

SCHOOL-BASED PARENT INVOLVEMENT: AN INVESTIGATION
OF COMPREHENSIVE SPECIAL EDUCATION SERVICES, SATISFACTION WITH
SERVICES, AND RACE

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ABSTRACT

Parent involvement in special education encompasses parental activities in the school, engagement with school personnel, engagement in school, community, or home based activities, and advocating on behalf of a child with special needs. Parent involvement ensures quality special education services for children as well as promotes educational and skill gains. The current study investigated school-based parental involvement (P.I.) and its association with a child's receipt of comprehensive special education services, parental satisfaction with special education services, and parental satisfaction with the school. In addition, the study investigated whether a child's race affects the comprehensiveness of special education services and parents' perceptions of special education services. Using the Parent and Family Involvement in Education Survey 2007 Panel, linear and multinomial regression models were conducted to investigate relationships.

Study results indicated P.I. is associated with the receipt of comprehensive special education services, satisfaction with services, and overall satisfaction with the school. P.I. was higher when a child received more special education services. In addition, as P.I. increased, parents had higher satisfaction with special education services and the school. Minority children in the study received more special education services than non-minority children. On the other hand, satisfaction with special education services varied across races. The study provides insight on special education delivery as well as establishes a preliminary understanding of P.I.

DEDICATION

This dissertation is dedicated to my grandfathers, Mr. Fred E. Nottingham and Mr. William H. Pincham, Jr., both of whom were World War II veterans. Although they never saw me grow into adulthood, I appreciate their tenacity, hard work, and dedication for ensuring their future generations would have opportunities never afforded to them.

LIST OF ABBREVIATIONS AND SYMBOLS

β	Beta
χ^2	Chi square value
CRT	Critical Race Theory
Coeff.	Coefficient
CATI	Computer assisted telephone interviews
df	Degrees of freedom
F	F ratio
H	Hypothesis
IDEA	Individuals with Disabilities Education Improvement Act of 2004
IEPs	Individualized Education Plans
M	Mean
NASW	National Association of Social Workers
NCES	National Center for Education Statistics
NHES	National Household Education Surveys Program
n	Number
OSEP	Office of Special Education Programs
PFI-NHES	Parent and Family Involvement in Education Survey
P.I.	Parent involvement
P.I. score	Parent involvement score
%	Percent

p	Probability
RDD	Random digit dialing
Sig	Significance
SES	Socioeconomic status
S.E.	Standard error
S.D.	Standard deviation
<	Less than
=	Equal to

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CONTENTS

ABSTRACT.....	ii
DEDICATION.....	iii
LIST OF ABBREVIATIONS AND SYMBOLS	iv
ACKNOWLEDGEMENTS.....	xii
LIST OF TABLES.....	xix
LIST OF FIGURES	xx
CHAPTER 1 – INTRODUCTION AND RESEARCH PROBLEM.....	2
Background	2
Study Aims.....	3
Significance of the Study to Research.....	4
Significance of the Study to Social Work Practice	4
Significance of the Study to Policy.....	5
Individuals with Disabilities Education Improvement Act of 2004	5
IDEA 2004 and P.I.	6
Social Work and Special Education	7
CHAPTER 2 - LITERATURE REVIEW.....	9
What is Parental Involvement?	9

Why is Parent Involvement Important?	9
Collaboration	10
The interplay of systems.....	13
How Is P.I. Impacted by Socio-cultural Contexts?	14
Racial and cultural impacts.....	14
Economic impacts.....	16
The Influence of the School on P.I.....	18
Framework and Theory	21
Hoover-Dempsey and Sandler Parent Involvement Model	21
Critical Race Theory.....	30
This Study’s Conceptual Framework	31
Research Questions and Hypotheses.....	34
Research Questions.....	34
Hypotheses.....	34
CHAPTER 3 - METHODOLOGY.....	36
Research Design.....	36
PFI-NHES Sampling Strategy.....	37
PFI-NHES Sample	38

Current study sample	39
Variables.....	42
Measures in Study	44
Independent variable.....	44
Dependent variables	45
Moderator Variable	47
Child Race/ethnicity	47
Control Variables	47
Respondent characteristics	47
Child characteristics	48
Analysis Plan.....	49
Descriptive analysis.....	49
Bivariate analysis.....	50
Multivariate analysis.....	50
IRB Approval	54
CHAPTER 4 - RESULTS.....	55
Introduction	55
Descriptive Analysis	56

Bivariate Analysis Results	59
Multivariate Analysis Results	63
Research Question 1	67
Research Question 2	67
Research Question 3	68
Research Question 4	68
Research Question 5	71
Research Question 6	72
CHAPTER 5 - DISCUSSION AND IMPLICATIONS	75
Findings Summary	75
Comprehensive Special Education Services.....	76
Satisfaction with Special Education Services.....	78
Satisfaction with the School	80
Summary of Main Findings.....	81
Study Implications.....	82
Policy	83
Social Work Practice	84
Social Work Research	86

Strengths & Limitations	88
Strengths	88
Limitations.....	89
Conclusion.....	92
REFERENCES	94
APPENDICES	103
Appendix A: OLS Models for White Children Only.....	103
Appendix B: Illustration of Interaction Effects by Race	104
Appendix C: IRB Approval	112

LIST OF TABLES

1. Rates of Disability in PFI-NHES.....	41
2. Constructs Included in the Primary Study Variables.....	43
3. Variables Used in Linear & Multinomial Regression Models to Test Study Hypothesis.....	52
4.1 Variable Descriptions.....	57
4.2 Variable Descriptions.....	58
4.3 Bivariate Associations Between School-based P.I. and Outcome Variables.....	60
4.4 Bivariate Associations with Child Race and Outcome Variables.....	62
4.5 Multinomial Regression of Comprehensive Special Education Services & P.I.....	64
4.6 OLS Regression of Satisfaction with Special Education Services.....	65
4.7 OLS Regression of Satisfaction with the School.....	66
5.1 OLS Regression of Satisfaction with Special Education for White Children.....	103
5.2 OLS Regression of Satisfaction with the School for White Children.....	103

LIST OF FIGURES

1. Original Hoover-Dempsey Model.....	24
2. Revised Hoover-Dempsey Model.....	25
3. Hybrid Model of Parental Involvement.....	29
4. Relationships Tested in the Proposed Study.....	33
5. The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of White Children.....	104
6. The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Black Children.....	105
7. The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Hispanic Children.....	106
8. The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Other-race Children.....	107
9. The Relationship Between School-based P.I. and Satisfaction with the School for Parents of White Children.....	108
10. The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Black Children.....	109
11. The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Hispanic Children.....	110
12. The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Other-race Children.....	111

CHAPTER 1 – INTRODUCTION AND RESEARCH PROBLEM

Background

During the 2010-2011 school year, 49.5 million children were educated in our nation's public schools (National Center for Education Statistics, 2013b). Six and a half million, or 13%, of the aforementioned children received special education services (National Center for Education Statistics, 2012). By 2021-2022, it is projected that public school enrollment will increase to 53.5 million children (National Center for Education Statistics, 2013b). Thus, one can assume that the number of children receiving special education services will also increase.

In order to adequately serve students with special needs, school districts, principals, teachers, parents, and students collaborate to fulfill the objectives of the educational process. Objectives include, but are not limited to, ensuring students adequately progress through each grade level, promoting students' social adjustment, efficiently preparing students to successfully pass standardized tests and graduation exit exams, ensuring students graduate high school, and supporting students' navigation towards a college path (Allen-Meares, 2007). When providing special education to students with disabilities, however, these objectives may differ in nature and quality. Special education is defined as a "...specially designed instruction, at no cost to the parent, to meet the unique needs of a child with a disability..." (U.S. Department of Education, n.d.b.). The aforementioned instruction includes that which is conducted in the classroom, at home, in institutions and hospitals, in other settings, as well as during physical education (U.S. Department of Education, n.d.a.).

Substantial research posits that students' educational outcomes greatly improve when parents are involved in their child's education (Alameda- Lawson, Lawson, & Lawson, 2010; Fish, 2008; Hoover-Dempsey & Sandler, 1995; Scheer, & Gavazzi, 2009; Walberg, & Lai, 1999). Parental involvement (P.I.) is a key factor in the educational success of a student receiving special education or related services. Jackson and Epps (2000) contend that parent involvement (P.I.) reduces feelings of isolation and increases awareness of resources in relation to special education legislation and delivery. Parents and students have rights which ensure an appropriate quality education. Importantly, parents are viewed as members of the collaborative team that make special education determinations and develop education plans to buttress students' outcomes (United States Department of Education, n.d.b.).

Study Aims

The proposed study aims to explore school-based parental involvement and its association with the comprehensiveness of special education services, parental satisfaction with special education services, and parents' overall satisfaction with the school. In addition, the study assesses whether a child's race affects the comprehensiveness of special education services and the parental satisfaction with special education services. The aims will be addressed through a secondary data analysis of the Parent and Family Involvement in Education Survey (PFI-NHES). The PFI-NHES is suited for the study inasmuch it contains a nationally representative sample and has been utilized substantially by P.I. researchers. In addition, items and concepts which comprise the PFI-NHES are derived prominently from the P.I. literature base.

Significance of the Study to Research

A significant amount of literature focuses on P.I. Much of the literature informs schools of the means by which they can facilitate P.I. Many of the studies, however, are not empirical in nature, and neither is their central focus parent involvement in special education. These studies are quite often conceptual or "how-to's." Given that the educational system is driven by data and accountability measures, school level interventions and exploratory studies need to be conducted which provide further support for P.I.

The limited empirically based literature underscores the need for systematic research which addresses P.I. in special education. The proposed study contributes to the knowledge base in a number of ways. First, this study will address both P.I. and comprehensive special education services through sound data-based methodologies. This will provide generalizable information in efforts to improve the condition of P.I. in special education. Secondly, the study can either substantiate or refute previous authors' assertions on the associations between race, special education, and P.I. Specifically, the study will provide an in-depth picture of the interaction between child race, P.I., and special education.

Significance of the Study to Social Work Practice

School social workers often promote parent and family involvement. Other types of social workers who work with children receiving special education services may also influence P.I. For example, foster care social workers may participate in meetings to develop plans for special education services for children who transfer home placements (Stanley, 2012), agency-based case managers implement family mediation interventions for high school students transitioning out of special education (Balcazar, et al., 2012), and social workers who work in

supportive housing for homeless families may assist in increasing school attendance and obtaining previous school records related to special education (Hong & Piescher, 2012). Therefore, the topic of P.I. in special education has implications for social workers who work with special-needs children.

In addition to the above, P.I. is also important for several other reasons. First, promoting P.I. in special education ensures that schools comply with IDEA 2004 guidelines. Second, understanding parents' frequency and nature of involvement allows school administrators and faculty to engage them, thus further promoting involvement in the special education process. Third, P.I. increases awareness and knowledge of special education delivery, parental self-efficacy, and home-school collaboration (Resendez, Quist, & Matshazi 2000; Bickman, Heflinger, Northrup, Sonnichsen, & Schilling, 1998; Heflinger, Bickman, Northrup, Sonnichsen, & Schilling, 1998). Fourth, knowledge about the effects of P.I. allows school social workers and other school-related social service professionals to advocate for more P.I. in special education, as well as promote interdisciplinary collaboration.

Significance of the Study to Policy

Individuals with Disabilities Education Improvement Act of 2004. The Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) is the federal policy which outlines special education in the United States. IDEA 2004 does the following: (1) ensures children with disabilities are prepared for higher education, employment, or independent living; (2) safeguards the rights of parents and children; (3) assists states, school districts, and educational service agencies with providing an appropriate education to children with disabilities; (4) aids in implementing a comprehensively coordinated early intervention system for infants and toddlers with disabilities through multidisciplinary efforts; (5) makes certain that

parents and teachers have tools to improve the education of children with disabilities; (6) coordinates research preparation, dissemination, and support; and (7) ensures the effectiveness of efforts to educate children with disabilities (U.S. Department of Education, n.d.b.). In addition to the above, parents and students have a number of rights that ensure a free and appropriate, high quality education. Parents are also designated members of the collaborative multidisciplinary team whose responsibilities include determinations and development of educational plans (United States Department of Education, n.d.b.).

IDEA 2004 and P.I. The U.S. Department of Education's Office of Special Education Programs (OSEP) identified 20 indicators to ensure states are measuring and reporting their efforts to educate students with disabilities. Specifically, state education agencies are required to report their performance and progress to the OSEP. Indicator 8, Parent Involvement, assesses how schools facilitate the involvement of parents as a means to improve a child's special education services (U.S. Department of Education, n.d.).

In order to measure Indicator 8, states may engage in a number of activities such as using approved instruments developed by designated national centers, developing their own state instrument, or a combination of the above (The Right IDEA, 2009). School districts are required to administer these assessments to parents of children who receive special education services in their respective states. *The Indicator B8 Summary* reported that in 2009, 23 states disseminated surveys to all parents of children aged 3-21 who receive special education. The average response rate across all states was 27.9% (The Right IDEA, 2009).

Out of 50 states, 9 territories, and the District of Columbia, 10 states chose to administer one question regarding P.I. One state chose to ask two questions. Nineteen states used a Rasch analysis framework to determine positive responses. In addition, few states described specific

P.I. activities, but many did not mention issues of culture and diversity. On the other hand, four states (Kentucky, Indiana, Rhode Island, and Tennessee) critically analyzed their results to determine the technical assistance needed by school districts and parents to support P.I. (The Right, IDEA, 2009). The wide-ranging data reported by states on Indicator 8 further substantiates my claim that limited quantitative information exists regarding the impacts of P.I. in special education. Furthermore, the 2009 Indicator B8 Summary is the most recent report publicly provided by the OSEP.

Social Work and Special Education

In regards to the provision of special education, social work services include organizing and documenting social or developmental histories for children being identified or evaluated for disabilities; conducting group and individual counseling with children and their families; working to alleviate problems in the child's home, school, and community which threaten and diminish school adjustment; assembling resources within the school and community to enable an effective learning environment for children with disabilities; and assisting with the development of positive behavioral intervention strategies (U.S. Department of Education, 2004). Each of these services is provisioned under the related services principle of IDEA 2004. In addition to the above, school social workers are members of the multidisciplinary team which evaluate the recommendation, eligibility, and determination of special education diagnoses and the implementation of special education programming. Furthermore, the NASW's School Social Work group established 11 standards for school social work practice to guide the needs of students, parents, and families (NASW, 2012). Standards for school social work practice include ethics and values, qualifications, assessment, intervention, decision making and practice

evaluation, record keeping, workload management, professional development, cultural competence, interdisciplinary leadership and collaboration, and advocacy (NASW, 2012).

CHAPTER 2 - LITERATURE REVIEW

What is Parental Involvement?

The original intent of the P.I. principle in federal special education policy was to support the ability of all parents to participate, influence, and ensure a quality special education for their child (Turnbull, Leonard, & Turnbull, 1981). P.I. has been defined as parents' interest, knowledge, and willingness to be involved in the daily activities of their child (Wong, 2008). P.I. is also a mutual partnership between parents, teachers, and the school to collaboratively educate the child and aid in the learning process (Staples, & Diliberto, 2010). Further, P.I. in special education has been empirically operationalized as parent activities within the school (Overstreet, Devine, Bevans, Efreom, Yael, 2005); passive engagement with school personnel, being adversarial, or advocating for their child (Trainor, 2010); engagement in school-sponsored and home-based activities that promote educational outcomes (Zhang, Hsu, Kwok, Benz, & Bowman-Perrott, 2011); and has been found to be shaped by cultural capital (e.g., various education materials and knowledge to inform actions) and social capital (e.g., relationships and social networks) (Trainor, 2010).

Why is Parent Involvement Important?

When parents are involved, anecdotal evidence and some research illustrates that children have better educational outcomes. For instance, P.I. in special education ensures quality special

education services for children, promotes greater educational gains and skills for children with disabilities, and increases involvement in creating Individualized Education Plans (IEPs) (Spann, Kohler, Soenksen, 2003). Moreover, P.I. facilitates collaboration between multiple partners and incorporates the interplay of systems.

Collaboration. Collaboration consists of the partnership and working relationship between school administrators, general and special education teachers, parents, school social workers, and other service providers. Similarly, the concept of a therapeutic alliance encompasses relationships amongst collaborating individuals as well as the larger systems in which they operate (e.g., the family system, clinical system, and educational system) (Feinstein, Fielding, Udvari-Solner, Joshi, 2009; Manso, & Rauktis, 2011). Accordingly, a working alliance is strongly associated with engagement in interventions and therapy (Jenson, Pine, Spath, & Kerman, 2009; Altman, 2008; Yatchmenoff, 2005), positive psychological changes (Florsheim, Shotorbani, Guest-Warnick, Barratt, & Hwang, 2000), and therapeutic success (Howe, 2010; Kondrat, & Early, 2010). Thus, it can be expected that a working alliance would be positively associated with educational outcomes for children who receive special education services.

In a study which sought to evaluate a group-based manualized parent education program administered to parents of children with developmental delays, Farber and Maharaj (2008) illustrated the power of a working alliance. Parents were referred to the program, Positive Alternatives for Families (PAF), through social work or mental health services. PAF was conducted once a week for three hours over a 13-week period. The program sought to create positive changes when raising children with developmental delays through the domains of

empowerment, emotional outlook, parent-child interactions, and community involvement. Specifically, this was accomplished through parent education, discussions, role plays, and modeling. Explanatory variables consisted of issues related to the child's disability such as the impact of the disability on the child's education, access to technology for functioning, medication management, interactions with the school to develop the IEP, positively advocating during the IEP meeting, conflict and anger management, and financial resources (Farber, & Maharaj, 2008). Outcome variables were empowerment, emotional outlook, parent-child interaction, and community involvement (Farber, & Maharaj, 2008). A pre-experimental one group pre- and post-test design was employed. Results depicted a 22% increase in parents' empowerment score. All parents reported attending IEP meetings after the intervention. In addition, they reported asking questions about their child's development during the goal planning stage of the IEP meeting. Furthermore, parents were better at managing household tasks and caring for their children post-test, reported significant positive changes on hope scales, showed statistically significant improvement in parent-child interactions (e.g., ate as a family, attended cultural events, listened to opinions), and increased community involvement (Farber, & Maharaj, 2008).

Collaboration between parents and school professionals is imperative. School social workers' training in human behavior and social environments, advocacy, consultation, and policy allows them the expertise to substantially facilitate the parent-professional relationship as well as contribute to multidisciplinary collaboration (Ouellette, & Wilkerson, 2008).

Shared decision making. It is of critical importance to develop a sense of equality between school professionals and parents. The knowledge and expertise of parents are equally as important as that of education professionals' inasmuch shared decision making is essential for

collaboration in the special education planning process (Salembier, & Furney, 1997; Simpson, & Fielder, 1989; Staples, & Diliberto, 2010). Esquivel, Ryan, and Bonner (2008) explored parents' perspectives of experiences in special education team meetings. Parents were members of the school district's special education advisory committee. A two-question open-ended survey was administered which asked parents to describe meetings they considered were the most positive and those which were the most negative. Parents were asked to describe the context of the meeting, including what were the most positive or negative aspects, specific behaviors exhibited, or feelings, etc. Results depicted five thematic categories which included: (1) meeting context and organization (e.g., smaller team meetings which were organized and also facilitated by one individual); (2) relationship factors (e.g., the past and current relationships between the parent and school staff, the relationships between the school administrators and staff, and the relationships between the child and professionals); (3) communication factors (e.g., parents being told they are team members and maintaining an honest dialogue); (4) problem solving factors (e.g., flexibility in planning, creating challenging goals, and taking responsibility for the child's educational outcomes); and (5) parent emotional factors (e.g., feelings of anxiety and nervousness regardless of whether past team experiences were positive). Findings from this study suggest parents want to be involved in meaningful ways. Participants were members of an advisory team, therefore one can assume they were empowered and possessed the appropriate skills to effectively advocate for their children. Moreover, it is possible that parents in this study may not experience the barriers which often limit P.I. such as feelings of alienation, a lack of knowledge, and a lack of time for involvement. Fortunately, for parents who do experience these barriers, school social workers often serve as liaisons between parents and schools by ensuring that parents are equal partners in the special education process. This is accomplished through

communicating the school's needs with parents as well as informing parents of procedural processes.

