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An examination of the effectiveness of an early truancy intervention for reducing chronic absenteeism amongst at-risk students through the use of Regression Discontinuity analysis

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AN EXAMINATION OF THE EFFECTIVENESS OF AN EARLY TRUANCY
INTERVENTION FOR REDUCING CHRONIC ABSENTEEISM AMONGST AT-RISK
STUDENTS THROUGH THE USE OF REGRESSION DISCONTINUITY ANALYSIS

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

In

The School of Social Work

by
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ABSTRACT

Truancy is a major social problem affecting students, families, schools, and communities in the United States and is associated with low academic achievement, grade retention, and dropout. Truancy is also correlated with other adverse life outcomes including delinquency, substance abuse, and incarceration. Social work best practices literature suggests that truancy interventions should take place before habitual chronic truancy becomes a problem. There are few truancy preventions for elementary-age students that have been empirically assessed. Thus, this study examined the effectiveness of the Truancy Assessment and Service Centers intensive case management intervention for elementary-aged students ($N = 700$) using a quasi-experimental group design, Regression Discontinuity (RD). This study is the first known application of the RD design for truancy intervention assessment. One year of data previously collected from one urban TASC site in the Deep South was used to investigate whether participation in the truancy case management intervention reduced truancy among participants. Based on a pre-determined cut-off score, approximately half of the sample ($n = 331$) was assigned to the case management intervention, while the other half received a notification letter and warning. Both groups were monitored for the remainder of the school year. Truancy rates among participants in the control group remained at the pre-intervention levels, while truancy rates among those in the treatment group significantly declined ($p < .01$). Further, cases in the truancy intervention group that were successfully closed were more likely to show a reduction in truancy than those that were not ($p < .001$). Moreover, the findings indicated that participants referred to educational and social services were more likely to complete them and were more likely to show positive case outcomes ($p < .05$). Although the truancy intervention successfully reduced truancy overall, it was less effective with non-White children and with children who had

been previously retained. Future resources should be aimed bolstering school social work practice and influencing educational reform at the local, state, and federal levels. Additional well-controlled outcome research is needed to shed light on the components of truancy intervention that are associated with long-term positive outcomes for children.

CHAPTER 1: INTRODUCTION

Truancy is a major social problem affecting individuals, families, schools, and communities. Truancy has been a concern since the enactment of the compulsory attendance laws in the 1950's and 1960's, and it has become more noticeable over the last several decades with the rise of high school dropout. School principals in the United States cite truancy as one of the top five challenges currently affecting public education (Heaviside, Rowand, Williams & Farris, 1998). Current truancy estimates indicate that some school districts experience daily rates of absenteeism as high as 30% of the student body (Garry, 1996). Teasley (2004) reports that, on average, 6% of rural, 8% of urban, and 12% of inner city school children are absent on a daily basis. However, national rates of truancy are difficult to gauge due to the lack of a single definition of truancy (Chang & Romero, 2008), which makes it nearly impossible to compare estimates across districts and states. Individual states are responsible for creating compulsory attendance laws that: a) determine the age at which a child must be enrolled in school, b) the age at which a child is legally allowed to permanently withdraw from school, and c) the number of absences for which a child is considered legally truant (National Criminal Justice Reference Service [NCJRS], 2007). The National Center for School Engagement [NCSE] (2007) proposes a brief and concise definition: Any unexcused absence from school. Examples of unexcused absences include: a) a child's absence without a verifiable medical or parental excuse, b) a child being registered for school but never attending, c) habitually missing a specific class, such as English or math, or d) habitual tardiness (Reid, 2005; Zhang, 2003).

