

A REVIEW OF PARENTAL INVOLVEMENT AND STUDENT ACHIEVEMENT AS
MEASURED BY END-OF-COURSE AND AMERICAN COLLEGE TESTING
SCORES IN ONE MIDDLE TENNESSEE HIGH SCHOOL

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Verena Owsley

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MEASURED BY END-OF-COURSE AND AMERICAN COLLEGE TESTING
SCORES IN ONE MIDDLE TENNESSEE HIGH SCHOOL

A Field Study

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The College of Graduate Studies

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In Partial Fulfillment

Of the Requirements for the Degree

Educational Specialist

Verena Owsley

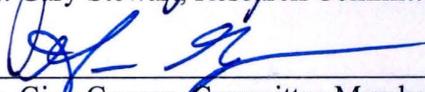
December 2013

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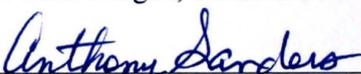
We are submitting a field study written by Verena Owsley entitled "A Review of Parental Involvement and Student Achievement as Measured by End-of Course and American College Testing Scores in One Middle Tennessee High School." We have examined the final copy of this study for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Educational Specialist.



Dr. Gary Stewart, Research/Committee Advisor

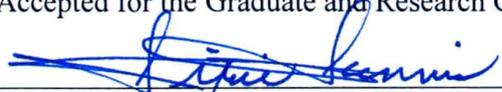


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ABSTRACT

VERENA OWSLEY. A Review of Parental Involvement and Student Achievement as Measured by End-of Course and American College Testing Scores in One Middle Tennessee High School. (Under the direction of DR. GARY STEWART.)

Purpose: The purpose of this quantitative research study was to investigate the relationship between students' achievement on the American College Testing and End-of-Course in English and Math, if any, and parental involvement at high school open houses, student orientations, parent/teacher conferences, club/organization rosters, sports team rosters, and classroom activities throughout the 2012-2013 school year. This study compared the relationship of students' achievement on standardized assessments with parental involvement in the related school functions. This research design was an ex-post facto design. Data were analyzed using a two-tailed *t*-Test. The study took place in a public high school in Robertson County School System in Tennessee. During the 2012-2013 school year, Greenbrier High School, in the Robertson County School System, served over 700 students and employed over 75 teachers, administrators, and support staff. Greenbrier High School is the second largest school in the Robertson County School System, while the Robertson County School System is one of the smallest school systems in the state of Tennessee. Greenbrier High School's student population during the 2012-2013 school year represented 763 students of which there were 286 females, 477 males, 710 Caucasian, 2 Native American, 17 African-American, 6 Asian, 20 Hispanic, and 8 Multiracial students. Within this population 246 students qualified for free and/or reduced

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lunches, which requires the students to be at or below the federal guidelines for poverty (Robertson County School system, 2012-2013).

The sample used was a convenience sample because the researcher is employed as a teacher at the selected location and has access to school's records. Additionally, student anonymity was ensured by this method. There were 39 participants in total in this study.

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CHAPTER I

Introduction

Creating programs to help involve parents in their student's education is a common strategy used to help raise student achievement. The No Child Left Behind Act (NCLB) has left schools striving to raise achievement levels and test scores for the past two decades. This has become even more relevant in the high school population. Shumow, Lyutykh, and Schmidt (2011) found that scholars and educators have directed far less attention toward parent involvement during high school than in the earlier grades, especially as it pertains to specific subject areas. With NCLB in place, the objectives of high schools are to prepare students to enter higher education and prepare them for the work force.

Parental involvement in their child's education has been researched over and over throughout the years, during times of social change, educational reform, and economic hardship. Holcomb-McCoy (2010) found that most of the information leads to the conclusion that the more involved parents are in the education system, the greater the chance the students will be successful in school and careers. Byrd (2011) concluded that indicates when schools work to involve parents; outcomes are positive for students and parent. Holcomb-McCoy (2010) also discovered that family and/or parental involvement has been positively linked to several outcomes, including higher academic achievement, a sense of well-being, school attendance, student and family perceptions of school climate, student willingness to undertake academic work, quantity of parent and student interaction, student grades, aspirations for higher education, and parent satisfaction with

teachers. Since research indicates that parental involvement influences so many factors in a student's education, it is important for educators to encourage this process. Research performed over the past decade gives educators insight into ways to improve parental involvement schools. This process takes a combined effort of the administration, teachers, school counselors, parents, students, and community leaders.

With the amount of research that is available, it is important to screen for the most effective ways to benefit the student in the parental involvement process. LaRocque, Kleiman, and Darling (2011) suggest that the education system provides different educational opportunities for students on the basis of their race, gender, religion, social class, language, and ethnicity. With this in mind, there are key areas of interest among educators to facilitate this process, especially in the high schools. Some areas include; students achievement, the family system, ways to involve parents, student and parents ethnic and socioeconomic differences, environmental influences, and the role of the school in the process.

Statement of the Problem

The problem that was clearly examined in this study was the issue that a large number of high school students have parents that are not involved in their educational process and how this effects achievement in school including grades 9 – 12. Increasing parental involvement in child's education is the foremost way to improve academic achievement and development in schools (Abdullah, Seede, Alzaidiyeen, Al-Shabatat, Alzeydeen, Al-Awabdeh, 2011). However, there have been consistent gaps in high school student achievement rates based on gender, parental involvement, and socioeconomic

status. This issue should be investigated to determine the implications of student achievement.

Purpose of the Study

The purpose of this research was to determine how student achievement for a group of students that have parents that are involved in their education academic achievement. Does parental involvement in their child's education increase academic achievement? To clearly understand how schools can increase parental involvement, several factors must be considered. First and foremost, how do schools define achievement, and is the definition the same as the way parents and students would define achievement, and do stakeholders buy in and have similar goals and interests? The second area that must be factored into parental involvement in school is the family itself. The family system, ethnicity of the family, socioeconomic status of the family, and the child's environment may influence the ability of the parents to be involved in the child's education. The third factor that should be considered is the school itself. The administrator, teachers, and school counselor play an important role in influencing parental involvement in the educational system. All of these factors are important when trying to understand and develop a successful parental/student/educator relationship in the school.

Significance of the Study

Currently the Robertson County School System and the State of Tennessee have implemented and American College Testing assessments in the schools, grades nine through twelve, to assess student achievement. According to the State of Tennessee and

Robertson County School System, raising these assessment scores will enhance student long term educational success in college and career planning. It is important to find ways that will benefit student achievement on standardized assessments. Research currently indicates that there is a significant relationship between parental involvement and student achievement. This study investigated whether this applies to the Greenbrier High School in the Robertson County School System.

Research Questions

The following research questions were generated to guide the study.

1. Is there a difference in End-of-Course Math scores for students that have parents that are involved in school?
2. Is there a difference in End-of-Course English scores for students that have parents that are involved in school?
3. Is there a difference in American College Testing scores for students that have parents that are involved in school?
4. Is there a difference in End-of-Course Math scores for students that have parents that are involved in school based on gender?
5. Is there a difference in End-of-Course English scores for students that have parents that are involved in school based on gender?
6. Is there a difference in American College Testing scores for students that have parents that are involved in school based on gender?

7. Is there a difference in End-of-Course Math scores for students that have parents that are involved in school based on socioeconomic status?
8. Is there a difference in End-of-Course English scores for students that have parents that are involved in school based on socioeconomic status?
9. Is there a difference in American College Testing scores for students that have parents that are involved in school based on socioeconomic status?