The interplay of systems. When addressing P.I. in special education, the home and community contexts cannot be ignored. It is also important to note that P.I. extends beyond volunteering in the school or classroom. Epstein (2001) proffers six types of P.I., thus connecting the aforementioned contexts. They consist of parenting, communicating, volunteering, learning at home, decision making, and collaborating in the community. Social workers often facilitate the aforementioned activities. Munn-Joseph and Gavin-Evans (2008) conducted a qualitative study which sought to explore the involvement perspectives of three low-income African-American families whose children had been receiving special education services for at least one year. In particular, the study explored the roles schools and families play, the interactions with teachers, and the interactions at home which reinforce the educational objectives of the school. A constant comparative analysis identified a number of themes. Results suggest parents shared the same educational vision as the school; however, they questioned whether the school was committed to that vision. Additionally, themes indicate parental expectations are based on personal experiences; parents feel schools often focus on negativity such as misconduct; and parents rely heavily on social and institutional networks, such as family and friends, for guidance on parenting and educational decision making. Parents in this study differed in their involvement behaviors across various social and institutional networks. Although social workers contribute to the interaction between parents, teachers, and the school, this study did not note or integrate the role of social workers or other social service professionals.

How Is P.I. Impacted by Socio-cultural Contexts?

Racial and cultural impacts. Special parent populations, such as minority parents or those living in rural environments, often have unique circumstances which adversely influence P.I. (Harry, 2002). For example, African-American parents often feel alienated by the educational system. Cultural and linguistic differences contribute to this alienation. In addition, historical events, such as segregation, have caused an ever-present distrust in the education system for the African-American community. As a result, parents do not understand how their input may be valuable to their child's education. They may confuse teaching style with the learning abilities of their child, experience perceived and real discrimination, and/or encounter feelings of fear and depression when interacting with school professionals (Bempechat, 1992; Brandon, et al., 2010; Epstein, 1996; Harry, 1992; Thompson, 2003). On the other hand, the feelings of alienation and discontent may drive parents to be more involved in their child's special education planning. In a three-year longitudinal study which sought to explore African-American parents' involvement for children in pre-K through 1st grade, Allen, Harry, and McLaughlin (1995) discovered parents initially believed their children were placed in special education classes to "catch up" with their same aged peers. Over a three year period, those initial thoughts evolved into parental disillusionment. Parents reported they felt their children were inappropriately placed in certain classes, were isolated from being educated in the general education environment, and did not agree with the special education label(s) assigned to their child. Thus, parents reported influencing decisions through repeatedly requesting special assessments and reviews until their child's special education services and programming were changed.

Similar to the above, families living in rural environments may question the cultural appropriateness of strategies used in the educational decision-making process. Parents' beliefs about the best practices for their children must be part of informed decision making (Trussell, Hammond, & Ingalls, 2008). In a study which compared P.I. in rural and urban families, almost half of the rural parents in the study did not feel comfortable voicing their opinions when they disagreed with information presented in special education meetings (Trussell, Hammond, & Ingalls, 2008). Unfortunately, many rural families have less educational resources available to them such as parent support programs, libraries, advocacy organizations, etc. (Trussell, Hammond, & Ingalls, 2008). Resources such as these would give parents the knowledge of available educational options and also facilitate their involvement in the educational decision making process.

The bedrock of P.I. presumes that there is a shared understanding of its benefits; meaning, the cultures of all parties involved value equality, individualism, and the need to exercise rights. Although this may be construed as social justice, cultural nuances may cause individuals to interpret these attributes differently. These values are not always shared by individuals of different cultures and backgrounds (Lo, 2012). Cultural and linguistic interpretations may prevent many families from fulfilling their roles in the P.I. process (Baker, Sigmon, & Nugent 2001), especially when the child receives special education services or is being evaluated for special education placement. In addition, these cultural nuances may differentially influence factors associated with P.I.

Disproportionality. Disproportionality is the overrepresentation of minorities, particularly African-Americans and Latinos, in special education (Ahram, Fergus, & Noguera, 2011; Beratan, 2008; Brandon, et al., 2010). Causes of disproportionality include social and

political inequalities present in society which are further perpetuated in school districts (Blanchett, 2006; Patton, 1998), educational practices that are unintentionally discriminatory or bias (Ahram, Fergus, & Noguera, 2011), limited opportunities for learning prior to students being referred for special education (Harry & Klinger, 2006), and cultural deficit thought processes which pathologize minority students and students of low socioeconomic status. In 1997, the overrepresentation of minority students in special education was first addressed in the reauthorization of the Individuals with Disabilities Education Act. IDEA 2004 further recognized disproportionality and provided concrete evidence of its implications. Specifically, IDEA 2004 illustrated that more minority students receive special education services than would be expected based on the percentage of minority students in the general school population. In comparison to their White peers, African-American students are more often identified as having intellectual disabilities and severe emotional disturbances; and schools with predominately White students and teachers placed disproportionality higher numbers of their minority students in special education (U.S. Department of Education, 2004).

Economic impacts. Socioeconomic status (SES) is often an important influence on P.I. Socioeconomic factors contribute to the nature and extent of P.I. or lack thereof. Research has shown that parents of higher SES are typically more frequently involved than economically disadvantaged parents; whereas, economically disadvantaged parents may not have affordable transportation to get to and from the school, may be working multiple jobs, and may move to different households often (Lawrence, Lawther, Jennison, & Hightower, 2011; Teasley, 2004).

Although SES does not explain why parents are or are not involved, it provides insight on the nature of and barriers to P.I. As mentioned previously, P.I. requires the time, energy, and commitment of parents. Economically disadvantaged parents often experience a number of life

circumstances which limit or prohibit them from being involved in their child's education such as arduous work schedules, a lack of transportation, or insufficient child care (Hill, & Taylor, 2004). As a result, these parents often engage in less structured P.I. which often includes unscheduled school visits and informal conversations with staff and administrators. In addition, many economically disadvantaged parents may lack the appropriate reading and comprehension skills to participate in the special education process. This can perpetuate the lack of knowledge as well as exacerbate feelings of alienation and isolation. Unfortunately, non-traditional P.I. and the variability in economically disadvantaged parents' involvement leaves many teachers, school administrators, and school staff to assume parents lack concern or care for their child's education (Kroeger, 2007).

At the same time, P.I. can be a protective factor for children of economically disadvantaged families who experience multiple stressors (Shumow, Vandell, & Posner, 1999). Research has shown that the extent of P.I. in relation to SES is best conceptualized as the availability of resources; meaning, involvement opportunities can be created by teachers, school social workers, and administrators to accommodate parents (Hoover-Dempsey, et al., 2005). In a study which sought to test whether parental economic stress and parents' perceptions of their neighborhood context predicted P.I. amongst 154 parents whose children attended Head Start programs, Waanders, Mendez, and Downer (2007) found that parents who reported having higher economic stress and disorderly neighborhoods were rated by teachers as having a low quality parent-teacher relationship. On the other hand, parents who perceived their neighborhoods as supportive and cohesive reported being more involved in their child's school. These findings provide evidence for the aforementioned assertion of creating involvement opportunities for economically disadvantaged parents.

Living in poverty can produce demographic and psychological barriers to P.I. The traditional model of P.I. rests on the foundation that P.I. is essential for helping the school promote the student's education. Incorporating a broader conceptualization of P.I. which encompasses social cohesiveness and neighborhood contexts takes into account the unique needs of low-income families (VanVelsor, & Orozco, 2007; Lawson, 2003). Thus, resources can be mobilized to create innovative P.I. initiatives and opportunities which seek to address and combat the barriers encountered by the economically disadvantaged population.

The Influence of the School on P.I.

Educational practices are widely impacted by school structures. School-level factors are integral in encouraging, facilitating, and ensuring P.I. Marschall (2006) investigated schools' efforts to involve Latino parents whose children attend Chicago Public Schools. Specifically, the study sought to do the following: address schools' actions for supporting parents, facilitate involvement and engagement, and create strong parent-school relationships; investigate schools' effectiveness for fostering P.I.; and identify whether schools with high P.I. and effective P.I. initiatives perform better than those with low P.I. and less effective initiatives. A data set was constructed which consisted of information on Local School Council Membership from the National Association of Latino Elected Officials, student demographics and school characteristic data for the Chicago Public Schools obtained from the Illinois State Board of Education, and teacher surveys on school practices for outreach and engagement with parents and communities which was obtained from the Consortium on Chicago School Research.

Outcome variables included teacher cultural/community awareness and school initiated efforts to involve parents. Explanatory variables consisted of school organization aspects, governance and representation, and school characteristics/student demographics. Given that data

was compiled to formulate a dataset, items were selected which represent each of the above variables. Effective school organization was represented by instruments which addressed collective responsibility, reflective dialogue, and principal-teacher trust. Governance and representation included measures which indicated the number of Hispanics and Latinos on the Local School Councils and a survey item which explored teachers' opinions of the Local School Council's contribution to improving parent and community involvement. Lastly, school characteristics and student demographics were represented by the school's grade levels, number of students enrolled, attendance rate, percentage of low-income students, and the percentage of Latino and Hispanic students.

Results indicated the Local School Council outreach increased P.I. In addition, collective responsibility, reflective dialogue, and principal-teacher trust had strong direct effects on promoting P.I. Similarly, teacher awareness and school effort measures positively affected P.I. These findings suggest the importance of schools for influencing P.I. Although Latinos are a minority in the United States and often experience the brunt of oppressive practices, Latinos in this study may feel more empowered to be involved in their child's education inasmuch non-U.S. citizens are afforded the right to vote and run for office in Local School Council elections.

Similar to the above study, Feuerstein (2000) explored the relationship between school-level factors and P.I. Using the 1988 wave of the National Education Longitudinal Study, the sample consisted of 24,599 eighth grade students, their parents, and principals. P.I. served as the outcome variable. Specifically, nine P.I. categories were formulated which included students' talk with parents about school, parents' contact with school, parents' volunteerism, parents' expectations, parents' participation in PTO, parents' talk with students about school, parents' visits to school, structure of home-learning environment, and parents' involvement in grade-

placement decision. Explanatory variables consisted of student-teacher ratio, number of minority teachers, approach to discipline, teacher morale, academic focus, and extent to which parents are contacted. The researcher controlled for demographic variables (i.e., race, sex, English language proficiency, free lunch, etc.).

Results indicated that control variables caused much of the variation in the individual P.I. factors of students talk with parents about school, parents volunteer at school, parents participate in parent-teacher organization, parents have high expectations, and parents participate in grade placement decisions. This finding suggests that P.I. is widely affected by causes uncontrolled by schools. Other results indicate that school level factors account for a portion of the variance in P.I. For instance, parental contact with schools was influenced by a number of school level factors which included schools initiating contact because of student behavior, grades, and requests to volunteer. In addition, these variables were strongly associated with greater parent volunteerism in the school. Schools' efforts to contact parents was also positively associated with parent participation in parent-teacher organization. On the other hand, the same Feuerstein study found that school initiated contact to obtain general information from parents was negatively associated with parental contact with schools. Similarly, school initiated contact to obtain general information was negatively associated with parent participation in the parent-teacher organization. Findings from this study show that schools' efforts to meaningfully communicate with parents strongly influence P.I. Increased contact with parents illustrates to parents that schools have a vested interest in their children and that they recognize the importance of parental roles in the educational process.

Although schools are integral in ensuring P.I., limited empirical literature exists which explores and or evaluates schools' influences on P.I. A thorough review of academic databases

indicated that much of the literature related to school level factors and P.I. was myopic, focusing on particular educational issues such as bullying (Waasdrop, et al., 2011; Zablotsky, et al., 2012), identity development (Nassar-McMillian, Karvonen, Perez, Abrams, 2009), and school connectedness (Kelly, et al., 2012). On the other hand, many conceptual pieces exist which inform schools of the means to which they can facilitate P.I.

Framework and Theory

Hoover-Dempsey and Sandler Parent Involvement Model

Psychologists Hoover-Dempsey and Sandler conducted extensive research which sought to understand parent contributions to student educational outcomes and explain their influence on educational and parental practices (Hoover-Dempsey, & Sandler, 1995). Resultantly, the Hoover-Dempsey and Sandler Model for Parent Involvement was constructed in 1995.

Grounded upon literature in education, developmental psychology, educational psychology, and social psychology, the Hoover-Dempsey and Sandler Model for Parent Involvement applies popular theories such as role theory (Fisher, & Gitelson, 1983), self-efficacy theory (Bandura, 1977; Bandura, 1996), theory of overlapping spheres of influence (Epstein, 1992), and typologies of parental involvement (Epstein, 1992). Over a 10 year period, the model was revised through qualitative interviews, scale development, and quantitative research (Hoover-Dempsey, & Sandler, 1997; Hoover-Dempsey, & Sandler, 2005).

Original model. The Hoover-Dempsey and Sandler Model for Parent Involvement (1995, 1997) theorizes five levels of parental involvement which build upon one another (i.e., they are sequential non-isolated concepts). The levels include Level 1- Parental involvement decision; Level 2 - Parents' choice of involvement forms; Level 3 - Mechanisms of parental involvement's influence on student outcomes; Level 4 - Tempering and mediating variables; and

Level 5 - Child or student outcomes (see Figure 1). Within each level are concepts. At Level 1, parents' basic involvement decision is influenced by four psychological contributors which include parent's construction of the parental role, parent's sense of efficacy for helping the child do well in school, general invitations and demands for involvement from the school, and general invitations and demands for involvement from the child. At Level 2, parents' choice of involvement forms are influenced by contextual factors such as specific domains of parents' skills and knowledge, the demands on parents' time and energy, and specific invitations and demands from the child and school. Level 3 illustrates how parents specifically engage and affect educational outcomes through identifying mechanisms such as modeling, reinforcement, and instruction. At Level 4, parents' actions are mediated by their child's developmental needs and the school's expectations. These variables include parents' use of developmentally appropriate strategies and the fit between involvement activities and the school's expectations. Lastly, Level 5 is comprised of child and student outcomes which include their skills, knowledge, and personal sense of efficacy for doing well in school.

Revised model. The 2005 version of the model has been described as a theoretical model and an analytic framework (Walker, et al., 2005) (see Figure 2). It also proffers five levels; however, many concepts have been combined into other levels. For instance, Level 1 contains three overarching concepts which were formally separated across Levels 1 and 2. They include personal motivation, invitations, and life context. Each concept is influenced by psychological factors and contextual factors. Specifically, personal motivation is influenced by parental role construction and parental efficacy. Parental role construction is operationalized as a "belief-only construct," whereas the behavioral component was replaced by the concept of parents' beliefs about role activities and parents' valence towards the school (i.e., parents' feelings about school

in relation to their personal experiences as a student). Parent perceptions of invitations from others are influenced by general school invitations and specific invitations from the child and school. Parents' life context is defined by their knowledge and skills for involvement, time and energy (such as family and employment demands), and family culture. These variables moderate the relationship with parents' motivational beliefs, how they perceive invitations for involvement, and their actual forms of involvement. New to the Hoover-Dempsey and Sandler Model of Parent Involvement lies a sub-level, parent involvement forms, between Levels 1 and 2. Parent involvement forms is defined by their values, goals, etc.; home involvement; school communication; and school involvement. Level 2, parent mechanisms of involvement, illustrates the means through which parents engage with their child. Mechanisms include encouragement, a new concept in the 2005 model, modeling, reinforcement, and instruction. Level 3, child perceptions of parent mechanisms, was added in the revision. At this level, parents' actions such as encouragement, modeling, reinforcement, and instruction are mediated by the child's perceptions. In turn, their perceptions lead to Level 4 - Student attributes conducive to achievement. Contextual factors which contribute to this level are academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy knowledge and use, and social self-efficacy for relating to teachers. Lastly, Level 5 is comprised of student achievement.

Figure 1
Original Hoover-Dempsey Model

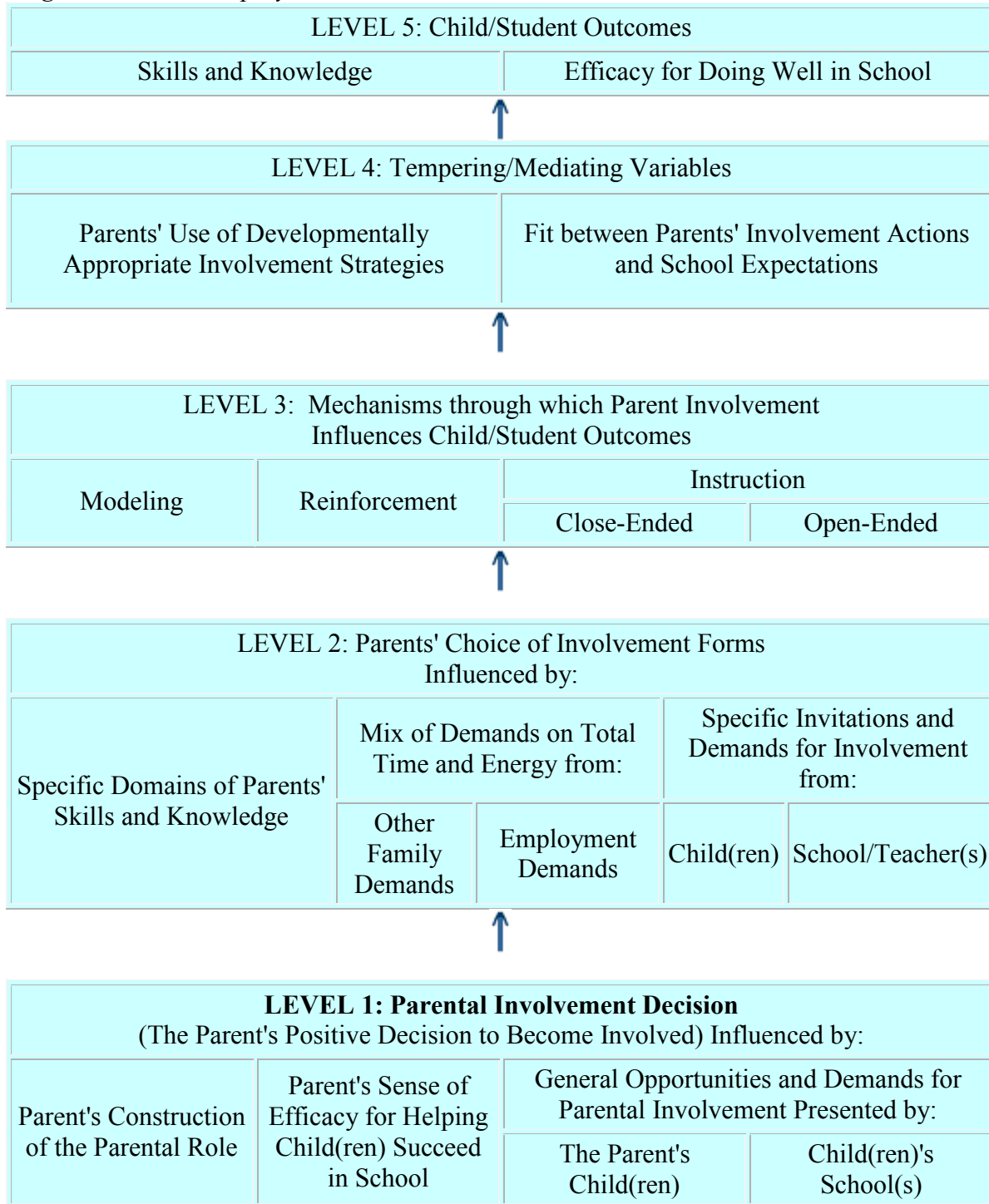


Figure 1. Original model of parental involvement. Adapted from “Why do parents become involved in their children’s education?” by K. Hoover-Dempsey and H. Sandler, 1997, *Review of Educational Research*, 67(1), p. 4. Copyright 1997 by the American Educational Research Association.

