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Academically-Redshirted Males' Behavior and Academic Performance at the Middle School Level

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Abstract

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MA, Walden University, 2010

BS, Regis University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Male students appear not ready for middle school by exhibiting lower grades, learner disengagement, and/or behavior problems. The age in which male students initially enter school has not been fully investigated as a possible systemic issue of a lack of male student longitudinal success and learner engagement. The purpose of this quantitative study was to examine the differences between how academically redshirted male students performed academically and behaviorally compared to their non-academically redshirted grade mates at Grades 6-8. This study drew from the theories of early childhood constructivists: Piaget, Vygotsky, and Montessori. The research questions addressed the academic and behavioral differences between redshirted and non-academically redshirted students throughout Grades 6-8. Academic data, through numerical average and GPA, and behavioral data, through the total number of behavioral violations, from 1 archived school year were gathered for all male students in grades 6-8 (N=109). Students were grouped academically redshirted or non-academically redshirted based on age of school entry. A series of independent t tests were performed on all academic and behavioral data for each of the respective grades and sets of student data. Findings revealed differences in how redshirted versus non-academically redshirted students performed; however, these findings revealed no statistically significant difference. The results of this study provided evidence to support a correlation between when male students formally enter school and male academic and behavioral success. These findings lead to positive social change for school communities, specifically parents/guardians and school officials, by providing necessary data to drive decisions regarding school entry age and its longitudinal effects at the middle school level.

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Dedication

This dissertation study is dedicated to my family. My mother had a simple motto: finish what you start. I knew when I declared to my husband (upon the immediate return from my honeymoon) that I wanted to pursue a doctorate that I might be tackling a bit too much; however, I also knew that this was something that was important to me and that I needed to simply start the process. Well start the process I did and soon came to the sticking part-the proposal and the actual project study. Within that same time frame I found out that we were expecting our first bundle of joy and thought this is okay- this will be done, and I can do it all. That was not as easy as I thought, and the process took a halting pace. Family struggles and life got in the way of my dream of finishing and I was not sure if I ever would get back on track. I thought perhaps this was not meant to be, but there was one person who always believed it would get done and one person who kept that tiny voice alive within me, my mom, and that message of finishing what we set out to do kept resounding until I knew there was only one way to go-I had to finish this and see it through. Mom, may you know that the hard work ethic that you have instilled in each of us has and will always win out. Dad, may you know that your steadfast belief in me to be and do anything has and will always motivate me. To my sister, Kate, you inspire me each day. Lou, my husband and partner, you pushed me and helped me find the inner strength to persevere when I did not think it was possible. Most of all, my children, may you both believe in the promise of tomorrow and follow your own dreams wherever they may lead you and may you always know the importance of finishing what you start.

Acknowledgments

With a grateful heart, I would like to thank my professor and chair, Dr. Babb. From the very first conversation I had with Dr. Babb I knew two things: 1.) I was going to work harder than I had possibly ever had to work academically in my life and 2.) This was going to get done because she was going to be there right alongside me. If it was not for Dr. Babb's constant support, guidance, and mentoring this dissertation study would not have been possible. I have worked with many chairs, professors, and people in the academic world and the respect and dedication that Dr. Babb has and shows is remarkable. Next, I would like to acknowledge and thank both Dr. Dass and Dr. Keeley. Without their help and support this dissertation process would have been impossible. Additionally, I have had the benefit of many staff members at the research site and beyond who have dedicated themselves to helping ensure the success of this project study. Thank you to the assistant superintendent of schools at the research site for ensuring that this study pass the local board by helping to give it the personal and professional approval needed to move forward. Thank you for believing in the process and taking the time to listen along the way. Thank you to Matt Ishibashi, Ken Stokum, Roz Goldsmith, Kathy Seetoo, Karryne MacLean, and Megan Davis. Lastly, I wish to ultimately thank the person that was my eyes when I could not see my own grammatical errors and the person that I trusted with this project from the very beginning, Gina Mancini. She is unstoppable and pushed me day in and day out to produce better work and get it done. Thank you, Gina, may you always know that you are an angel to everyone you meet you have given me wings and for that I am and will be forever indebted to you.

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Chapter 1: Introduction to the Study

Male middle school students appear unready for school and exhibit academic and behavioral difficulties once they reach Grades 6-8 (Venable, 2015). Current and older academic research has investigated poor middle school behavior and academics for a correlation with socio-economic status and race, a lack of parent involvement, parenting style, and exposure to violence (Cripps & Zyromski, 2015; Griffin, Botvin, Scheier, Diaz, & Miller, 2000; Monroe, 2010). However, none of the current research on school readiness has explored the age at which male students formally enter school as a possible factor that influences their behavior and academic achievement or lack thereof once they reach middle school. And yet, according to seminal research conducted by Graue and DiPerna (2000), since the 1970s, parents of male students who appear unready for formal entry into school have sought academic redshirting, or delayed school entry, to mitigate some of these academic and behavioral concerns (Huang, 2015; Moore, 2017). However, Byrd, Weitzman, and Auinger (1997) stated that delaying male school entry led to increased behavior problems once these "old for their grade" students reach middle school (p. 656). They suggested there were latent behavioral outcomes that resulted from delaying male school entry (Byrd et al., 1997). The purpose of this study was to explore whether students who are academically redshirted (RS) perform statistically differently, academically and/or behaviorally, when compared to their non-academically redshirted (NONRS) grade mates once they reach middle school.

Many parents chose to RS their male children as opposed to their female counterparts (Smith, 2016). Educators report the social, academic, and behavioral

deficiencies of boys versus girls at the middle school level including interference with the learning process, diverted administration time, and teacher burnout (Osher et al., 2010). Compared to middle school females, males are more often referred to administration for disciplinary action, are typically more dependent on teachers, and struggle both academically and socially (Gregory, 1997; Gregory, Skiba, & Noguera, 2010; Ramani et al., 2007). According to popular literature and academic research, some parents, looking to mitigate these effects, chose to RS their male students by delaying formal education for 1 year (Dougan & Pijanowski, 2011; Paul, 2010). Current research on the effects of RS excludes middle school. An older longitudinal study conducted by Lincove and Painter (2006) researched the effects of RS at the high school, collegiate level, and beyond; however, extensive research on the effects of RS at the middle school level has not been conducted. The results of this study extend the data on this topic by including the middle school arena.

The age at which a child formally enters school is debated by parents, school officials, and communities. Parents, school officials, and community leaders want to know the effect age has on behavior and academic achievement for students beyond their elementary school years (Huang, 2015). Every spring, newspapers, parenting magazines, and television programs discuss a topic on the forefront of many parents' minds: Is my child ready for school? (Aliprantis, 2014; Ayers, 2013; Huang & Invernizzi, 2013). Recent articles in the popular press (e.g., Bronson & Merryman, 2009; Dizikes, 2011, Gladwell, 2008; Gootman, 2006; Hanson, 2016; Paul, 2010; Wallace, 2014; Weil, 2007) highlighted worries and concerns for parents with children deemed "young for their

grade" or as having "summer birthdays" (Huang & Invernizzi, 2013, p. 11). The debate about school readiness regains momentum with each passing generation gaining attention from researchers and media over the last decade (Bixby, 2012; Reardon & Portilla, 2016) and will more than likely continue to do so in the future. In *The Outliers*, Gladwell (2008) even suggested that the timing of school entrance or whether a child is "old" or "young" compared to their peers can set them up for a successful life. Thus, when a child formally enters school could have potential positive or negative longitudinal effects. My research of the academic and behavioral performance for RS students versus their NONRS grade mates in this study could yield positive social change for parents, children, and ultimately, school communities across America because that information could be used to make data-driven decisions regarding when a child should enter formal education and thus perform more positively throughout their academic career.

With this quantitative research study, I attempted to fill a gap in RS literature by gathering data from beyond the elementary school years and through a collection and analyses of behavior and academic achievement data for Grades 6, 7, and 8. Much of the current research has discussed the prevalence of RS, who delays, and why (Bassok & Reardon, 2013; Sloth, 2013). Additionally, there is a preponderance of evidence reporting that the academic gains that these RS children may initially exhibit lessen after or by the time children reach third grade (Cascio & Schanzenbach, 2016; Grissom, 2013; Hensley, 2014; Hover, 2014, 2015; Huang, 2015; Hughes, 2016; Katz, 2000; McCullough, 2015; Nam, 2014; Smith, 2016; Strauss, Johnson, Gilmore & Wolke, 2015; Tisher, 2014). I could find no consistent research stating whether RS has latent positive effects beyond

the elementary school years, and in particular what the longitudinal effects are at the middle school level; therefore, I collected and analyzed archival data for all middle school male students enrolled at one New Jersey suburban school district in Grades 6, 7, and 8 for 1 school year.

While research has been conducted on the role RS has on behavior (Byrd et al., 1997; Gottfried, Le, & Datar, 2016), there remained a gap in research literature on the effects of RS beyond elementary school and at the middle school level, in particular Grades 6–8. An examination of RS of male students and its relationship with behavior and academics was and is a matter of public policy interest with implications for positive social change for schools and communities alike because this information could better inform data-driven decisions regarding school entry. Consequently, I examined the longitudinal effects of when a child formally enters school through archival data collected from Grades 6–8 to extend the body of knowledge on male behavioral and academic achievement.

Background on Academic Redshirting

Current literature on middle school pedagogy has focused on differentiated instruction and how teacher efficacy could work to improve curriculum, instruction, and assessment to meet the needs of all learners (Dixon, Yssel, & McConnell, 2014). The idea behind this focus is that educators, oftentimes with the help of technology, ought to employ differentiated instruction to meet learners in the learning process and ensure student success through smart sustainable goals for all learners (Dixon et al., 2014). Additionally, learners are being pushed to meet the stringent demands of state and

national testing, and educators, students, and parents alike feel increased pressure to perform above and beyond national and state norms and goals (Ravitch, 2016). One way that teachers are encouraged to help meet the needs of all learners, while at the same time preparing them for the rigor of the current curriculum and inevitable student testing, is to incorporate theories of the flipped classroom into their daily routine and teaching (Hwang, Lai, & Wang, 2015).

Parents seeking academic and social-emotional success for their children are looking for alternative ways to ensure what is best for their child, at times choosing to RS or hold their child back from entering formal education when they are initially eligible. This is done, according to research studies, in order to ensure the academic and behavioral success of the child (Graue & DiPerna, 2000). This trend has been around as early as the 1970s but has been popularized in the media and educational research since the 1980s, when despite a growing number of children attending preschool, an increasing number of parents intentionally delayed these same children's entry into kindergarten (Graue & DiPerna, 2000). Redshirting, a term taken from collegiate athletics, now applied to holding students back prior to entering kindergarten (Graue & DiPerna, 2000). As a practice, RS has grown steadily in the last 3 decades (Bassok & Reardon, 2013; Bazelon, 2008; Graue & DiPerna, 2000; Paul, 2010; Weil, 2007). The practice of RS is based on the belief that children that are younger for their year level in terms of either academics or behavior are less ready for school (Lewitt & Baker, 1995; McGrath, 2006; Routley & de Lemos, 1993). This practice has become more readily implemented due to increased academic expectations, high stakes testing, and school accountability (Cosden,

Zimmer, & Tuss, 1993; Graue, Kroeger, & Brown, 2002; Noel & Newman, 2003; Winsler, De Feyter, Manfra, Bleiker, & Hartman, 2012). Earlier estimates claimed that an average of 7%–9% of children nation-wide begin kindergarten a year later than the age at which they initially are eligible (Alexander, Entwisle, & Dauber, 2003; Datar, 2003; Zill, Loomis, & West, 1997). Current studies put the number closer to 5% nationally (Bassok & Reardon, 2013; Bixby, 2012).