Hypotheses

1. There will be no statistically significant difference in End-of-Course Math scores for students that have parents that are involved.
2. There will be no statistically significant difference in End-of-Course English scores for students that have parents that are involved.
3. There will be no statistically significant difference in American College Testing scores for students that have parents that are involved.
4. There will be no statistically significant difference in End-of-Course Math scores based on gender for students that have parents that are involved.
5. There will be no statistically significant difference in End-of-Course Math scores based on gender for students that have parents that are involved.
6. There will be no statistically significant difference in American College Testing scores based on gender for students that have parents that are involved.
7. There will be no statistically significant difference in End-of-Course Math scores based on socioeconomic status for students that have parents that are involved.

8. There will be no statistically significant difference in End-of-Course English scores based on socioeconomic status for students that have parents that are involved.
9. There will be no statistically significant difference in AMERICAN COLLEGE TESTING scores based on socioeconomic status for students that have parents that are involved.

Limitations

The population size for this study limits the ability to make generalizations about parental involvement and student achievement. This study was conducted in one high school in Robertson County Schools in Middle Tennessee. The small sample size used in this study limits the potential of the results of the study to be generalized to other populations. Student achievement was based on and limited to two types of testing; End-of-Course and American College Testing only. A full range of student achievement is difficult to assess in high school without including additional variables.

Assumptions

For the purpose of this study, it was assumed that all students gave full effort during the time of the assessment, all students were testing at their full ability in ideal test settings, and the End-of-Course and American College Testing scores were reported accurately.

Definition of Terms

1. Student Achievement: Student achievement is how well a student performs academically, including on standardized assessments.

2. Parental Involvement: Parental involvement is the level of participation of a parent in their child's education and school (e.g. volunteering to help in his/her child's classroom, communicating well with their child's teachers, assisting with homework, and understanding their child's individual academic strengths and weaknesses).
3. End-of-Course: In the new High School Transition Policy, the State Board stipulated that End-of-Course examinations will be given in English I, English II, English III, Algebra I, Geometry, Algebra II, U.S. History, Biology I, Chemistry and Physics, (Tennessee Department of Education, 2013).
4. American College Testing: the American College Testing is a longitudinal assessment system to connect student performance from elementary grades through high school. The system will include summative assessments that measure how much students have learned over time as well as classroom-based assessments that help educators better understand students' learning needs throughout the school year. Student assessment results will be tied to readiness benchmarks early enough for schools to take appropriate and effective American College Testing is to address problems and help students improve. The American College Testing system will also inform teachers about students' progress toward specific learning standards, so they can better tailor their instruction and resources to help students learn, (American College Testing, 2013).

5. Ethnicity: Ethnic groups are described as African-American, Caucasian, Hispanic, Asian, American Native and Pacific Islander as determined by the United States Department of Education.
6. Minority: Any student belonging to the ethnic groups African-American, American Native, Hispanic, Asian, and Pacific Islander as determined by the United States Department of Education.
7. Non-Minority: Any students belonging to the ethnic group Caucasian.
8. Socioeconomic Status: Socioeconomic status is determined by the federal poverty guidelines. Students receive fee waivers for free and reduced lunch and classroom fees.

CHAPTER II

Review of Related Literature

Student Achievement

To understand how parental involvement can influence student achievement we must first understand how the educational system defines student achievement. Student achievement in the educational system is typically observed in measurements of standardized testing. If a student is maintaining growth in all subject areas, this is referred to as gain. When a specific demographic group maintains growth this is referred to as closing the gap. It is also important to understand how parents view achievement in their student educational process. Hayes (2012) stated that achievement values refer to parents' values and attitudes about the importance of effort and academic success. In theory, schools view achievement in gains and parents see achievement in effort to improve. There are different views of achievement, and the process makes it easy to see why the subject of parental involvement in student achievement is so widely studied by educators. The values schools and families assign to this issue are often different depending on the perception of achievement.

Student achievement is an important part of the educational process. So much so that educators expend tremendous effort in assessing student academic levels and designing programs to benefit them in the struggle to close this achievement gap. Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones (2001) found that schools often dedicate precious resources toward the goal of increasing the incidence and effectiveness of family involvement in their child's education. Even with high cost of

education and time spent working towards this goal, there are setbacks and very little progress made in the educational system to reach the goals. Hoover-Dempsey, Shenker, and Walker (2010) found that educator's efforts, however, are not always informed by systematic investigations of why parents become involved or how their involvement influences their child's academic engagement and achievement. This reinforces the question of why student achievement and parental involvement is still a valuable research topic.

Family System

It is important to involve parents in student achievement, which makes it important to understand the family system. We now know that the particular and unique ways family members interact with their children are much more powerful predictors of their child's school achievement than family status variables, for example income, parental educational level, and family structure variables for families, whether intact or divorced, are influenced (Amatea, Smith, & Villares, 2006). These variables influence the family system being aware as an educator of the stressors in families will help make it possible to involve parents in their child's education. As educators, it is important to not add additional stressors to their already full schedules, but to offer opportunities as support to the family. Not only are family systems influenced by stressors, but also specific family belief systems. Hong, Yoo, You, and Wu (2010) found that children's values and behaviors are deeply influenced by their parents. Knowing that these values and behaviors in the family influence the child and their learning process is another important piece of the puzzle as we strive to include parents in the education system.

The knowledge of these influences will benefit the school system when developing programs to educate, inform, and include parents in the educational process of their child.

The current research indicates that families are under a great deal of stress from day to day American College Testing. Therefore, schools system should take into account the emotional state, resilience, and belief systems of our families and students. Research indicates that families of academically successful students view their family as a source of mutual emotional support and connectedness (Amatea et al., 2006). This is important when working with students and families of low achieving students or noninvolved parents. Students in these groups may not have the family support system to help maintain the emotional necessities and overall support needed to be successful. Schools may have to play a significant role in helping students with needed support. Students may need to be taught how to express and calm themselves in times of great stress. Another link to successful students is that families demonstrate high levels of warmth, affection, and emotional support for one another (Amatea et al., 2006). Families spend leisure time together through participation in school based activities. Students who are deprived of this warmth and support may be less likely to feel comfortable and confident in group situations such as school function and even in the classroom. A third attribute of an emotionally supportive family is open communications. Families that use clear communication in their interactions with each other and consistency between what is said and what is done, including discussing personal fears, stresses, criticisms, complaints, and other feelings with each other rather than censoring such topics from conversation are found to have higher scholastic achievement in their educational process

(Amatea et al., 2006). Unfortunately this is not always the case with students that are served in the educational system. Students come from homes with problems and their emotional needs are not always met.

Family beliefs and expectations have a significant influence throughout the educational process. This can be a great determiner of how they perceive their education and the support they receive at home. Parents who frequently talk with their children about future life goals and the necessary steps to getting there; encourage their children to dream, to make plans for the future, and to seek "a better life" frequently use themselves as reference points, and repeatedly encourage their children to do better in educational and occupational attainment (Amatea et al., 2006). Contributing American College Testing influence students goal making, decision making, and problem solving skills more defined for their success in school and life. Families of high achieving students think optimistically about their life circumstances, and they teach their children to think optimistically--viewing adverse circumstances as providing an opportunity to learn (Amatea, et al., 2006). Students look forward to their future goals and to life beyond school. Students that do not have this encouragement may not set goals and may give up on themselves more easily due to the lack of supportive and uplifting behaviors. Parents of high achieving students also provide the support to develop resiliency in difficult academic and social situations. Amatea and colleagues discovered do not become discouraged and immobilized by stresses and difficult life challenges, family members "rise to the challenge" and are confident about their ability to succeed (Amatea et al., 2006). Additionally, parents visit the school and routinely monitor (and are

emotionally supportive of) their child's involvement in school assignments and other literacy-producing activities (Amatea, et al., 2006).