Figure 2
Revised Hoover Dempsey Model

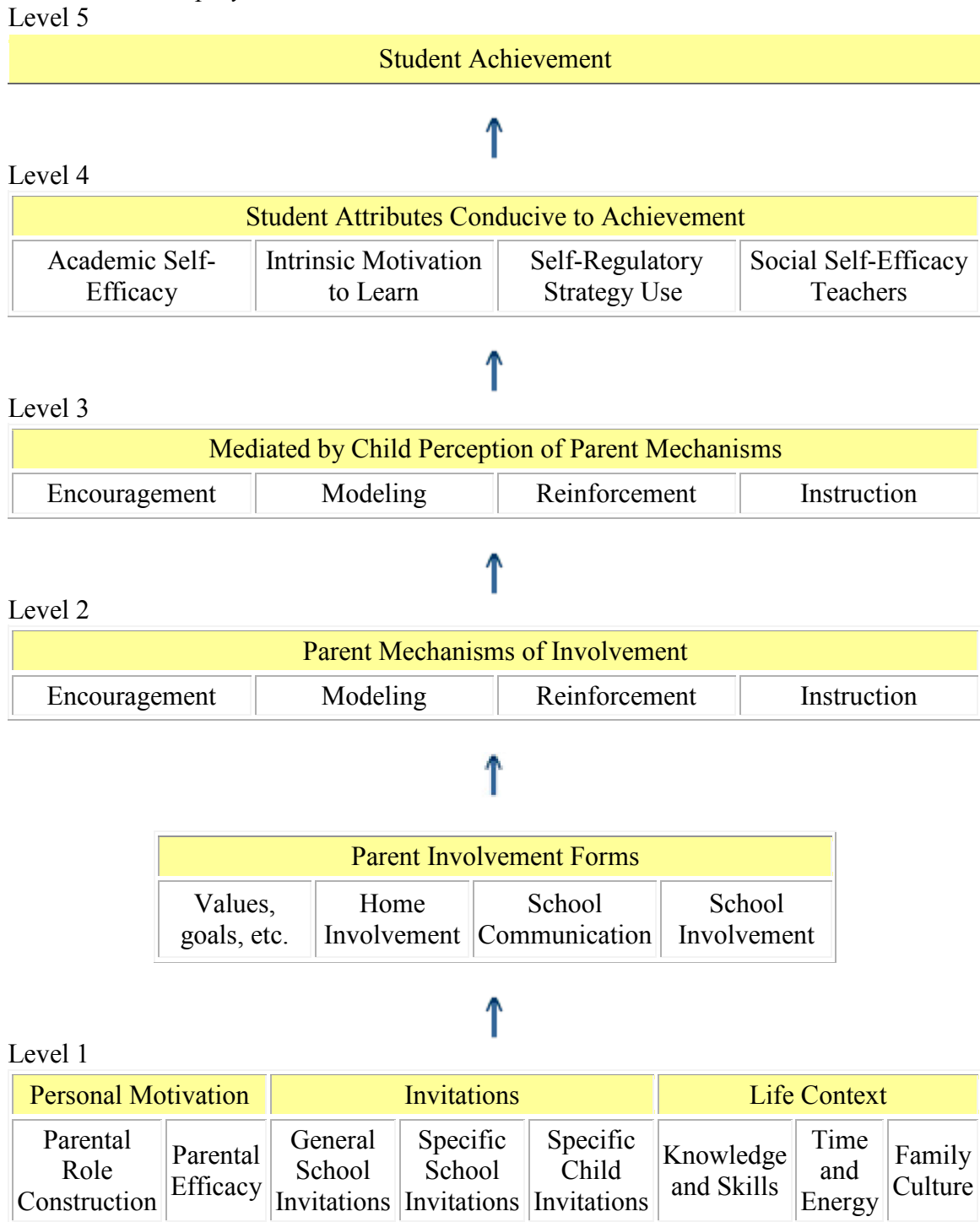


Figure 2. Revised model of parental involvement. Adapted from “Why do parents become involved? Research findings and implications” by K. Hoover-Dempsey, J. Walker, H. Sandler, D. Whetsel, C. Green, A. Wilkins, and K. Closson, 2005, *The Elementary School Journal*, 106(2). Copyright 2005 by The University of Chicago Press.

Hybrid model. The applicability of the Hoover-Dempsey and Sandler Model for Parent Involvement to the special education population is uncertain inasmuch pertinent information related to special education evaluation, determination, and delivery is not included. Furthermore, the model has not been applied to other high risk areas such as mental health disorders in adolescents, adolescent substance abuse, or adolescents with medical conditions. On the other hand, to my knowledge, no other empirically-tested or comprehensive framework regarding P.I. in general and or P.I. in special education exists. Thus, the Hoover-Dempsey and Sandler Model can initiate the practice of theoretically analyzing and exploring P.I. in special education.

A combination of levels from the 1997 and 2005 models are most appropriate because each of their scopes contain information pertinent to special education. In particular, Level 1 (i.e., personal motivation, invitations, and life context), and the sub-level (i.e., parent involvement forms) from the 2005 model; Level 4 (i.e., tempering and mediating variables) from the original model; and Level 5 (i.e., student achievement) from the 2005 model are fundamentally germane to P.I. in special education (see Figure 3). Level 1 from the 2005 model is most appropriate inasmuch it provides a clearer representation of overarching concepts for P.I. in special education. Important concepts include parents' perceptions of invitations for participation from others (e.g., parents being reminded about and or encouraged to attend IEP meetings), their beliefs in whether or not their involvement will produce desired outcomes (e.g., parents beliefs that their attendance at special education team meetings will secure valuable educational services for their child), and what parents believe their responsibilities are in regards to their child's education (e.g., parents believe they are responsible for ensuring their child's educational success). In addition to the above, family culture is an added concept under the life context construct. From a social work perspective, this concept is a point of interest given social

work's orientation toward culture, diversity, and ecological systems. The 1997 model does not take this important feature into account.

The sub-level from the 2005 model, parent involvement forms, includes parents' values and goals, home involvement, school communication, and school involvement. These variables are germane to special education because they provide an understanding of the means to which parents participate in their child's special education determination, planning, etc. For example, if a parent's only involvement form includes home involvement, it would be unlikely to expect them to attend every special education and or IEP team meeting; given they do not engage in school communication and school involvement.

Level 4 from the 1997 model (tempering and mediating variables) is applicable to P.I. in special education because it encompasses the fit between parents' involvement actions and the school's expectations. IDEA 2004 requires parents be involved in the special education process. Given that parents are expected to attend meetings which determine their child's special education eligibility and provide input on their IEPs, it is critical to explore and determine whether or not parental actions coincide with the school's expectations.

Lastly, Level 5 from the 2005 version is a better fit for P.I. in special education than the Level 5 in the 1997 version. The 2005 model defines Level 5 as student achievement. In 1997, Level 5 was defined as child or student outcomes and operationalized as a child's skills, knowledge, and efficacy for doing well in school. In the 2005 version, student achievement was not specifically operationalized. This allows researchers to use various measures to operationalize the construct. Fortunately, this is beneficial for the model's application to special education given that a child's academic abilities vary greatly depending on their special education diagnosis as well as their behavioral, social, and emotional needs. Furthermore, the

use of varied methods to measure student achievement (as opposed to skills, knowledge, and efficacy for doing well) supports the goals of special education as well as the underlying purpose of an IEP—an individualized plan to support and ensure the quality education of children with disabilities.

Figure 3
Hybrid Model of Parental Involvement

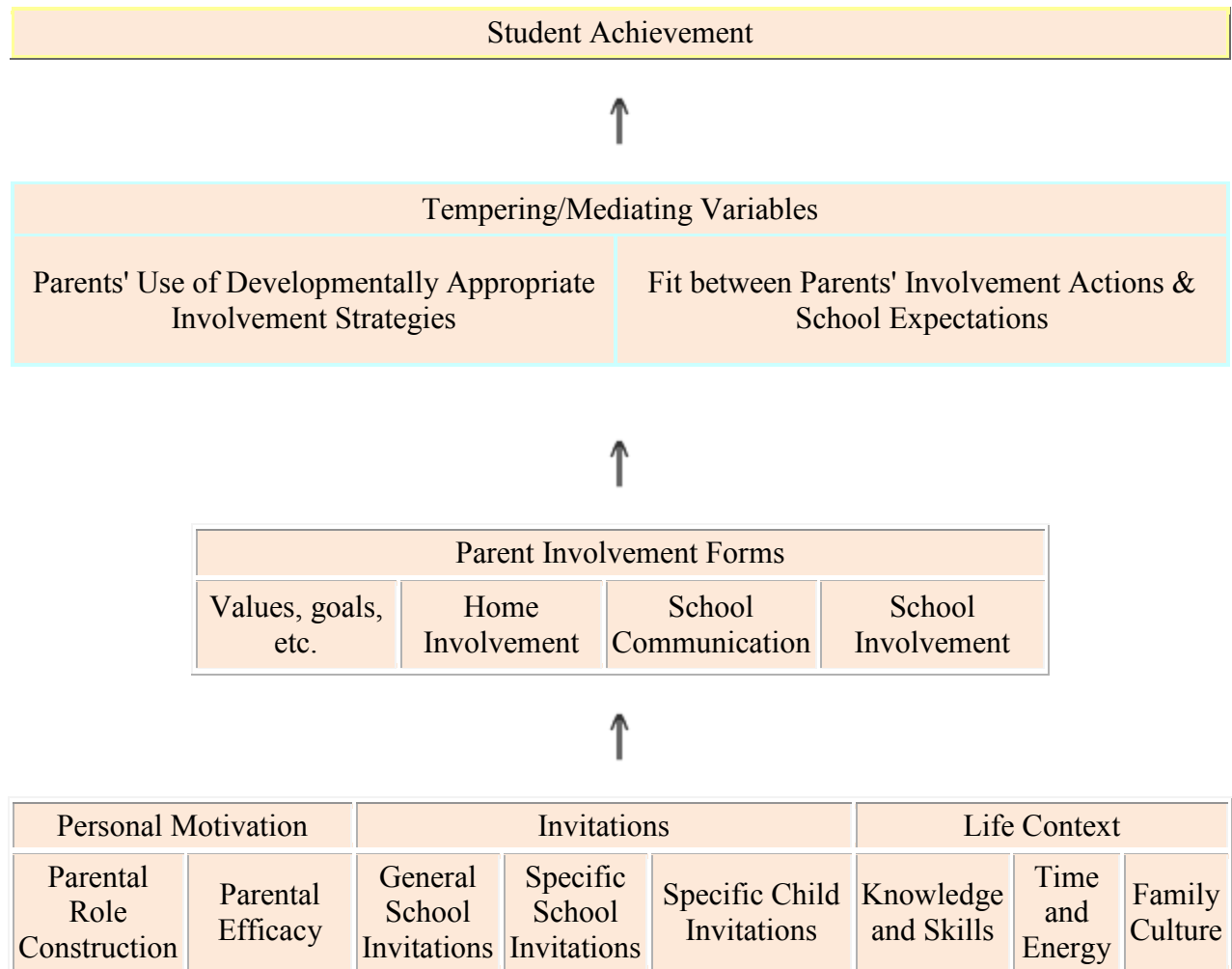


Figure 3. Hybrid model of parental involvement. Adapted from “Why do parents become involved in their children’s education?” by K. Hoover-Dempsey and H. Sandler, 1997, *Review of Educational Research*, 67(1), p. 4. Copyright 1997 by the American Educational Research Association; and “Why do parents become involved? Research findings and implications” by K. Hoover-Dempsey, J. Walker, H. Sandler, D. Whetsel, C. Green, A. Wilkins, and K. Closson, 2005, *The Elementary School Journal*, 106(2). Copyright 2005 by The University of Chicago Press.

Critical Race Theory

Critical race theory, or CRT, was founded in efforts to deconstruct institutional racism. The underlying premise of the theory states that race is a normal fixture in our lives whereas institutional, structural, and systemic racism prevail in the dominant culture (Bell, 1987; Delgado, 1995). For parents and children of color with disabilities, at either the individual decision making levels, or institutionalized levels, racism may be operating in a way that results in less (or more) comprehensive special education services and less satisfaction with these services and the school. Unfortunately, students of color can experience disparaging access to special education related resources. For instance, in comparison to their White peers, when diagnosed with learning disabilities, African-American students have much more limited access to general education, fewer quality services, fewer post-secondary options, and a lower overall quality of life (Blanchett, 2010). Mazama and Lundy (2012) found that African-American parents often expressed that racism covertly led to unnecessary referrals for special education. Although their study investigated parent's choices to homeschool as a form of protecting their children from institutional and individual racism, one parent in their study stated that she received demands for her kindergartner to be tested for special education. Subsequently, her child was diagnosed with an intellectual disability. The school wanted to place the child in a self-contained (i.e., segregated) classroom for children with severe and profound disabilities. The parent refused, remained consistently involved, and fought to keep her child in mainstream education (i.e., educated with students with and without disabilities), stating, "I am his advocate."

Major tenants of CRT include intersectionality, white privilege, essentialism, microaggressions, and social justice (Crenshaw, Gotanda, Peller, & Thomas, 1995; Delgado,

1995; Ladson-Billings, & Tate, 1995). Intersectionality describes the combination of how race, sex, class, national origin, and sexual orientation play out in society. White privilege suggests that there are social advantages associated with being a member of the dominant culture. Essentialism refers to a process of reduction, whereby one group's experience becomes the experience of a sub-group (Delgado, 1995). Thus, all oppressed people now experience oppression; however, the degree to which the sub-group is oppressed and the type of oppression experienced will vary. Microaggressions refer to the acts which exacerbate and perpetuate racism. These acts can be purposeful or unconscious (Delgado, 1995). Quite often, microaggressions derive from stereotypical assumptions passed through cultural heritage. CRT scholars' methodologies and specific ideologies may vary, especially depending on the discipline. However, all CRT scholars maintain the following interests: (1) understand how white supremacy subordinates people of color and how this system has been maintained over time in America, and (2) seek to alter the connection between law and racial power. It is easy to see how each of these tenants could affect the relationship between P.I. in special education and perceptions of special education services.

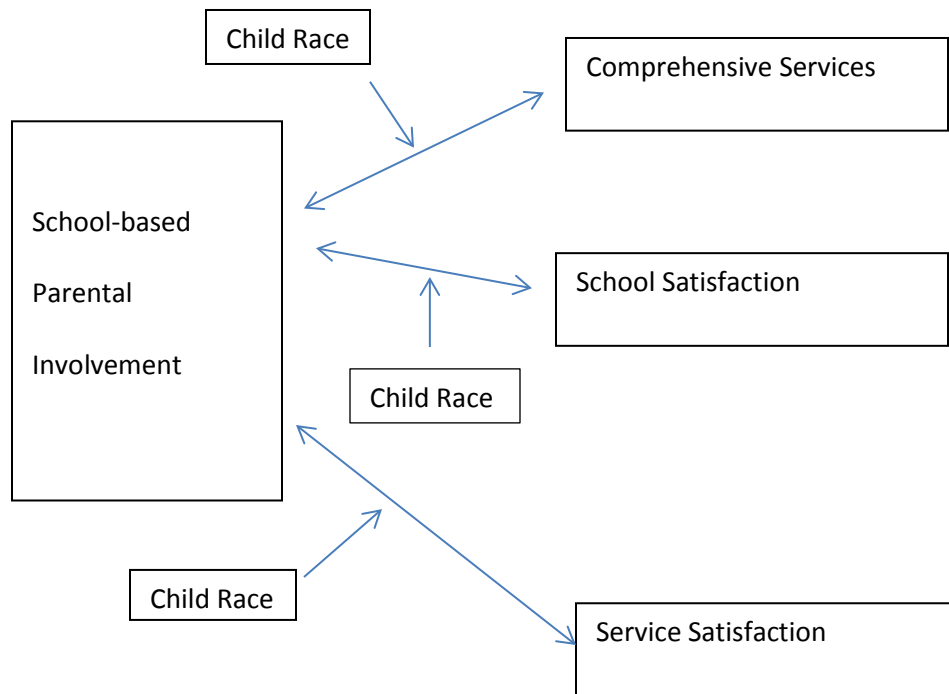
This Study's Conceptual Framework

Many researchers have studied factors which affect P.I. The Hoover-Dempsey and Sandler Parent Involvement Model addresses influences on P.I. as well as how P.I., along with other factors, affects academic achievement. The model, however, does not speak to the quality of services or the comprehensiveness of services provided by a school. Few researchers have specifically investigated potential associations between P.I. and service quality for students in special education or parental satisfaction with these services. Therefore, further study is

warranted to ascertain whether P.I. is associated with the comprehensiveness of special education services, satisfaction with services, and satisfaction with the school.

Parental satisfaction with special education services and parent's satisfaction with the school are proxy measures for the quality of special education services and overall school quality. These measures allow the investigation of the missing link between P.I. and special education. Furthermore, one may question whether this missing link may differ by race. For example, the interaction of race implicitly suggests that parents of one race may exhibit more P.I. because they are satisfied with their child's special education. For other races, the contrary may be true. The proposed study will seek to investigate the aforementioned links. Relationships are illustrated below (See Figure 4).

Figure 4
Relationships Tested in the Proposed Study



Research Questions and Hypotheses

Research Questions

The current study seeks to answer the following questions:

1. Is school- based P.I. associated with the comprehensiveness of special education services?
2. Is school-based P.I. associated with parental satisfaction with special education services?
3. Is school-based P.I. associated with parental satisfaction with the school?
4. Is the relationship between school-based P.I. and the comprehensiveness of special education services moderated by race?
5. Is the relationship between school-based P.I. and parental satisfaction with special education services moderated by race?
6. Is the relationship between school-based P.I. and satisfaction with the school moderated by race?

Hypotheses

Coinciding with the aforementioned research questions, hypotheses are described below:

- H₁: The greater the school-based P.I., the more comprehensive will be the special education services received.
- H₂: The greater the school-based P.I., the more parents will be satisfied with their child's special education services.
- H₃: The greater the school-based P.I., the more parents will be satisfied with the school.
- H₄: The relationship between school-based P.I. and comprehensive special education services will differ by race: For parents of White children, school-based P.I. will be positively associated

with comprehensive special education services; for parents of Black children, school-based P.I. will be negatively associated with comprehensive special education services.

H₅: The relationship between school-based P.I. and satisfaction with special education services will differ by race: For parents of White children, school-based P.I. will be positively associated with satisfaction with special education services; for parents of Black children, school-based P.I. will be negatively associated with satisfaction with special education services.

H₆: The relationship between school-based P.I. and satisfaction with the school will differ by race: For parents of White children, school-based P.I. will be positively associated with satisfaction with the school; for parents of Black children, school-based P.I. will be negatively associated with satisfaction with the school.

CHAPTER 3 - METHODOLOGY

Research Design

The current study employed a cross-sectional secondary data analysis. Data was derived from the Parent and Family Involvement in Education Survey (PFI-NHES) 2007 Panel. Conducted by the National Center for Education Statistics, the PFI-NHES was a part of the National Household Education Survey Program. The 2007 Panel of the PFI-NHES is the most recent data on parent involvement in education made available by the National Center for Education Statistics. The PFI-NHES is a public use data set.

