and class disparities in the United States (Barrow & Rouse, 2006).

Much has been written about the relationship between socioeconomic status (SES), racial/ethnic background, and academic achievement (Diaz, 2008; Scafidi, Sjoquist, & Stinebrickner, 2007), the full measure of the relationship is still underappreciated. After 10 years of test-driven standards implemented as a result of No Child Left Behind (2002) legislation and despite the shift heralded by the Common Core (Common Core State Standards Initiative, 2010, 2010) in support of nationwide achievement goals—represented by standardized and internationally competitive content guidelines in the areas of English language arts and mathematics—it seems clear that poor and minority children have not and will not be able to meaningfully experience equity as defined by the current conceptualization and operationalization of standardized test scores (Gaddis & Lauen, 2014).

Accountability pressure have led to reforms that focus on mutable factors within schools. Factors considered modifiable are often looked upon as potential sources of school reform, specifically classroom size, school size, and teacher mobility (Leithwood & Jantzi, 2009) are seen as, and shown to be, related to school performance. However, this focus may not attend sufficiently to the impact of school-level SES and racial composition. Thus, although reforms work to document progress with standardized test



scores, these tests may be, in fact, measures of less mutable factors, such as school level, race and SES, factors which may further exert a compounding impact on achievement.

The United States is growing rapidly and addressing the way in which English language learners are taught and needs to become a priority so all students, from all backgrounds can succeed academically. English-Language Learners (ELLs) are beginning to dominate public schools (Katz, 2013). Katz (2013) affirmed that ELL students are the fastest growing group of school-age students in the United States, and they come from tremendously diverse backgrounds.

ELL students are being left behind in public education due to high-stakes testing curriculum and the fast pace classroom instructions designed for fluent English-speaking students (Katz, 2013). ELL students are facing academic barriers because they are not learning or speaking English when at home and rarely receive accommodations during high-stakes tests. If tests were given in more languages perhaps scores would be more reliable (Katz, 2013). Katz continues to declare that it is unrealistic to expect students to navigate two languages in the same amount of time as an English speaker. On average, it takes five to seven years to master cognitive academic language expertise (Katz, 2013).

### **Summary**

Negative factors that this study examined, involved issues that will require a great deal of work to alleviate. Low socioeconomic status, lack of a two-parent household, gender, ethnicity, and language spoken in the home are unfortunately increasing trend in students' lives. This study shows the impact these circumstances had upon students' academic success. If it can be shown that these factors contribute to

academic stress, we should explore ways to minimize these effects. We shouldn't continue to just pretend that these children were just like everybody else.

The factors that were identified in this study only scratched the surface of the many influencers of academic achievement of students today. Other factors that may have an adverse impact on academic achievement should be explored and identified. Those factors that impact achievement should be extensively analyzed to determine if there are measures that could be taken to minimize their impact on students.

## CHAPTER 3

### RESEARCH DESIGN

The purpose of this study will be to investigate the relationship and predictability of selected demographic, academic, and family related factors on the academic performance of middle school students. Specifically, this study will be concerned with the predictability of the variables gender, ethnicity, standardized mathematics scores, standardized reading scores, family income, type of household, socioeconomic status and primary language spoken in the home on the academic performance of middle school students as measured by their STAAR's social studies scores. This chapter will consist of twelve (12) major sections: 1) Type of research design; 2) Population and research setting; 3) Sampling procedure; 4) Instrumentation; 5) Validity of the instrument; 6) Reliability of the instrument; 7) Sources of data; 8) Data collection; 9) Independent and dependent variables; 10) Null hypotheses; 11) Statistical analysis and 12) Evaluation of statistical assumptions.

#### **Type of Research Design**

A quantitative correlational research design (see Figure 1) was employed in the current investigation. This type of research design will allow the investigation to examine the predictable relationships between and among variables for the purpose of describing predicting and explaining specific outcomes (Mertler, 2019).