Parental Involvement in Student Achievement

Educators understand the importance, and influences of parental involvement in student's education and in their future success. Bell, Perna, and Rowan-Kenyon (2008) pointed out that quantitative research typically operationalizes parental involvement using a narrow set of indicators that focus on quantity rather than quality of different types of involvement. This is the reason that schools, teachers, counselors, and administrators work on outreach programs for students and parents. Byrd (2011) pointed out that; however, it is important to recognize that better systems for schools and teachers in working with parents do not automatically result in good parent involvement and strong partnerships. There are numerous reasons for the lack of parental involvement in their child's education. Some parents are not aware of the educational opportunities available to their children. There are parents in minority or low income groups, or there are parents that are uneducated themselves. Byrd pointed out that some parents may not be very involved for a variety of reasons, including work, day-care issues, time demands, or cultural practices (2011). In many cases educational success is influenced, in part, by parental support and encouragement. McDonough (2005) found that 82% of students whose parents were college-educated enrolled in college directly out of high school, but only 54% of students whose parents had completed high school, and only 36% of students whose parents had less than a high school diploma immediately enrolled in

college after high school. Offering outreach to parents, and educating parents and students on higher education options could potentially increase student's future success.

There has been a great deal of research in the past decade that investigates ways for schools to involve parents in their child's education. Hoover-Dempsey et al. (2001) show that a systematic way that schools can engage parents in their child's education is beneficial. His research pointed out 5 levels that will help parents understand and engage their children in the educational process. Each level of the model targets parents' motivations to become involved, especially their role construction and self-efficacy and their skills and knowledge for involvement. Parents also understand that it is their responsibility to be involved and that their involvement can have a positive outcome on their children, the stage is set for teachers to invite their involvement (Hoover-Dempsey et al., 2001). If parents can understand the importance of their child's education they are more likely to lesson involved and help motivate the student in school, by enhancing their overall achievement. They also discovered that if they help schools target ways that school counselors can increase the range and quality of parents' involvement forms and how they can remove barriers to involvement, parents are more likely to engage in their child's education (Hoover-Dempsey et al., 2010).

The research specifies a very systematic way to engage the parents throughout their child's education. These levels include; communicate the importance of parental involvement; prepare parents to perceive and respond appropriately to teacher invitations to involvement; address barriers to parental participation and create school-family-

community linkages. In the first level, schools can communicate to the parents the importance of their involvement with their child's education. This can be done through surveys, questionnaires, or informational meetings. At this level it can also be communicated to the parent that they do not have to possess all of the educational skills and resources that the school possesses, but to be present and aware of the child's progress and use the resources that the school offer to assist in the learning process. Parents can model for their children a commitment to learning and, through encouragement and positive reinforcement, they can communicate that they value education and that the children's efforts can have a positive effect on performance (Hoover-Dempsey et al., 2001). Teachers, school counselors, school web sites, and school newsletters are great resources for parents that do not know how to be involved with their child's education.

By having a process where parents are involved members of the school indicates students and the community that the school is engaged with the family, not only the student. Thus, students see their parents as involved members of the school and are more likely to see them in the role of an advocate in the education process. This process starts with open communication, dialogue and invitations, but expands with volunteer opportunities, organization of extra-curricular activities, and offering resources to parents. In this way parents are seen by students and school personnel as valuable partners in the educational process. Inviting parents to serve as guest educators in the school can have a positive impact on parents' role construction and self-efficacy (Hoover-Dempsey et al., 2001).

The next level in the model reflects how schools can create an open dialogue and create invitations to parents to be involved in their student's educational process. School counselors and administrators can assist teachers in the process of having open dialogue with parents. This dialogue between both individual families and school personnel and between groups of parents and school personnel can help parents become more equal partners in the education of their children; they will become more empowered in the school (Hoover-Dempsey et al., 2010). Trained in group processes, school counselors can guide open conversations among the stakeholders that can clarify misperceptions, increase trust and understanding, enhance relationships, and increase interaction. Additionally they can serve as moderators helping parents and school personnel to communicate their concerns and develop appropriate, cooperative responses (Hoover-Dempsey et al., 2001). The schools can also help parents feel comfortable with their child's educational process by setting up formal and informal invitations to the schools activities and events. A formal invitation is an invitation to a parent-teacher conference. With such a formal invitation, school counselors can give parents sheets to prepare for parent-teacher conferences describing specific steps to take before (talk with the child about school, prepare questions), during (ask questions, share information about the child, ask what parent can do to help, ask to be kept informed about the child's progress), and after the meeting (share information from the conference with the child, keep in touch with the teacher) (Hoover et al., 2010). An informal invitation is a request from the teacher to the parent to attend an event at school, via flyer or parent newsletter is less

effective than a personalized invitation by phone or in a note addressed specifically to the parent (Hoover-Dempsey et al., 2010).

Another way to invite parents to be involved in their child's education is to offer volunteer opportunities, activities and events, and additional resources to parents. If parents know that there is an open-door to helping in the schools, they are more likely to feel comfortable entering the school and even asking teachers if they can help. By parents demonstrating a love of learning and positive connections to the school, parents are teaching their children the importance of education through modeling, (Hoover-Dempsey et al., 2001). A step towards this process is offering informational events, and extra-curricular activities in the schools. It is important, especially at the high school level, to offer after-school activities for students and parents, and for educators to be involved in this process. This engages the family in a portion of the educational process. Weekly sports and performance events, monthly parent-teacher informational or organizational meetings, regular community events, and bi-annual open houses and awards ceremonies enable all stakeholders to be involved in the student achievements and success. Schools can distribute information to parents regarding existing extracurricular programs and can organize more family-centered activities, to bring parents to the school. Additionally community groups led by parents can be invited to use school facilities for their meetings (Hoover-Dempsey et al., 2010). With this information, resources for the parents and families are just as important in keeping the communication open at all ends. Providing parents with resources can benefit them in learning more about child development and effective parenting (Hoover-Dempsey et al., 2001).

The last two levels of this parental involvement process in school parent attendance and school-family-community linkage. It is important when offering opportunities for parents to be in the schools that schedules are considered. This may be the most difficult part in the parental involvement process. Each family has a busy and full schedule with work, family, school, and activities that are often in conflict with each other. By holding meetings at community activities where parents already feel comfortable, schools can reach parents who might not attend meetings at the school (Hoover-Dempsey et al., 2010). This enables the entire community to be involved with the students' educational process. Schools can work with community businesses, tutoring programs, mentoring organizations, literacy projects, community health services, libraries, and recreational programs to build school-family-community partnerships (Bryan & Holcomb-McCoy, 2007).

Ethnicity's Effects on Students Achievement

Often schools look at the demographics of their students when assessing achievement. Schools are interested in finding ways to improve student success. Often research in areas such as ethnic differences and the affects in the classroom are important to determining student's success. Parents of different ethnic backgrounds need additional support in promoting the involvement in their child's education. Knowing that the educational achievement levels of students who are from diverse backgrounds lag behind their White counterparts, it is important to know how to increase the achievement levels of students (LaRocque et al., 2011). Parents from other cultures may not understand the rules of the games in which their children are engaged nor the importance of involvement

in activities (Hoover-Dempsey, 2010). Current research indicates the reason for this occurrence and how the schools can interact with diverse groups of student populations.