The PFI-NHES yields information on parents' involvement with homework, school activities, meetings, and activities outside of school, as well as schools' practices to involve families, homeschooling, parents' satisfaction with schools, and information on children with disabilities for a nationally representative sample of over 10,000 individuals (National Center for Education Statistics, 2008). Respondents were interviewed once via computer assisted telephone interviews from January 2 through May 6, 2007 (National Center for Education Statistics, 2008). Random digit dialing was employed. Respondents interviewed for the PFI-NHES were parents or guardians who had children in kindergarten through twelfth grade, aged 20 or younger, and who were most knowledgeable about the child's care and education (National Center for Education Statistics, 2008).

Computer assisted telephone interviews (CATI) were employed. CATI improves project administration, online sampling and eligibility checks, scheduling of interviews according to a

priority scheme to improve response rates, manages data quality by controlling skip patterns and checking responses during the interview for range and consistency, and offers a help function for a limited number of items to assist interviewers in answering respondents' questions during the interview. Items within each of the NHES 2007 instruments were programmed so that the appropriate items appeared on the interviewers' computer screen according to the respondents' answers to previous questions (National Center for Education Statistics, 2008a, pp. 7-8).

PFI-NHES Sampling Strategy

The National Household Education Surveys Program (NHES) uses a list-assisted method for telephone surveys. Telephone numbers in 100-banks have an equal probability of being randomly selected. "The numbers in the 100-banks have the same first eight digits of the ten-digit telephone number" (National Center for Education Statistics, 2008a, p. 14). The bank serves as the listed stratum. As such, listed and unlisted numbers (i.e., telephone numbers listed and not listed in the white pages) are included in the listed stratum. "Telephone numbers in 100-banks with no listed telephone numbers (the zero-listed stratum) are not sampled" (National Center for Education Statistics, 2008a, p. 14).

The sample for the 2007 panel of the PFI-NHES was selected via random digit dialing. Random digit dialing (RDD) sampling uses stratified or unstratified simple random sampling of telephone numbers (Lepkowski, Brick, Japec, & Link, 2008). Area codes and digits are used to generate random samples of telephone numbers in defined geographical areas (Link, Town, & Mokdad, 2007). This method is preferred because it is cost-effective and has probability characteristics (Lee, Brick, Brown, & Grant, 2010), and also produces high levels of calling efficiency (Lepkowski, et al., 2008). Unfortunately, RDD has been widely scrutinized. With the increased use of cell phones, elimination of landlines, and phone number portability (i.e., move

or transfer a telephone number from a landline to wireless service, vice versa, or between to wireless services) the efficiency of RDD is minimized inasmuch the geographical location of respondents may be inaccurate or unidentifiable (Lepkowski, et al., 2008; Link, Town, & Mokdad, 2007). For example, in a study which used the PFI-NHES 2003 panel to explore the effects of school choice on parent involvement in education, Buckley (2007), chose Census region as an indicator variable for parent's choice of type of school. Given that RDD generates samples based on residential telephone numbers, some geographical regions may be disproportionately represented in the sample. Lower income areas may not be justly represented in the sample inasmuch lower income families may not have landlines.

A two-phase stratification was used to obtain more reliable national estimates of race and ethnicity. In the first phase, 476,167 telephone numbers were drawn. The sampling frame for race populations was obtained from the Census 2000. Areas with high percentages of Black and Hispanic residents were sampled at a greater rate than those with lower percentages. A high minority concentration stratum was defined if the Black or Hispanic population comprised at least 20%. In the second phase, sampled numbers were labeled as malleable and non-malleable. Malleable was defined as whether a telephone number could be matched to a mailing address in the white pages or another directory. Four strata were then created according to a combination of minority concentration and malleable status (e.g., high minority and malleable, low minority and non-malleable, etc.). As such, telephone numbers were sample at different rates and oversampling of malleable telephone numbers occurred.

PFI-NHES Sample

The NHES 2007 was conducted in two stages. Stages included the screener (stage 1) and the quantitative survey interview (stage 2). Twenty three thousand, eight hundred, twenty-two

(23,822) households were eligible for interviews as a result of the PFI-NHES 2007 screener. The total number of study respondents for the PFI-NHES 2007 was 10, 681 (45% of those eligible).

Current study sample. Non-probability sampling (i.e., purposive sampling) was employed for the study. Parents of children with a special education diagnosis were included. It is important to note that special education includes gifted and talented education programs. Parents of children who are talented or gifted were not included in the sample inasmuch the PFI-NHES did not include the talented and gifted label in their list of special education diagnoses. In addition, given that children in private schools who receive special education services are not guaranteed the same rights to special education as children enrolled in public schools (e.g., a free and appropriate public education, limits on the number of students who receive services, etc.), only children who attend a public school were included in the sample. Similar to the above, the provision of special education services in charter schools differs than that in traditional public schools. Although charter schools must follow federal education policy and are required to provide special education services, the responsibility for ensuring that special education services are available to students depends on whether the school is an independent local education agency (i.e., the charter school must provide services) or part of an existing local education agency (i.e., the school district the charter school is associated with is responsible for providing services) (Mulligan, 2013). Therefore, only children who did not attend charter schools were included in the current study.

A child's special education diagnosis was measured through the question, "Has a health professional told you that your child has any of the following disabilities...?" Response choices range from a specific learning disability (HDLEARN), mental retardation (HDMENRET), a

speech or language delay (HDSPEECH), a serious emotional disturbance (HDDISTRB), deafness or another hearing impairment (HDDEAFIM), blindness or another visual impairment not corrected with glasses (HDBLIND), an orthopedic impairment (HDORTHO), Autism (HDAUTISM), attention deficit disorder, ADD, or ADHD (HDADD), Pervasive Developmental Disorder or PDD (HDPDD), or another health impairment lasting six months or more (HDOTHER).

Among the 10,681 respondents of the 2007 panel of the PFI-NHES, 2,308 (22%) are parents of children who have a documented special education diagnosis and meet the designated criteria described above. To give a general sense of how children with disabilities in the PFI-NHES compare to estimates of children with disabilities from other data sources, Table 1 illustrates the incidence of disabilities, as noted by the U.S. Department of Education, during the 2006-2007 school year versus parent self-report of disability incidence in the PFI-NHES (National Center for Education Statistics, 2013a).

Table 1
Rates of Disability in the PFI-NHES

Type of Disability	NCES 2006-2007*		PFI-NHES**
	Number of Students	Percentage of Students	Percentage of Students
Specific Learning Disabilities	2,665,000	5.4	9.2
Speech or Language Impairments	1,475,000	3.0	8.3
Intellectual Disability	534,000	1.1	.9
Emotional Disturbance	464,000	.9	2.7
Hearing Impairments	80,000	.2	1.7
Orthopedic Impairments	69,000	.1	2.7
Other Health Impairments	611,000	1.2	7.5
Visual Impairments	29,000	.1	1.6
Multiple Disabilities	142,000	.3	
Deaf-blindness	2,000	0	
Autism	258,000	.5	1.2
Traumatic Brain Injury	25,000	.1	
Developmental Delay	333,000	.7	
Pervasive Developmental Disorder			.9
Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder			9.4
TOTAL	6,686,000	13.7	22

*Percent equals the number of students served in special education as a percent of total public school enrollment

**Percent equals the number of students with a particular diagnosis as it related to the study's sample

Variables

This study investigates the association of school-based P.I. with a number of phenomena related to the receipt of special education services. Specific constructs selected were included in the study based on an extensive overview of relevant P.I. and special education literature, as well as my theoretical understanding of the topic. Within the current document, variable names as listed in the PFI-NHES 2007 are noted in parentheses following the explanation of the item. If no variable name is noted, then one was not provided in the original survey. Table 2 lists the variables included in the study.

Table 2

Constructs Included in the Primary Study Variables

Predictor	Moderator	Outcome(s)		
School-Based P.I.	Child Race	Comprehensive Special Education Services	Satisfaction with Special Education Services	Satisfaction with the School
Survey Items	Item	Items	Items	Items
Attend general school meeting	Child race and ethnicity	Local school district	Communication with family	School child attends
Parent Teacher Organization/Association		State or local health or social service agency	Special needs teacher/therapist	Child's teacher
Attend scheduled parent- teacher conference		Doctor, clinic, or other healthcare provider	Accommodating child's special needs	Academic standards
Attend school/class event		Other source	Commitment to help child learn	Order and discipline
Volunteer in class or school				Staff interaction with parents
Participate in fundraising Serve on school committee				
Meet with guidance counselor in person				
Develop/change IEP with school				

Measures in Study

Independent variable. The study conceptualizes P.I. as an independent variable. Given that the current study seeks to investigate the receipt of special education services, satisfaction with special education services, and their associations with P.I., I chose to use school-based P.I. as the predictor variable, as opposed to home-based or community P.I. Home-based P.I. variables are more germane for measuring academic achievement, school readiness, or engaged parenting and are not necessary for obtaining special education services (Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones, 2001; Hoover-Dempsey, & Sandler, 1995; Sanders, 1998). Items from the PFI-NHES 2007 used to measure school-based P.I. are described below.

School-based P.I. School-based P.I. measures the involvement activities parents engage in as they relate to the school environment. Nine dichotomous items were used to compute a parent involvement score (P.I. score) which represents school-based P.I. Items state, “Since the beginning of the school year, have you...” attended a general school meeting (FSMTNG), a meeting of the parent-teacher organization or association (FSPMTNG), gone to a regularly scheduled parent-teacher conference with your child’s teacher (FSATCNFN), attended a school or class event such as a play, dance, sports event or science fair because of the child (FSSPORT), served as a volunteer in your child’s classroom or elsewhere in the school (FSVOL), participated in fundraising for the school (FSFUNDERS), served on a school committee (FSCOMMTE), met with a guidance counselor in person (FSCOUNSLR). The last item to be included asked “did you work with the school to develop or change the child’s IEP (HDDIEP).

Each item’s response is coded as yes = 1 and no = 2 in the original survey. To compute the P.I. score, I recoded responses as yes = 1 and no = 0. Next, I calculated a sum for the

aforementioned variables. P.I. scores ranged from 0 to 9, whereas higher scores reflect more school-based P.I.

Dependent variables. The outcome variables for the study are comprehensive special education services, satisfaction with special education services, and satisfaction with the school.

Comprehensive special education services. The variable comprehensive special education services measured the type of services utilized by children with a special education diagnosis. Comprehensive special education service was initially measured through computing a magnitude score using five dichotomous items from the original survey. The items ask “is your child receiving services for his/her condition...” from your local school district (HDSCHL), from a state or local health or social service agency (HDGOVT), from a doctor, clinic, or other health care provider (HDDOCTOR), and from some other source (HDSOURCE). A last item states “is your child currently enrolled in any special education classes or services” (HDSPCLED). Item responses are coded as yes = 1 and no = 2 in the original survey. To compute the magnitude score, I recoded responses as yes = 1 and no = 0. Next, I calculated a sum for the aforementioned variables. Magnitude scores ranged from 0 to 5, with higher scores indicating more comprehensive special education services. During data analysis, I investigated whether the distribution of comprehensive special education services was normal. The data revealed that the variable was not distributed normally; therefore, I recoded it into a categorical variable. Recoded response categories included 0 = no services, 1 = one services, 2 = two services, and 3 = three or more services.

Satisfaction with special education services. Satisfaction with special education services assesses parents’ satisfaction with the specialized services their child receives. Satisfaction with special education services was measured through four Likert-type items. The question states,

“During this school year, how satisfied have you been with the following aspects of your child’s IEP, special education classes, or services?” Items include the school’s communication with your family (HDCOMMU), your child’s special needs’ teacher or therapist (HDTCHR), the school’s ability to accommodate your child’s special needs (HDACCOM), the school’s commitment to help your child learn (HDCOMMIT). Responses range from very satisfied = 4 to very dissatisfied = 1. A ratio level or continuous variable was derived through adding scores and computing a mean value. Higher scores indicate more satisfaction with special education services.

Internal consistency for the scale was obtained during preliminary analysis. Preliminary analysis revealed a Cronbach’s alpha of .969, which indicates, that together, the items are a reliable measure of satisfaction with the school.

Satisfaction with the school. Satisfaction with the school measures parents’ general satisfaction with the overall school environment irrespective of special education. A scale was derived which consists of five Likert-type items. Responses ranged from very satisfied (4) to very dissatisfied (1). The question reads as follows: “Would you say that you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with...” the school your child attends this year (FCSCHOOL), the teachers your child has this year (FCTEACHR), the academic standards of the school (FCSTDS), the order and discipline at the school (FCORDER), and the way that school staff interacts with parents (FCSUPPRT). A ratio level or continuous variable was derived through adding scores and computing a mean value. Higher scores indicate more satisfaction with the child’s school.

Internal consistency for the scale was obtained during preliminary analysis. Preliminary analysis revealed a Cronbach's alpha of .908, which indicates, that together, the items are a reliable measure of satisfaction with the school.

Moderator Variable

Child Race/ethnicity. Race/ethnicity was measured through a categorical hierarchy created by the researcher. Four categories were derived based on current responses in the PFI-NHES 2007. This was done for parsimony. Categories included Hispanic, African-American, White, and Other. Original categories as listed in the PFI-NHES 2007 interview protocol include Spanish, Hispanic, or Latino origin (CHISPAN); White (CWHITE); Black or African-American (CBLACK); American Indian or Alaska Native (CAMIND); Asian (CASIAN); Native Hawaiian or Pacific Islander (CPACI); and Other (CRACEOTH). Respondents were asked to choose yes = 1 or no = 2 to the categories and were allowed to select more than one. I recoded item responses as yes = 1 and no = 0. Ultimately, I computed dichotomous categorical variables to indicate the primary race of each child.

Control Variables

Respondent characteristics. Parents are the respondents in this study. In alignment with IDEA 2004, a parent is defined as the individual who makes educational decisions for the child and is responsible for their daily well-being; thus, parents in this study may include individuals who are not the biological parent of the child. Other characteristics measured are described below.

Relationship to child. The parent respondent's relationship to the child was measured through the question, "How are you related to the child (RESRELN)?" Responses include

mother (birth, adoptive, step, or foster), father (birth, adoptive, step, or foster), brother (including step, adopted, and foster), sister (including step, adopted, and foster), grandmother, grandfather, aunt, uncle, cousin, other relative, nonrelative, same sex parent, girlfriend or partner of child's parent or guardian, and boyfriend or partner of child's same sex parent or guardian. I recoded this variable into a categorical variable with two categories: parent vs. other.

Language spoken at home. The language a parent speaks at home was measured through the item, "What language do you most speak at home (CSPEAK)?" The multi-category response choices included English, Spanish, English and Spanish equally, English and another language equally, and another language.

Income. Income ranges are originally listed in the PFI-NHES 2007 in \$5,000 increments ranging from \$5,000 or less to over \$100,000. In efforts to measure income, a four category income variable was created for parsimony. Four categories were chosen to clearly distinguish between very low income families and very high income families. Categories included very low (\$20,000 and under), low (\$20,001 to \$40,000), medium (\$40,001 to over \$80,000), and high (\$80,000 and higher). During data analyses, it was noted that the PFI-NHES upper income categories' increments had broad ranges; therefore, upper income categories were revised. Final categories included very low (\$20,000 and under), low (\$20,001 to \$40,000), medium (\$40,001 to \$75,000), and high (\$75,001 and higher).

Child characteristics. A number of items which characterize the parent respondents' children were measured in the study. Characteristics are described below.

Grade in school. Grade in school measured a child's grade in school at the time of the original survey's data collection. The item states, "What grade or year is your child attending (GRADE)?" Response choices range from kindergarten up to twelfth grade (Senior). Additional

responses include pre-first grade, ungraded, and special education. A continuous ratio-level variable was computed; whereas each grade level represented a numerical response (i.e., kindergarten = 1, pre-first and first grade = 2, second grade = 3, etc.).

School mobility. School mobility measured whether or not a child has transferred during the school year. The item states, “Since the beginning of the school year, has your child been in the same school (SSAMSC)?” Item responses are dichotomous and coded as yes = 1 and no = 2 in the original survey. I recoded responses as yes = 1 and no = 0.

IEP. The section of the PFI-NHES addressing the type of services received includes a question regarding an IEP. The item states, “Are any of the services provided through an IEP?” (HDIEP). I recoded item responses as yes = 1 and no = 0.

Analysis Plan

IBM SPSS Statistics 20 was used for data analysis. An alpha level of .05 was used to determine significance across the study. All measures were computed among the valid responses only. No special steps were taken to impute missing values.

Descriptive analysis. I analyzed measures of central tendency in efforts to assess the range of values and responses as well as investigate patterns of responses for each variable. Specifically, for continuous variables (i.e., school-based P.I., satisfaction with special education services, and satisfaction with the school) standard deviation, mean, median, range, minimum, and maximum were calculated. For categorical variables (i.e., comprehensive special education services, special education classification, parent relationship to the child, language spoken at home, race/ethnicity, income, child grade in school, and school mobility), frequencies and percentages were obtained.

Bivariate analysis. In efforts to assess the relationship between two variables, I conducted bivariate analysis. Bivariate analysis depicted significant associations between variables, and informed decisions about inclusion in subsequent multivariate models. Specifically, I tested the relationship between school-based P.I. and satisfaction with special education services, and school-based P.I. and satisfaction with the school through conducting Pearson correlations. Correlations were obtained because each of the aforementioned variables is continuous. I tested the relationship between school-based P.I. and comprehensive special education services using one-way ANOVA. One-way ANOVA was conducted inasmuch school-based P.I. is a continuous variable and comprehensive special education services is a categorical variable.

Given that child race served as a moderator in the study, its relationship with the independent and dependent variables were assessed. I conducted three one-way ANOVAs to assess the relationship between the following variables: a) child race and P.I., b) child race and satisfaction with special education services, and c) child race and satisfaction with the school. One-way ANOVA was conducted because race is a categorical variable and P.I., satisfaction with special education services, and satisfaction with the school are each ratio level variables. In addition, I conducted a chi-square analysis to test the relationship between child race and comprehensive special education services. Chi-square was conducted because child race and comprehensive special education services are both multi-category variables. Finally, the appropriate bivariate tests were conducted to assess associations among the control variables and other study variables.

Multivariate analysis. For multivariate analysis, I used linear regression and multinomial regression. Linear regression was conducted because two of the dependent

variables (satisfaction with special education services and satisfaction with the school) are continuous. Multinomial regression was conducted because the third dependent variable, comprehensive special education services, is a multi-categorical variable. Linear regression assesses the linear relationship between an explanatory variable and an outcome variable through observing changes in the explanatory variable and fitting a linear equation to the data (Neter, Wasserman, & Kutner, 1989; Pedhazur, 1997). The test statistic (F) was used to evaluate the significance of the hypothesized model. Adjusted R^2 , which ranges from 0 to 1, was used to assess the percent of the variance accounted for by the explanatory variables. The obtained coefficient (b) was used to indicate the strength and direction of the association for each variable. The p value indicated whether each effect is statistically significant. Multinomial regression is an extension of logistic regression. Multinomial regression assesses the probability of possible outcomes for comprehensive special education services, given school-based P.I.

For the current study, I ran a total of nine regression models. Specifically, I ran six linear regression models and three multinomial regression models. In the first three models, each dependent variable was run once with school-based P.I. in efforts to test their relationships. Specifically, I ran linear regression models for a) satisfaction with special education services and school-based P.I. and b) satisfaction with the school and school-based P.I. I ran a multinomial regression model for c) comprehensive special education services and school-based P.I. Next, I ran the aforementioned regression models a second time with the inclusion of interaction terms for race. Finally, the last three models investigated whether the associations found in the first three regression models are maintained after controlling for race, income, a child's grade in school, and IEP. Table 3 shows the anticipated variables to be included in each regression model I will run to test each of the study hypotheses.