Existing research claims that RS is more common in families of higher socio-economic status because these families are said to be able to financially afford the time and money that childcare and preschool incur (Bassok & Reardon, 2013; Cosden et al., 1993; Gredler, 1992). Boys born close to the kindergarten cutoff date (typically October 1) become potential candidates for waiting an extra year to enter formal education because they are believed to mature more slowly than their female grade-mates (Bellisimo, Sacks, & Mergendollar, 1995; Brent, May, & Kundert, 1996; Byrd et al., 1997; Graue & DiPerna, 2000; May, Kundert, & Brent, 1995; Winsler et al., 2012; Zill, 1992). According to research studies, parents of boys see redshirting as an opportunity to be more physically competitive than other children in their class (Albanesi, 2016; Graue & DiPerna, 2000). These parents are allowing for better chances for their male children to do well at sports and be awarded scholarship opportunities. This is something important in terms of competitive sports because many highly competitive sports programs, such as Amateur Athletic Union basketball, group participants by grade level and not birth year (Winsler et al., 2012). The incentive for the implementation of this practice is that parents are giving their children the “gift of time” in the form of awarding these children more

time to develop the skills needed to do well in school (Graue & DiPerna, 2000, p. 511). Alternatively, others argue that these same parents may, perhaps unknowingly, be robbing their children of potential opportunities to receive early intervention services a school might otherwise be able to provide had the child entered school at the time in which he or she were initially eligible and that what initially appears to be a "gift of time," may in fact be a "theft of opportunity" (Graue & DiPerna, 2000, p. 511).

The practice of RS has gained attention in academic literature as the number of parents who delay their child's entry into formal schooling is believed to have increased (Bassok & Reardon, 2013; Huang, 2015). This parent-led decision is made in terms of research regarding the short-term behavioral and academic effects for children; however, the longitudinal effects of these variables need to be researched so that school officials can better inform parents regarding their decision of when it may be best to push students forward or hold them back from entering formal education at the kindergarten level. Thus, my aim with this research study was to yield necessary data, in terms of a student's academic and behavioral achievement, so school officials could use it to help better inform parental decisions about when it may be best for their child to start kindergarten.

Overall, the effects of delayed school-entry remain unclear. Current studies have shown that by the third grade, any academic achievement and cognitive development indicated in the primary grades has dwindled and according to many studies, disappeared altogether (Bixby, 2012; Cameron & Wilson, 1990; Graue & DiPerna, 2000; Morrison, Griffith, & Alberts, 1997; Shepard & Smith, 1986). Additionally, seminal research in the field indicated that secondary education RS children tend to exhibit behavior problems

once they reach middle school and high school (Byrd et. al., 1997; Zill et al., 1997). Overall, the evidence suggests that some benefits of academic redshirting are short lived and may in the long term be disadvantageous (Gottfried et al., 2016; Graue & DiPerna, 2000; Katz, 2000; Spitzer et al., 1995).

Additional research has been conducted on what parent versus educator perceptions of school readiness are (Cole-Taylor, 2015; Newman, 2013; Simerly, 2014; Sloth, 2013). There has also been much discussion of the prevalence of and reasons behind delaying school; however, there remained a gap in the effects of behavior and academics up to and including the middle school level (Bassok & Reardon, 2013). With this study, I aimed to fill that gap by indicating how RS students' academic and behavioral performance compared to that of their NONRS grade mates at the middle school level.

This study was needed because there continues to be conflicting hypotheses about what delaying school entry will mean for adolescents as their academic careers continue beyond elementary school (Angrist & Krueger, 1991; Bedard & Dhuey, 2006; Byrd et al., 1997; Byrd, Weitzman & Doniger, 1996; Cascio & Schazenbach, 2015; Datar, 2006; Deming & Dynarski, 2008; Graue & DiPerna, 2000; Guagliardo, Huang, Hicks, & D'Angelo, 1998; Jaekel, Strauss, Johnson, Gilmore, & Wolke, 2015, Lincove & Painter, 2006; Mendez, Kim, Ferron, & Woods, 2014; Strauss et al., 2015). While the prevalence and patterns of redshirting are being addressed, the effects at the middle school level are not extensively researched (Bassok & Reardon, 2013). The findings from this study are beneficial for parents and educators working together to make informed decisions

regarding school readiness and when it may be best for a child to enter kindergarten. There is a push for RS; however, the push may be unwarranted when the research in unclear and inconclusive. With this research, I aimed to move the discussion towards the middle school philosophy, practice, and research to better educate school officials and parents alike concerning the ramifications of RS and further develop the school readiness conversation.

Problem Statement

With this study, I aimed to address the problem of male behavior at the middle school level by examining one possible systemic reason for this ongoing problem--the age at which male students formally enter school. Educational researchers, school officials, and parents alike do not know the extent to which age of school entry is associated with desired and less desired academic and behavioral outcomes at the middle school level. Delaying school entry, or RS students, has become a customary practice in some communities and research purports the academic gains of students through the third grade using this practice (Bixby, 2012; Cameron & Wilson, 1990; Graue & DiPerna, 2000; May, 2013; McCullough, 2015; Morrison et al., 1997; Robertson, 2016; Shepard & Smith, 1986; Smith, 2016). However, much of that research does not extend into the start and conclusion of middle school; hence, I collected data from Grades 6–8 in this study. The questions regarding school readiness are not new; in fact, between 1975 and 2000, 22 states increased the minimum entry age for kindergarten (Bassok & Reardon, 2013; Stipek, 2002). Policy shifts are evidence of the growing concerns of school readiness in terms of the current high-stakes demands of formal education. Parents, as well as law

makers, are delaying school entry; however, in doing so educators and lawmakers are at a disadvantage because they are not fully informed as to what the effects, especially behaviorally, are as the child progresses past the elementary school level. Some longitudinal studies share evidence that RS students do not academically perform any better or less than their peers at the high school, college level, or in terms of compensation later in life (Lincove & Painter, 2006), but rather these RS children may exhibit behavioral concerns at the middle school level (Byrd et al., 1997).

The controversial practice of RS continues to receive national attention in the popular press (i.e., Ashbrook, 2014; Safer, 2012; Wallace, 2014) and academic journals (i.e., Bassok & Reardon, 2013; Mendez et al., Kim, Ferron & Woods, 2014). Popular television news programs, such as *60 Minutes* and Fox News, have indicated that "the number of academic redshirting children have tripled since the 1970s" (Safer, 2012, p. 1). Traditional outlets, such as *The New York Times*; *Wall Street Journal*; and local to this study tri-state area press of New York, New Jersey, and Connecticut have referred to the practice of RS as the new norm (Huang, 2015; Paul, 2010; Wallace, 2014). However, some current studies indicate a downward trend in the practice (Bassok & Reardon, 2013; Huang, 2015). At kindergarten registration in many districts, some parents ask the current administration what to do when it comes to registering students whose birthdays fall close to the kindergarten cutoff date, while many other parents and educators are left to resort to out-of-date educational research or their personal feelings and findings on the topic. Decisions of school readiness and when to start or delay formal education need to be made based on current and reliable data. My aim with this study was to provide

needed insight regarding what effect entry age had on the academic and behavioral performance of RS versus NONRS male students in Grades 6, 7, and 8.

Purpose of the Study

The purpose of the study was to examine if a statistically significant difference exists between how RS students versus NONRS students perform behaviorally and academically once they reach middle school, specifically at Grades 6, 7, and 8. The results of this study helped fill a gap in current research by examining how RS male students' behavior and academic performance at the middle school level compares to that of their grade mates. The findings of this study updated those of past research studies that suggested "older for their grade" male students exhibit poor behavior as one potential latent result of RS (Byrd et al., 1997, p. 659).

In this quantitative, cross-sectional, comparative research study, I looked at archival data between RS and NONRS male students in Grades 6, 7, 8 in one New Jersey school district. The study sample was comprised of all male students in Grades 6, 7, and 8 within that school district. Students were grouped as either RS or NONRS based on when they entered kindergarten and the cut-off date of October 1st for school kindergarten entry for the district and in accordance with the state of New Jersey guidelines. Students who were enrolled in kindergarten 1 year after the cut-off date of October 1st when they were initially eligible to enter formal education were considered RS, while students who were not represented by this group were NONRS. The categorical RS status of students was the independent variable and behavioral and academic achievement were the dependent variables of both RS and NONRS students.

Academic achievement was recorded as both a student's numerical average and grade point average (GPA) for all male students for Grades 6, 7, and 8. Behavior was measured in terms of the total number of behavioral violations present: suspensions and/or detentions and/or harassment, intimidation, and bullying violations. After all academic and behavioral data were collected, I analyzed the data using an independent samples *t* tests comparing how RS versus NONRS students performed both academically and behaviorally at Grades 6, 7, and 8.

Research Questions and Hypotheses

RQ1: How do RS students perform academically, as measured by their numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a1: There is a significant difference between how RS students perform academically, as measured by numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8.

H_01: There is no significant difference between how RS students perform academically, as measured by numerical academic average, when compared to NONRS students throughout grades 6, 7, and 8.

RQ2: How do RS students perform academically, as measured by their GPA data, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a2: There is a significant difference between how RS students perform academically, as measured by GPA data, when compared to NONRS students throughout Grades 6, 7, and 8.

$H_0$2: There is no significant difference between how RS students perform academically, as measured by GPA data, when compared to NONRS students throughout Grades 6, 7, and 8.

RQ3: How do RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a3: There is a significant difference between how RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8.

$H_0$3: There is no significant difference between how RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8.

I was granted permission to access this archival data by the district's superintendent of schools. The archived data were collected and coded for anonymity by the school district (see Appendix). Data for all male students of Grades 6, 7, and 8 for 1 school year in one suburban New Jersey public school district were used for the purpose of this study. I grouped the student data into two groups: RS and NONRS students I collected and examined this data to see if a significant difference existed between how RS versus NONRS students perform academically and behaviorally at the middle school level.

Theoretical Foundation

The theoretical or conceptual base of this study was framed around the constructivists and the work of early cognitive psychologists such as Piaget, Vygotsky, and Montessori. Montessori, Vygotsky, and Piaget all lend themselves to the development of early childhood education and this was an integral part of the study because my focus in the study was on school readiness and the development of the autonomous learner (see Dixon-Krauss, 1996; Montessori & Carter, 1936; Mooney, 2000; Piaget & Cook, 1952; Vandiver & Walsh, 2010; Vygotsky, 1978).

Piaget believed that from an early age children seek meaning from their world, a process later referred to as the development of schema (Piaget & Cook, 1952). Piaget believed that children have a strong desire to organize the world they live in, in an effort to develop cognitively and recognized the notion that children develop differently, so learning can be divided into stages (Piaget & Cook, 1952). Piaget, along with Vygotsky (1978), conveyed the need for early education both in the home and beyond (Piaget & Cook, 1952).

Vygotsky (1926) believed that all children are naturally curious about their world and seek meaning or understanding of their world. The author felt that children seek ways to learn and develop cognitive abilities that help them with their learning and as part of this seeking, turn to a more knowledgeable other, not necessarily an adult, this could also be a peer. The more knowledgeable other helps the learner understand and develop within their own zone of proximal development in an effort to gain more independence within their learning (Vygotsky, 1926). The idea is that children learn from others; therefore, the

question of school readiness ought to be when and how soon children can be socialized and should be sent to school, not whether or not they are ready. Vygotsky, like Piaget believed that children have a natural penchant for learning and when given ample opportunity will chose to do so and do so at their own pace (Piaget & Inhelder, 1969).

Montessori (1936), an early proponent of the autonomous learner, also offered insight and a foundation for this study. Piaget, a student of Montessori's work, was certain that children develop their own ideas and understanding of the world around them at their own pace, thus developing as autonomous learners (Montessori & Carter, 1936). Likewise, Vygotsky studied the work of contemporaries, such as Montessori and Piaget, and added insights regarding learning, development, and the autonomous learner (Mooney, 2000). Together, these early theorists helped frame the foundation for this study which hinged on the understanding of what it means to be an autonomous learner and how one is developed (see Chan, 2003; Jimenez & Perez, 2002; Millei, 2012; Vandiver & Walsh, 2010).

Due to the lack of extensive research on RS and the need to incorporate seminal work done in the field of RS, in the literature review I included research that was published more than 5 years ago that addressed school readiness as well as current middle school behavioral concerns. One trend that repeats itself throughout middle school research is the lack of motivation and autonomous learning at the middle school level (McTigue & Liew; 2011; Rowan-Kenyon, Swan, & Creager, 2012). Researching theoretical frameworks as well as current literature helped me illuminate the root of the problem. Perhaps students are being sent to school too early, and they are not ready for

the demands of formal education. This notion, coupled with a growing controversial phenomenon over the practice of an individual holding their school-aged child back has given rise to recent research, news articles, and best-selling book, such as Gladwell's (2008) nonfiction book based on theory and research, *Outliers: The Story of Success*. Critics and proponents of Gladwell's work abound (O'Reilly, 2012), but regardless of whether a person supports the author's notion that there are definitive advantages, such as birth date, that place some above others in terms of the potential to achieve or get ahead does not negate the conversation it has sparked in and beyond the educational world. This book helped put the practice of RS at the forefront in terms of national media coverage.