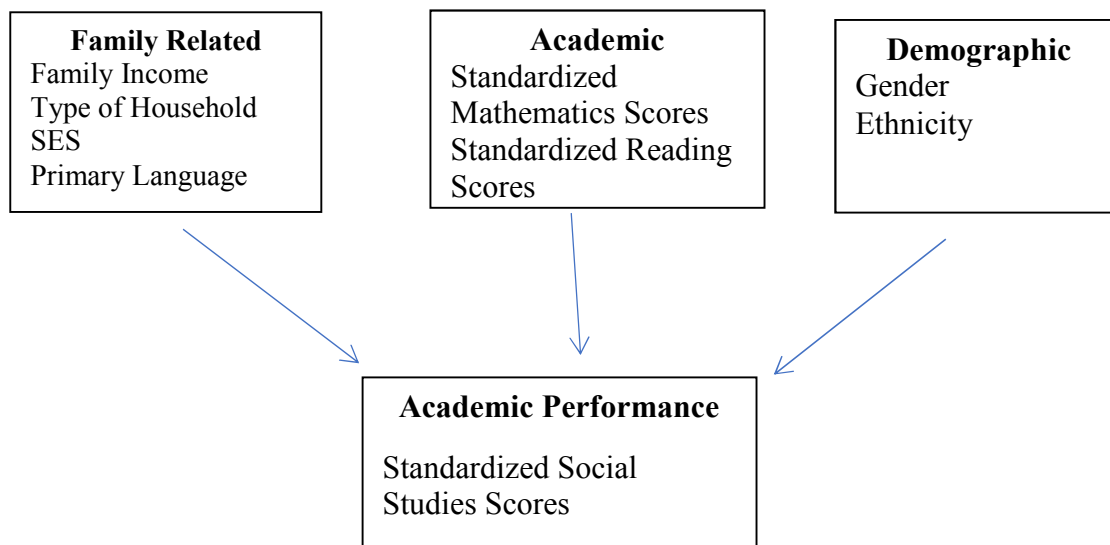
The quantitative correlation research method will provide the investigator with the opportunity to assess the linear combination effects of several independent variables on a dependent variable (Mertler, 2019). Moreover, according to Warner (2013), the

quantitative correlational research design has the following advantages as a research method: 1) It identifies variables that are significantly related for the purpose of determining statistical and theoretical connections; 2) It provides goodness-of-fits indices to indicate how well the empirical data is consistent with the hypothesized model; and 3) It creates mathematical equations to explain the statistical power of independent variable on the dependent variable.

Finally, the quantitative correlation research design will be the most efficient and effective paradigm to determine the predictable relationship between demographic, academic, and school related factors with respect to the academic performance of middle school students in social studies.

### **Figure 1**

#### *Quantitative Correlational Research Design*



### **Population and Research Setting**

The population for this study will consist of eighth grade students enrolled in a middle school in a school district located in the southern region of Texas. Additionally,

archival data from the students' records will be collected from the school's database as well as from the Texas Education Agency's database.

Texas Education Agency is the state agency that oversees public education both on the primary and secondary levels. This agency is also responsible for providing leadership, guidance and support to the public-school districts in Texas.

TEA is responsible for the following eight major functions: (a) administers the distribution of state and federal funding to public school; (b) administers the statewide assessment program and accountability system; (c) provides support to the State Board of Education in the development of the statewide curriculum; (d) assists the State Board of Education in the instructional materials adoption process and managing the instructional materials distribution process; (e) administers a data collection system on public school information; (f) performs the administrative functions and services of the State Board for Educator Certification; (g) support agency operations, including carrying out duties related to the Permanent School Fund; and (h) monitors for compliance with certain federal and state guidance (Texas Education Agency, 2017).

### **Sampling Procedures**

The purposive sampling procedure will be employed in this present investigation. This type of non-probability sampling technique will provide the investigator the opportunity to focus on specific characteristics of a population of interest to answer his or her research questions (Vogt, 2007). According to Vogt (2017), the purposive sampling procedure will allow the investigation to select individuals based on a variety of criterion common to those who will be chosen for the study.

In the present investigation, the following criteria will be used to collect the sample: 1) the participants must be a middle school student; 2) the participant must attend a middle school in a school district located in the southern region of the target state; 3) the participant must have taken the target state standardized examination; and 4) the participant must be able to speak more than the English language in the home.

### **Instrumentation**

The major instrumentation to be employed in the present investigation will be the State of Texas Assessment of Academic Readiness (STAAR). This investigative instrument was developed by the Texas Education Agency for the purpose of being a more vigorous assessment which would provide the foundation for a new accountability system for Texas public education.

Moreover, under House Bill 5 passed by the Texas Legislative (2013), Texas Middle school students are required to pass five end-of-course examinations in English, reading, mathematics, science and social studies. Scores for the STAAR assessment will consist of the number of items answered correctly (raw scores), scale scores, and the resulting performance level associated with student's score. Student's performance will fall in one of the three categories:

Level III: Advanced Academic Performance

Level II: Satisfactory Academic Performance

Level I: Unsatisfactory Academic Performance

For the present study, the scores of the academic year (2018-2019) in STAAR's mathematics, reading, and social studies Middle school students enrolled in a public school district will be used to measure the students' academic achievement.