One consideration in different ethnic groups that may affect grades and students achievement is parenting styles. Amatea and colleagues discovered that low grades were associated with certain parenting styles, although there were some differences in the strength of the patterns across ethnic groups, the patterns were consistent across diverse family structures (i.e., for biological two-parent, single-parent, or stepfamily structures), student age, and family social class for African-American, Non-Hispanic, White males and females, and for Hispanic females (2006). The greatest difference in the parenting styles reported by students was found in Asian families. Asian students with parents with authoritarian parenting styles typically report lower grades, whereas Asian students with authoritative or permissive parenting styles show no significant change of grades (Amatea et al., 2006). This is not the case with all ethnic groups. Hispanic males with authoritarian parenting reflected almost no relationship between parenting styles and grades (Amatea et al., 2006). The authoritative parenting style is positively associated to the academic achievement at school (Kazmi, Sajjid, & Pervez, 2011). With that said there is a great deal of research that indicates other ethnically differences when looking at students achievement. One pattern that appears to have broad applicability is that authoritative parents--who exercise their authority over their children by clearly and regularly delineating their standards and rules for their child's conduct, yet also attempt to make standards reasonable for their children--tend to raise children who are successful in school. Perhaps this is because children who understand what to do at home find it easier

to understand and follow the instructions and requirements of adults at school (Amatea et al., 2006).

Another area of interest when working with parents in diverse populations is in demographic cultural differences in different ethnic families. African-Americans that are concentrated in urban environments are not all homogenous as demonstrated and need to use caution when generalizing results related to urban, African-American parents (Hayes, 2011). Research is important in this area in educating teachers and communities to be cautious when generalizing based on ethnic stereotypes of certain populations. African-American adolescents from urban areas may differ greatly from African American Adolescents from rural areas experiences with their parents and school officials can vary by their environments. Hayes (2011) has suggesting that although all of the African-American parents in the study lived in urban environments, not all the same variables were predictive of greater levels of involvement and thus interventions aimed at increasing parental involvement may need to fit the unique needs of a given group of parents rather than relying on universal interventions geared toward "urban" African-American parents. Cultural differences may also be an indicator of the type of involvement that diverse groups of populations consider as educational involvement. Hayes (2012) found that home-based involvement was the only significant predictor of achievement outcomes in this sample of African-American adolescents. Parents in certain ethnic groups may be highly involved at home with homework, college preparation, and goal setting, although may not be able or may prefer not to interact at the school. Research indicates that the college choice process is often characterized by class-and

race-based differences that can include parental differences based on perceived entitlement, expectations, use of school counselors, different behaviors regarding college application processes, and differential access to resources that enhance the college choice process (Holcomb-McCoy, 2010). This may be an indicator of the success found in this group. Parents that reported engaging in higher levels of home-based involvement had adolescents that performed better academically and missed fewer days of school (Hayes, 2011). Results suggest that African-American parents in the current sample were more likely to promote school success in their high school adolescents by engaging in more frequent conversations about school and learning as opposed to engaging in direct involvement in school activities or merely having high values about academic success (Hayes, 2012). Thus, not all forms of parental involvement lead to the same outcomes for all students across all grade levels (Hayes, 2012).

Socioeconomic Effects on Students Achievement

There are several factors to consider when looking at student achievement and family low socioeconomic status which includes but are not limited to school performance, graduation rates, college entrance, and college funding. Orthner, Jones-Sanpei, & Williamson (2004) studied low income families and found that families have poor communication skills; both parents work one or more jobs, and still struggle to pay for basic necessities. Researchers believed that a family's beliefs and behaviors were not static but instead varied over time as family members experienced challenges and influences from the broader sociocultural context (Amatea, et al., 2006).

Dearing, Kreider, Simpkins, and Weiss (2006) looked at average parental involvement and average literacy in public schools to find a better understanding of why this phenomenon occurs. They found that there was no association between average involvement and average literacy for children whose mothers were relatively more educated, average involvement levels between kindergarten and fifth grade were positively associated with average literacy performance levels for children whose mothers were relatively less educated, although there was an achievement gap in average literacy performance across the study between children of more and less educated mothers if family involvement levels were low, this gap was nonexistent if family involvement levels were high. Research on minority group performance in the education system is a concern for all educators. Amatea, et al. (2006) analyzed 101 different studies of this kind, and found that in the white population that only 25% reported a variance in student achievement which could be accounted for by family socioeconomic status or family structure configuration. With that said the results from research in minority populations show different results. When examining urban African-American families, parents from the lower socioeconomic status group did show a greater likelihood to be actively engaged in school related activities when they were more educated. This may be especially important for parents that tend to live in lower socioeconomic status environments than for parents from higher socioeconomic status environments. Parents who come from traditionally lower socioeconomic backgrounds but who are more educated may feel the need to engage in greater interactions with teachers and school personnel in order to eliminate any preconceived notions teachers may have of parents

from certain backgrounds. Therefore, schools need to make a concerted effort to reach out to parents who have been traditionally disengaged in the schooling process primarily due to their background (Hayes, 2011). Dearing, et al. (2006) discovered that there is increasing evidence that family involvement in schools among low-income families may likely be a determiner in improving the achievement of children who are exceptionally at risk for academic failure because of both low income and low parent education.

Graduation rates in minority groups are also of great interest in the education system. Dropout rates in the United States have remained consistently at the 30% level, over the past three decades. McDonough (2005) discovered that the largest gap in the high school graduation rate and college entrance is related to race and poverty or low income families. With that said, parent's claim that they will do whatever it takes to increase their child's education levels. With the information available, there have been efforts in the education system to predict students achievement based on family socioeconomic status. This trend follows students on into adulthood. Messacar and Oreopoulos (2013) point out that dropouts earn less money, are more likely to be in jail, less likely to be married, less healthy, and unhappier overall when compared to high school graduates.

When Holcomb-McCoy (2010) examined the low income students, there was a link with students who are strongly encouraged by their parents to attend college and are much more likely to attend 4-year institutions than are students who do not receive that support from their families. In general, students from low income families have less parental involvement when compared to students of middle or upper class families.

Young people from low-income families and whose parents have not attended college, as well as those of African-American and Hispanic descent, are less likely than other young people to enroll in college and when they do enroll, students find themselves concentrated in lower-priced institutions, such as public two-year colleges and less-selective four-year colleges and universities to college enrollment, this study develops a typology of college-enrollment programs to sort out the tangled web of governmental efforts in this area (Bell, Perna, & Rowan-Kenyon, 2008).

Family member's involvement in the college financial aid process is an important factor to the success of student academic achievement. Parents at the low-resource schools were typically uncertain about how to pay college prices and only a few parents at the low-resource schools indicated that they had saved some money for their child's postsecondary education (Bell, Perna, & Rowan-Kenyon, 2008). Low income families generally do not understand the availability to college funding and perceive college as expensive and are unable to find resources for their children; therefore do not encourage such a venture. The barriers are inequalities of familial cultural and social capital; inequality of resources in neighborhoods and communities; lack of peer support for academic achievement; racism; inequalities in K-12 schools including unequal distribution of well-qualified teachers; segregation of Black and Hispanic students; poor high school counseling; low expectations and aspirations; high dropout rates; and, limited financial resources (Bell, et al., 2008). In many cases, parents and the students assume large amounts of student loans to finance their college studies. Financial aid outreach from community organizations could assist parents in making the higher education

process easier and more cost efficient. Thus, the challenge is to break this cycle and educate parents to further involve them in this process. Bell, Perna, & Rowan-Kenyon (2008) noted in their research that schools, higher education institutions, economic forces, and state policies contribute to differences in parental involvement.