School readiness typically refers to a child's attainment of a certain set of emotional, behavioral, and cognitive skills needed to learn, work, and function successfully in school and formal education (Rafoth, Buchenauer, Crissman, & Halko, 2004). The question of school readiness relies on the child's readiness to enter a social setting focused primarily on learning in a formal setting. Many parents struggle with this and decide to take matters in their own hands and redshirt their children to give them, what they see in their eyes to be, an advantage.

Nature of the Study

In this study, I sought to determine if the age at which male students enter school contributes to differences in behavior problems and academic achievement at the middle school level. Archival data on behavior problems and academic achievement were collected through students' final performance records on PowerSchool, an electronic database used for student records and filing electronically collected and recorded by the

school district. The school district assigned student identification numbers to the male student data; therefore, no names or demographic information, besides students' age, academic GPA score, and total number of behavioral violations was shared. This way, I was able to gain access to the students' age, academic, and behavioral records while maintaining student anonymity.

I used a quantitative, cross-sectional research design to analyze archival data for all male students who attended one New Jersey suburban school district. There were three sets of archival data, one for each of the three grades: six, seven, and eight. All male middle school students were identified as RS or NONRS based on the age at which the students entered kindergarten. Academic archival data were collected in terms of academic averages, GPAs, and the total number of recorded behavioral violations for male students to measure behavioral performance for each of the grade levels for 1 archived school year. I selected a quantitative, cross-sectional research design because it yielded an answer as to whether or not there was a significant difference between how RS and NONRS students performed behaviorally and academically at the middle school level.

Once all the data were collected, I ran a series of independent sample *t* tests to analyze the differences between how RS and NONRS students perform academically and behaviorally for each of the three grade levels of six, seven, and eight and one that combined all academic and behavioral data respectively for Grades 6–8. The results indicated whether any significant differences existed between how these two groups, RS and NONRS students, performed at Grades 6, 7, and 8.

Definition of Terms

Academic redshirting: The act of delaying entrance into kindergarten of age-eligible children to permit time for intellectual, physical, and/or social and emotional development (Smith, 2016).

Academically-redshirted (RS) students: Students who were delayed formal entry into school when they were initially eligible based on cut-off date criteria for the school district and local state guidelines (Moore, 2017).

Cut-off date: A deadline date that requires students to meet the age requirement established by the district and state. Per the New Jersey Department of Education, the cut-off date for all public-school districts in New Jersey is October 1st (State of New Jersey, 2017).

Harassment, intimidation, and bully violations: Specific conduct that is violative of New Jersey law adopted in 2002 is detailed in N.J.S.A. §18A:37-15(a) and N.J.A.C. §6A:16-7.1(a)1. According to New Jersey statute, as found on the New Jersey Department of Education website, this is a violation that is against the law and these acts deemed as

> Harassment, intimidation or bullying are any gesture, written, verbal or physical act, or any electronic communication, whether it be a single incident or a series of incidents, that is reasonably perceived as being motivated either by any actual or perceived characteristic, such as race, color, religion, ancestry, national origin, gender, sexual orientation, gender identity and expression, or a mental, physical or sensory disability, or by any other distinguishing characteristic, that takes place

on school property, at any school sponsored function, on a school bus, or off school grounds (New Jersey Department of Education, 2018).

Kindergarten readiness: The concept that children have developed the social, physical, and cognitive skills necessary to learn in a structured environment in which they are age-eligible to attend (Malone, West, Flanagan, & Park, 2006; Smith, 2016).

Non-academically redshirted (NONRS) students: Students who were not delayed formal entry into school when they were initially eligible based on cut-off date criteria for the school district and local state guidelines (Moore, 2017).

PowerSchool: A web-based electronic student management system that provides a range of features used by administration, teachers, and parents (Pearson, 2014).

School readiness: The concept that children have developed social, physical, and cognitive skills necessary to learn in a structured classroom environment (Malone et al., 2016; Smith, 2016).

Assumptions

In this study, I relied on the fact that there were male students that were RS and NONRS within the school district selected for the study; however, the exact number of male children who were RS or NONRS could not be determined until the study was conducted and the entirety of the archival data were collected and analyzed. The study also rested on the assumption that there were enough behavioral violations to represent a large enough sample size to measure for a cross-sectional research design study and run a series of independent *t* tests. To alleviate this concern, I used archival data from a large regional school district as opposed to a single smaller school setting or district, thereby

allowing for a large sample size in terms of measuring behavior. Moreover, the plan allowed for more than one type of behavioral violation to see that all types of behavioral violations were included and would indicate a concern for any RS versus NONRS student. Lastly, I assumed that the school district under study had valid electronic student PowerSchool records that were recorded in good faith for all students. The study rests on the assumption, for example, that behavioral and academic records were collected initially in an objective manner consistent with building, district, and state guidelines. These assumptions were needed for the study to be reliable and valid and to allow for internal and especially, external, validity if the results of the study are intended to be used beyond this study and help affect data-driven decisions beyond this one school community.

Scope and Delimitations

The results of this study extend the body of knowledge that already exists about RS male students. Male students are held back each year from entering formal education when they are initially eligible based on a series of decisions, only some of which have been researched and reexamined over the last 3 decades (Venable, 2015). Girls were not included in this study because they are often not seen as potential candidates for RS (Osher et al., 2010). Additionally, the nature of this study was longitudinal because I looked at the behavior problems and academic achievement of RS male students versus NONRS male students in Grades 6, 7, and 8.

Limitations

One limitation of this study lay in what the data might not indicate. For instance, while there were RS students in the data set, but it was unclear why those students were RS. Additionally, there may have been a limit in how much behavioral data were available had the research data collection been limited to one specific type of behavioral violation. Having multiple sources of behavior violations for that behavioral measurement was one way I allayed this limitation. To mitigate this limitation, I collected data from not only harassment, intimidation, and bullying violations, but also a total number of all behavior violations reported by the district for each male student. Having an adequate sample size for all measurements was integral for the research to accurately report and measure longitudinal effects in terms of both behavior and academics.

Significance

There was a lack of current research regarding the ramifications of RS beyond third grade. Current studies claim that early academic and behavioral gains level off by the time students reach the conclusion of third grade (Bixby, 2012; Cameron & Wilson, 1990; Graue & DiPerna, 2000; May, 2013; McCullough, 2015; Morrison et al., 1997; Robertson, 2016; Shepard & Smith, 1986; Smith, 2016). Additionally, there is older seminal research in the field that supported the idea that students who are old for their grade may exhibit behavior problems once they reach middle school (Byrd et al. 1997). For this reason, I focused on collecting both behavioral and academic data throughout middle school. Recent studies have revealed that the number of RS male students is closer to 5% nationally rather than the 9% previously reported (Bassok & Reardon, 2013;

Bixby, 2012). Regardless, when combined, these numbers warranted further investigation, especially as the trend of RS is on the rise in school communities that are similar in demographics to the selected school district for this study (see Bixby, 2012).

The controversial phenomenon and practice of holding students back from entering kindergarten in an attempt to prepare them for the demands of kindergarten and formal education is not a new one; however, this trend is on the rise according to some studies (Connell, 1987; Frick, 1986; llg & Ames, 1972; May, 1995; Range et al., 2011). According to U.S. Census Bureau (2010) statistics, in 1975, 3.6% of 5-year-olds were in preschool, while in 2009, the number jumped to 13.9%. Additionally, in 1975, 86.2% of 5-year-olds were in kindergarten; by 2009, that number had dropped to 80.2% (CITE). Moreover, in 1975, 10% of 5-year-olds were in first grade or higher and that number dropped to 5.9% in 2009 (U.S. Census Bureau, 2010).

In a 1998–1999 longitudinal study of 8,000 Wisconsin children entering kindergarten, Dougan and Pijankowski (2011) found that 94% of all kindergartners in a specific district were redshirted, while contrastingly only 3% were redshirted in a neighboring district (p. 3). The researchers found that parents follow the trend set by other parents. Furthermore, this practice is seen primarily amidst moderately middle to high socio-economic families as opposed to lower-socio-economic families living in urban areas that may rely on formal education as a form of child care (Graue & DiPerna, 2000). Therefore, this practice has developed into a growing trend in today's society as parents search for ways to set their child up for success rather than failure, which drives the argument for universal public preschool as well because it suggests that only those

parents who can afford to hold students back in order to better prepare them academically, behaviorally, and socially will do so, thereby, giving certain children an advantage for years to come (Kniffin & Hanks, 2016; Poland, 2009).

Many parents view RS as a viable option, believing it will allow their students the competitive edge needed to meet the demands and rigor of today's classroom. However, many parents take this leap of faith without a logistical analysis of all the facts and longitudinal effects. Parents and educators alike need to know the effects of RS on academics and behavior at the middle school level.

The effects of RS remain unclear and inconclusive as to whether or not advantages abate by the time these students mature and develop throughout their school career (Boyd, 2012). Notwithstanding, middle school educators continue to have a first-hand view that aligns with the findings of academic-based research: The social, academic, and behavioral deficiencies of boys exist at the middle school level (when compared to girls) including interference with the learning process, diverted administration time, and teacher burnout (Osher et al., 2010). Compared to middle school females, males are more often referred to administration for disciplinary action and are reported to be unmotivated and disengaged from their learning (Gregory, 1997; Gregory et al., 2010; Ramani et al., 2007). The purpose of this study was to fill a gap in current literature on RS and further the discussion, extending it to the middle school arena. Current research on academic redshirting does not fully extend beyond the third-grade level and longitudinal studies have even been conducted at the high school, collegiate level and beyond; however, extensive research at the middle school level has not been

conducted. The results of this study extend the data towards and culminating at the middle school arena, filling a gap in the research and analyzing male RS middle school students' behavioral and academic progress.

Summary

Summarily, I conducted a quantitative, cross-sectional, research study to compare the behavioral and academic performance of RS male students to their NONRS grade mates in Grades 6–8. Parents and school officials make decisions regarding male RS; however, the research previously conducted on the effects of RS has left a gap in knowledge concerning the middle school arena. In short, parents and school officials see the positive effects of RS up to the elementary school level, and sufficient data explains the results and norms of doing so up to and including the third grade (Bixby, 2012; Cameron & Wilson, 1990; Graue & DiPerna, 2000; May, 2013; McCullough, 2015; Morrison et al., 1997; Robertson, 2016; Shepard & Smith, 1986; Smith, 2016). However, there were and are still questions as to why male students appear unready for middle school and underperform behaviorally and academically when compared to their female grade-mates.

Male students continue to appear not ready for middle school and/or exhibit behavior problems such as lower grades, truancy, and discipline issues that result in suspensions and/or academic failure (Osher et al., 2010; Venable, 2015). My aim with this research was to see if there was a link between delaying male students' formal education and an influx of male students who are performing poorly at the middle school level. The middle school demographic is changing, and my goal was to see if the shifting

age of today's middle school male student is a determining factor in male behavioral and academic issues present in middle school. The following chapter addresses the literature review of RS.

Chapter 2: Literature Review

Introduction to School Readiness and Academic Redshirting

Middle school is a formative step in an adolescent's learning career. Lifelong habits are formed and the transition to middle school is a time period that causes some parents to worry, long before a child may actually enter middle school (Akos, Lineberry, & Queen, 2015). The period of middle school, while currently being researched in terms of the digital age, the flipped classroom, and high stakes testing among other trending topics, is still something that worries educators and parents alike (Hwang, Lai, & Wang, 2015). Educators are seeking ways to mitigate middle school behavior and academic problems, and they look to revamp and examine curriculum, instruction, and assessment as possible ways to deal with the issues. Some states and school officials have even looked at amending school policy and questions of school readiness and when it may be best to start formal schooling have arisen (Ashbrook, 2014). Not always able to control board and school policy, parents have, over the course of the past 3 decades, chosen to take matters into their own hands by RS their children (Bassok & Reardon, 2013; Graue & DiPerna, 2000). Male children with birthdays that were perceived as being close to the cut-off date to start kindergarten continue to be commonly seen as possible candidates for delaying school entry (Huang, 2015).