### **Validity of the Instrument**

Content and concurrent validity procedures were employed on the STAAR examination. To establish content validity, a panel of national testing experts called the Texas Technical Advisory Committee (TTAC) was created by Texas Educational Agency to examine the items and confirm that each item appropriately measures the particular content area. The content validation committees convened for all STAAR subjects and gathered the theoretical and empirical evidences to support those items on the STAAR examinations did measure the intended content areas (Texas Education Agency, 2012).

Moreover, to establish concurrent validity on the STAAR examination, the relationship between the students' performance on the STAAR and similar assessment such as SAT and ACT were computed. Concurrent validity coefficients ranging from .61 to .71 were calculated between these assessments (Texas Education Agency, 2012).

### **Reliability of the Instrument**

Internal consistency reliability was used on the STAAR examinations. This type of reliability determines how all items on a single test related to all other items and the test as a whole (Gay & Airasian, 2002). The Cronbach's alpha and Kuder-Richardson 20 procedures were used to compute internal consistency reliability for the STAAR examinations.

Furthermore, for examinations involving dichotomously scored items, the KR 20 was used to calculate the reliability estimates. For examinations involving both dichotomous and polytomous response items, the alpha coefficient was used to calculate the reliability estimates. Internal reliability coefficients ranging from .81 to .93 were computed for the STAAR examination as a whole. Internal consistency estimates across

grades and content areas were found to be of a similarly high level, with no significant increases or decreases across grades or content areas (Texas Education Agency, 2015).

### **Sources of Data**

The existing (archival) data for the present investigation will be obtained from the target school district database and the students' personal records. The following data will be obtained from the aforementioned data sources pertaining to the middle school students:

#### School District (Academic)

- STAAR's Social Studies Scores (Individual)
- STAAR's Mathematics Scores (Individual)
- STAAR's Reading Scores (Individual)

#### Students' Personal Records (Demographic)

- Gender
- Ethnicity

#### Family Related

- Family Income
- Type of Household
- SES
- Primary Language

### **Data Collection**

The researcher will contact by phone and follow up with an email to the target school district during the spring semester of 2021 requesting 2018-2019 STAAR data as well as the students' personal data. The email will summarize the purpose and logistic of



conducting the study and outline the methodological framework to be employed in carrying out the study.

Once permission is received to use the district's database, this document will be shared with the University's Human Subject Committee for final approval to conduct the study. The investigator will agree to all of the demands in safe guarding the data.

Moreover, after the data-base is received by the investigator, it will be downloaded into a computerized statistical system. Once this process is completed, the data will be recorded. Finally, the coded data file will be entered into a statistical software package by the investigator. For this purpose, the Statistical Package for the Social Sciences (SPSS) will be employed.

### **Null Hypotheses**

The following three major null hypotheses were generated for the present investigation:

- HO<sub>1</sub>: There is no statistically significant predictable relationship between demographic factors (gender and ethnicity) and the academic performance of middle school students as measured by the STAAR's social studies scores.
- HO<sub>2</sub>: There is no statistically significant predictable relationship between academic factors (standardized mathematics scores and standardized reading scores) and the academic performance of middle school students as measured by their STAAR social studies scores.
- HO<sub>3</sub>: There is no statistically significant predictable relationship between family related factors (family income, type or household, SES and primary

language spoken in home) and the academic performance of middle school students as measured by their STAAR's social studies scores.

### **Independent and Dependent Variables**

For the current study, three (3) sets of independent (predictor) variables will be employed. The first set of predictor variables will examine the demographic characteristics of the middle school students (gender and ethnicity). The second set of predictors will assess the academic performance of the middle school students on standardized examinations (Standardized mathematics and reading scores). The final set of predictor variables will be associated with middle school students' family related characteristics (family income, type of household, SES, and primary language spoken in the home). All eight (8) independent variables under the auspice of three sets of factors will be assumed to have a predictable relationship with the academic achievement (social studies scores) of middle school students.

### **Statistical Analysis**

The Multiple Correlation and Standard Multiple Regression procedures will be employed in this investigation. According to Johnson and Wichern (2002), the multiple correlation technique is a statistical procedure utilized in multiple regression to measure and describe the relationship between three or more variables.

Additionally, once the multiple correlation procedure assesses the degree of relationship between the variables in a predictive model, the multiple regression technique will examine the predictable relationship between a single dependent variable and a set of independent variables (Johnson & Wichern, 2002). The multiple regression procedure to be used in the present investigation will be standard multiple regression technique. In this

type of regression technique, all the independent variables are entered into the multiple regression in one step (Johnson & Wichern, 2002).

### **Evaluation of Statistical Assumption**

According to Osborne, and Waters (2002), there are four major assumptions related to employing the Standard Multiple Regression procedures. They are homoscedasticity, normality, linearity, and Independence of residuals.