The Schools' Role in Students Achievement

The role of the school is triple fold. Students come into contact with many individuals each day; teachers, counselors, and administration. Each member of the education system works diligently each day towards improvement in student success. Educators work with parents and community groups to find solutions to encouraging and influencing educational success. With legislature changing annually looking towards higher education, it is more important than ever to encourage, and look for ways to involve parents in the education process of their children. No Child Left Behind Act and Obama's Reauthorization of the Elementary and Secondary Education Act has educators on their toes to find more effective ways to accomplish and mandate educational goals and focus their attention on the future of students, and their success. According to recent changes, schools that fail to make adequate yearly progress for two consecutive years are required to develop or revise school improvement plans aimed at boosting student achievement (Kochanek, Wraight, Wan, Nysten, & Rodriguez, 2011). Schools are required to include parental and community involvement within these annual plans. This has increased research in these areas. An analysis of 1,400 school improvement plans from Title I schools found that more than 90 percent included at least one "potentially

effective" parent-involvement activity, and 70 percent included at least one extended-learning activity, such as a before-school, after-school, or summer program (Kochanek et al., 2011). However the report from the federal Institute of Education Sciences found that very few of the plans included activities that involved parents in decision-making. Just 5 percent of before-school, 20 percent of after-school, and 5 percent of summer school programs offered academic support for struggling learners (Kochanek et al., 2011). Therefore, it is important to look at, and use tools when involving parents in the educational system that allow for this connection to be improved and to be applied.

Leadership in the schools is one major influence in parental and community involvement. Research supports the view that principals have a direct influence on the school climate (Bryan & Griffin, 2010). Administrators that encourage parental participation who an open-door policy to parental and community involvement, and engage this aspect of education in the schools, find that it is easier to implement such programs. Principals have the greatest influence in involving parents and community leaders into the schools (Bryan & Griffin, 2010). When principals accept that parental and community involvement in school activities benefits the entire student population, educators find that students, parents, and other stakeholders find that the implementation and success of these types of programs encourage student success. Principal expectations appear to be a significant predictor of school counselor involvement in school-home partnerships, in school-community collaboration, and in their overall partnership involvement. However, this is not the case with their involvement on collaborative teams. Indeed, principal expectations were the strongest predictor of these types of partnership

involvement (Bryan & Griffin, 2010). Thus, a collaborative effort between administrators, teachers, school counselors, students, parents, and community leaders may be the most important link to accomplishing goals.

The Teachers Role

Teachers are an important factor when looking at parental and community involvement in the schools. Teachers have first hand encounters with students and parents and can, at times, be the only communication for parents with the schools. Byrd (2011) suggested that teachers can begin to discuss issues in parent-teacher conferences or phone conversations. Teachers are able to meet with other professionals in the field and discuss relevant classroom concerns and communicated to administration. Concerns can be expressed to administration and other school leaders to achieve a consensus on programs that will benefit their students the most. Another way teachers can encourage parental involvement is through homework assignments. Homework requires students, teachers, and parents to invest time and effort on assignments. According to Van Voorhis (2011), 90% of teachers, students, and parents believe homework will help students reach important goals. However, 26% of students, 24% of teachers, and 40% of parents report that some homework is just busywork, and 29% of parents report homework is a major source of stress. This concept requires parents to take a proactive approach in the children's educational process.

One area that may be the link between parental involvement and college and career success is related to the work of school counselors. Students that are not

encouraged by parents and those around them to attend higher education find this support at school. Research suggested that student perceptions of school counselors' postsecondary expectations of them may influence whether they even seek the school counselor out for college information utilized a conceptual framework that categorized the factors related to partnership involvement into school-related factors and school counselor factors (Bryan, Griffin & Holcomb-McCoy, 2010). They found that school counselors' involvement in partnerships was related to one school factor, collaborative school climate. They also found that school counselor involvement leads to: role perceptions, attitudes about partnerships, and confidence in their ability to build partnerships. The previous research further explore the school and school counselor factors related to school counselor partnership involvement and includes other variables not previously examined in their model. Overall, the literature suggested that school counselors have an impact on the following aspects of college preparation: (a) structuring information and organizing activities that foster and support students' college aspirations and an understanding of college and its importance, (b) assisting parents in understanding their role in fostering and supporting college aspirations, (c) assisting students in academic preparation for college, (d) supporting and influencing students' decision making about college, and (e) organizationally focusing the school on its college mission (McDonough, 2005; Bell et al., 2008). Students from low income families do not always understand how to access financial aid. Therefore, they rely on help from school counselors rather than their parents. This leaves students that may otherwise qualify for financial aid unable to access higher education because of the expense. Additionally,

Bryan and Griffin (2010) state that research on school counselor partnership roles and practices and potential influences is best approached from a multidimensional perspective, that is, within the context of multiple factors to capture the complexity of the real world in which school counselors deliver services.

Research indicates that school counselors play an important role in engaging parent and community in the various school activities. There are many possibilities that school counselors can explore in reaching out to parents and the community in taking a proactive roles in student education. One strategy is to raise their own level of collaboration with student services professionals, teachers, and principals. For example, school counselors can initiate a collaborative team with the school psychologist, behavioral specialist, social worker, school nurse, parent liaison, or other school professionals who deliver social and psychological services to students. School counselors must ensure that the collaboration is based on strengths-based and culturally competent practices, mutual respect, and a shared vision (Bryan & Griffin, 2010).

Another strategy is to actively reach out to teachers and families as well as seek their insights about the needs and strengths of the school and community and to garner ideas about ways to improve family involvement. Strategies such as community asset mapping and forming relationships with cultural brokers provide school counselors with useful information and resources and opportunities to connect with families and communities and increase their presence in the school (Bryan & Griffin 2010).

With the roles that schools play in student achievement, it is important to have a plan to implement parental involvement programs. Hoover-Dempsey, et al. (2010) stated that there are 5 levels in schools engaging parental involvement in their student's educational achievement; motivation to be involved, parental forms, student perception, student's outcome, and parental involvement. The research is beneficial to the schools in order to promote an understanding of the students, the family, and the community. This research simplifies this for the schools in that each level spells out the precise roll that the school plays in this involvement and how the school should plan to implement programs. Level one includes: beliefs; perceptions; perceived life context; and family cultural beliefs; level two includes: parental values; goals; expectations; and aspirations; home-based Activities; parent-teacher-school communications, and school-based involvement ranging from rather passive activities to rather active ones level three involves children who are active architects of their own development; level four and five represents the current tendency in the research literature to regard student achievement as a significant outcome of parental involvement (Hoover –Demspey, 2010). With this research each school can devise a plan specific to meet its individual needs.