With the rise of RS, researchers have spent years investigating the effects age at school entry has on student performance and outcomes. There is considerable data available on the impact that delaying entry into kindergarten has in the short-term with some researchers positing the short-term advantages; however, many experts have stated

that these advantages fade out over time, oftentimes once students reach the third grade (Cascio & Schanzenbach, 2016; Grissom, 2013; Hensley, 2014; Hover, 2014, 2015; Huang, 2015; Hughes, 2016; Katz, 2000; McCullough, 2015; Nam, 2014; Smith, 2016; Strauss, Johnson, Gilmore & Wolke, 2015; Tisher, 2014). Some researchers have contended that there are negative effects in the long-term and claim that these disadvantages outweigh the advantages (Bryd, et al., 1997). Throughout the late 70s and early 80s, educators noticed that the average age of children in kindergarten and ascending grades appeared to be on the rise (Graue & DiPerna, 2000). Researchers began investigating the trend through correlation, multiple regression tests, and survey research studies (Bassock & Reardon, 2013). In the 1980s, early childhood educators noticed a further perplexing trend, despite growing numbers of students who attended preschool; fewer children were registering for kindergarten (Graue & Diperna, 2000). An increasing number of parents deliberately delayed these same children's entry into kindergarten (Graue & DiPerna, 2000).

Between 4%–5.5% of all children delay kindergarten, a lower number than was previously claimed (Bassok & Reardon, 2013). Traditionally, delaying school entry is more common in families of higher socio-economic status because these families are said to be able to financially afford the time and money that childcare and preschool incur (Bassok & Reardon, 2013; Cosden et al., 1993; Gredler, 1992). Boys born close to the kindergarten cutoff date (typically October 1) continue to be viewed as good candidates for waiting an extra year to enter formal education because boys believed to mature more slowly than their girl grade-mates (Bellisimo et al., 1995; Brent et al., 1996; Byrd et al.,

1997; Graue & DiPerna, 2000; May et al., 1995; Winsler et al., 2012; Zill, 1992). Moreover, there are studies that have showed an increased number of students with Attention Deficit Hyperactivity Disorder, ADHD, who were seen as good candidates for RS, though there were no meaningful gains for these students compared to their non-delayed peers (Barnard-Brak, Stevens, & Albright, 2015).

Overall, the effects of RS remain unclear. Current studies have shown that by the third grade, any academic achievement and cognitive development indicated in the primary grades has dwindled and in many studies disappeared altogether (Bixby, 2012; Cameron & Wilson, 1990; Graue & DiPerna, 2000; May, 2013; McCullough, 2015; Morrison et al., 1997; Robertson, 2016; Shepard & Smith, 1986; Smith, 2016). Some current studies have pointed out that RS students had an initial advantage in kindergarten in reading and mathematics, and they had fewer problematic behaviors (Lloyd, 2015). Additionally, seminal research in the field indicated that secondary education RS children tend to exhibit behavior problems once they reach middle school and high school (Byrd et. al., 1997; Zill et al., 1997). Overall, the evidence suggests that some benefits of academic redshirting are short lived and the practice may be disadvantageous in the long term (Gottfried et al., 2016; Graue & DiPerna, 2000; Katz, 2000; Spitzer et al., 1995). Furthermore, any gains that students reached academically in elementary school years were not seen at the high school level (Nam, 2014).

Entering kindergarten a year later has been associated with significantly better social-behavioral outcomes during elementary school (Datar & Gottfried, 2015). Also, some current researchers have claimed that having RS students in the classroom with

their grade-mates may actually help because these older children exhibit and showcase more mature behavior and academic success and create experiences for other students that positively affect the classroom (Cascio & Schanzenbach, 2015). This theory is new and veers away from the idea that teachers had to change what they were teaching in order to accommodate the older children in their classrooms, changing the classroom curriculum and expectations. It appears being older socially and emotionally has a benefit that outweighs the once-deemed troublesome curriculum issues. Educating the whole child and looking to make education more individualized in the hopes of crafting self-motivated, life-long learning has become the latest push in education (Simerly, 2014).

Additionally, recent income, racial and ethnic research studies on school readiness and kindergarten entry have shown growing academic achievement gaps between high- and low-income students born since the 1990s, indicating that the disparity is on the rise due to RS (Hughes, 2016; Reardon & Portilla, 2016). There is a discrepancy in who is given the gift of time and who is not in terms of socio-economic and racial status present in today's school communities. Other researchers have suggested compulsory and free preschool attendance be mandated in order to ameliorate these discrepancies (Huang & Invernizzi, 2013). Moreover, dropout rates and crime rates have a direct causal link to the age at which students start formal education, and many of these same students who drop out have birthdates that fall just close to the cutoff, making them the youngest students in their classes (Cook & Songman, 2016). According to prison statistics and school readiness academic literature, there may be a direct link to the idea that if children are

brought to school unready, they are more likely to develop habits that lead them towards a criminal lifestyle (Cook & Songman, 2016).

Recent researchers on the subject of RS have tended to argue against students being older because many schools are now pushing to socially promote as opposed to retain failing students due to the social-emotional impact and lack of data to prove that retention alone solves student academic and behavioral issues (Range et al., 2011). Recent studies have shown the data between delayed entry students and their retained grade-mates and that those that were RS were seen as less likely to be retained by the end of third grade compared to their younger school-aged peers (Mendez et. al, 2014; Venable, 2015). Regardless, the current literature rests on the foundational and seminal work done on RS. In review of the following studies, presented in chronological order from 1995 to the present day, I will outline the results of what educational researchers already know about RS and how age affects behavior and academic achievement and performance.

May et al. (1995) conducted a small study consisting of 27 students identified as delayed-entry, or RS students, in one suburban school district. They concluded that while there were initial gains when these redshirted students were compared to grade-equivalent peers, there were higher numbers of special educational referrals and services for the delayed-entry students. The limits for their study were the size of the study and the lack of demographic information about the delayed-entry students or their parents to further inform the study.

Zill et al. (1997) used data from students born in the late 1980s, accessed through the National Center for Educational Statistics, to conclude that approximately 9% of all students were delayed-entry into kindergarten. They reported that these students were less likely to receive negative feedback from teachers between Grades 1–3 and were less likely to exhibit learning struggles in their elementary school years. Additionally, West, Denton, and Germino-Hausken (2000) found similar results using data from the National Center for Educational Statistics on the kindergarten class of 1998–1999.

Dissimilarly, Byrd et al. (1997) used a cross-sectional study of over 9,000 nationally representative of students, aged 7–17 and found that there were definitive negative behavioral effects of delaying school entry. The researchers reported that 27% of these students were old for their grade and indicated that being so was more common for males. Byrd et al. also stated:

> Controlling for multiple potential confounders with logistic regression, both old-for-grade status and grade retention are independently associated with increased rates of behavior problems. Separate logistic regression analyses for blacks and whites showed that these findings pertained only to white children. (p. 657)

Educational leaders in the study of RS, Graue and Diperna (2000) investigated the effects of redshirting by conducting a large study of 8,595 students in one Wisconsin school district. Their results indicated that 7% of all students experienced delayed-school entry and that high socio-economic males with summer birthdays were more commonly delayed-entry into kindergarten. Their results also indicated that most academic advantages peter off by the time students reached third grade and similar to May et al.

(1995), found that delayed-entry students were more likely to be referred for special education services throughout Grades 1–3.

Moreover, Datar (2003) conducted a study using data from the Early Childhood Longitudinal Study-Kindergarten Class suggests that delaying school entry may have positive effects for reading scores but negative effects on math scores. Datar affirmed that when compared to their peers, delayed-entry students perform better academically at the end of kindergarten and first grade. Most of the researchers studying the effects of delayed-school entry, or RS, explored the short-term impacts and did not focus extensively on the long-term impacts until the longitudinal study conducted by Lincove and Painter (2006). Lincove and Painter used data from students born in the mid-1970s to conduct a longitudinal study that indicated the long-term effects of being old for their grade students compared to their peers. Their findings indicated that approximately 9% of those students were delayed, though a limit to the study was not specifically being able to indicate if being older was a direct result of RS or other factors, such as grade retention. Similar to previous findings, Lincove and Painter found that any short-term academic advantages diminished as student progressed further than the third grade. They closely examined test scores from Grades 8, 10, 12; dropout rates and college enrollment; salary; and family structures later in life. Their results showed that delayed-entry students had slightly lower test scores in Grade 8 than older or younger students, were twice as likely to drop out of high school as younger students, were less likely than older or younger students to attend college, and earned lower salaries than older and younger students. Additionally, they found that delayed-entry students were more likely to have non-

traditional family structures. One major limit to their study was that the findings could be related to demographic differences between the groups as opposed to merely birthdate disparities because demographics were withheld for the purposes of the study.

In a more recent study, Elder and Lubotsky (2009) utilized both the Early Childhood Longitudinal Study-Kindergarten Class and National Educational Longitudinal Study datasets to estimate both the short-term and long-term effects of entry age on student achievement. Similar to previous studies, Elder and Lubotsky identify an advantage of being older in early grades, but show that this advantage all but disappears over time. They also show a prevalence of males and HSES students being academically-redshirted. Elder and Lubotsky also indicate that further study is needed in terms of the impact preschool attendance has on student achievement in correlation with birth-date data.

Huang (2012) has conducted one such study analyzing the birthday effects and preschool attendance. Based on the findings of the study, attending preschool is beneficially associated with reduced risks of retention but young-for-their grade students still have higher retention risks, despite attending preschool. Huang's research indicated that there were a growing number of students attending preschool. Those same students were reported to see benefits. Students who attended preschool as opposed to those who did not prior to the start of kindergarten exhibited higher numeracy skills and stronger language acquisition skills. However, the data did not clearly indicate whether being held back and RS was a factor toward academic growth or whether it was the year of

preschool that these RS students received that accounted for the academic differences between the two groups of students researched.

Lastly, Bassok and Reardon (2013) investigated the prevalence, patterns, and implications of academic redshirting and found that previous trends and numbers are actually decreasing and not increasing as previous data and research has suggested. More recently, Bassok and Reardon reported that the number of RS children ranges between 4.5-5% of all children. The research uses data from two cohorts Early Childhood Longitudinal Study Birth Cohort and it is the first study to track a more recent, large, nationally representative sample from birth to school entry. The base sample includes over 10,700 infants born in 2001 and tracked them to collect data on children and parents in five waves as children initially entered school. Research findings from this study report that parents of HSES male students with summer or early fall birthdays are more likely to delay school entry. Additionally, the research found that "[Delaying school entry] is twice more likely among boys than girls" (Bassok & Reardon, 2013, p. 289).

The researcher conducted extensive research regarding academic redshirting, retention, and age as a determining factor for behavioral and academic success and failure. Library search strategies have spanned a series of 3 years of efforts. The search strategies employed, theoretical foundation, and literature review will be discussed in depth in the following chapter.

Literature Search Strategy

Initially, the researcher discovered the topic of academic redshirting in articles in *The New York Times* and papers local to the school district used for this dissertation, such

as the *Asbury Park Press* (Hu, 2011; Wallace, 2014). Once it was deemed the topic of study for this research, the research extended to university and collegiate libraries available to me, and even blogs, radio broadcasts, and published documents commonly available to parents and educators. Walden's Online Library housed some significant full text peer-reviewed articles. Key terms of: *Delayed school entry*, *Academic redshirting*; *age and behavior at the middle school level*, *gender* and *behavior* were Boolean searched. Databases within EBSCOHost were all selected to cross search other fields such as psychology. Search engines within the ERIC databases such as Education Research Complete, ERIC, and Education Source led to peer-reviewed articles within the multifarious peer-reviewed journals.

Over the course of the last 5 years I have gathered articles and literature on the topic of RS, its prevalence, and its effects, especially in terms of academic and behavioral gains. While the last 5 years of publication for peer-reviewed articles were heavily relied upon and searched in order to draw upon a current body of knowledge, key works and studies with respect to academic redshirting had to be reviewed and reexamined. Reverse bibliographical searches have yielded seminal works in the field done by leading educational researchers. For example, no study on academic redshirting and its effects would be complete without looking at pieces of the larger whole that make up the landscape of what we currently hold to be true regarding RS.