Table 3

Variables Used in Linear & Multinomial Regression Models to Test Study Hypotheses

Hypothesis Number	Dependent Variable	Key Independent Variable (Model 1)	Model with Interaction Terms Added (Model 2)	Control Variables Added (Model 3)
1 (Multinomial Models 1 and 2)	Comprehensive Services	P.I.	P.I. * White P.I. * Black	Race (White, Black, Latino, Other)
4 (Multinomial Model 3)				Income Grade in School
2 (Linear Models 1 and 2)	Service Satisfaction	P.I.	P.I. * White P.I. * Black	Race (White, Black Latino, Other)
5 (Linear Model 3)				Income Grade in School IEP
3 (Linear Models 1 and 2)	School Satisfaction	P.I.	P.I. * White P.I. * Black	Race (White, Black Latino, Other)
6 (Linear Model 3)				Income Grade in School IEP

In efforts to test moderating effects by race, I ran additional analyses. I first computed interaction terms in order to specify the interaction between P.I. and White (P.I.*White) and P.I. and African-American (P.I.*Black). Although interaction terms for White and African-American were noted in the analysis plan, compelling relationships were observed for the Hispanic and Other categories; therefore, additional interaction terms were computed. I subsequently ran regression models to include P.I., the appropriate race variables, and the appropriate interaction terms to ascertain associations with the three dependent variables. Multinomial regression models were conducted to assess relationships with the receipt of comprehensive special education services. The IEP variable is not included in the multinomial analysis of factors associated with the number of comprehensive special education services received because none of the children with “0” services had an IEP. That is, there was no variation in the IEP variable among those children without any services. For parents of White children, I expected the relationships between P.I. and comprehensive special education services to be positive. That is, I expected higher levels of P.I. as children received more services. For parents of African-American children, I expected the relationship between P.I. and comprehensive special education services to be negative. That is, I expected lower levels of P.I. as children received more services.

Following the aforementioned analyses, I conducted linear regression models to assess whether there is an interaction with race in the relationships between P.I. and satisfaction with special education services and satisfaction with the school. I ran regression models to include P.I., the appropriate race variables, and the appropriate interaction terms. For parents of White

children, I expected the relationships between P.I. and both of the satisfaction variables to be positive; for parents of African-American children, I expected the relationship between P.I. and both of the satisfaction variables to be negative.

IRB Approval

The data used for the current study was derived from a previously completed study and does not identify participants. The University of Alabama's Institutional Review Board approved methods employed in this study on September 25, 2014.

CHAPTER 4 - RESULTS

Introduction

This chapter presents the results of the aforementioned analyses followed by a brief discussion. First, descriptive information for the sample of parents is presented. Next, the independent, dependent, and moderator variables are compared. Lastly, using procedures described in the data analysis section, linear and multinomial regression results are reported which answer the following research questions:

1. Is school-based P.I. associated with the comprehensiveness of special education services?
2. Is school-based P.I. associated with parental satisfaction with special education services?
3. Is school-based P.I. associated with parental satisfaction with the school?
4. Is the relationship between school-based P.I. and the comprehensiveness of special education services moderated by race?
5. Is the relationship between school-based P.I. and parental satisfaction with special education services moderated by race?
6. Is the relationship between school-based P.I. and satisfaction with the school moderated by race?

Descriptive Analysis

Descriptive results are shown in Table 4.1 and Table 4.2. Frequencies are reported for categorical variables and the means, standard deviation, minimum and maximum for the continuous variables. As a whole, 93% of respondents were the parent of the child (i.e., mother or father). The majority of parents in the study spoke English at home (91%). Over half the parents were White (mothers = 71%, fathers = 77%). Of the parents in the study, 14% describe their household income as very low (\$20,000 and under); 22% report their income to be low (\$20,001 to \$40,000); 31% describe their income as medium (\$40,001 to \$75,000); and 34% reported their income is high (\$75,001 and higher).

Ninety-seven percent of parents reported their child had been in the same school since the beginning of the 2006-2007 academic school year. A child's number of years in school ranged from 0 to 15 and had a mean of 6.55. The mean value for school-based P.I. was 4.02. The mean for parents' satisfaction with the school was 3.38. Similarly, parental satisfaction with special education services ranges from 1 to 4, with a mean value of 3.38. Comprehensive special education services varied; whereas, 25% of children received no services, 35% received one service, 21% received two services, and 19% received three or more services. Lastly, 72% of parents reported that their child did not have an individualized education plan (IEP).

Table 4.1
Variable Descriptions

	Mean	S.D.	Min	Max
School-based P.I.	4.02	2.13	0	9
Satisfaction with special education services	3.38	.77	1	4
Satisfaction with the school	3.38	.66	1	4
Child grade in school	6.55	3.77	0	15

Table 4.2
Variable Descriptions

<i>Variable Descriptions</i>	Frequencies
Comprehensive special education services	No services = 25% One service = 35% Two services = 21% Three or more services = 19%
Parent relationship to the child	Parent = 93% Other = 7%
Language spoken at home*	English = 91% Spanish = 6% English-Spanish Equally = 2%
Income*	Very Low = 14% Low = 22% Medium = 31% High = 34%
School mobility	Yes = 97% No = 3%
Child race/ethnicity*	African American = 12% Hispanic = 17% Other = 7% White = 65%
IEP*	Yes = 29% No = 72%

*Some variable percentages do not equal 100% due to rounding.

Bivariate Analysis Results

Bivariate associations of school-based P.I. with satisfaction with special education, satisfaction with the school, and comprehensive special education services are shown in Table 4.3. School-based P.I. has a very weak positive, but statistically significant association with satisfaction with special education services ($r = .096$, $p = .006$), and satisfaction with the school ($r = .169$, $p < .001$). A one-way ANOVA determined there was a statistically significant difference between comprehensive special education services and school based P.I. ($F_{(3, 2304)} = 78.14$, $p < .001$). As shown in Table 4.3, as the number of services used increased, mean school-based P.I. was higher. A Games-Howell post-hoc test depicted parents had significantly higher school-based P.I. when their child received one special education service in comparison to no services (mean difference = $.71$, $p < .001$); as well as when their child received two special education services in comparison to no services (mean difference = 1.50 , $p \leq .01$) or one service (mean difference = $.79$, $p < .001$); and when their child received three or more special education services in comparison to no services (mean difference = 1.73 , $p < .001$) and one service (mean difference = 1.03 , $p < .001$). No statistically significant differences existed amongst a child receiving three or more special education services versus two special education services.

Table 4.3
Bivariate Associations Between School-based P.I. and Outcome Variables

Variable	School-based P.I.		Satisfaction with Special Education		Satisfaction with the School					
School-based P.I.	1.00		.096***		.169***					
Satisfaction with special education			1.00							
Satisfaction with the school					1.00					
Comprehensive special education services	No services n = 575		One Service n = 810		Two Services n = 492		Three or More Services n = 431		ANOVA	Post-hoc analysis
	M	SD	M	SD	M	SD	M	SD	F	
School-based P.I.	3.13	1.89	3.83	1.96	4.62	2.23	4.86	2.11	78.142***	^b

*p<.10; **p<.05; ***p<.01;

^a Games-Howell tests for post-hoc comparisons due to different variances/not meeting the homoscedasticity criterion.

^b Post-hoc comparisons reflect whether the standardized residuals of each cell indicate a statistically significant difference from the cell's expected value (EV) 0;1>0; 2>0; 2>1; 3>0; 3>1.

Bivariate associations of child race are shown in Table 4.4. A one-way ANOVA determined there was a statistically significant difference among groups as it relates to school based P.I. ($F_{(3, 2304)} = 8.70, p < .001$). Mean school-based P.I. scores are higher for White and parents of other races/ethnicities than for Black or Hispanic parents. Post-hoc tests revealed that White and Other children had parents with higher school-based P.I. than Hispanic children (mean difference = .599 and .58, respectively). At the same time, Hispanic children's parents reported the highest satisfaction with special education services (mean = 3.44); however, there are no statistically significant differences among ethnic groups in satisfaction with services. A one-way ANOVA determined there was a statistically significant difference among groups as it related to satisfaction with the school ($F_{(3, 2304)} = 4.57, p = .003$). Parents of Black children had significantly less satisfaction with the school in comparison to parents of White children (mean difference = -.149). Also shown in Table 4.4, a chi-square test of independence was performed to examine the relation between child race and receipt of comprehensive special education services. The relation between these variables was significant ($X^2 = 19.43, df = 9, p = .022$). Black children are less likely than children of each of the other races and ethnicities to receive zero services and more likely to receive two or more services.

Table 4.4

Bivariate Associations with Child Race and Outcome Variables

Variable	White n = 1490		Other n = 155		Black n = 281		Hispanic n = 382		ANOVA	Post-hoc analysis
	M (n)	SD	M (n)	SD	M (n)	SD	M (n)	SD	F	
School-based P.I.	4.15	2.11	4.12	2.14	3.88	2.19	3.55	2.09	8.70**	W>H; O>H
Satisfaction with special education services	3.39 (515)	.76	3.17 (54)	.81	3.34 (122)	.78	3.44 (134)	.75	1.75	
Satisfaction with the school	3.40	.65	3.31	.70	3.25	.76	3.39	.65	4.57***	W>B
	N (%)		N (%)		N (%)		N (%)		Chi-Square	
Comprehensive special education services									19.43**	
No services	376 (25)		37 (24)		54 (19)		108 (28)			
Receives 1 service	541 (36)		56 (36)		89 (32)		124 (33)			
Receives 2 services	316 (21)		35 (23)		73 (26)		68 (18)			
Receives 3 or more services	257 (17)		27 (17)		65 (23)		82 (22)			

*p<.10; **p<.05; ***p<.01;

^a Games-Howell tests for post-hoc comparisons due to different variances/not meeting the homoscedasticity criterion.^b Post-hoc comparisons reflect whether the standardized residuals of each cell indicate a statistically significant difference from the cell's expected value (EV).

Multivariate Analysis Results

Linear regression was conducted to assess the relationship between each of the satisfaction-related dependent variables and school-based P.I. Multinomial regression was conducted to assess the association between receipt of comprehensive services and school-based P.I. A number of control variables noted in the study proposal were not included in final models due to results yielded during initial analyses. For example, the majority of households (91%) spoke English in the home; therefore, the variable was omitted from subsequent models. Similarly, the majority of respondents in the study (93%) was the child's birth, adoptive, step, or foster parent; therefore, the variable was omitted from subsequent models. In addition, 97% of children in the study had been in the same school since the start of the school year; therefore, the variable was omitted from subsequent models. Lastly, during data analysis, it was discovered that school size data is not accessible in the protected use data set; therefore, this variable was also omitted from the study. Results from the multinomial regression models are shown in Table 4.5. Results from the linear regression models are shown in Table 4.6 and Table 4.7. Results for each research question and its accompanied hypothesis are described below.

Table 4.5
Multinomial Regression of Comprehensive Special Education Services & P.I.

(vs. no services)	One Service n = 810			Two Services n = 492			Three or More Services n = 431		
Variable	Odds Ratio	P Value 2-tail Test	P Value 1-tail Test	Odds Ratio	P Value 2-tail Test	P Value 1-tail Test	Odds Ratio	P Value 2-tail Test	P Value 1-tail Test
Model 1									
(Vs. White)									
Child is Black	1.238	.255	.128	1.883	.002	.001	2.115	.000	.000
Child is Other	1.062	.787	.394	1.149	.587	.294	1.091	.751	.380
Child is Hispanic	.880	.393	.197	.930	.683	.342	1.437	.039	.020
School-Based Parental Involvement	1.182	.000	.000	1.437	.000	.000	1.537	.000	.000
Model 2									
(Vs. White)									
Child is Black	1.139	.706	.353	3.106	.005	.002	2.813	.022	.011
Child is Other	1.554	.337	.169	2.584	.093	.047	3.111	.064	.032
Child is Hispanic	.922	.773	.387	1.864	.089	.045	1.760	.154	.077
School-Based Parental Involvement	1.194	.000	.000	1.527	.000	.000	1.600	.000	.000
(Vs. P.I.*White)									
P.I.*Black	1.02	.843	.422	.886	.214	.180	.931	.486	.243
P.I.*Other	.893	.292	.146	.813	.089	.045	.775	.050	.025
P.I.*Hispanic	.979	.774	.390	.836	.044	.022	.941	.503	.252
Model 3									
	n = 808			n = 489			n = 428		
(Vs. White)									
Child is Black	1.147	.695	.348	2.560	.022	.011	1.881	.168	.084
Child is Other	1.575	.319	.160	2.427	.121	.061	2.769	.104	.052
Child is Hispanic	.927	.792	.400	1.457	.315	.158	1.171	.697	.349
School-Based Parental Involvement	1.193	.000	.000	1.559	.000	.000	1.687	.000	.000
(Vs. P.I.*White)									
P.I.*Black	1.020	.822	.411	.888	.227	.114	.945	.591	.295
P.I.*Other	.891	.276	.138	.815	.096	.048	.780	.062	.031
P.I.*Hispanic	.980	.789	.395	.847	.065	.033	.964	.694	.347
(Vs. High Income)									
Very low income	1.017	.929	.465	2.268	.000	.000	4.321	.000	.000
Low income	.860	.349	.175	1.844	.001	.000	2.919	.000	.000
Medium income	.954	.726	.363	1.405	.035	.018	1.682	.003	.002
Child grade in school	.999	.942	.471	.990	.573	.287	1.032	.088	.044

Reference groups = No services (n=575); White; P.I.*White; High income

Table 4.6
OLS Regression of Satisfaction with Special Education Services

Variable	Model 1 n = 825					Model 2 n = 825					Model 3 n = 821				
	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test
Constant	3.20	.08		.000	.000	3.09	.09		.000	.000	3.02	.13		.000	.000
School-based P.I.	.036	.01	.100	.005	.003	.056	.02	.156	.001	.000	.046	.02	.130	.009	.005
Child is Black	-.022	.08	-.010	.778	.389	.239	.19	.110	.197	.099	-.197	.19	.091	.299	.150
Child is Other	-.212	.11	-.068	.053	.027	-.474	.26	-.153	.065	.033	-.452	.26	-.146	.079	.040
Child is Hispanic	.079	.08	.038	.291	.145	.538	.18	.259	.003	.002	.519	.19	.248	.005	.003
P.I.* Black						-.053	.04	-.128	.130	.065	-.053	.04	-.126	.137	.069
P.I.*Other						.052	.05	.096	.249	.125	.048	.05	.089	.284	.142
P.I.*Hispanic						-.097	.04	-.240	.005	.003	-.103	.04	-.253	.003	.002
Very low income											.147	.09	.072	.102	.051
Low income											.151	.08	.083	.049	.025
Medium income											.074	.07	.045	.286	.143
Child grade in school											-.011	.01	-.054	.134	.067
IEP											.149	.07	.078	.046	.023
R ² = .02; F = 3.34, df 820, p<.01						R ² = .03; F = 3.64, df 817, p<.01					R ² = .04; F = 2.95, df 808, p<.01				

Table 4.7
OLS Regression of Satisfaction with the School

Variable	Model 1 n = 825					Model 2 n = 825					Model 3 n = 821				
	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test
Constant	3.18	.03		.000	.000	3.18	.04		.000	.000	3.44	.05		.000	.000
School-based P.I.	.053	.01	.169	.000	.000	.052	.01	.168	.000	.000	.045	.01	.145	.000	.000
Child is Black	-.134	.04	-.066	.002	.001	-.165	.09	-.081	.061	.031	-.127	.09	-.062	.150	.075
Child is Other	-.094	.06	-.035	.089	.044	-.273	.12	-.102	.024	.012	-.275	.12	-.103	.022	.011
Child is Hispanic	.017	.04	.009	.662	.331	.093	.08	.052	.220	.110	.109	.08	.061	.152	.076
P.I.* Black						.008	.02	.017	.693	.347	.006	.02	.014	.753	.377
P.I.*Other						.043	.03	.076	.095	.048	.043	.03	.076	.094	.047
P.I.*Hispanic						-.022	.02	-.051	.227	.114	-.025	.02	-.060	.154	.077
Very low income											-.135	.05	-.070	.003	.002
Low income											-.070	.04	-.043	.069	.035
Medium income											-.065	.03	-.045	.057	.029
Child grade in school											-.025	.00	-.140	.000	.000
IEP											-.050	.03	-.034	.145	.073
$R^2 = .03$; F = 20.39, df 2303, $p < .01$						$R^2 = .04$; F = 12.39, df 2300, $p < .0$					$R^2 = .06$; F = 11.88, df 2287, $p < .01$				

Research Question 1. Is school-based P.I. associated with the comprehensiveness of special education services?

H₁: The greater the school-based P.I., the more comprehensive will be the special education services received.

Results indicate support for Hypothesis 1. As shown in Table 4.3, at a bivariate level, school-based P.I. is associated with the number of special education services received. As the number of services used increased, so did school-based P.I. Specifically, parents had significantly higher school-based P.I. when their child received one, two, or three or more special education services versus receiving no special education services. The bivariate relationship was maintained in a multivariate model controlling for race and other variables. As shown in Table 4.5, Model 1, when controlling for race, school-based P.I. is 18% higher amongst parents of children receiving one service versus parents of children receiving no services ($\text{Exp}(B) = 1.182$, $p < .001$), 44% higher amongst parents of children receiving two services versus no services ($\text{Exp}(B) = 1.437$, $p < .001$), and 54% higher amongst parents of children receiving three or more services versus receiving no services ($\text{Exp}(B) = 1.537$, $p < .001$). School-based P.I. also retains an association with the number of services offered in Models 2 and 3, which include interaction terms for race and control variables for income and child grade in school.

Research Question 2. Is school-based P.I. associated with parental satisfaction with special education services?

H₂: The greater the school-based P.I., the more parents will be satisfied with their child's special education services.

The results indicate support for Hypothesis 2. As shown in Table 4.3, at the bivariate level, school-based P.I. had a very weak, positive, statistically significant association with

satisfaction with special education services. As shown in Table 4.6, a weak, positive association between school-based P.I. and satisfaction with special education services is maintained in all three models. Model 3 includes control variables for race, income, child grade in school, and having an IEP. At the .05 significance level, in this study, school based P.I. is positively associated with satisfaction with special education services. As shown in Table 4.6, Model 3, as parents' school-based involvement increases, their satisfaction with special education services increases ($\beta = .06, p = .005$).

Research Question 3. Is school-based P.I. associated with parental satisfaction with the school?

H₃: The greater the school-based P.I., the more parents will be satisfied with the school.

The results also indicate support for Hypothesis 3. As shown in Table 4.3, at the bivariate level, school-based P.I. had a very weak, positive, but statistically significant association with satisfaction with the school. The bivariate association was maintained in a multivariate model. As shown in Table 4.7, school-based P.I. is positively associated with satisfaction with the school in all three models, including Model 3 which controls for race, income, child grade in school, and IEP. As shown in Table 4.7 Model 3, in a one-tail test, at the .05 significance level, the more school-based P.I., the more parents were satisfied with the school ($\beta = .04, p < .001$).

Research Question 4. Is the relationship between school-based P.I. and the comprehensiveness of special education services moderated by race?

H₄: The relationship between school-based P.I. and comprehensive special education services will differ by race: For parents of White children, school-based P.I. will be positively

associated with comprehensive special education services; for parents of Black children, school-based P.I. will be negatively associated with comprehensive special education services.

The results indicate mixed support for Hypothesis 4. First, Table 4.5, Model 1, simply shows the likelihood of receiving different numbers of services for children of each race while controlling for the level of school-based P.I. Compared to children receiving no services, no significant differences by race existed for children receiving one special education service. As such, parents whose children are Other, Black, and Hispanic are as likely as parents whose children are White to receive one service versus no services at any level of school-based P.I. However, Black children were 88% more likely than White children to receive two special education services versus no services ($\text{Exp}(B) = 1.883$, $p = .002$). Black children were also two times as likely as White children to receive three or more special education services versus no services ($\text{Exp}(B) = 2.115$, $p < .001$). In addition, Hispanic children were 43% more likely than White children to receive three special education services versus no services ($\text{Exp}(B) = 1.437$, $p = .039$). There are clear racial differences when a child receives multiple special education services.