Environmental Effects on Students Achievement

Parents and schools are not the only resources available to students. There are many college and community outreach programs that are mostly government or non for profit designed to assist students and parents in making the best higher educational decisions. Alternative forms of students outreach come from private educational counseling firms, college intervention programs, pre-college outreach, and college

preparation programs, according to McDonough (2005). With the lack of training and time allotted to school counselors, there is the need to go outside the schools to community organizations. Pre-collegiate outreach or intervention programs are designed to supplement schools and communities with resources that are helpful for students preparing for college. Most intervention programs target improving opportunities for individual students, rather than changing the structure or functioning of schools, and thus are student-centered, rather than, school-centered programs (McDonough, 2005).

Students tend to start making college and career choices as early as elementary school, this why early parental and community involvement is important. Programs such as career days in elementary schools encourage students to begin the thought process in making future goals and for parents to begin planning for their child's future. Research indicates that most students have some post-high school educational or job plans by the ninth grade (McDonough, 2005). In middle school, students tend to take a high rigorous course plan throughout middle and high school. These are good opportunities for schools to involve parents in high school orientations and college nights. Students and parents can then begin to explore careers, colleges, programs, and financial aid. By a student's mid high school career they have made the decision to attend college. The experience of the student from parental and community contributions and school-based programs will benefit him/her in making the best decision.

Summary

Parental involvement in schools has been explored as a possible means through which students can be provided with additional supports (Chen & Gregory, 2009).

Previous research has indicated a relatively positive association between parental involvement and academic achievement, the growing research evidence has suggested a more complex picture in this relationship (Hong et al., 2010). This process takes the time and support of the school and parents working in a partnership for the well-being of the student. There are difficulties, associated with this in the family system, including economic status, ethnicity, and environment, that play a contributing role in the organization to meet all family and students needs. Although all students benefit from family involvement, low-income students and students of color fare significantly better in gaining admission to 4-year colleges and universities when their parents are involved in their schooling (Holcomb-McCoy, 2010). It is also consistent with a family resilience model of intervention to acknowledge that different families have varying resources to contribute to the types of activities that promote their child's academic success (Amatea et al., 2006). Families of high-achieving children teach their children firsthand about the personal roadblocks one may confront and strategies for circumventing these roadblocks through encouraging pep talks about education and by providing clear suggestions that children invest time and energy in school-related tasks (Amatea, et al., 2006). Families play an important role in creating a school that meets their child's needs, yet teachers admit they have little information or training on how to effectively work with diverse parents (LaRocque et al., 2011). This makes it difficult for the school to reach out to the families and offer opportunities for family and parent involvement, although with planning and a good school support system these challenges can be overcome and beneficial to the student.

CHAPTER III

Methodology

Purpose

The purpose of this research is to show if there is significance between groups of students that have parents that are involved in their education academic achievement. To look at Parental Involvement and Student Achievement as measured by American College Testing and End-of-Course Scores in One Middle Tennessee High School.

Overview

The study's methodological approach was quantitative and it followed an ex-post facto design study because the parental involvement data of the participants was during the 2012-2013 school year. This study investigated the relationship between parental involvement during open houses, student orientations, parent/teacher conferences, club/organization roster, sports team rosters, and classroom activities were maintained throughout the 2012-2013 school year and students' achievement on the American College Testing and End-of-Course, which are standardized state assessments.

Research Design

The research design used is a quantitative descriptive study. This field study examined any significant relationship between parental involvement and increased academic achievement. The relationship between End-of-Course and Academic College Testing scores and parental involvement were examined for significance. The independent variable of this study is parental involvement. The dependant variable of this study is achievement scores.

Participants

The population from which the sample for this research was taken represents a small group of students in the Robertson County School System. Greenbrier High School, in the Robertson County School System, services over 700 students and employs over 75 teachers, administrators, and support staff. Greenbrier High School is the second largest school in the Robertson County School System, although the Robertson County School System is one of the smallest school systems in the state of Tennessee. Greenbrier High School 's students population during the 2012-2013 school year this high school served 763 students, 286 females, 477 males, 710 Caucasian, 2 Native American, 17 African American, 6 Asian, 20 Hispanic, and 8 Multiracial. Within this population 246 students qualify for free and/or reduced lunch, which requires the students to be at or below the federal guidelines for poverty. (Robertson County School System, 2012-2013).

The sample for this study consist of ninth, tenth, eleventh, and twelfth grade students that had parents that were involved in school activities in the 2012 – 2013 school year, reported by parent/teacher conferences, open house and other school event sign ins, and parent volunteer events, and that had previously took the American College Testing, English and Math End-of-Course.

Instruments

The researcher utilized data from the American College Testing, English and Math Tennessee End-of-Course. American College Testing: American College Testing is

a longitudinal assessment system to connect student performance from elementary grades through high school. The system will include summative assessments that measure how much students have learned over time as well as classroom-based assessments that help educators better understand students' learning needs throughout the school year. Student assessment results will be tied to readiness benchmarks early enough for schools to take appropriate and effective act is to address problems and help students improve. The American College Testing system will also inform teachers about students' progress toward specific learning standards, so they can better tailor their instruction and resources to help students learn, (American College Testing, 2013). The American College Testing is administered to all eleventh grade students in the Robertson County System, although students may begin taking the ACT early as seventh grade. The End-of-Course is administered to all ninth grade students in Tennessee in the fall and/or spring each year. The assessment measures the students' understanding of the state-wide curriculum standards. Students were excluded from the study if they did not have End-of-Course and/or American College Testing scores available.

Data Collection Procedure

The researcher began this study by collecting data about individual participants. The study assessed parental involvement and End-of-Course and American College Testing scores of 40 high school students in one Robertson County School in Tennessee. All participants were randomly selected from the schools population.

Logs and sign in sheets of open houses, student orientations, parent/teacher conferences, club/organization roster, sports team rosters, and classroom activities were maintained throughout the 2012-2013 school year. These items were used to indicate parental involvement of these students in the school. End-of-Course and American College Testing scores were used to assess academic achievement.

Data Analysis Procedure

After the data were collected, the researcher analyzed the data using a data analysis program. The researcher used a paired, two-tailed *t*-Test to compare student's achievement and parental involvement. The researcher also used a paired, two-tailed *t*-Test to compare student's achievement to gender and socioeconomic status. The *t*-Test was calculated at the significance level, or alpha (α) level, of .05.

CHAPTER IV

Presentation and Analysis of Findings

Introduction

This study was conducted to determine in parental involvement in education influences Math End-of-Course, English End-of-Course, and/or American College Testing scores in students in one Middle Tennessee High School. The focus was on the students that had parents that were involved in their education during the 2012-2013 school, year, had taken the Math End-of-Course, English End-of-Course, and American College Testing. There were 39 participants that meet these criteria.

Table 1.

Demographic Information of Sample Population of Students

Group	Gender	<i>N</i>
Total	Female	20
	Male	19
Low Socioeconomic Status	Female	6
	Male	4
Grade Level	9	3
	10	7
	11	20
	12	9

Table 1 shows the demographic information for the participants in this study.

There were 20 Females and 19 Males in the study. Of the 39 participants, 3 were in the 9th grade, 7 were in the 10th grade, 20 were in the 11th grade, and 9 were in the twelfth grade. Ten of the 39 participants were approved for free or reduced lunch, and therefore were identified as having low socioeconomic status. All 39 of the participants had parents that were involved in the student's education during the 2012-2013 school year. All 39 participants were involved in Math End-of-Course, English End-of-Course, and the American College Testing.

Analysis of Findings

The researcher used Microsoft Excel to analyze the data by creating a spreadsheet to calculate a paired, two-tailed t -Test at the .05 Alpha level to test each of the hypotheses.