As a result of this, seminal studies that were older than 5 years were included as they lead me to draw hypotheses integral to be reexamined for this current study. The landscape of research on this subject is changing as seminal works and studies done in

the later 90s and early 2000s are being reexamined with more current samples and data sets. The effects of RS cannot be measured over the course of one year, thus studies on the subject today reveal information that sheds new light on theories once held as valid. The aim of this current study is to shed new light on the longitudinal effects of RS and its rests on the foundation of the theories of the early educational theorists and how these theories were used in the educational research done on RS for the past 30 years or more.

Theoretical Foundation: Focus on School Readiness

The term "readiness" has been debated by those with contradicting philosophies. Maturationists believe time creates a readiness within the child, while constructivists such as Piaget and Vygotsky believe that experiences lead the child to readiness. Kindergarten readiness has been defined as having two parts: readiness to learn and readiness for school (Kagan, 1990; Lewit & Baker, 1995). Parents, educational experts, and psychologists grapple with these two notions and what they mean for the whole child. Two diametrically opposed theories exist regarding readiness: Maturationists versus Constructivists. Maturationists believe that a child must come to the experience of school ready, while constructivists feel the child will acquire the readiness needed when given the experiences to learn (Graue & DiPerna, 2000). Constructivists believe that readiness cannot be, simply put, taught and that it will come with the passage of time (Marshall, 2003). These theories have been renamed over time, for example, constructivists are sometimes referred to as "*interactionists*" and the terms "*idealist*" versus "*nativists*" are sometimes used for "*maturationists*" and "*constructivist*" respectfully in some current educational theory (High, 2012).

Piaget believed that a child needed time to develop certain skills or be ready to learn. Piaget's theory of development posits that a child needs to be at the appropriate stage in their development to learn. Piaget's theory rests on the notion that the child must be interacting with the world around them. Additionally, Vygotsky believed that readiness to learn required guidance and time's passing in and of itself was not merely enough to ensure readiness (Vygotsky, 1978).

Reviewing school readiness and academic redshirting in light of these theorists is important because the foundation of this study lies in examining decisions regarding a child's readiness and ability to learn. Educational research on the subject of RS focuses on the theories of school readiness throughout the instruction to their study as this is the core of the matter. Through examining leading and seminal theories about learning one can better conceptualize the need to reexamine the school readiness question and the effects of RS in terms of educating the whole child's socio-emotional, physical, and academic well-being.

Literature Review Related to Key Concepts and Variable

RS is believed to have begun as a trend in the 1970s, but the trend did not grow to substantial or noticeable numbers until the 1980s. By the late 80s and early 90s the trend had reached the academic arena and research studies by Katz (CITE), Graue and DiPerna (2000), and Byrd (1997) started appearing in Educational Journals throughout the United States. These early studies suggested that there were some gains academically for delayed-entry students present in the elementary years, up to third grade; however, the

latter study, conducted by Byrd, suggested that delayed entry males may exhibit negative behavioral or socio-emotional tendencies as a result of being old for their grade.

In the mid to late 90s May et. al, did subsequent studies that indicated that special education services for delayed entry students were on the rise due to missed opportunities for early intervention services and/or referrals. In short, Graue and DiPerna began to question the trend with articles that asked are we giving children the gift of time by holding them back, thereby robbing them of potential opportunities that sooner formal entry would have provided.

Academic redshirting continued to be studied into the early 2000s with more varieties of research studies. Research studies have utilized national data sets (Lincove & Painter, 2006) experimental data (Cascio & Schazenbach, 2007), and quasi-experimental designs (Jaekel et. al, 2015). Each of these studies fails to indicate longitudinal advantages at the middle school level for redshirted students. Contrastingly, researchers continue to find that children who are delayed entry into formal education are referred for special education at a higher rate when compared to their grade-equivalent peers (Graue & DiPerna, 2000; Mendez et. al, 2014). Additionally, research indicates that secondary education redshirted children tend to exhibit behavior problems once they reach middle school and high school and have a higher prevalence of substance abuse (Byrd et al., 1997; Zill et al., 1997). Still other studies suggest that redshirted children were more likely to earn lower earnings over time when compared to their grade-equivalent peers (Deming & Dynarski, 2008, Jimerson, 1999) and even have a higher high school dropout rate (Angerist & Krueger, 1991). One other noteworthy study indicated that old for their

grade high school students were more disengaged, had lower homework completion rates, and performed at lower levels when compared to their grade-equivalent peers. Overall, the evidence suggests that some benefits of academic redshirting are short lived and may in the long term be disadvantageous (Graue & DiPerna, 2000; Huang, 2015; Katz, 2000; Spitzer et al., 1995).

Also, communities, wherein the practice of redshirting remains commonplace, are, perhaps inadvertently, reshaping the dynamics of the kindergarten classroom so that it must accommodate the new challenges of older and more diverse academic, cognitive, and social gaps amongst its students (Noel & Newman, 2003). Teachers are forced to develop more differentiation that is not developmentally sound practice (Huang, 2015; Shepard & Smith, 1986). These now 6-year old kindergarteners and their parents/guardians seek a more rigorous curriculum to meet their needs through practices such as differentiated instruction (Crosser, 1998; Graue, 1993; Karweit, 1988; Lincove & Painter, 2006). Likewise, these diverse academic and behavior problems manifest themselves in subsequent grades and appear to come to a climax in the middle school years. Yet, there remains a gap in the research wherein middle school is concerned.

There has been a surge of interest in this topic over the last three decades, as more parents are choosing to delay entry for males to formal education. This interest has led to a number of studies revealing varying findings. Dr. Nancy Frey, a prominent researcher on the topic, recently published scholarly work outlining the extent of work in the field over the course of the past few decades. Frey cites studies whose findings highlight the rate, parent reasons, and access to preschool for delay entry students. Gnezda, Garduque,

and Schultz (1991) found that between 10-50% of all students were delayed entry to kindergarten-their results were indicative of a national survey of state education officials. Perhaps more accurately, Graue and DiPerna (2000) researched the number of delay entry students to be closer to 7% and be males with late birthdays. Furthermore, Zill et al., (1997) stated that 9% of all first and second graders experienced delayed enrollment (Frey, 2005). However, the most recent studies and surveys place the number of delay entry students somewhere between 4-5%. This number is indicative as it remains something that parents are choosing and; in doing so, reshaping the demographics of today's classrooms. Bassok and Reardon (2013) are the latest to report that the number of delayed entry students in closer to between 4-5.5%.

Kagan (1990) cites that parents hope the extra year of preschool, especially for males with late or summer birthdays, will benefit the child developmentally. While school officials, concerned about educating all children in a fair and equitable way, worry about the consequences of parents taking school readiness into their own hands. Studies, at present, indicate a strong tendency for behavioral problems to worsen not lessen as children are either delayed (Byrd et al., 1997) or retained (Hagborg, Massella, Palladino, & Shepardson, 1991; Jimerson, 1999; McCoy & Reynolds, 1999) or referred to special educational services (Katz, 2000; May & Kundert, 1995). Other studies suggest that retention and academic redshirting may lead to high dropout rates (Barro & Kolstad, 1987; Jimerson, 1999; Rumberger, 1995; Rush & Vitale, 1994). More recent studies have reported about the effects of these youngsters as they mature into adulthood. One such

longitudinal study cited that students who were retained or delayed may not do well at the collegiate level and may ultimately earn a lower salary than their peers (Jimerson, 1999).

Middle school is a time frame that was not extensively researched in terms of the latent effects of academic redshirting present at this level and therefore a gap in the data remains waiting to be filled. The formative years of middle school offer a viable place to start collecting data, as life-long behavioral and academics tendencies are being formed. Middle school is where many students make positive or negative study skills and habits that they take with them into high school and beyond. This time period is one that is formative and the reason parents cite as to why they may delay kindergarten entry (Bassok & Reardon, 2013). Many studies indicate that parents chose to delay school entry on the basis that when these students reach middle school and high school they wish for their child to be developmentally ahead, and yet there remains a gap in the data regarding the effects of this decision. Many parents are making this judgment call regarding their child and school readiness without there being formal data and extensive research in the middle school arena.

Furthermore, there is evidence of male behavioral concerns such as immaturity, a lack of attention, and accountability present at the middle school level. Boys are twice as more likely to be diagnosed with ADHD, and other attention disorders; boys tend to score lower on language, fine motor skills, and attention type tasks and assessments (Der Bedrosian, 2012). Additionally, there are twice as many boys being referred to special education services and exhibiting poor academic growth at the middle school level (Haggerty, 2009). This gender disparity is something to ponder, especially in terms of

school readiness, and it ultimately causes many parents of boys, especially those with late or summer birthdays to voluntarily delay school entry.

There is a push for academic redshirting across some communities; however, the push may be unwarranted when the research in unclear and inconclusive. The researcher wishes to move the discussion towards the middle school arena to better educate school officials and parents alike concerning the ramifications of RS and the school readiness conversation. Moreover, the discussion could better inform educators about the important differences between educating both males and females and the gender disparity that exists. Additionally, furthering the discussion could alleviate some tension felt amidst middle school officials over systemic concerns for adverse behaviors displayed by today's middle school boys.

Summary and Conclusions

A great deal of research since the 1980s has occurred on the increased average age in which male students start school. This has led to a series of changes within the school community, not the least of these, is a larger percentage of old for their grade male students by the time these RS kindergarteners reach middle school. Some educators and researchers clearly see this as positive for the school and the child learner. However, others see this trend as part and parcel responsible for the negative behavior present amongst some male students at the middle school level.

The benefit of this study was to examine the behavioral and academic performance of RS and NONRS students at the middle school level. Through a well-constructed cross-sectional research study examining the differences between the

academic and behavioral performance of RS versus NONRS students, I have extended the research into the present day, as many studies in this area of interest exceed 5, 10 years, and even 20 years. Parents and school officials have suggested that holding back male students with birthdays that are close to the cutoff may be best for the student overall; however, this research examined the data behind these beliefs so as to benefit parents and school officials alike and assist in making data-driven decisions regarding when to formally start sending male children to school. The research methods of the study will be further addressed in the following chapter.

Chapter 3: Research Method

Introduction

School officials, educators, and parents alike need a broader answer to the school readiness question (Cole-Taylor, 2015; Newman, 2013, Noel & Newman, 2008; Simerly, 2014; Sloth, 2013). The prevalence, patterns, and short-term advantages of RS have been explored since the early 80s by Graue & DiPerna (2000); however, the long-term effects have not been fully investigated, particularly at the middle school level (Bassock & Reardon, 2013; Huang, 2014). Moreover, a large portion of administrative time at the middle school level is spent disciplining and overseeing male student behavior (M. Long, personal communication, (2017). Perhaps these two areas of concern are linked. Current researchers have contended that academic achievement gaps present in the elementary grades close over time for male RS students (Huang, 2014; Stipek, 2002). However, investigating the difference between how RS versus NONRS students perform both academically and behaviorally at the middle school level could yield newfound data that sheds light on the larger issue of school readiness. I will further explain the quantitative, cross-sectional research design; overall methodology; archival data collection; and data analysis plan of this study in the following section. Setting

The setting for this study was one large, regional K–8 school district in New Jersey. From this school district, I collected archival student data for all Grade 6–8 male students for 1 archived school year, 2016-2017. According to the U.S. Department of Commerce (2010), the regional school district used for this study is the only K–8 district for approximately 40,000 people living in roughly 13,000 households within the town

and surrounding areas. The gross median income was $107,569 and more than 93% of the total population has completed high school with over 47% having completed a bachelor's degree program. Twenty-five percent of the total population was under 18 and enrolled in one of the district's schools. Eighty-four percent of the total population identified themselves as White, 6.9% identified themselves as Asian, and 2.9% identified themselves as Black or African-American during the time this study was conducted. I chose this school district for this study because it is representative of school communities across the United States wherein families, who can afford to do so, grapple with the decision of RS their male children (U.S. Department of Commerce, 2010).