The interaction terms indicate whether the associations between parental involvement and services received differ by race. As shown in Table 4.5, Model 2, parents whose children are Black, Other, and Hispanic are more likely than White children to receive two services versus no services ($\text{Exp}(B) = 3.106$, $p = .005$, $\text{Exp}(B) = .813$, $p = .044$, $\text{Exp}(B) = 1.864$, $p = .044$; respectively) at any level of school-based P.I. Parents of Black children were three times more likely than White children to receive two services versus no services. Parents of Black children were also nearly three times more likely to receive three services versus no services ($\text{Exp}(B) = 2.831$, $p = .022$). However, the level of Black parents' involvement is not associated with

service receipt. That is, contrary to the study hypothesis, for Black parents, the likelihood of their child receiving special education services does not change when they are more involved. A different pattern emerged for Hispanic parents. When Hispanic parents were more involved, their children were less likely than White children to receive two services rather than no services ($\text{Exp}(B) = .836$, $p = .022$). That is, although Hispanic children were more likely than White children to receive more services, those likelihoods diminished as Hispanic parents became more involved. Similarly, parents of Other-race children are three times more likely to receive three services versus no services ($\text{Exp}(B) = 3.111$, $p = .064$); however, as the parents become more involved, Other-race children are 23% less likely than White children to receive three services versus no services ($\text{Exp}(B) = .775$, $p = .050$).

Finally, as shown in Table 4.5, Model 3, after controlling for race, income, a child's grade in school, and whether a child had an IEP, results indicate that parents of very low (annual income of \$20,000 and under), low (i.e., annual income of \$20,001 to \$40,000), and medium income's (i.e., annual income of \$40,001 to \$75,000) children are more likely than those of high income's (annual income of \$75,001 and higher) children to receive two special education services versus no services or three services versus no services. The greatest disparity exists for parents of very low income; their children are more than two times more likely to receive two services ($\text{Exp}(B) = 2.268$, $p < .001$). Similarly, in comparison to children whose parents have a high income, parents of very low income's children are more than four times more likely to receive three services versus no services ($\text{Exp}(B) = 4.321$, $p < .001$). Model 3 also underscores the finding that, controlling for all other factors, Black children are more likely than White children to receive 2 services versus no services.

Research Question 5. Is the relationship between school-based P.I. and parental satisfaction with special education services moderated by race?

H₅: The relationship between school-based P.I. and satisfaction with special education services will differ by race: For parents of White children, school-based P.I. will be positively associated with satisfaction with special education services; for parents of Black children, school-based P.I. will be negatively associated with satisfaction with special education services.

The results indicated some moderating effects of race on the relationship between P.I. and satisfaction with special education services, in addition to support for the hypothesized relationship among White children and signs of support for the hypothesized relationship for parents of Black children, the results indicate some moderating effects for parents of Hispanic children and children of Other races. As shown in Table 4.6, Model 1, the relationship between school-based P.I. and satisfaction with special education services remained the same as when addressing research question two. The more school-based P.I., the more parents were satisfied with their child's special education services ($\beta = .056$, $p = .001$). Table 4.6, Model 1 also shows that overall, parents of children of Other race were less satisfied with special education services than were parents of White children ($\text{Exp}(B) = -.212$, $p = .027$). When interaction terms for P.I. and race are entered in Model 2, new relationships emerged. With the race variables and interaction terms included in the model, the parameters for school-based P.I. reflect parameters for parents of White children. As parents of White children become more involved, satisfaction with services increased ($\beta = .056$, $p = .001$). This relationship is confirmed in a separate regression model involving White children only that is shown in the Appendix, as well as through graphs depicted in Figures 5 through 8. Also shown in Table 4.6, Model 2, although the relationship for parents of Black children is in the predicted negative direction, the relationship is

not statistically significant. Parents of Hispanic children were more satisfied with their child's special education services than parents of White children ($\beta = .538, p = .003$). However, as shown in Model 2, as parents of Hispanic children were more involved, they were less satisfied ($\beta = -.097, p = .005$).

As shown in Table 4.6, Model 3, after controlling for race, income, a child's grade in school, and whether a child had an IEP, the interaction effects for parents of Other-race children emerged. In comparison to parents of White children, parents of children of other race were less satisfied with special education services at any level of involvement ($\beta = -.452, p = .039$). After controlling for race, income, and whether a child had an IEP, the interaction effect of school-based P.I. for parents of Hispanic children remained the same as in Model 2 ($\beta = -.103, p = .003$). Once again, indicating signs of support for Hypothesis 5 but not at a level of statistical significance, Model 3 indicates as parents of Black children were more involved, satisfaction with special education services decreased ($B = -.053, p = .069$). In addition, parents whose children had an IEP were more satisfied with special education services ($\beta = .149, p = .046$). Parents of very low income (i.e., annual income of \$20,000 and under) and low income (i.e., annual income of \$20,001 to \$40,000) were also more satisfied with special education services than parents of high income (i.e., annual income of \$75,001 and higher) ($\beta = .147, p = .051$; $\beta = .151, p = .049$, respectively). No other significant differences existed among income groups.

Research Question 6. Is the relationship between school-based P.I. and satisfaction with the school moderated by race?

H₆: The relationship between school-based P.I. and satisfaction with the school will differ by race: For parents of White children, school-based P.I. will be positively associated with

satisfaction with the school; for parents of Black children, school-based P.I. will be negatively associated with satisfaction with the school.

As with Hypothesis 5, the results indicate interactions by race in the relationship between P.I. and satisfaction with the school, but results only partially support the moderating relationships hypothesized. As shown in Table 4.7, Model 1, in comparison to parents of White children, parents of Other children and parents of Black children were less satisfied with the school at any level of involvement ($\beta = -.094$, $p = .044$; $\beta = -.134$, $p = .002$, respectively). After the inclusion of the interaction terms in Model 2, results indicated that compared to parents of White children, parents of Black children were not more satisfied with the school with higher levels of school based P.I., nor were they less satisfied with the school with more school-based P.I. ($\beta = .008$, $p = .693$). Satisfaction with the school for parents of Black children in comparison to parents of White children is not a function of P.I. Parents of White children, however, are more satisfied with higher levels of school-based P.I. ($\beta = .052$, $p < .001$) (As with the analysis of satisfaction with services, this relationship was confirmed in a separate regression model involving White children only, which is shown in the Appendix. Relationships between school-based P.I. and satisfaction with the school for each child race group are also shown in Figures 9 through 12. As shown in Models 1 and 2, overall, parents of children of Other race were less satisfied with the school than parents of White children; however, as they become more involved, they were more satisfied with the school ($\beta = .043$, $p = .048$).

As shown in Table 4.7, Model 3, the interaction effect of P.I. and parents of children of other race was maintained. As parents were more involved, compared to parents of White children, parents of children of other races became more satisfied with school ($\text{Exp}(B) = .043$, $p = .047$). In addition, after controlling for race, income, a child's grade in school, and whether a

child had an IEP, parents with a very low income (annual income of \$20,000 and under) were less satisfied with the school than were parents with a high household income (annual income of \$75,001 and higher) ($\text{Exp}(B) = -.135, p = .002$). In addition, the higher a child's grade in school, the less a parent was satisfied with the school ($\beta = -.025, p < .001$). No other significant difference existed amongst groups.

CHAPTER 5 - DISCUSSION AND IMPLICATIONS

This chapter provides a discussion of results presented in Chapter 4. The chapter begins with a statement of the study's purpose and rationale. Next, primary study findings will be summarized. Subsequently, implications for social work practice, policy, and research will be synthesized. Lastly, the strengths and limitations of the study will be delineated as well as the directions for future research. The chapter closes by discussing the study's major findings and contributions.

Findings Summary

This study is among the first to address the role of school-based parental involvement (school-based P.I.) in special education. The study's main goal was to assess whether school-based P.I. was associated with the following important special education outcomes: receipt of comprehensive services, satisfaction with services, and satisfaction with school. In addition, the study addressed how child race may influence relationships between school-based P.I. and the aforementioned study outcomes. Hypotheses tested suggested that the relationships between school-based P.I. and special education outcomes would differ by child race.

As described above and summarized below, several of the study's basic hypotheses addressing school-based P.I. and having a strong evidence base in general education were supported in a sample focusing on special education. In addition, most of the predicted interaction effects were supported for parents of White children. In general, parents of White children are more satisfied with special education services and the school when they are more involved. Most of the predicted interaction effects involving parents of Black children were not

supported; but, other interesting interaction effects emerged. Details of the study findings for each of the three dependent variables are summarized below.

Comprehensive Special Education Services

Overall, school-based P.I. was significantly higher when a child received more special education services. This relationship was maintained when taking into account the interaction of a parent's race, a parent's annual income, and their child's grade in school. All ethnic groups were as likely as the others to receive one special education service at any level of school-based P.I.; therefore, it can be ascertained that no racial or ethnic differences existed in regards to the receipt of one special education service. As the number of special education services increased, however, differences amongst racial groups emerged. Black children were almost 90% more likely than White children to receive two or more special education services. This is consistent with relevant special education literature which states that African-American children disproportionately receive special education services (Ahram, Fergus, & Noguera, 2011; Beratan, 2008; Brandon, et al., 2010).

Comparable to federal special education data, minority children in the present study received more special education services than would be expected based on the overall number of minorities in the sample (U.S. Department of Education, 2004). This finding also supports claims which state that P.I. can help ensure that the appropriate number of special education services is received. On the other hand, parents of Black children in the present study have low P.I. and their children are more likely than White children to receive two or more special education services (Alameda-Lawson, Lawson, & Lawson, 2010; Scheer & Gavazzi, 2009; Spann, Kohler, Soenksen, 2003). Therefore, one may question whether the number of special education services received would differ for children of Black parents if the parents engaged in

more school-based P.I. While this study cannot definitively determine why children of particular races receive more or less special education services than others, for Black children in this study, the likelihood of receiving special education services did not change when their parents were more involved.

Hispanic and Other race children were also more likely to receive three special education services as opposed to none. Although Hispanic and Other race children were more likely to receive more services than White children, when parents of Hispanic and Other race children were more involved, their children were less likely to receive two or more services. Because the study is cross-sectional, causal direction cannot be determined, but, it is possible that for parents of Hispanic and Other race children, school-based P.I. played a role in decision making for their child's special education services. Multiple studies have contended that shared decision making is essential in the special education planning process and that parents are of equal importance as education professionals (Salembier, & Furney, 1997; Simpson, & Fielder, 1989; Staples, & Diliberto, 2010). Although the majority of children in the sample did not have IEPs, shared decision making, communication, and collaboration are important for positive educational outcomes (Hoover-Dempsey, & Sandler, 1995; Manso, & Rauktis, 2011).

Socioeconomics were also associated with school-based P.I. and the receipt of special education services. Research has shown that parents of higher SES are typically more frequently involved than parents of lower SES or economically disadvantaged parents (Lawrence, Lawther, Jennison, & Hightower, 2011; Teasley, 2004). This is often attributed to a lack of affordable transportation, working multiple jobs, working extensive hours, or a lack of child care for younger siblings (Lawrence, Lawther, Jennison, & Hightower, 2011; Teasley, 2004). The current study depicted a similar disparity between parents of high SES and low SES amongst

children's receipt of special education services. Specifically, in comparison to parents who made \$75,000 a year and higher, parents whose annual income ranged from \$20,000 and under to \$74,000 had children who were more likely to receive two, three, or more special education services. In particular, parents whose annual income was \$20,000 and under had children who were more than two times more likely to receive two special education services and more than four times more likely to receive three or more special education services. Likewise, in a study which sought to assess risk for special education identification and disproportionality, Sullivan and Bal (2013) found that students of low income (i.e., those who received free and reduced lunch), as well as those who were African-American, had a higher risk for being identified for special education, thus receiving special education services. Ford (2012) contends that special education researchers must comprehensively evaluate special education representation in order to deeply understand specific categories, such as gender and income differences, associated with groups who are over represented in special education.

Satisfaction with Special Education Services

As school-based P.I. increased, parents had greater satisfaction with special education services. This relationship was maintained after taking into account child race, family income, a child's grade in school, and having an IEP. Although the present study did not hypothesize relationships for Hispanic parents, Hispanic parents had lower school-based P.I. than Black, Other, and White parents; yet, after controlling for P.I. and other factors, they were found to be more satisfied with special education services than were White parents. Perhaps Hispanic parents' higher level of satisfaction could be attributed to cultural norms. Many Latino communities view the school as an authority figure, whereas they believe they should not interfere with educational professionals' decisions and should maintain a respectful distance

(Lian, & Fontáñez-Phelan, 2001). The study also found an interesting interaction effect involving Latino children. That is, when Hispanic parents' school-based P.I. was higher, they were less satisfied with special education services. Perhaps dissatisfaction with services was driving P.I. among the Hispanic parents in the study. When studying correlates of satisfaction in public schools, Bejou (2013) asserts that positive school experiences with school service quality, involvement, and school climate leads to satisfaction. Thus, negative experiences within the aforementioned constructs lead to dissatisfaction; which, in turn, causes parents to increase their voices (i.e., speak out and advocate for their child) or exit (i.e., transfer their child to another educational setting). Similarly, Park and Holloway (2013) found that Black and Latino parents experience less satisfaction in schools and perceived the school environment as less welcoming. Analyses in their study revealed that parents were likely to increase involvement when the school made an effort to engage in meaningful and informative communication.

After controlling for the interaction of race with school-based P.I. and whether a child had an IEP, relationships for parents of Other-race children and parents of Black children emerged. Parents of Other-race children were less satisfied with their child's special education services at any level of involvement; and, as parents of Black children became more involved, their satisfaction with special education services was lower, but not at a statistically significant level. Zoints, Zoints, Harrison, and Bellinger (2003) found that parents' level of satisfaction with special education services was directly related to the respect they received from the school when they were involved, as well as the level of respect shown to their child. The majority of parents in the Zoints' study also felt they were partners with the school inasmuch they were knowledgeable of the school's level of compliance with the parent participation principle of

federal special education policy (i.e., the Individuals with Disabilities Education Improvement Act of 2004; IDEA 2004).

Satisfaction with the School

School-based P.I. is positively associated with overall satisfaction with the school. The greater the school-based P.I., the more parents were satisfied with the school. Satisfaction with school was also associated with race. At any level of involvement, parents of Black and Other race children had lower satisfaction with the school in comparison to parents of White children. However, after investigating the interaction between race and school-based P.I., it became clear that Black parents' satisfaction with the school was not a function of parent involvement. When investigating the correlates of parent satisfaction in public schools, Bejou (2013) also found that parent satisfaction was not associated with parental involvement. Other factors (not investigated in this study) may have contributed to parents of Black children's overall satisfaction with the school, such as overall school climate, school ethical values, and the school's disciplinary practices. On the other hand, when parents of Other-race children were more involved, they were more satisfied with the school. This relationship was maintained after assessing the interaction between race and school-based P.I.

After taking into account race, income, a child's grade in school, and whether a child had an IEP, differences by income emerged. Parents whose annual income was \$20,000 and under were less satisfied with the school than were parents whose annual income was \$75,001 and higher. Similarly, Jacob and Lefgren (2007) found that low income parents were indifferent to school satisfaction and more concerned with their child's academic achievement. Contrarily, high income parents in their study preferred the promotion of school satisfaction and school enjoyment opposed to academic achievement. Lastly, in the present study, the higher a child's

grade-level, parents were less satisfied with the school. This finding could be attributed to the changing needs of students in special education as they progress through school (e.g., post-secondary transitional planning needs; Rehfedlt, Clark, & Lee, 2012) as well as the diverse curricula and diploma options. In a study which assessed parents' satisfaction with teachers and the public school system, Thompson (2003) found that parents were more satisfied during elementary school years and dissatisfied during high school years.

Summary of Main Findings

In sum, P.I. was consistently and persistently positively associated with all three special education outcome variables assessed in the study. In general, P.I. was higher when children received more special education services, when parents were more satisfied with special education services, and when parents were more satisfied with schools. Given that the current study did not assess causal relationships, the causal order of the aforementioned associations is less clear.

Perhaps the study's more intriguing findings pertain to race and ethnicity. The most important findings related to race and ethnicity are that Black children are more likely than White children to receive two and three special education services versus receiving no services. Yet, for these parents, their race did not interact with school-based P.I. and affect the number of special education services received. On the other hand, when parents of Hispanic children were more involved, their children were more likely to receive no special education services. Also, when parents of Hispanic children were more involved, they were less satisfied with special education services. For parents of White children, study findings were consistent with my prediction; when parents of White children were more involved in school, their children received more services, and they were more satisfied with both school and the services they received.

The study findings do not depict a clear picture in which parents of Black children were more involved because they were dissatisfied with special education services or schools. In a surprise, the findings suggest that, rather than Black parents, more-involved Hispanic parents were less satisfied with special education services. A plausible explanation for this finding includes culture-specific behaviors and needs are misunderstood by education professionals making special education service decisions, thus leading to unsatisfactory or unnecessary services. In addition, Hispanic families may not hold the same views of disability as non-Hispanic (e.g., White) teachers, families, and educational professionals (Ford, 2012). In another surprise, the findings suggest that more-involved parents of children of other races were more satisfied with schools. These findings imply that additional factors not investigated in the study may be contributing to the overall satisfaction with schools amongst minority parents. Further, the findings suggest a need for future studies to further investigate the interaction between race/ethnicity and school-based parental involvement in special education.

Study Implications

Relevant literature illustrates that P.I. increases educational outcomes such as higher grades, lower dropout rates, and lower grade retention; however, prior to the current study, it was unknown whether the provision of special education services had a relationship with P.I. Furthermore, much of the current special education literature depicts the means to which schools can facilitate P.I. and are conceptual pieces on why P.I. activities are important. Empirically understanding the links between P.I., comprehensive special education services, and satisfaction with services and the school informs policy efforts, social work practice, and future research.

Policy

Federal special education policy calls for students to receive services in efforts to ensure optimal educational attainment. Whereas services are mostly provided through Individualized Education Plans (IEPs), 75% of children in this study received special education services, yet only 29% of these students had an IEP. Therefore, one may question whether the children in the present study have disabilities which do not manifest in a way that requires supportive services from the school, parents refuse to participate in IEP programming, or whether parents were not forthcoming with IEP information during data collection.

The federal policy also requires schools and school districts to promote and ensure P.I. throughout the special education process (e.g., determining special education eligibility, outlining educational plans in the IEP, and the delivery of special education programming). Accordingly, state education agencies are required by law to report the performance and progress of their schools' facilitation of P.I. to improve special education services. Given the above, the current study can provide a foundation for helping policymakers and educators emphasize culturally diverse components of special education programming.

The current study initially aspired to provide clarity and a more substantive understanding of the P.I. provision in IDEA 2004 inasmuch the policy's language is vague, stating to "meaningfully involve" parents. Although a more substantive understanding of the provision was not derived, it became clear that P.I. remains a vague concept. This is evidenced by the strong association between an increase in special education service use and higher school-based P.I., as well as the weak association between school-based P.I. and satisfaction with special education services. The aforementioned associations became complex when evaluating across racial groups. For example, children in this study who were Black were more likely than White children to receive two or more special education services. Although the federal

government has been intentional in their pursuit to combat disproportionate educational opportunities for children of color over the past 20 years, the disproportionate receipt of special education services for minority children in this study further substantiates the need for federal policy to address the following: a.) educational practices that are unintentionally discriminatory or biased; b.) limited opportunities for learning prior to students being referred for special education; and c.) cultural deficit thought processes which pathologize minority students and students of low socioeconomic status.

Social Work Practice

Family involvement and school engagement is buttressed by positive relationships between school personnel and families (Fraser, Kirby, & Smokowski, 2004). School social workers and social workers who work with children receiving special education services across various practice settings often promote and influence P.I. The current study's exploration of school-based P.I. and its association with special education outcomes is important to social work practice in several ways.