1. Homoscedasticity – This assumption opines that the variance around the dependent variable associated with the residuals should be equal across all levels of the independent variable. The Box’s M Test will be used to test this assumption.
2. Normality – This assumption opines that the scores associated with the dependent variable should form a bell-shaped curve. The Kolmogorov-Smirnov statistic will be employed to test this assumption.
3. Linearity – This assumption opines that the relationship between the independent and dependent variables within a regression model must be linear. Residuals plots and bivariate scatterplots will be used to test this assumption.
4. Independence of Residuals – This assumption refers to the disturbance of one case being uncorrelated with those of another case. In other words, if two cases in the data set are related to one another, then their error terms are also related. Box plots will be used to test this assumption.

**CHAPTER 4**  
**ANALYSIS OF THE DATA**

The purpose of this study was to examine the relationship and predictability of selected demographic, academic and family related factors on the academic performance of middle school students. Specifically, this study was concerned with the predictability of the variables gender, ethnicity, standardized mathematics scores, standardized reading scores, family income, type of household, socioeconomic status and primary language spoken in the home on the academic performance of middle school students as measured by their STAAR's social studies scores. This study sought to answer the following questions:

- 1) Do demographic factors (gender and ethnicity) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?
- 2) Do academic factors (standardized mathematics and standardized reading scores) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?
- 3) Do family related factors (family income, type of household, socioeconomic status and type of language spoken in home) have any predictive power with regards to the academic performance of middle school students as measured by their STAAR's social studies scores?

A sample of one hundred eighty-one (181) middle school students participated in the study. A local devise instrument entitled the Student Characteristic Profile was utilized to collect the data. The data analysis section using a regression model consisted of four major sections. Section one dealt with analysis pertaining to the demographic characteristics of the participants in the study. Section two presented the mean and standard deviation analyses concerning the independent and dependent variables. Section three entertained the correlational analyses with respect to the independent and dependent variables. The fourth and final section addressed the three statistical hypotheses formulated for the study. Finally, the simultaneous (standard) multiple regression procedure in conjunction with the multiple correlation technique were used to test the hypotheses. All hypotheses were tested at the .05 level or better.

### **Demographic Characteristics of the Participants in the Study**

There were 181 middle school students who participated in this study. The middle school students were described by the variables gender, ethnicity, family income, types of household and social economic status.

**Gender.** Eighty-nine or 49.2 percent of the middle school students were males. By contrast, 92 or 52.88 percent were females. See Table 1 for the results

**Table 1**

*Frequency Distribution of the Participants by Gender*

Variable	Number	Percent
Gender		
Male	89	49.2
Female	92	50.8
Total	181	100.0

**Ethnicity.** The variable ethnicity was categorized into four groups for this study. Thirty-nine or 21.5 percent of the middle school students reported their ethnic status as African American and 12 or 6.6 percent of them indicated their ethnic identify as Anglo American. On the other hand, 109 or 60.2 percent of the middle school students revealed their ethnic background as Hispanic American and 21 or 11.6 percent of them expressed their ethnicity as Asian American. See Table 2 for the findings.

**Table 2**

*Frequency Distribution of the Participants by Ethnicity*

Variable	Number	Percent
<b>Ethnicity</b>		
African American	39	21.6
Anglo American	12	6.6
Hispanic American	109	60.2
Asian American	21	11.6
Total	181	100.0

**Family Income.** The variable family income was classified into five distinct categories. There were 9 or 5 percent of the middle school students whose family income was \$25,000 or less and 85 or 47 percent of them whose family income was between \$25,001 to \$35,000. Likewise, 74 or 40.8 percent of middle school students whose family income was between \$35,001 to \$45,000 and 10 or 5.5 percent of them whose family income was between \$45,001 to \$55,000. Finally, 3 or 1.7 percent of the middle school student's family income was \$55,001 and above. See Table 3 for these analyses.

**Table 3***Frequency Distribution of the Participants by Family Income*

Variable	Number	Percent
Income		
\$25,000 or less	9	5.0
\$25,001 to \$35,000	85	47.0
\$35,001 to \$45,000	74	40.8
\$45,001 to \$55,000	10	5.5
\$55,001 and Above	3	1.7
Total	181	100.0

**Type of Household.** The variable type of household was measured as a dichotomous variable in the current study. Of the 181 middle school students analyzed, 105 or 58 percent of these students resided in a single parent household. Additionally, 76 or 42 percent of the middle school students resided in a two-parent household. See Table 4 for these findings.