Research Design and Rationale

I used independent sample *t* tests to determine if a statistically significant difference existed between the academic and behavioral performance for RS versus NONRS students throughout middle school. This type of test was chosen for the data analyses because with it I could compare the means of both groups of students: RS and NONRS (see Creswell, 2012). In this study, I employed a cross-sectional research design aimed at updating past research on RS to fill a gap in current research by analyzing data beyond the elementary school years and recognizing middle school as a time needed to be further studied. The data were analyzed using a series of independent *t* tests performed for the student academic and behavioral data collected from Grades 6–8 and another series of independent samples *t* tests to analyze the combined academic and behavioral data for RS and NONRS students from Grades 6–8.

Methodology

Population

I included all Grade 6–-8 male students in the school district for the archived school year of 2016–2017 in this study. There were approximately 1,000 male students total for all three grade levels in the district for the selected archived school year that represented the total testing sample group. I sorted the students according to birthdate and then further divided them into subpopulations, or groups, RS or NONRS, based on whether they entered kindergarten when they were initially eligible to do so based on the state and district cutoff date of October 1st. I chose to include the total male population for Grades 6–8 in order to reach the largest sample size possible for the study.

Population Selection

I included all Grade 6–8 male students who attended the regional suburban school district under study, approximately 1,000 students, in this study to have as large of a sample size as possible. It was necessary to have the required power and level of statistical significance for the data to ensure that the results were valid and representative of each group: RS students and NONRS students. Once data were collected, the RS group size determined the size of the NONRS student group to ensure the results of the series of independent samples *t* tests were valid. There were 10, 15, and 12 RS students in Grades 6, 7, and 8 respectively. All of these RS students were included for analysis and the NONRS groups were a stratified sample to double the size of the RS student group. Combined data for Grades 6–8 was also calculated with RS ($n = 37$) students and NONRS ($n = 64$) students. I used a stratified sample of the students in the combined

NONRS group to get to the total number of students needed to analyze the data and ensure valid and robust statistical results.

Archival Data

I collected the age at the time of entry into kindergarten, academic GPAs, and total number of behavioral violations from the data of all Grade 6–8 male students for the archived school year of 2016–2017 through PowerSchool, the district's electronic management system. I was granted permission to collect this information by the district (See Appendix). Student anonymity was ensured because the student data were coded with student identification numbers used solely for the purpose of the study. I had no direct contact with participants, since only archival data were used.

Instrumentation and Operationalization of Constructs

In this cross-sectional, quantitative study, the independent variable was a student's RS versus NONRS status, and the two dependent variables were how these students performed behaviorally and academically during the archived school year. I measured the academic achievement for all participants through student academic average and overall GPA for one academic school year. Behavioral data for each participant was measured through the total number of behavioral violations over the course of the same academic school year for each student. For instance, a student may have received a detention; an in-school or out-of-school suspension; or a harassment, intimidation, and bullying violation. The total number of violations for each student was recorded by the district and this total number was shared with me for the purpose of

conducting this study. All data were shared via reports from the district electronic student management system,-Power School.

Once I had collected all the data, I ran a series of independent sample *t* tests for each set of data--academic averages, GPAs, and behavioral violations--for each of the grade levels, Grades 6, 7, and 8, to compare the means of the two groups of students: RS and NONRS. Additionally, a combined data set for Grades 6–8 was independently *t* tested to compare the means of RS versus NONRS students and their overall GPA and behavioral violations. The results of all tests showed how students in these two groups performed behaviorally and academically at middle school. I ran these series of independent sample *t* tests to see if a statistically significant difference, if any, exists between how RS versus NONRS students perform academically and behaviorally. I will explain the results in the following chapters and data from each series of independent *t* tests will be graphically displayed in a series of outlined tables.

Data Analysis Plan

I used Statistical Package for the Social Sciences (SPSS) software was used for statistical analysis of all the data. Data were collected from Power School and analyzed using a series of independent *t* tests to compare the means of the RS and NONRS groups for each measurement: academic average, GPA, and total number of behavioral violations. Academic data were represented by averaged academic percent totals for each student, where 100% is the highest academic average, and separate GPA scores at the culmination of Grades 6, 7, and 8. These data were collected for each male student enrolled in the district during the 2016-2017 school year for Grades 6, 7, and 8

respectively. Behavior was measured in terms of a total number of behavioral violations for the same school year and same population of students.

Research Question and Hypotheses

RQ1: How do RS students perform academically, as measured by their numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a1: There is a significant difference between how RS students perform academically, as measured by numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8.

H_01: There is no significant difference between how RS students perform academically, as measured by numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8.

RQ2: How do RS students perform academically, as measured by their GPA data, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a2: There is a difference between how RS students perform academically, as measured by GPA data, when compared to NONRS students throughout Grades 6, 7, and 8.

H_02: There is no significant difference between how RS students perform academically, as measured by GPA data, when compared to NONRS students throughout Grades 6, 7, and 8.

RQ3: How do RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8?

H_a3: There is a difference between how RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8.

$H_0 3$: There is no significant difference between how RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8.

Archival data were analyzed over the course of one archived school year, 2016-2017, for all male students in Grades 6-8 within one large suburban New Jersey school district. Student population size per Grades 6-8 averages 1000 students. Male students were identified as RS or NONRS based on when these students first entered formal schooling or kindergarten.

The aim of this study was to see if a significant difference exists between how RS versus nonRS students perform behaviorally and academically once they reach middle school. This is important because current research on the effects of academic redshirting includes the elementary school years and does not extensively examine middle school. There is research that extends beyond middle school, including case studies done at the high school and collegiate level. However, there is scant research regarding the effects of academic redshirting at the middle school level itself. This is of public policy interest as

many male students, when compared to their female grade-mates, appear not ready for middle school or exhibit behavior problems such as lower grades, behavioral violations, and discipline issues that result in suspensions and academic failure at the middle school level (Osher et al., 2010; Venable, 2015).The aim of this research was to see if there is a link between delaying formal education and an influx of male behavior and academic concerns at the middle school level.

Threats to Validity

This study included all male students in a regional school district in order to compare effect sizes and ensure that there was a limited threat to external validity. The final report of the study indicates whether or not there was a significant difference between the academic and behavioral performance of RS versus NONRS students throughout Grades 6, 7, and, 8. Data were reported using descriptive statistics, tables, and bar graphs indicating the results of a series of independent *t* tests run for the data collected at Grades 6, 7, and 8 and combined data for Grades 6-8.

Ethical Procedures

Archival student data were collected and uploaded into the statistical program SPSS using student identification numbers to delineate the two groups of students, RS and NONRS, used solely for the purpose of this study to ensure all students' anonymity. Data were gathered directly by the district and already coded for anonymity for the researcher prior to the start of the study. All data has been kept in a locked filing cabinet in a private office space setting, so as to ensure that the data has not been tampered with for the duration of the study and up to 5 years after the conclusion of the study.

Summary

In summation, data from one archived school year, 2016-2017, for Grades 6-8 has been collected and data analyses, in the form of a series of independent samples *t* tests, has indicated whether there is a significant difference between how RS versus NONRS students perform academically and behaviorally at the middle school level. Analyzing the data for whether or not a significant difference between how RS and NONRS students perform behaviorally and academically for Grades 6, 7, and 8 yielded data results indicating what it means to be academically redshirted beyond third grade and the elementary school years. Thereby, parents and educators are empowered with more data to drive decisions of school readiness and the ramifications of RS beyond the elementary school years, specifically at the middle school level. The insights gleaned from this study were designed to help alleviate some of the stress of the school readiness dilemma that many parents and educators grapple with each school year. Decisions of school readiness and when it is best to start formal education ought to be well-informed and data from this study will help, specifically in terms of providing longitudinal behavioral and academic results for the middle school arena. This study aimed to fill a gap in the vast body of knowledge regarding school readiness and add to the dearth of knowledge available regarding the effects of delaying school entry at the middle school level.

Subsequently, many male middle school students continue to appear not ready for middle school or exhibit behavior problems such as lower grades, truancy, and discipline issues that result in suspensions and academic failure (Farmer et al., 2013). The aim of this research was to see if there is a link between delaying formal education and an influx

of male behavior and academic concerns at the middle school level. An examination of RS male behavior and academics compared to that of their grade-mates was and is a matter of public policy interest with the implication of positive social change for schools and communities alike as this information could better inform data-driven decisions regarding school entry. Overall, researching the topic of school readiness and the academic and behavioral differences of RS versus NONRS male students at Grades 6, 7, and 8 has and will continue to inform school readiness decisions and what effects pushing children ahead or holding them back have once male students reach middle school. The data analysis and results of the study will be shared in the following chapter.

Chapter 4: Data Analysis and Results

Introduction

The purpose of this study was to examine whether a significant difference exists between how RS students versus NONRS students perform behaviorally and academically once they reach middle school, specifically in the Grades 6, 7, and 8. With this study, I aimed to fill a gap in current research by examining how RS male students' behavior and academic performance at the middle school level compares to that of their grade mates. I also aimed to update past research studies that suggested "older for their grade" male students exhibited poor behavior as one potential negative latent result of RS (Byrd et al., 1997, p. 659). Using a quantitative, cross-sectional, comparative research study design, I looked at archival data for all RS and NONRS male students in Grades 6–8 in one New Jersey school district for the academic school year of 2016–2017.

The following research questions were addressed:

RQ1: How do RS students perform academically, as measured by their numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8?

RQ2: How do RS students perform academically, as measured by their GPA data, when compared to NONRS students throughout Trades 6, 7, and 8?

RQ3: How do RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8?

Data Collection

Data collection took place over the course of 1 month and involved accessing the archival data using records provided through PowerSchool, the electronic student management system used in the school district. Initially, I collected archived academic data followed by behavioral data for the sample consisting of each male student within the school district for the 2016–2017 school year for Grades 6, 7, and 8. The academic data were collected as both a numerical average of all academic courses and GPA for each male student for a more detailed reporting of data. Behavioral data included a total number of violations, including suspensions; detentions school rule infractions and harassment, intimidation, and bullying violations as per New Jersey state law.

Within each grade there was a large range between the oldest and the youngest students. The oldest students in each grade level were a full year and a half apart from the youngest students in the same grade level. This range was similar to state and national norms found in many school districts across the United States (Huang, 2016). The data I collected indicated that 3.3% of all sixth grade students represented were redshirted, 4.8% of all seventh graders were redshirted, and 3.8% of all eighth graders were redshirted. These numbers were also within the national and state norms (Bixby, 2013). Students who did not have any academic data that could be used because they were on a pass/fail plan as per their Individualized Education Plans were excluded from this study as there was not enough data to be utilized from these students to compare means.

Data Analysis Procedure

Students were grouped first by birthdate and then I analyzed their numerical academic average, GPA, and total number of behavioral violations for the archived school year using SPSS software. Independent samples *t* tests were performed on student's overall numerical academic average, GPAs, and total number of behavioral violations. To ensure validity for the study, the total number of RS students determined the total number of NONRS students included in this study. The total number of NONRS students was a stratified sample to reach a total number that was no more than double the total number of RS students. The RS and NONRS distributions were sufficiently normal for the purposes of conducting all *t* tests (i.e., skew < /2.0/ and kurtosis < /9.0/; see Creswell, 2009). I grouped the students as either RS or NONRS per when they were enrolled in school in the primary grades, and the stratified sample from the NONRS student population was used for the purpose of this study**.** See Table 1 for the total number of students in each grade level that were identified as RS and NONRS. See Figure 1 for a detailed image of the ethnicities of RS students for combined Grades 6–8.

Table 1

Number of RS and NONRS Students in Grades 6, 7, and 8

Grade Level	RS students	NONRS students
6	10	310
7	15	310
8	12	309

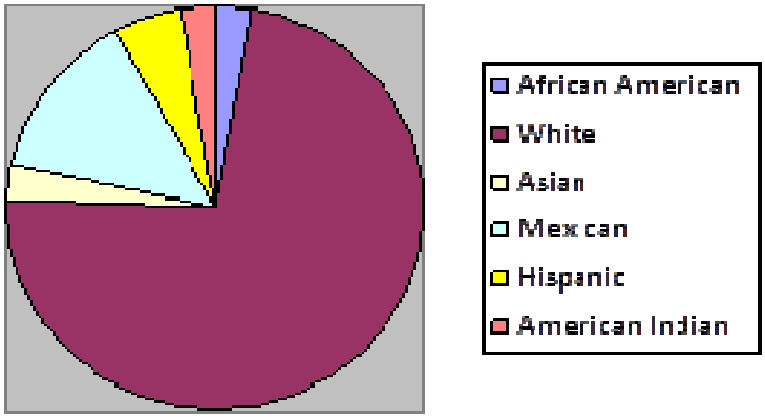

Figure 1. Ethnicity of RS students for combined Grades 6–8. Out of all 37 redshirted students in Grades 6-8, their ethnicities were as follows: one African-American, 27 White, one Asian, five Mexican two Hispanic and one American Indian.