IDEA 2004 created educational mandates for children with disabilities and describes five social work services in schools for students with disabilities. Social workers often facilitate communication surrounding the IEP development process as well as conduct social, emotional, and behavioral assessments which provide support for the non-academic components of IEP's (U.S. Department of Education, 2004). In addition, they serve on teams which develop and revise IEP's. Parents in the current study whose children had an IEP were found to be more satisfied with their child's special education services. On the other hand, 72% of children in the study did not have an IEP; therefore, the likelihood that they have benefitted from the aforementioned school-related social work services is slim. Interactions between students,

parents, school personnel, and the community promote healthy physical and mental development as well as academic success (Hopson, & Lawson, 2011; Cohen, & Geier, 2010). Therefore, social workers who work in schools are in the position to interface with school personnel and parents in order to advocate for students and impact the receipt of special education services. Moreover, social workers can help parents to be more aware of special education services, including the role of an IEP and the means to obtain an IEP. In addition, social workers can help parents to advocate for more services, if appropriate, or for fewer services, if appropriate.

Diversity in culture, ethnicity, socioeconomic status, and ability level are directly related to the core values in social work. It appears that minority groups in this study match the profile of disenfranchised groups social workers have historically fought side-by-side with to improve conditions of life. For example, low income children in the study were more likely than high income children to receive special education services. In addition, low income parents were less satisfied with special education services and the school than high income parents. Given that annual household income alone does not explain or justify why differences in the receipt of services or satisfaction among the two groups exists, one can assume that other environmental forces or broader inequitable practices may be contributing to the disparities. Social workers combat injustices and practices which perpetuate disparities and oppression (Segal, 2010).

Zisser and van Stone (2015) led an innovative medical-legal program which uses social workers and a multidisciplinary approach to provide services to low-income families with children who have developmental and intellectual disabilities. They found that families were satisfied with their children's complex health, education, and psychological services and outcomes when they received advocacy assistance (Zisser, & van Stone, 2015).

In addition to the above, the current study's investigation of the interaction of race has a number of implications. For instance, attention to racial disparities was highlighted as opposed to assuming they exist in a limited capacity. As such, differences amongst racial groups were depicted. Although the current study could not determine the cause of the disparity, Critical Race Theory would suggest that racism is operating in a way that results in differential comprehensive services and less satisfaction; therefore, people of color continue to be subordinated and the balance of power within the educational system remains inequitable. The study findings also suggest that for Hispanic parents and parents of children of other races dissatisfaction may be leading to greater parental involvement. Participants in Zoints, Zoints, Harrison, and Bellinger's (2003) study stated that there is a critical need for school professionals to undergo cultural awareness, diversity, or sensitivity training in order for the school to understand their "Black boys."

Social Work Research

Although this study cannot determine causal relationships or trends over time, the use of a nationally representative data set offers the ability to paint a reasonable picture of the condition of P.I. in special education and its associations with comprehensive special education services, satisfaction with special education services, and satisfaction with the school. Satisfaction with special education services and satisfaction with the school served as proxy measures for quality special education services and overall school quality. Insight was acquired on parents' involvement activities and whether these activities were related to the aforementioned concepts. Insight was also gained on relevant theoretical frameworks.

The current study used Hoover-Dempsey and Sandler Models of Parental Involvement as a framework to understand the constructs explored. A hybrid version of the model was

suggested as more appropriate for P.I. in special education inasmuch information pertinent to the delivery and receipt of special education services was not included in previous versions of the model (See Figure 3). Key concepts depicted in the model were related to the study findings. Under the level in the model titled personal motivations, invitations, and life context, family culture is a component. Cultural and linguistic differences have implications for the type and amount of involvement parents engage in. As noted previously, some cultures and ethnicities regard the school as the authority figure and refrain from interfering with academic and behavioral decisions. In regards to the current study, Hispanic parents were satisfied with their child's special education services; yet, when they were more involved they were less satisfied. Moreover, the higher their school-based involvement, the less likely their children were to receive two special education services (in comparison to parents of White children). In addition to the above, another family culture related finding is linked to income. Annual household income in this study was associated with the receipt of services, satisfaction with special education services, and satisfaction with the school. Other concepts in the hybrid model which can be linked to the study's findings relate to the levels parent involvement forms. Under parent involvement forms, school communication and school involvement are concepts. The current study's main goal was to assess school-based involvement activities. School communication variables were included in the composition of the overall P.I. score (i.e., the study's measure for school-based involvement). An increase in involvement was associated with differing outcomes. Although this study did not seek to assess the applicability of the hybrid model of parental involvement to school-based P.I. in special education and its associations with special education services and satisfaction with services and the school, the results noted indicate further exploration of the model's use for this population may be warranted.

As noted above, the current study revealed that children of particular races were more likely to receive two special education services or three or more special education services versus not receiving any services. The number of special education services received was lower when their parents were more involved. This finding supports relevant literature which asserts the importance of P.I. in special education. It remains to be known, however, which specific parental involvement activities play a role in the receipt of special education services. Similarly, future research should investigate factors associated with differences amongst groups. For example, a follow-up study could investigate why children of low income are more likely to receive special education services than children of high income; why parents of Black children and parents of children of other races are less satisfied with the school; and why parents of children of other races are less satisfied with special education services.

Strengths & Limitations

Strengths

Data examined in the current study was collected from a nationally representative sample of parents. The study is unique in its use of the most recent national data to systematically assess school-based P.I. and special education services. Limited quantitative information exists regarding the impacts of P.I. in special education. The current study makes a meaningful contribution to the literature by examining the role of specific involvement activities and their relationship to the receipt of special education services. In addition, few studies have investigated satisfaction with special education services amongst a diverse population of parents. Most studies targeted specialized groups such as support groups for parents who have children with a specific disability (Scheer, & Gavazzi, 2009; Spann, Kohler, & Soenksen, 2003; Zions,

Zionts, Harrison, & Bellinger, 2003). The lack of empirically based literature underscored the need for such research.

Furthermore, the current study provided an in-depth picture of the interaction between child race, P.I., and special education. Countless special education researchers have documented and examined discriminatory educational practices amongst students of color; however, few studies have investigated the association between these practices and parent involvement for parents of color and students of color. The current study not only supported previous assertions on race and special education, it also highlighted how the educational system can unintentionally subordinate minority parents by not taking into account their satisfaction with the services their children receive. As mentioned previously, research has shed light on disproportionate educational practices for African-Americans and Latinos and federal policy has sought to diminish these acts; yet, limited focus has been placed on other minority groups. The current study addressed gaps through finding that individuals who identify as other (i.e., American Indian or Alaska Native; Asian; Native Hawaiian or Pacific Islander; and Other) also experience disparaging and disproportionate access to special education.

Limitations

Several limitations were noted in the current study. First, the measurement of key variables could be considered simplistic. For example, the measure “comprehensive special education services” does not distinguish the level of importance or availability of one service versus another. It simply measures the overall number of services a child receives and assumes that each service is equally important or available. Similarly, the measure for school-based P.I. does not distinguish which involvement activity is more important or readily available from the school over another. Therefore, a parent may have a lower school-based P.I. score, yet, could be

highly involved in their child's education given the limited opportunities offered by the school.

In addition, the study does not control for the level of service need. As a result, it is hard to interpret the meaning of receiving more or fewer services. Given the above, one may question whether children who are receiving more services getting needs met; or, are they being unnecessarily targeted for special education? The study cannot address this question.

Moreover, the study does not assess whether parental satisfaction with services is associated with the number of services received.

Other limitations for the proposed study relate to the theoretical framework and the data set chosen. Specifically, although the Hoover-Dempsey and Sandler Model for Parent Involvement comprehensively addresses P.I. related concepts such as parental motivations for involvement, invitations from the school, and involvement forms, it omits the actions of practitioners who influence parental participation. For example, social workers influence P.I. through their interpersonal relationships. Specifically, social workers' ability to build rapport with parents influences P.I. and the level of parent engagement. Moreover, a number of concrete means for social workers to facilitate P.I. exists. For instance, social workers may facilitate P.I. through providing transportation assistance for parents to attend school-based meetings or may verbally communicate to parents meeting outcomes (Zetlin, Weinberg, & Luderer, 2004).

In addition to the above, the use of cross-sectional data will prevent assessing causal relationships. For example, the data limits the investigation of whether P.I. leads to the provision of more comprehensive special education services or if receipt of more comprehensive special education services promotes P.I. The study findings raise similar questions about the relationship between P.I. and parental satisfaction. Does P.I. promote greater satisfaction, or

might parents who are more satisfied with services and schools be more motivated to get involved?

Another limitation pertains to sampling methods. Sampling methods used to obtain data in large studies like this one can exclude certain groups. For example, individuals of lower socioeconomic status who may not have telephones or whose telephone numbers change often may have been excluded from the sample. Furthermore, individuals who live in cell phone only households may not have been sampled. In addition to the above, the majority of the respondents in this study spoke English (91%); therefore, the current study excluded parents who do not speak English.

Other limitations regarding the data set pertain to the content included. Originally, the collection of data for PFI-NHES 2007 was not focused on special education. As such, pertinent variables, information, and data were excluded. For example, although IDEA 2004 delineates 13 special education categories, the PFI-NHES 2007 only included 11 categories. On the PFI-NHES 2007, some IDEA 2004 special education categories were combined while others were omitted—no reason for omission was provided. For example, Deafness and Hearing Impairment are separate IDEA 2004 categories, yet the PFI-NHES 2007 has them combined into one item. ADHD/ADD is listed as an item in the PFI-NHES 2007. IDEA 2004 does not delineate ADHD/ADD as a classification; inasmuch, students identified as having the disability receive services under the Other Health Impairment special education category. Similarly, Pervasive Developmental Disability is not a category under the IDEA 2004 classifications, although it is commonly experienced among students who receive special education services. These students also receive services under the Other Health Impairment special education classification. IDEA 2004 special education classifications omitted from the PFI-NHES 2007 list are Deaf-Blindness,

Multiple Disabilities, and Traumatic Brain Injury (U.S. Department of Education, 2004). In addition to the above, the PFI-NHES 2007 lacks data on school quality, the receipt of free and reduced lunch, and Title 1 status. This information is imperative for gaining a deeper conceptual understand of a school's demographic make-up. Similarly, data related to school size was not available in the protected use data set; therefore, it is unknown whether a school's enrollment size had implications for the receipt of comprehensive special education services, parent's satisfaction with special education services, or parent's overall satisfaction with the school.

Conclusion

The current study sought to increase knowledge of the effects of school related parental involvement activities on the receipt of special education services as well as examine the effects of child race on parent's perceptions of special education services. This was accomplished through exploring school-based parental involvement (P.I.) and its association with the comprehensiveness of special education services, parental satisfaction with special education services, and parents' overall satisfaction with the school. In addition, the study also assessed whether a child's race affects the comprehensiveness of special education services and the parental satisfaction with special education services. All of the above was addressed through a secondary data analysis of the Parent and Family Involvement in Education Survey (PFI-NHES).

Findings from this study suggest that school-based P.I. is associated with comprehensive special education services, satisfaction with special education services, and overall satisfaction with the school. Specifically, school-based P.I. was higher when a child received more special education services. As school-based P.I. increased, parents also had higher satisfaction with special education services as well as higher overall satisfaction with the school. Minority children in this study received more special education services than their White peers; however,

satisfaction with special education services varied across races and ethnic groups. Results from this study provide insight on special education delivery and a foundation upon which the condition of P.I. in special education can be improved. As such, social workers and other school-related social service professionals can advocate for more P.I. in special education, as well as promote interdisciplinary collaboration.

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APPENDICES

Appendix A: OLS Models for White Children Only

Table 5.1

OLS Regression of Satisfaction with Special Education for White children

Variable	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test
Constant	3.09	.09		.000	.000
School-based P.I.	.056	.02	.150	.001	.000
$R^2 = .02$; $F = 11.85$, $df\ 513$, $p < .01$					

Table 5.2

OLS Regression of Satisfaction with the School for White children

Variable	Coeff	S.E.	Beta	P Value 2-tail Test	P Value 1-tail Test
Constant	3.18	.04		.000	.000
School-based P.I.	.052	.01	.171	.000	.000
$R^2 = .03$; $F = 45.02$, $df\ 1488$, $p < .01$					

These models demonstrate that the coefficients for P.I. shown in Tables 4.6 and 4.7 reflect the effects for parents of White children. The coefficients for P.I. shown in Model 2 in both tables (the interaction term models) are the same as the coefficients shown in the tables above.

Appendix B: Illustration of Interaction Effects by Race

Figure 5

The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of White Children

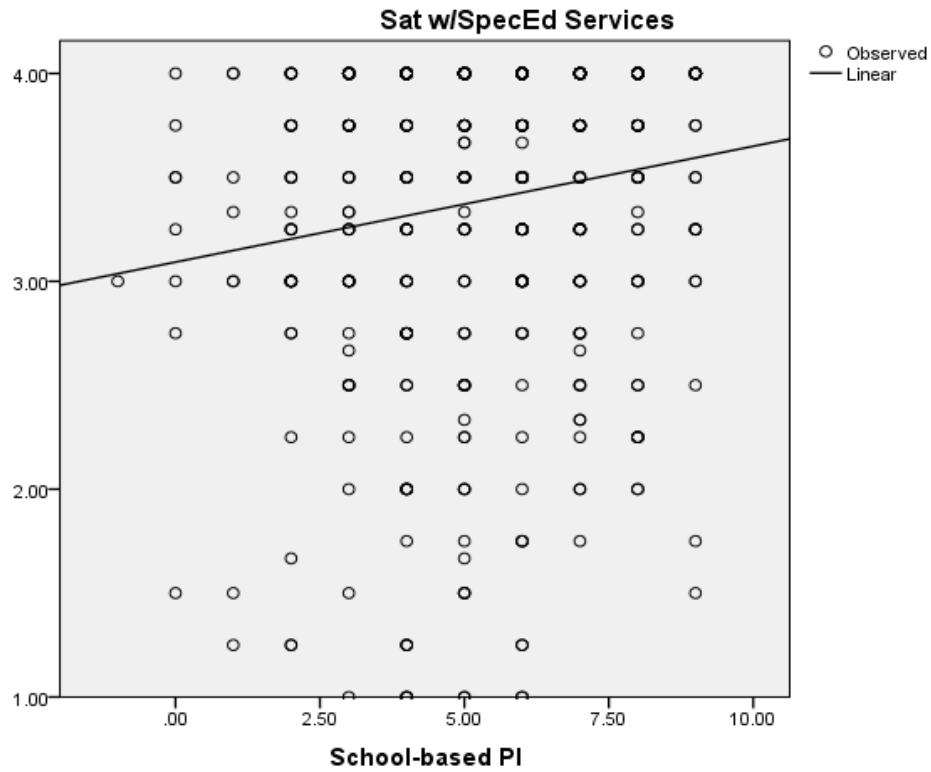


Figure 6
The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Black Children

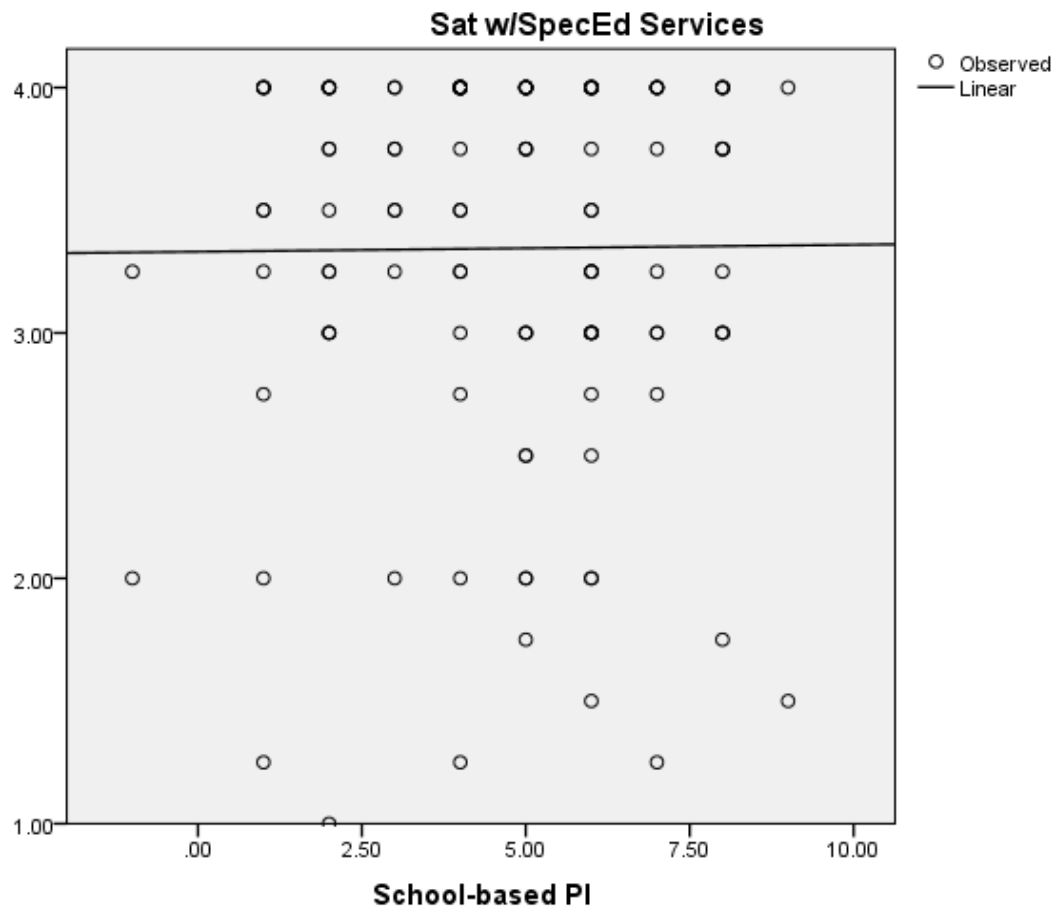


Figure 7
The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Hispanic Children

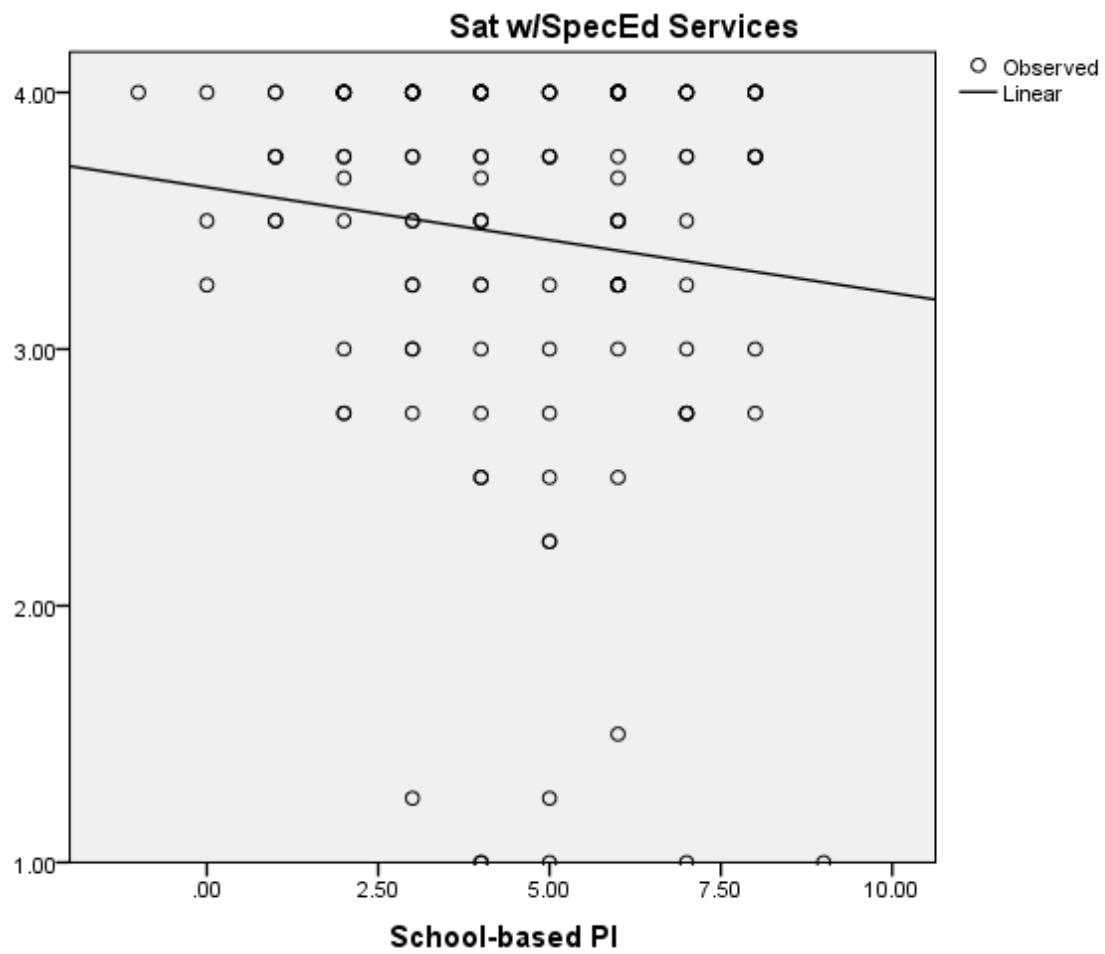


Figure 8
The Relationship Between School-based P.I. and Satisfaction with Special Education Services for Parents of Other-race Children