**Table 4***Frequency Distribution of the Participants by Type of Household*

Variable	Number	Percent
Household		
One Parent	105	58.0
Two Parent	76	42.0
Total	181	100.0

**Socioeconomic Status.** Regarding the variable socioeconomic status, 131 or 72.4 percent of the middle school students received free or reduced lunch. By comparison, 48 or 26.6 percent of the middle school students paid for their lunch. See Table 5 for those results

**Table 5**

*Frequency Distribution of the Participants by Socioeconomic Status*

Variable	Number	Percent
SES		
Free or Reduced Lunch	131	72.4
Paid Lunch	48	26.6
Total	181	100.0

### **Mean and Standard Deviation Results**

The mean and standard deviation as descriptive statistics (See Table 6) were calculated on the independent and dependent variables employed in the regression model. The mean social studies score for middle school students was 29.97 (SD = 5.37). In addition, the mean reading score and the mean mathematics score of middle school students were 30.30 (SD = 3.68) and 30.79 (SD=2.41), respectively. Therefore, on the average, middle school students seem to perform similar on these examinations.

Moreover, on the average, the family income of middle school students was between \$35,001 to \$45,000. Additionally, on the average, middle school students residing in one parent household and received free and reduced lunch. Also, on the average, middle school students spoke English most often in the home.



Furthermore, on the average, most of the middle school students were female.

Also, on the average, most of the middle school students were Hispanic.

**Table 6**

*Mean and Standard Deviation Results Regarding the Independent and Dependent*

*Variables*

Variables	Mean	Standard Deviation
Gender	.49	.50
African American	.14	.35
Anglo American	.06	.24
Hispanic American	.60	.49
Asian American	.11	.32
Family Income	2.51	.74
Household	.61	.52
SES	.79	.82
Primary	.69	.47
Reading	30.30	3.68
Mathematics	30.79	2.41
Social Studies	29.97	5.37

*Note.* Household = Type of Household; Primary = Primary Language Spoken in Home; Reading = STAAR's Reading Scores; Mathematics = STAAR's Mathematics scores and Social Studies= STAAR's Social Studies Scores.

### **Correlational Results Regarding Independent and Dependent Variables**

Correlational analyses (See Table 7) utilizing the Pearson Product Moment Correlation, the Point Biserial Correlation and the Biserial Correlation procedures were employed to determine the interrelation between the quantitative and qualitative

(dichotomous) variables presented in the prevailing investigation. Of the family related variables, the variable primary spoken in the home was significantly related to the social studies scores of middle school students ( $r=.15$ ,  $P<.05$ ). The other family related variables were found not to be statistically correlated to the social studies scores of middle school students.

Moreover, the academic variable, mathematics scores was found to be statistically related to the social studies scores of middle school students ( $r = .226$ ,  $P <.01$ ). On the other hand, the academic variable, reading scores was not significantly related to middle school students' social studies scores. Finally, neither one of the demographic variables, gender, African American, Anglo American, Hispanic American and Asian American were found to be significantly correlated with middle school students' social studies scores.

**Table 7**

*Intercorrelation Results Regarding Independent and Dependent Variables*

Independent Variables	Dependent Social Studies Test Scores
Gender	-.011
African American	.008
Anglo American	.011
Hispanic American	.055
Asian American	-.049
Family Income	-.010
Household	.055
SES	.053
Primary Language	.150*

Reading Scores	.033
Mathematic Scores	.226**

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*Note.* \*Significant at the .05 level, \*\*Significant at the .01 level

### **Testing of the Hypotheses**

HO<sub>1</sub>: There is no statistically significant predictable relationship between demographic factors (gender and ethnicity) and the academic performance of middle school students as measured by the STAAR's Social Studies Scores.

Shown in Table 8 were the Simultaneous Multiple Regression results pertaining to the predictable relationship between middle school students' gender, ethnicity, and their STAAR's Social Studies scores. The Multiple regression model for hypothesis one yielded a multiple correlational  $R^2$  of .078. The demographic factors of gender and ethnicity together accounted for .6 percent (adjusted=.000) of the variance in the STAAR's Social Studies scores.

A linear relationship did not exist between the demographic factors (gender, African American, Anglo American and Hispanic American) associated with middle school students and their STAAR's Social Studies scores ( $F(4,176) = .272, P > .05$ ). In addition, neither one of the four demographic variables were found to be an independent predictor of the middle school students' social studies scores. Therefore, hypothesis one was not rejected.

**Table 8**

*Simultaneous Multiple Regression Results Regarding the Relationship Between Demographic Factors and Academic Performance of Middle School Students*

Model	B	SE	Beta	t	P
Constant	29.095	.922			
Gender	-.208	.833	-.019	-.250	.803
African American	.872	.135	.057	.642	.521
Anglo American	.930	.178	.043	.523	.601
Hispanic American	.996	.990	.091	1.006	.316

*Note.* R= .078; R Square = .006; Adjusted R Square = .000; F =.272; df = 4,176; P =.896

Reference group = Asian American

HO<sub>2</sub>: There is no statistically significant predictable relationship between academic factors (standardized mathematics scores and standardized reading scores) and the academic performance of middle school students as measured by their STAAR's social studies Scores.