Hypothesis 1

There will be no statistically significant difference between parental involvement and Math End-of-Course scores.

The researcher utilized the participants Math End-of-Course scores. The mean of the Math End-of-Course scores was 89.28 with a standard deviation of 38. The researcher used a paired, two-tailed t -Test that was tested at the .05 level of statistical significance. The results for the Two-Tailed, Paired t -Test at the .05 alpha level evaluating for statistical significance evaluating parental involvement and Math end-of-course scores are illustrated in Table 2.

Table 2.

Two-Tailed, Paired t-Test at the .05 Alpha Level Evaluating Parental Involvement and Math End-of-Course Scores

Assessment	Mean	Standard Deviation	p-Value
Math End-of-Course	89.28	38	5.43

*Significant at $p < .05$

Table 3.

Two-Tailed, Paired t-Test at the .05 Alpha Level Evaluating Parental Involvement and English End-of-Course Scores

Assessment	Mean	Standard Deviation	p-Value
English End-of-Course	91.56	38	4.92

*Significant at $p < .05$

Hypothesis 2

There will be no statistically significant difference between parental involvement and English End-of-Course scores.

The researcher utilized the participant's English End-of-Course scores. The mean of the English End-of-Course scores was 91.56 with a standard deviation of 38. The researcher used a paired, two tailed *t*-Test that was tested at the .05 level of statistical significance.

The results for the Two-Tailed, Paired *t*-Test at the .05 Alpha level of statistical

significance evaluating parental involvement and English end-of-course scores are noted in Table 3. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 2 is thereby accepted.

Hypothesis 3

There will be no statistically significant difference between parental involvement and American College Testing scores.

The researcher utilized the participants American College Testing scores. The mean of the American College Testing scores was 22.61 with a standard deviation of 38. The researcher used a Two Tailed, Paired *t*-Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired *t*-Test at the .05 Alpha level of statistical significance evaluating parental involvement and American College Testing scores are reflected in the data in Table 4. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 3 is thereby accepted.

Table 4.

Two-Tailed, Paired t-Test at the .05 Alpha Level Evaluating Parental Involvement and American College Testing Scores

Assessment	Mean	Standard Deviation	p-Value
American College Testing	22.61	38	2.23

*Significant at $p < .05$

Hypothesis 4

There will be no statistically significant difference between parental involvement and Math End-of-Course scores based on gender. The researcher utilized the participants Math End-of-Course scores. The mean of the Math End-of-Course scores for females was 90.9 with a standard deviation of 19 compared to the Math End-of-Course scores for males was 87.57 with a standard deviation of 18. The researcher used a Two Tailed, Paired *t*-Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired *t*-Test at the .05 Alpha level of statistical significance evaluating gender and Math end-of-course scores are reflected in the data in Table 5. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 4 is thereby accepted.

Table 5.

Two-Tailed, Paired *t*-Test at the .05 Alpha Level Evaluating Gender and Math End-of-Course Scores

Gender	Mean	Standard Deviation	p-Value
Female	90.9	19	1.72
Male	87.57	18	

*Significant at $p < .05$

Hypothesis 5

There will be no statistically significant difference between parental involvement and English End-of-Course scores based on gender.

The researcher utilized the participant's English End-of-Course scores. The mean of the English End-of-Course scores for females was 92.95 with a standard deviation of 19 compared to the English End-of-Course scores for male was 90.10 with a standard deviation of 18. The researcher used a Two Tailed, Paired t -Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired t -Test at the .05 Alpha level of statistical significance evaluating Gender and English End-of-Course Scores are reflected in the data in Table 6. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 5 is thereby accepted.

Table 6.

Two-Tailed, Paired t -Test at .05 Alpha Level Evaluating Gender and English End-of-Course Scores

Gender	Mean	Standard Deviation	p-Value
Female	92.95	19	1.72
Male	90.10	18	

*Significant at $p < .05$

Hypothesis 6

There will be no statistically significant difference between parental involvement and American College Testing scores based on gender.

The researcher utilized the participants American College Testing scores. The mean of the American College Testing scores for females was 24.15 with a standard deviation of 19 compared to the American College Testing scores for males were 21.00 with a standard deviation of 18. The researcher used a Two Tailed, Paired *t*-Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired *t*-Test at the .05 Alpha level of statistical significance evaluating gender and American College Testing scores are reflected in the data in Table 7. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 7 is thereby accepted.

Table 7.

Two-Tailed, Paired t-Test at .05 Alpha Level Evaluating Gender and American College Testing Scores

Gender	Mean	Standard Deviation	p-Value
Female	24.15	19	1.72
Male	21.00	18	

*Significant at $p < .05$

Hypothesis 7

There will be no statistically significant difference between parental involvement and Math End-of-Course scores based on socioeconomic status.

The researcher utilized the participants Math End-of-Course scores. The mean of the Math End-of-Course scores for students with Low SES was 88.7 with a standard deviation of 9 compared to Math End-of-Course scores for students Not Identified as having Low SES was 89.48 with a standard deviation of 28. The researcher used a Two Tailed, Paired t -Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired t -Test at the .05 Alpha level of statistical significance evaluating Socioeconomic Status and Math End-of-Course scores are reflected in the data included in Table 8. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 7 is thereby accepted.

Table 8.

Two-Tailed, Paired t -Test at the .05 Alpha Level Evaluating Socioeconomic Status and Math End-of-Course Scores

SES	Mean	Standard Deviation	p-Value
Low	88.7	9	5.47
Not Identified	89.48	28	

*Significant at $p < .05$

Hypothesis 8

There will be no statistically significant difference between parental involvement and English End-of-Course scores based on socioeconomic status.

The researcher utilized the participant's English End-of-Course scores. The mean of the English End-of-Course scores for students with Low SES was 90.8 with a standard deviation of 9 compared to English End-of-Course scores for students Not Identified as having Low SES was 91.82 with a standard deviation of 28. The researcher used a Two Tailed, Paired *t*-Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired *t*-Test at the .05 Alpha level of statistical significance evaluating Socioeconomic Status and English End-of-Course Scores are reflected in the data included in Table 9. Since the p value exceeded the .05 level of significance threshold, the Null Hypothesis 8 is thereby accepted.

Table 9.

Two-Tailed, Paired t-Test at the .05 Alpha Level Evaluating Socioeconomic Status and English End-of-Course Scores

SES	Mean	Standard Deviation	p-Value
Low	90.8	9	4.17
Not Identified	91.82	28	

*Significant at $p < .05$

Table 10.

Two-Tailed, Paired t-Test at the .05 Alpha Level Evaluating Socioeconomic Status and American College Testing Scores

SES	Mean	Standard Deviation	p-Value
Low	20.7	9	5.23
Not Identified	23.27	28	

*Significant at $p < .05$

Hypothesis 9

There will be no statistically significant difference between parental involvement and American College Testing scores based on socioeconomic status.

The researcher utilized the participants American College Testing scores. The mean of the American College Testing scores for students with Low SES was 20.7 with a standard deviation of 9 compared to American College Testing scores for students Not Identified as having Low SES was 23.27 with a standard deviation of 28. The researcher used a Two Tailed, Paired t -Test that was tested at the .05 Alpha level of statistical significance. The results for the Two-tailed, Paired t -Test at the .05 Alpha level of statistical significance evaluating Socioeconomic Status and English End-of-Course Scores and American College Testing scores are reflected in the data included in Table 10. Since the

p value exceeded the .05 level of significance threshold, the Null Hypothesis 9 is thereby accepted.