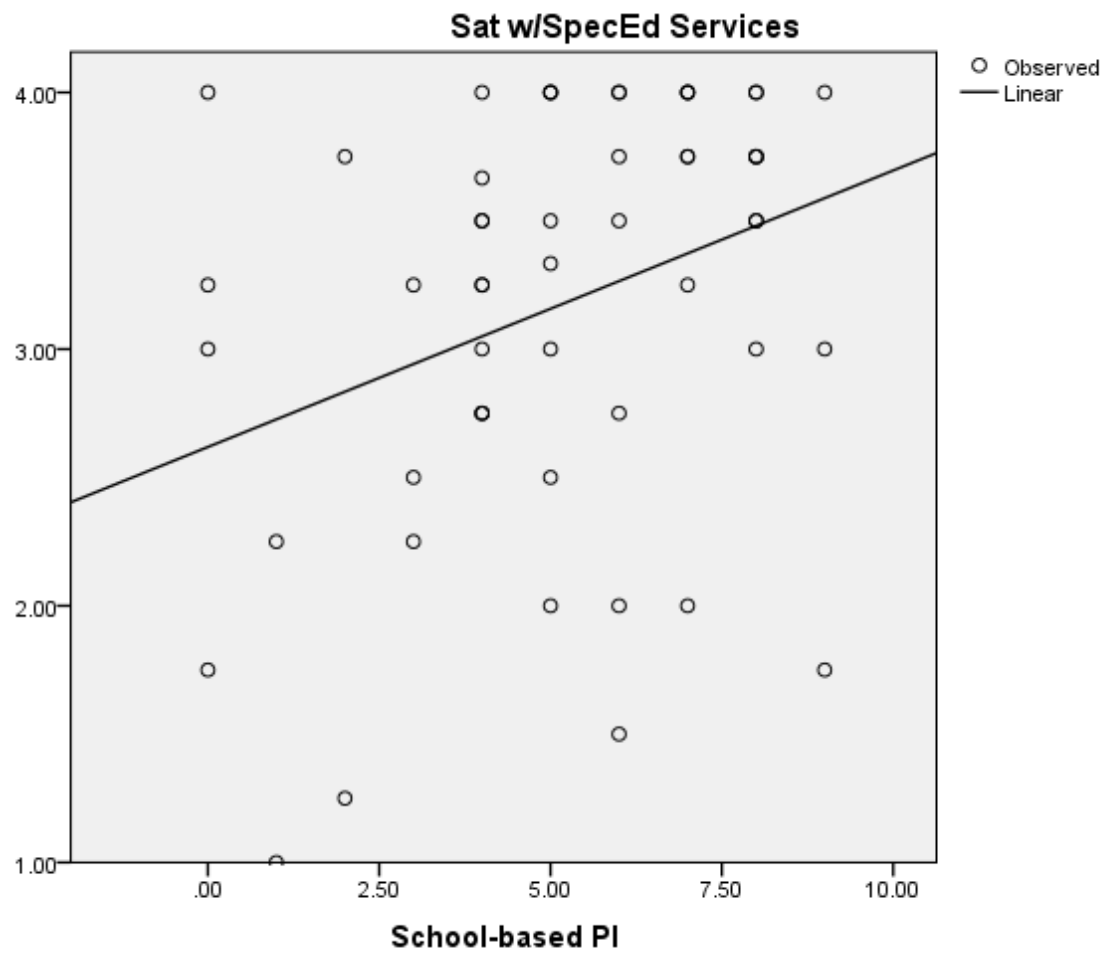


Figure 9
The Relationship Between School-based P.I. and Satisfaction with the School for Parents of White Children

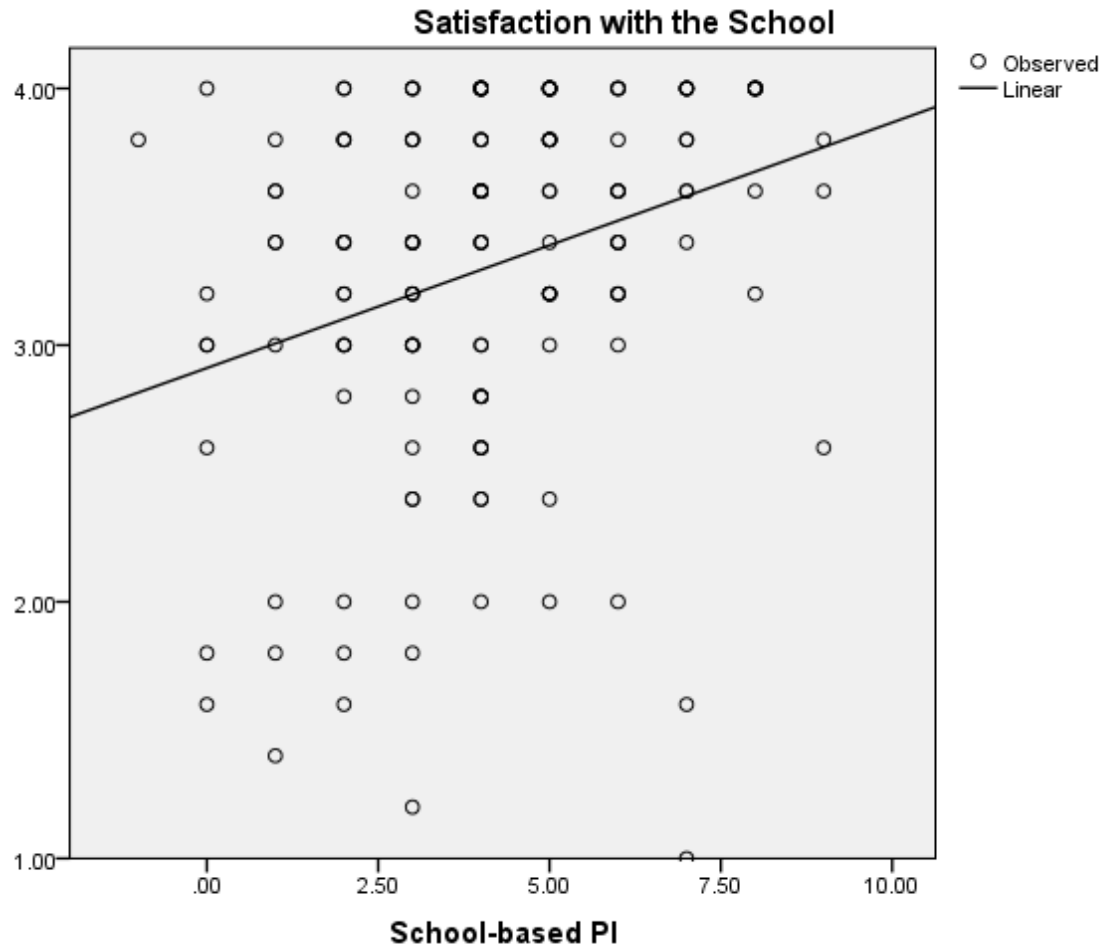


Figure 10
The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Black Children

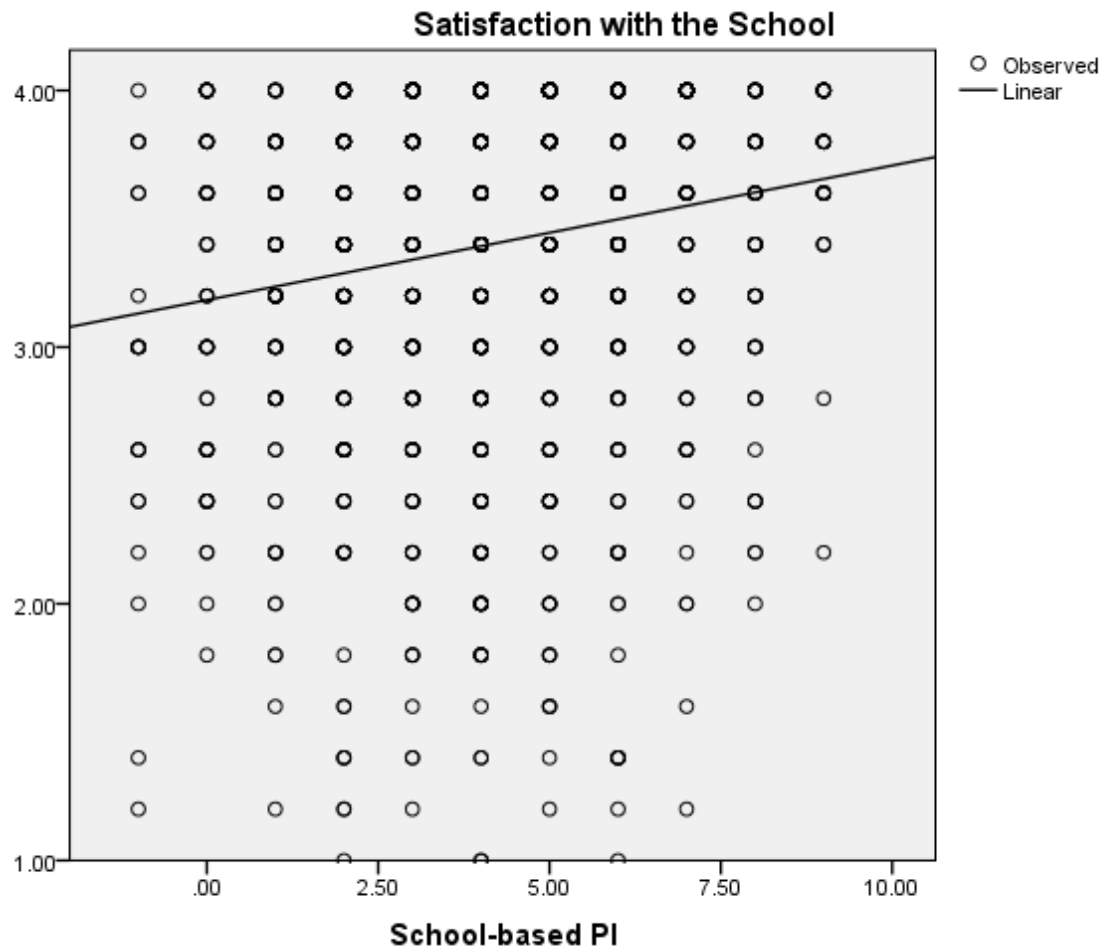


Figure 11
The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Hispanic Children

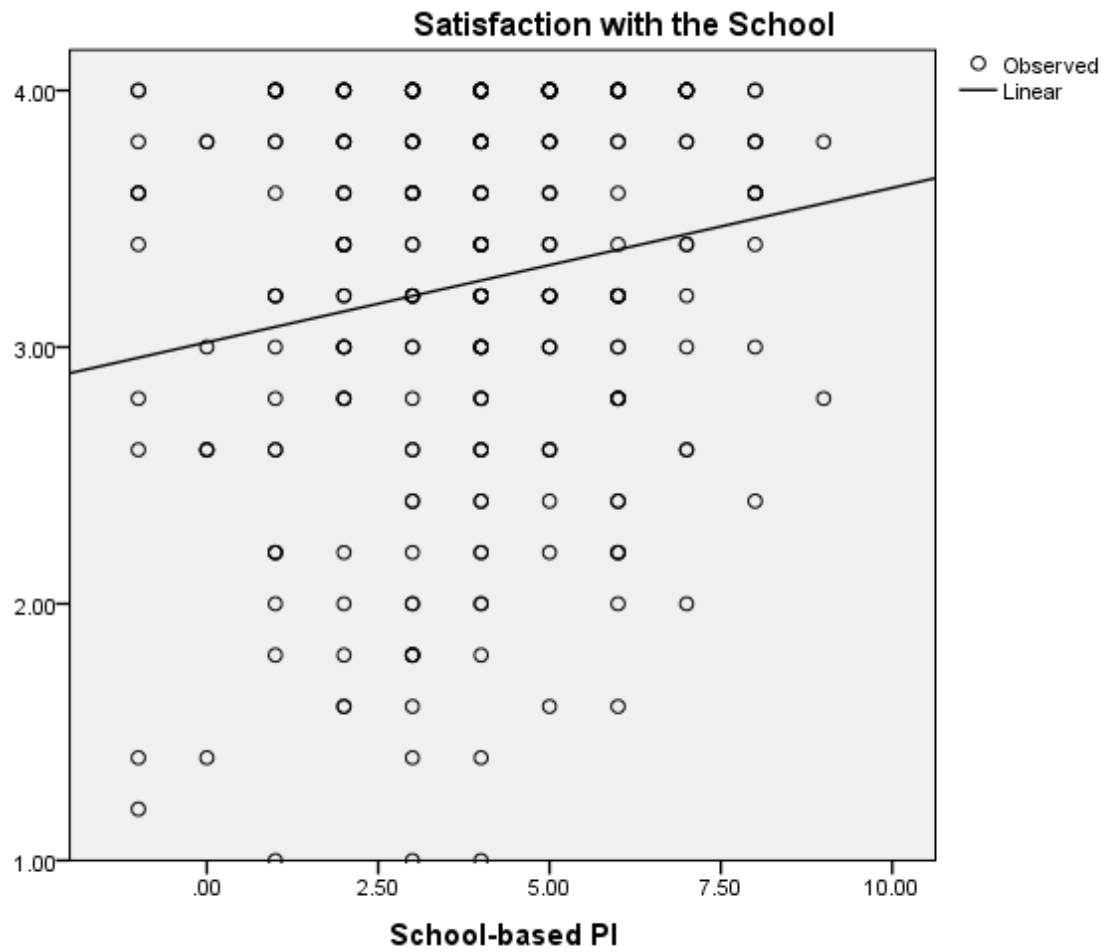
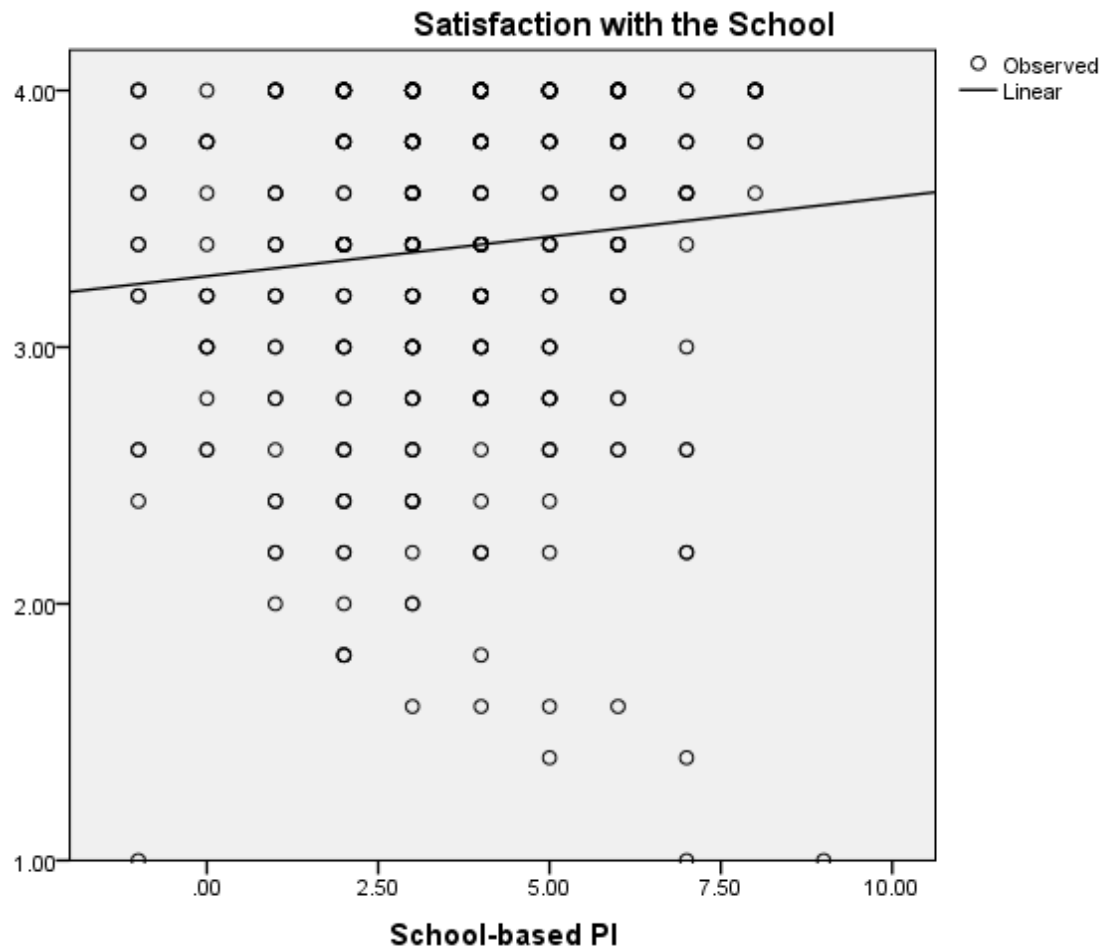


Figure 12
The Relationship Between School-based P.I. and Satisfaction with the School for Parents of Other-race Children



Appendix C: IRB Approval



August 27, 2015

Jessica Pincham
School of Social Work
The University of Alabama
Box 870172

Re: IRB # EX 14 CM 101-R1 "Parent Involvement in Special Education:
An Investigation of Comprehensive Services, Service Satisfaction, & Race"

Dear Ms. Pincham:

The University of Alabama Institutional Review Board has granted approval
for your renewal application.

Your renewal application has been given exempt approval according to 45
CFR part 46.101(b)(4) as outlined below:

*(4) Research involving the collection or study of existing data, documents, records,
pathological specimens, or diagnostic specimens, if these sources are publicly available; or if
the information is recorded by the investigator in such a manner that subjects cannot be
identified, directly or through identifiers linked to the subjects.*

Your application will expire on August 26, 2016. If your research will
continue beyond this date, complete the relevant portions of Continuing
Review and Closure Form. If you wish to modify the application, complete
the Modification of an Approved Protocol Form. When the study closes,
complete the appropriate portions of FORM: Continuing Review and
Closure.

Should you need to submit any further correspondence regarding this
proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

Carpi
Direcc
Office



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