Reported in Table 9 were the Simultaneous Multiple Regression Analyses concerning the predictable relationship between the middle school students' mathematics and reading STAAR scores and their STAAR's Social Studies scores. The regression model for hypothesis two resulted in a multiple correlation  $R^2$  of .228. The variables STAAR's mathematics and reading scores combined were found to explain 5.2 percent (Adjusted = 4.1%) of the variance in STAAR's Social Studies scores.

A statistically significant relationship was found to exist between the two academic factors (STAAR's mathematics scores and STAAR's reading scores) and the STAAR's social studies scores of middle school students ( $F(2,178) = 4.873, P < .01$ ). Moreover, when the variable STAAR's reading scores was controlled, STAAR's mathematics scores were found to contribute significantly to the social studies scores of middle school students ( $t(178) = 3.09, P < .01$ ). Thus, hypothesis two was rejected.

**Table 9**

*Simultaneous Multiple Regression Results Regarding the Relationship Between Academic Factors and Academic Performance of Middle School Students*

Model	B	SE	Beta	t	P
Constant	17.542	4.771			
STAAR's Math	.355	.115	.226	3.09	.002**
STAAR's Reading	.043	.016	.029	.434	.687

*Note.*  $R = .228$ ;  $R\text{ Square} = .052$ ;  $\text{Adjusted } R\text{ Square} = .041$ ;  $F = 4.873$ ;  $df = 2, 175$ ;  $P = .009$   
 \*\*Significant at the .01 level

HO<sub>3</sub>: There is no statistically significant predictable relationship between family related factors (family income, type of household, SES and primary language spoken in home) and the academic performance of middle school students as measured by their STAAR's social studies scores.

Indicated in Table 10 were the Simultaneous Multiple Regression findings regarding the relationship between middle school students' family income, type of

household, SES and primary language spoken in home and their STAAR's social studies scores. The regression model for hypothesis three yield a multiple correlation coefficient  $R$  of .157. The four family related factors collectively accounted for 2.5 percent (Adjusted =.2%) of the Variance in the STAAR's social studies scores of middle school students.

A significant linear relationship was not found to exist between the family related factors (family income, type of household, SES and primary language) and the STAAR's Social Studies scores of middle school students ( $F(4,176) = 1.105, P > .05$ ). Additionally, neither one of the four family related variables were found to be independent predictors of the social studies scores of middle school students. Accordingly, hypothesis three was not rejected.

**Table 10**

*Simultaneous Multiple Regression Results Regarding the Relationship Between Family Related Factors and Academic Performance of Middle School Students*

Model	B	SE	Beta	t	P
Constant	28.334	1.695			
Income	-.007	.562	-.001	-.012	.990
Household	.267	.794	.026	.337	.737
SES	.231	.510	.035	.454	.650
Language	1.602	.869	.141	1.843	.067

*Note.*  $R = .157$ ;  $R\text{ Square} = .025$ ;  $\text{Adjusted } R\text{ Square} = .002$ ;  $F = 1.105$ ;  $df = 4, 176$ ;  $P = .356$

### **Summary of the Hypotheses**

Three null (Statistical) hypotheses were tested in this empirical investigation. All of the hypotheses were tested for the predictable relationship between selected demographic, academic and family related factors and the social studies scores of middle school students. Of the three hypotheses, hypothesis two was found to be significant.

Relative to hypothesis one, the variables gender and ethnicity were found not to be statistically related to the social studies scores of middle school students. Neither one of the demographic variables were found to be an independent predictor of middle school students' social studies scores.

Further, regarding hypothesis two, the variables STAAR's Mathematics scores and STAAR's Reading scores were found to be linearly related to the STAAR's social studies scores of middle school students. The variable STAAR's mathematics scores were found to be an independent predictor of the STAAR's social studies scores of middle school students.

Finally, with respect to hypothesis three, the variables family income, type of household, socioeconomic status and primary language spoken in the home were not statistically related to the STAAR's social studies scores of middle school students. None of the family related factors were found to be an independent predictor of the social studies of middle school students. See Table 11 for these results.

**Table 11***Summary of All Hypotheses Tested*

Hypotheses	R	R Square	F	df	Conclusion
HO <sub>1</sub>	.078	.006	.272	4,176	Non-significant
HO <sub>2</sub>	.228	.052	.041	2,178**	Significant
HO <sub>3</sub>	.157	.025	1.11	4,176	Non-significant

*Note.* \*\*Significant at the .01 level



## CHAPTER 5

### SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

#### Summary

The purpose of this study was to examine the relationship and predictability of selected demographic, academic and family related factors on the academic performance of middle school students. Specifically, this study was concerned with the predictability of the variables gender, ethnicity, standardized mathematics scores, standardized reading scores, family income, type of household, socioeconomic status and primary language in the home on the academic performance of middle school students as measured by their STAAR's social studies scores.