Summary

After completing Two Tailed, Paired t - Tests at the .05 Alpha level of statistical significance, the researcher found that there was no statistically significant differences for any of the Null Hypotheses and the data tested. Even though no statistically significant differences were reflected in the data analysis between data sets, some noticeable differences did occur with Math and English End-of-Course scores for students that reported parental involvement in school compared to those who reported lesser involvement. Additionally, when comparing Math and English End-of-Course scores between the genders, there were no statistically significant differences between male and female scores.

There were no statistically significant differences found between the data sets for socioeconomic status and gender. Even though no statistically significant differences were reflected in the data analysis between data sets, some noticeable differences did occur when comparing socioeconomic status and gender. There were also some noticeable differences when comparing gender and socioeconomic status and American College Testing scores. However, no statistically significant differences were reflected in any of the data sets tested between any of the nine Null Hypotheses.

CHAPTER V

Summary, Conclusions, and Recommendations

Summary of the Study

The purpose of this research is to show if there is a difference between groups of students that have parents that are involved in his/her education academic achievement. Two-Tailed, Paired *t*-Tests were used to calculate the level of significance at the .05 Alpha level for statistical significance for all nine Null Hypotheses. The researcher analyzed the data collected from the End-of-Course and American College Testing scores of 39 students from one local high school in the Robertson County School District.

Conclusions

When comparing the student achievement rates of students that have parents involved in their education, the researcher found that there some very noticeable differences between End-of-Course and American College Testing scores when comparing the students who indicated greater parental involvement compared to those who indicated a lesser parental involvement in extracurricular and co-curricular activities. Even though there were no statistically significant differences determined through the analysis of the data reported between gender and Math and English End-of-Course scores, there were some noticeable differences when making a visual comparison between the data for socioeconomic status and Math and English End-of-Course scores. The tests conducted by the researcher did not yield any statistically significant findings when comparing gender and socioeconomic status and also when comparing American College Testing scores between the test groups.

The limitations of the study should be considered when reviewing the results. The population size for this study limits the ability to make a generalization about parental involvement and student achievement. This study was conducted in one high school in Greenbrier, Tennessee. The small sample size used in this study limits the potential of the results of the study to be generalized to other populations. Student achievement was based on and limited to two types of testing End-of-Course and American College Testing only. A full range of student achievement is difficult to assess in high school without including additional variables.

The researcher used only students who showed high parental involvement in the 2012-2013 school year and had taken the Math and English End-of-Course and the American College Testing. There may have been additional students who met this study's requirement in other school years.

Recommendations

The study was limited to a small sample of students. 39 of a 763 students were included in this study. It would be beneficial to extend the study to include a larger student population that has parental involvement in high school. It would also be beneficial to track this same group of students into additional school years to see if these achievement rates continue to grow as the student's age and parental involvement decreases, even into the first year of college. Research may also be conducted by using additional measures of parent involvement and student's achievement rates, such as Think Link and the new CRA and PARK.

It would be beneficial to broaden this study to include additional high schools in the district, and even additional counties within the state to see if parental involvement and achievement rates differ with similar assessments in diverse populations.

Within Robertson County School District, and the State of Tennessee all high school students currently take the English and Math End-of-Course and American College Testing assessments, therefore there are five high schools in Robertson County with diverse population from Greenbrier High School that may have parental involvement with different results. It should be considered that different types of parental involvement in a different environment may affect research findings.

For the purpose of this study, it was assumed that all parental involvement would be considered to have the same affect on student achievement. Although, for this study all parental involvement was reported the same level, all parental involvement can be measured the same in all environments. It should be considered, based on this current research, that environments with higher or lower SES could also affect the levels of parental involvement in each environment.

An assumption for this study was that all students were exposed to the same instruction for the Math and English, and American College Testing prep. In order for students to take the Math and English End-of-Course, the student must have been enrolled and completed the required course work. With that said, it is possible that students were in Math and English classes with different teachers, classes taught at different times of the day or at different times in the school year, and/or received additional resources within the course. Each of these variables could have changed the student's experiences or levels of understanding of the materials taught in class prior to taking the End-of-Course assessments.

It was also assumed for this study that all teachers were highly qualified to teach Math and English as determined by No Child Left Behind (2001). Even if all teachers were highly qualified, there could be differences in the experience levels of the individual teachers. A lack of

teaching experience may be related to inconsistencies of the standards for Math and English being taught in the different classes. All teachers in the Robertson County School District are required to receive 30 hours of additional professional development each year, although this professional development is not required to be in any specific area including Math and English or American College Testing preparation.

This study did not take into account the individual participants' attitudes about participation in the End-of-Course and American College Testing assessments. It may be beneficial to understand the students' attitudes toward these assessments; furthermore it may also be beneficial to understand the parents' attitudes towards these assessments. Students and parents that understand that these assessments are important to high school, college, and career success may be more involved in the preparation process for these assessments.

The results of this study show that there is no statistical difference in gender when comparing Math and English End-of-Course scores, although there was a static difference when looking at American College Testing scores, which is grounds for additional research. Because the American College Testing has combined 4 academic content areas into one assessment there may be an additional need to study the subject areas of the American College Testing when looking at gender differences.

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APPENDICES

Appendix A

Robertson County School System

Greenbrier High School Letter of Approval for Study

Dr. Katie Osborne, Principal
Gracey Raines, Vice Principal
Stephen Freeland, Vice Principal



Accredited by: The
Southern Association of
Colleges and Schools

Greenbrier High School

126 Guniff Drive Greenbrier, Tennessee 37073

Phone: 615-643-4526

Fax: 615-643-8873

To Whom It May Concern:

April 15, 2013

Mrs. Verena Owsley has permission to conduct her research study project using information obtained through Greenbrier High School events and achievement data. Mrs. Owsley will gather information from Open House, Parent-Teacher Conferences, sporting events, and orientation. Lists are compiled by parent/teacher volunteers with parents signing as they enter the building. These lists can be used to compare students' ACT and/or EOC scores.

Parent/Student confidentiality is of great importance and no listing of student names or descriptions will be identified in the study project. All data used for this project with student names will be shredded at the conclusion of this project.

Please contact me if you have any questions.

Sincerely,

Katie Osborne

Appendix B

Austin Peay State University

Institutional Review Board Approval

Date June 2, 2013

RE: Study number 13-027

Dear Verena Owsley,

Thank you for your recent submission to the IRB. We appreciate your cooperation with the human research review process.

This is to confirm that your proposal, (#13-027) has been approved and that your study is exempt from further review.

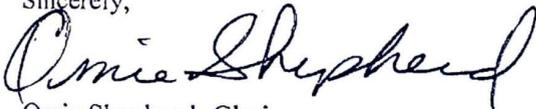
Exemption is granted under the Common Rule Subpart D:4b; data recorded in such a way identity of children cannot be determined directly or indirectly by investigator, and the study poses minimal or no risk to students if their identify is inadvertently obtained.

You may conduct your study as described in your application, effective immediately.

Please note that any changes to the study have the potential for changing the exempt status of your study, and must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. You are required to report completion of this study within one calendar year. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email (shepherdo@apsu.edu).

Again, thank you for your cooperation with the APSU IRB and the human research review process. Best wishes for a successful study!

Sincerely,



Omie Shepherd, Chair
Austin Peay Institutional Review Board

Cc: Dr. Gary Stewart