Seventy-five percent of the RS students had summer or early fall birthdays. If their parents had not redshirted them, these children would have been among the youngest in their respective grade levels. Again, these data were indicative of national norms and standards present in current statistics of redshirted students (see Bixby, 2012).

Results

Initially, I ran a series of independent samples *t* tests to compare the means of RS and NONRS students' numerical academic average for Grades 6, 7, and 8 and the combined data for Grades 6–8 respectively to answer the first research question and null hypothesis:

RQ1: How do RS students perform academically, as measured by their numerical academic average, when compared to NONRS students throughout Grades 6, 7, and 8?

$H_0 1$: There is no significant difference between how RS students perform academically, as measured by numerical academic average, when compared to nonRS students throughout grades 6, 7, and 8.

I conducted the independent samples *t* test to test the null hypothesis that there is no significant difference in numerical academic average between RS students and NONRS students of Grade 6 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(28) = .06$, $p = .810$, I chose to report *t* test results for equal variances assumed. This test was not significant, $t(28) = -.350$, $p = .729$, and the results were contrary to the research hypothesis. Students in the RS group ($M = 89.14$, $SD = 5.76$) on the average scored more than those in the NONRS condition ($M = 88.34$, $SD = 5.88$) as seen in Table 2. The 95% confidence interval for the difference in the means was small, ranging from -3.84 to 5.43. The eta square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected, so the result was inconclusive.

Table 2

Group Statistics for Grade 6 Numerical Academic Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	10	89.1400	5.76892	1.82429
NONRS students	20	88.3465	5.88297	1.31547

I conducted an additional independent samples *t* test to test the null hypothesis that there is no significant difference in numerical academic average between RS students and NONRS students of Grade 7 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(41) = .33$, $p = .570$, I chose to report *t* test results for equal variances assumed. This test was not significant, $t(41) = -.513$, $p = .611$, and the results were contrary to the research hypothesis. Students in the RS group ($M = 87.74$, $SD = 6.05$) on the average scored more than those in the NONRS condition ($M = 88.80$, $SD = 6.72$) as seen in Table 3. The 95% confidence interval for the difference in the means was small, ranging from -5.27 to 3.13. The eta square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected, so the result was inconclusive.

Table 3

Group Statistics for Grade 7 Numerical Academic Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	15	87.7373	6.04924	1.56191
NONRS students	28	88.8043	6.72216	1.27037

I conducted another independent samples *t* test to test the null hypothesis that there is no significant difference in numerical academic average between RS students and NONRS students of Grade 8 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(34) = 2.72$, $p = .109$, I chose to report *t* test results for equal variances assumed. This test was not significant, $t(34) = -1.55$, $p = .131$, and the

results were contrary to the research hypothesis. Students in the RS group (M = 85.25, SD = 8.58) on the average scored more than those in the NONRS condition (M = 88.96, SD = 5.73) as seen in Table 4. The 95% confidence interval for the difference in the means was small, ranging from -8.58 to 1.17. The eta square index indicated that 7% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected, so the result was inconclusive.

Table 4

Group Statistics for Grade 8 Numerical Academic Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	12	85.25	8.582	2.478
NONRS students	24	88.96	5.729	1.169

Summarily, an independent-samples t test was conducted to test the null hypothesis that there is no significant difference in numerical academic average between RS students and NONRS students of Grades 6-8 at .05 level of significance. Since Levene's Test for equality of variances was not significant, F (108) = .01, p =.930, we chose to report t Test results for equal variances assumed. This test was not significant, t (108) = -.91, p = .367, and the results were contrary to the research hypothesis. Students in the RS group (M =87.31, SD = 6.89) on the average scored more than those in the NonRS condition (M = 88.54, SD = 6.64) as seen in Table 5. The 95% confidence interval for the difference in the means was small, ranging from -.39 to 1.46. The eta

square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 5

Group Statistics for Grades 6th - 8th Numerical Academic Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	37	87.31	6.89032	1.13276
NONRS students	73	88.54	6.63718	.77682

An additional series of independent samples *t* tests were run to compare means of RS and NONRS students' GPA average for Grades 6, 7, and 8 and combined data for Grades 6-8 respectively to answer the following research question and null hypothesis:

RQ2: How do RS students perform academically, as measured by their GPA data, when compared to NONRS students throughout Grades 6, 7, and 8?

$H_0 2$: There is no significant difference between how RS students perform academically, as measured by GPA data, when compared to NONRS students throughout Grades 6, 7, and 8.

An independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in GPA between RS students and NONRS students of Grade 6 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(28) = .10$, $p = .751$, I chose to report *t* Test results for equal variances

assumed. This test was not significant, t (28) = .17, p = .863, and the results were contrary to the research hypothesis. Students in the RS group (M =3.36, SD = .58) on the average scored more than those in the NONRS condition (M = 3.32, SD = .60) as seen in Table 6. The 95% confidence interval for the difference in the means was small, ranging from -.43 to .51. The eta square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 6

Group Statistics for Grade 6 GPA Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	10	3.3600	.58157	.18391
NONRS students	20	3.3200	.59789	.13369

Another independent samples t test was conducted to test the null hypothesis that there is no significant difference in GPA between RS students and NONRS students of Grade 7 at .05 level of significance. Since Levene's Test for equality of variances was not significant, F (41) = .01, p = .923, I chose to report t Test results for equal variances assumed. This test was not significant, t (41) = -.34, p = .734, and the results were contrary to the research hypothesis. Students in the RS group (M = 3.25, SD = .62) on the average scored more than those in the NONRS condition (M = 3.32, SD = .63) as seen in Table 7. The 95% confidence interval for the difference in the means was small, ranging from -.47 to .33. The eta square index indicated that 0% of the variance of the numeric

academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 7

Group Statistics for Grade 7 GPA Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	15	3.2533	.61629	.15912
NONRS students	28	3.3214	.62501	.11812

An additional independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in GPA between RS students and NONRS students of Grade 8 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(34) = 3.27$, $p = .080$, I chose to report *t* Test results for equal variances assumed. This test was not significant, $t(34) = -1.73$, $p = .092$, and the results were contrary to the research hypothesis. Students in the RS group ($M = 3.00$, $SD = .85$) on the average scored more than those in the NONRS condition ($M = 3.40$, $SD = .54$) as seen in Table 8. The 95% confidence interval for the difference in the means was small, ranging from – .87 to .07. The eta square index indicated that 8% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 8

Group Statistics for Grade 8 GPA Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	12	3.0000	.84746	.24464

NONRS students	24	3.4000	.53649	.10951

In addition, an independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in GPA between RS students and NONRS students of grades 6th-8th at .05 level of significance. Since Levene's Test for equality of variances was not significant, F (109) = .66, p =.417, I chose to report *t* Test results for equal variances assumed. This test was not significant, t (109) = -.84, p = .400, and the results were contrary to the research hypothesis. Students in the RS group (M =3.20, SD = .69) on the average scored more than those in the NONRS condition (M = 3.86, SD = 4.74) as seen in Table 9. The 95% confidence interval for the difference in the means was small, ranging from -2.22 to .89. The eta square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 9

Group Statistics for Grades 6th- 8th GPA Average

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	37	3.200	.68799	.11311
NONRS students	72	3.862	4.73592	.55054

An additional series of independent samples *t* tests were run to compare means of RS and NONRS students' total number of behavioral violations for Grades 6, 7, and 8

and combined data for Grades 6-8 respectively to answer the following research question and null hypothesis:

RQ3: How do RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8?

$H_0$3: There is no significant difference between how RS students perform behaviorally, as measured by the total number of student behavioral violations, when compared to NONRS students throughout Grades 6, 7, and 8.

An independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in total number of behavioral violations between RS students and NONRS students of Grade 6 at .05 level of significance. Since Levene's Test for equality of variances was not significant, F (28) = .02, p =.884, I chose to report *t* Test results for equal variances assumed. This test was not significant, t (28) = .00, p = 1.0, and the results were contrary to the research hypothesis. Students in the RS group (M =.20, SD = .42) on the average the same as those in the NONRS condition (M = .20, SD = .52) as seen in Table 10. The 95% confidence interval for the difference in the means was small, ranging from -.39 to .39. The eta square index indicated that 0% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 10

Group Statistics for Grade 6 Total Number of Behavioral Violations

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	10	.2000	.42164	.13333
NONRS students	20	.2000	.52315	.11698

Additionally, an independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in total number of behavioral violations between RS students and NONRS students of Grade 7 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(41) = .03$, $p = .875$, I chose to report *t* Test results for equal variances assumed. This test was not significant, $t(41) = .01$, $p = .995$, and the results were contrary to the research hypothesis. Students in the RS group ($M = .47$, $SD = .92$) on the average scored more than those in the NONRS condition ($M = .46$, $SD = .1.26$) as seen in Table 11. The 95% confidence interval for the difference in the means was small, ranging from -.74 to .75. The eta square index indicated that 8.78% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 11

Group Statistics for Grade 7 Total Number of Behavioral Violations

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	15	.47	.915	.236
NONRS students	28	.46	.1.261	.238

Another independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in total number of behavioral violations between RS students and NONRS students of Grade 8 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(34) = .29$, $p = .594$, I chose to report *t* Test results for equal variances assumed. This test was not significant, $t(34) = .305$, $p = .762$, and the results were contrary to the research hypothesis. Students in the RS group ($M = .42$, $SD = .90$) on the average scored more than those in the NONRS condition ($M = .33$, $SD = .70$) as seen in Table 12. The 95% confidence interval for the difference in the means was small, ranging from -47 to .64. The eta square index indicated that 0 % of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was inconclusive.

Table 12

Group Statistics for Grade 8 Total Number of Behavioral Violations

Student Group	Number	M	SD	Std. Error *M*
RS students	12	.4167	.90034	.25990
NONRS students	24	.3333	.70196	.14329

Summarily, independent samples *t* test was conducted to test the null hypothesis that there is no significant difference in total number of behavioral violations between RS students and NONRS students of Grades 6-8 at .05 level of significance. Since Levene's Test for equality of variances was not significant, $F(109) = .50$, $p = .825$, I chose to report *t* Test results for equal variances assumed. This test was not significant, $t(109) =$

-.255, p = .799, and the results were contrary to the research hypothesis. Students in the RS group (M = .30, SD = .66) on the average scored more than those in the NONRS condition (M = .26, SD = .84) as seen in Table 13. The 95% confidence interval for the difference in the means was small, ranging from -2.74 to .36. The eta square index indicated that 5.96% of the variance of the numeric academic average was accounted for whether a student was assigned to RS or NONRS group. The null hypothesis could not be rejected; thus, the result was again inconclusive.

Table 13

Group Statistics for Grades 6th - 8th Total Number of Behavioral Violations

Student Group	Number	*M*	*SD*	Std. Error *M*
RS students	37	.2973	.66101	.10867
NONRS students	72	.2568	.84498	.09823

In conclusion, RS and NONRS in this small study performed academically similar, according to their numerical average, for Grades 6, 7, and 8, as seen in Figure 2.

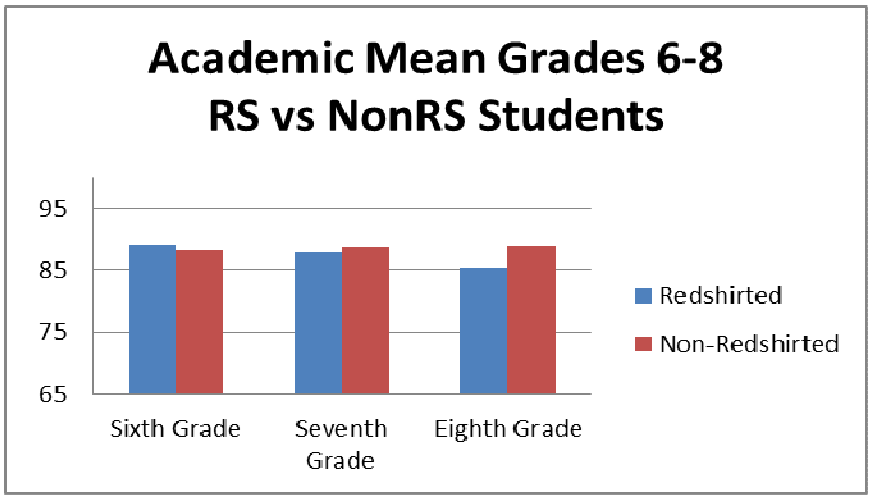

Figure 2. Academic Mean of 6th-8th grade RS versus NonRS students indicates no significant statistical difference in how RS versus nonRS students performed for grades 6th, 7th and 8th.