A correlational research paradigm was utilized in this empirical investigation. One hundred eighty-one (181) middle school students attended a middle school located in the southern region of the United States were selected to participate in the investigation. An instrument entitled the State of Texas Assessment of Academic Readiness (STAAR) and the Student Characteristic Profile were used to collect the data. The STAAR examination was found to have excellent content and criterion related validities as well as internal reliability coefficient ranging from .81 to .93 for the test as a whole.

Finally, the data were treated through the application of the Pearson Product Moment Correlation, the Multiple Correlation procedure and the Standard Multiple Regression Technique. The following null hypotheses were formulated and tested in this investigation.

- HO<sub>1</sub>: There is no statistically significant predictable relationship between demographic factors (gender and ethnicity) and the academic performance of middle school students as measured by the STAAR's social studies scores.
- HO<sub>2</sub>: There is no statistically significant predictable relationships between academic factors (standardized mathematics scores and standardized reading scores) and the academic performance of middle school students as measured by their STAAR's social studies scores.
- HO<sub>3</sub>: There is no statistically significant predictable relationship between family related factors (family income, type of household, SES and primary language spoken in home) and the academic performance of middle school students as measured by their STAAR's social studies scores.

### **Findings**

The following findings were obtained from the results of the study:

A linear relationship was not found between the demographic factors of gender and ethnicity and the academic performance of middle school students regarding their social studies scores. Middle School Students' gender and ethnicity were not independent predictors of their social studies scores. A statistically significant relationship was found between the academic factors of STAAR's mathematics scores, STAAR's reading scores and social studies scores of middle school students. The variable STAAR's mathematics scores did contribute significantly to the STAAR's social studies scores of middle school students. The variable STAAR's reading scores was not an independent predictor of middle school students' STAAR's social studies scores. A significant linear relationship

was not found between family related factors (family income, type of household, SES and primary language spoken in home) and the STAAR's social studies scores of middle schools' students. The variables family income, type of household, SES and primary language spoken in home were not independently predictors of the STAAR's social studies scores among middle school students.

### **Discussion**

Perhaps, the most significant finding of the present study was the impact on academic factors had on the social studies scores of middle school students. The academic factors of STAAR's Mathematics and Reading scores were found to be significantly linear related to the STAAR's social studies scores among middle school students. These findings were found to be consistent with those of Sloan (2006), Aug (2011), Gaddis and Laven (2014, Katz (2013) and Barrow and Roos (2016). All of the above researchers found that standardized examination scores were significantly related to the academic success of students.

Even more importantly is the relationship between standardized testing and the academic success of middle school students. Primarily, the fact that mathematics scores was an independent predictor of social studies scores. A reasonable explanation for the current findings may be that middle school students are now receiving the same amount of instructional time in social studies that they are receiving in mathematics. Consequently, the narrowing of the curriculum to decrease the achievement gap among diverse student population might not be an issue at the school where these students are attending.

An additional theoretical explanation for the prevailing finding may be due to the cultural-contextual factors that are associated with student achievement among middle school students. These factors seem to be essential in the performance of students on standardized examinations which tend to carry over to their performance in the classroom.

Another notable finding but somewhat surprising was the relationship between family related factors and the academic success of middle school students. To be sure, the family related factors of family income, types of households, socioeconomic status and primary language spoken in home were found not to be linearly related to the STAAR's social studies scores among middle school students. These findings were not consistent with those of Duan, Guan and Bu (2018), Berkowitz, et al. (2017), Bosco et al. (2013), Reardon (2011), Zhang (2012), Martin (2012), Wu et al. (2015), Son and Li (2012), Sutherland (2015), Monserod and Elder (2011), Santin and Sicilia (2016), Abuya et al. (2019), Zarate and Pinedo (2014), and Abraham, Crais, and Vernon-Feagan (2013). All of the aforementioned researchers found that family related factors were significantly related to academic success of students.

On the other hand, the findings regarding the impact of family related factors on the academic success of students were not consistent with those of Yeung et al. (2000) regarding primary language spoken in the home. Also, these findings did not parallel with those of McLanahan, Tach and Schneider (2014), Kiang et al. (2012) and Steele et al. (2009) with regard to family household.