Additionally, RS and NONRS students performed behaviorally similar, according to total number of behavioral violations for Grades 6, 7, and 8, as seen in Figure 3.

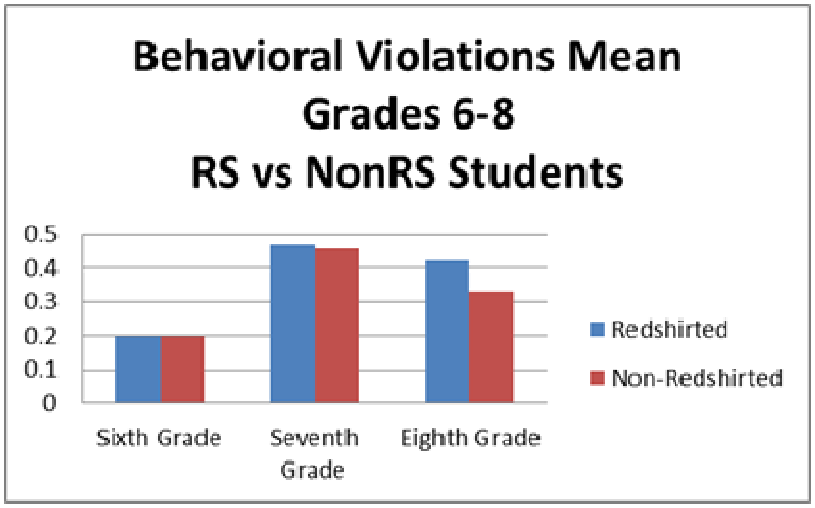

Figure 3. Behavioral Violations Mean of 6th-8th grade RS versus NonRS students. Indicates no significant statistical difference in how RS versus nonRS students performed behaviorally for grades 6th, 7th and 8th.

Summary

In summation, the data analyses revealed answers to each of the respective research questions. The study did not identify any significant difference in how RS and NONRS students performed either academically, as reported as a numerical average or GPA, or behaviorally, as reported by total number of behavioral violations throughout any of the tested Grades 6-8. In addition, combined Grade 6-8 student data analyses also revealed no statistically significant difference for academic or behavioral performance between RS and NONRS students.

Overall, these findings did update outdated research studies in an effort to begin to better inform school leaders and parents of possible long term academic and behavioral effects of academic redshirting. Additionally, the findings suggest a need for further investigation and study, as the results failed the reject the null hypotheses for all research questions. Furthermore, this study's nonsignificant results may be attributed to a small RS sample population size and more research on the topic needs to be conducted. The discussion, conclusion, and recommendations for further studies will be addressed in chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In study, I examined age as a possible systemic cause for the negative behavior of male students at the middle school level (i.e., Grades 6–8) by focusing on RS and NONRS student populations at one suburban New Jersey school district for the 2016–2017 school year. I did not find difference in the academic or behavioral performance of RS and NONRS students. The findings, though limited due to a small RS student sample size, revealed that an individual being older for their grade in middle school had no significant difference in terms of academic and behavioral performance for Grades 6, 7, and 8. However, I failed to reject the null hypotheses for all research questions and the topic needs to be further researched in order to indicate whether age is indeed a systemic cause of academic or behavioral outcomes at the middle school level.

While there were no statistically significant differences in the academic or behavioral performance of students who are older for their grade versus those that are not in this study, there were definitive outliers, in terms of students who were significantly younger for their grade level, that warrant further investigation. Perhaps collecting and analyzing data for students who are younger for their grade level may further inform whether age is a systemic cause of negative male middle school student academic and behavior performance. While, older studies in the field of RS concluded that male RS students performed worse than their grade mates behaviorally as they move beyond third grade (Byrd et al., 1997), the results in this study did not corroborate those findings. There were no statistically significant differences in how Grade 6–8 RS versus NONRS

students performed behaviorally. However, data sets with larger sample sizes and a more longitudinal study may be helpful in further addressing the role age has on academic and behavioral performance for RS versus NONRS students at the middle school level as the findings of this study were not significant.

Interpretation of the Findings

The findings from this study indicated that RS students performed academically similar to NONRS students in Grades 6–8. These findings confirmed current and past research stating that any academic gains of "older for their grade" students diminish by the third grade (Byrd et al., 1997, p. 659; Cascio & Schanzenbach, 2016; Grissom, 2013; Hensley, 2014; Hover, 2014, 2015; Huang, 2015; Hughes, 2016; Katz, 2000; McCullough, 2015; Nam, 2014; Smith, 2016; Strauss et al., 2015; Tisher, 2014). Behaviorally, RS and NONRS students performed similarly, thereby disconfirming what past research conducted by Byrd et al. (1997) suggested, that "old for their grade" students may have increased behavior problems once they reach middle school and beyond (p. 656).

Past researchers on RS concluded that while there are academic gains present at the elementary school level, this may not be the case once students exceed third grade (Cascio & Schanzenbach, 2016; Grissom, 2013; Hensley, 2014; Hover, 2014, 2015; Huang, 2015; Hughes, 2016; Katz, 2000; McCullough, 2015; Nam, 2014; Smith, 2016; Strauss, Johnson, Gilmore & Wolke, 2015; Tisher, 2014). The findings of this study confirmed this results of past research studies; however, the small RS sample size did limit this study and may have attributed to the nonsignificant results. May et al. (1995)

conducted a small study consisting of 27 RS students, similar in numbers to this study, and reported a higher number of special education referrals amongst students who were RS. The demographic information for this study indicated similar findings. Many of these RS students were either recommended for special educational services or were receiving special education services at the time of data collection.

Educational leaders in the study of RS, Graue and Diperna (2000) investigated the effects of redshirting by conducting a large study of 8,595 students in one Wisconsin school district. Their results indicated that males with HSES and summer birthdays were more commonly delayed-entry into kindergarten. Their results also showed that most academic advantages peter off by the time students reached third grade. Findings from this current study indicated that 75% of RS male students had summer or fall birthdays and that there were no academic advantages between being RS versus NONRS during middle school. Thus, the findings from this study corroborated the Graue and Diperna findings.

Montessori, Vygotsky, and Piaget all lend themselves to the development of early childhood education, and this was an integral part of this study because I focused on school readiness and the development of the autonomous learner (Dixon-Krauss, 1996; Montessori & Carter, 1936; Mooney, 2000; Piaget & Cook, 1952; Vandiver & Walsh, 2010; Vygotsky, 1978). Montessori (1936) believed that learning need to be brought to the child at their level. Piaget confirmed this thought process and believed that children seek meaning from their world, a process later referred to as the development of schema (Piaget & Cook, 1952). Piaget (1952) believed that children have a strong desire to

organize the world they live in, in an effort to develop cognitively. Vygotsky (1978) believed that all children are naturally curious about their world and seek meaning or understanding of their world. Vygotsky felt that children seek ways to learn and develop cognitive abilities that help them with their learning. Additionally, the theorist believed that there is a more knowledgeable other involved in the process, such as a peer, and that children will live up to the expectations set up for them so long as they see others doing the same (Vygotsky, 1978).

The findings of this study revealed that when children are grouped together by school year, despite having a range in age of more than a year and a half difference between them, those children will assimilate and meet the academic demands of the school and classroom they are in. In other words, there was no academic gain present, after the third grade or at the middle school level for Grades 6, 7, or 8 for the sample size tested. The findings of this study confirmed the work of early childhood theorists: When a child is surrounded with others to learn from that child will develop a natural curiosity to learn from and alongside others to create meaning about their world (see Vygotsky, 1978). As analyzed in this study, RS has no real bearing on how a child performs academically in the long run; however, sending a child who is not ready for formal education and cannot meet the demands of the learning or is not ready to learn with and alongside their peers may have negative effects that would need to be further studied. According to early educational researchers and theorists, it is essential that the child be given time to naturally develop their innate penchant for learning about their world (Chan, 2003; Jimenez & Perez, 2002; Millei, 2012; Vandiver & Walsh, 2010). The

results of this study confirmed that sending a child to school when they are ready is better for the whole child, even when doing so means holding them back or academically redshirting them 1 whole school year.

Limitations of the Study

Overall, the findings of this study revealed nonsignificant results that may be attributed to the small RS sample sizes for Grades 6-8. The sample size for RS students was relatively low, less than 30 RS students for all grade levels. In an effort to address this, I combined and analyzed data from Grades 6–8 through additional independent sample *t* tests for both academic and behavioral data sets. This yielded a larger sample of the RS group of students ($n = 37$) and a larger group of NONRS students ($n = 64$). However, the combined data set independent sample *t* tests also revealed there was no statistical significant difference between how RS versus NONRS students perform academically or behaviorally.

Recommendations

Once I had collected and analyzed the data, it was clear that there were outliers for each grade level and that the range of students for each grade was quite large. For instance, there was more than a year and a half difference between the oldest and the youngest students enrolled in each grade. The academic averages, GPAs, and number of behavioral violations for all of the outlier students, those that were both older and younger for their grade stood out. The younger outlier population of students could be reexamined in future studies to see if a person being younger for their grade has a statistically significant difference in terms of how these younger students perform

academically and behaviorally. Additionally, students who receive free and reduced lunch, ethnicity, and English Language Learners status could also be further investigated to compare means between these various groups of students in terms of how these students perform academically and behaviorally. A similar study could also be researched with data from a number of county and regional school districts in an effort to enlarge the sample population size.

Implications

In this study, I aimed at exploring one possible systemic cause of an ongoing problem: negative male middle school academic and behavior. The issue is still present in many middle schools because many males seem unready for middle school and there is a discrepancy in how male students act and perform academically and behaviorally at the middle school level (Osher et al., 2010; Venable, 2015). The findings of this study revealed that there was no statistical significant difference in the academic or behavioral means of students in Grades 6 and 7 and no academic difference in Grade 8. Age as a systemic cause of poor academic and behavioral performance needs to be further studied. The data analyses in this study revealed that while there are significant outliers, with some students being a whole year and a half older than their grade mates, being older did not have any significant bearing on at least 2/3 of their behavioral performance and no significant bearing on their academic performance at the middle school level. The implications of this study are clear--that an individual being older for their grade level did not have a large scale statistically significant difference or hold negative latent longitudinal effects on their schooling.

The results of this study begin to answer an important school readiness questions and whether or not there is any academic or behavioral advantage for parents, school officials, and educational experts. While there are academic gains reported up to and through the third grade, parents and school officials often wonder if those early academic gains come at the cost of future learning and behavior (Cascio & Schanzenbach, 2016; Grissom, 2013; Hensley, 2014; Hover, 2014, 2015; Huang, 2015; Hughes, 2016; Katz, 2000; McCullough, 2015; Nam, 2014; Smith, 2016; Strauss, Johnson, Gilmore & Wolke, 2015; Tisher, 2014). In short, there needs to be more data collected and more research conducted in which a larger RS sample size is present for Grades 6–8. In this study, I did not find a difference in the academic or behavioral performance of RS and NONRS students, so more research needs to be conducted in order to yield more significant results.

Conclusion

More educational research needs to be carried out into how and why students perform the way they do. There are differences between how various groups of males and students in general learn for instance, and educators need to further study and understand those differences in order to better educate each child that enters every classroom and school. Furthermore, society needs to ensure that they are meeting the needs of all learners from the moment they enter formal education. Being ready for school and formal education is an integral part of this process. The findings in this study revealed data that can help drive decisions regarding when a child should enter formal education, and

thereby start school performing positively, providing a good path to follow throughout their academic career.

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Appendix A

IRB Permission to Conduct the Study:

The IRB approval number for this study is 04-20-18-0129794.