Furthermore, the findings with regard to family related factors and academic success were found to be inconclusive in research conducted by Sirin (2005), Anderson

(2002), Brooks-Gunn (2006) Sharkey and Elwert (2011) and Steele et al. (2009). The above researchers found that some family related factors had a mediated or moderated effect, a small effect or no effect on the academic success of students. A plausible explanation for the present findings may be that the climate of the school where these students are enrolled might have mitigated the negative effects of substandard family characteristics on achievement. In other words, school level factors such as positive classroom and school environments might have more of an influence on academic achievement than family factors among this student population. Another possible explanation for these findings could be that these students as a group were exposed to similar familial cultural values that have not only a positive influence but a supportive one as well on their level of academic success.

Also, another reasonable explanation for these findings may be that all of the students who participated in this study have been afforded similar access to educational resources that is critical to their learning opportunities. Education is often seen as the great equalizer in any attempt in closing the achievement gap between students along racial, ethnic and socioeconomic line.

Moreover, another interesting finding of the prevailing study was the lack of the relationship between demographic factors and academic success of middle school students with respect to their social studies scores. The demographic factors of gender and ethnicity were found not to have a predictable relationship with the social studies scores of middle school students. These findings were not supported by the works of Onekutu (2002), Gessell (2004), Block (2006), Fortin et al. (2015), Spinath et al. (2014),

Hartley and Sutton (2013), Lapayese, Huchting, and Grimalt (2014), Sadovnik (2013), Mattern and Patterson (2013) and Williams and Bryan (2013).

Nonetheless, the findings regarding the impact of gender and ethnicity on academic success were found to be inconclusive with regard to the research conducted by Vernon (2002) and O'Connor, Lewis and Mueller (2007). An explanation for the current findings may be that both male and female middle school students regardless of their ethnicity have internalized positive messages provided to them within their school environment concerning their academic potentials. By doing so, these students perceived that they have the ability to be academically successful in social studies.

Another possible explanation for these findings may be that gender -ethnic differences with regard to academic achievement among middle school students could be minimized by the effective facilitative environment associated with the middle school level. Because of this type of instructional environment, male and female middle school students irrespective of their racial background seems to maintain a certain level of motivation which support improvement in their academic performance.

### **Conclusions**

The following conclusions were drawn from the results of this study:

In general, it appeared that any regression model developed to predict STAAR's social studies scores of middle school students should not include the demographic factors of gender and ethnicity. A regression model to predict the academic performance of middle school students in social studies should include the academic factors of STAAR's mathematics scores and STAAR's reading scores. It appeared that every one-point increase in STAAR's mathematics score there was a .355-point increase in the

STAAR's social studies scores of middle school students. The STAAR's reading scores was not an independent predictor of the STAAR's social studies scores among middle school students. In general, it appeared that any attempt to develop a regression model to predict with a large degree of accuracy the STAAR's social studies scores of middle school students, this model should not include the family related factors of family income, type of household, socioeconomic status and primary language spoken in home, collectively. Finally, even though the family related factor of primary language spoken in home was not found to be independent predictor of the STAAR's social studies scores of middle school students, a marked tendency toward significance was revealed in this relationship.

### **Implications**

The following implications are offered for consideration by public school officials:

The academic variables STAAR's mathematics and reading scores and their impact on the academic success of middle school students in social studies suggest that public school officials should take under consideration the accountability of high-stake testing on enhancing the academic potentials of middle school students. It is imperative that school district officials who are responsible for developing and implementing supplemental academic materials to assist students in their classroom assignments, particularly in social studies, be aware of how classroom preparation have some influence on students' performance on standardized examinations. Public school officials should develop and implement strategies to intensify the relationship between family related factors and the academic success of middle school students. An understanding of the

degree of influence that family related factors have on the academic performance of students will go a long way in producing a positive school climate. By doing so, public school officials will be able to evaluate the overall effects of family related factors on students' academic success. Finally, the findings regarding the relationship between demographic factors and the academic success of middle school students suggest the need for public school officials to develop conceptual paradigms to better explain the academic behavior of middle school students that are attributed to their personal characteristics. Because of the lack of relationship found between demographic factors and the academic success of middle school students in social studies, public school officials are constantly developing statistical models to better understand this association.

### **Recommendations For Further Study**

To extend the findings of this study, the researcher recommends the following:

Conduct a follow-up study to include a large sample of middle school students from various geographic regions of the United States. Such a study will provide a more detailed account of the impact of selected demographic, academic and family related factors on the academic performance of middle school students. Conduct a study to examine the direct and indirect effects of family related factors on the academic performance of middle school students. Design a study to determine the combined effects of selected demographic and family related factors on the academic achievement of middle school students not only social studies but reading, English, science and mathematics. Finally, conduct a study to investigate the influence of school and culturally related factors on the academic performance of middle school students.



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