Truancy as a Social Problem

Truancy was once thought to be an adolescent problem, particularly amongst high school students, but research now shows that truancy is a problem affecting every age and grade

including kindergarten (McCray, 2006). Truancy has often been portrayed in the media as a form of meaningless childhood rebellion (Reglin, 1997). However, truancy is associated with numerous negative outcomes for individuals, families, schools, and communities. Current research shows that truancy is not an individual issue, but rather an indicator of family problems or family dysfunction, as well as an array of unmet physical, psychosocial, or academic needs (Baker, Sigmon, & Nugent, 2001). Some of the common issues found to contribute to early childhood truancy include poverty and a lack of basic needs such as food, shelter, and appropriate clothing (McCray, 2006). Poverty has been measured as a lack of monetary resources, transportation, child care, adequate medical insurance, and family eligibility for free or reduced priced lunches (Alexander, Entwisle & Kabbani, 2001; Baker et al., 2001; McCray, 2006). According to the National Center for Children in Poverty [NCCP] (2008) over 20% of impoverished children are also chronically truant from school. More complex issues that contribute to truancy include domestic violence, lack of parental guidance, negative family attitudes toward education, and child behavior problems (Alexander et al., 2001; Baker et al., 2001; NCSE, 2007; Teasley, 2004).

Several academic factors have also been found to contribute to the problem of truancy such as an unsupportive school environment, large school size, inflexible teaching styles, and inconsistent means of responding to children who are consistently absent from school (Baker et al., 2001; McCray, 2006; NCSE, 2007). Research is now being focused on chronically absent elementary-age students because several studies have found that early intervention is needed to prevent life-long adverse outcomes (Alexander et al., 2001; Lehr, Sinclair, & Christensen, 2004; Fantuzzo, Grim, & Hazan, 2005). Research suggests that early truancy is one of the main contributors to academic difficulties, grade retention, academic failure, and drop out (Alexander

et al., 2001). By using information about truancy and other risk factors, researchers can now predict with 70% accuracy which first-grade children will eventually drop out of high school (Alexander et al., 2001). Alexander and colleagues found that 80% of children that were previously retained eventually drop out. In fact, children who have been retained more than one grade are 94% more likely to drop out of school than those who have never failed a grade (Alexander et al., 2001).

The effects of early truancy have been found to carry over into adulthood. Children that have a history of early truancy are disproportionately represented amongst those who drop out of school, those who rely on the welfare system, and amongst those who are incarcerated. According to the US Department of Education (NCES, 2010), nearly 10% of African American and 20% of Hispanic students between the ages of 16 and 24 dropped out of school in 2008, as compared to 5% of White students in the same age group. McCray (2006) reports that adults with a history of truancy are twice as likely to be unemployed and to rely upon government assistance. Shroeder and colleagues (2004) found that the life histories of over half of the death row inmates, most of whom were African American, included reports of chronic early absenteeism starting in kindergarten. Moreover, early truancy has also been found to contribute to juvenile delinquency (Garry, 1996), substance use and abuse both in adolescence and adulthood, early sexual behavior, and teen pregnancy (Halfors, Vevea, Iritani, Cho, & Khatapousch, 2002). Halfors and colleagues (2002) found that truant students were seven times more likely to report marijuana use than students without truancy issues. The National Center for Children in Poverty (NCCP, 2008) found that children born to teenage mothers miss 10% more days of school than children born to adults (NCCP, 2008). Moreover, more than 20% of children whose mothers did not earn a high school degree are chronically truant. Extant research

indicates that having a combination of any three of the aforementioned risk factors (e.g., living in poverty, teenage mother, mother lacking a high school diploma) makes a child 10% more likely to be chronically truant (NCCP, 2008).

The life-long effects of truancy are felt not only by individuals and families, but also by schools and communities. School districts gain or lose money based on daily attendance rates, which means that schools or entire districts are penalized when truancy rates are high (Darling-Hammond, 2007). Children that are frequently absent require more educational enrichment services such as tutoring and summer school to avoid retention and to stay on grade level. Such educational enrichment services are required because absences interfere with the teaching and learning processes. School districts are required to pay for these services outside of regular school hours and over the summer holiday, which negatively affects school budgets (Darling-Hammond, 2007). The negative impact to school budgets equates to less money overall, for teachers, for staff, and for textbooks, computers, and state of the art teaching materials. Because students who are chronically truant are also more likely to drop out of school, the community in which they live also experiences a reduced tax base. Not only do communities suffer the cost of high drop-out rates, employers that conduct business in these communities must spend money to train an undereducated and ill-prepared workforce (McCray, 2006).

Because of the deleterious effects of truancy, prevention interventions efforts have proliferated over the last decade in an effort to both reduce chronic absenteeism and improve the graduation rates in the US (NCJRS, 2007). The National Center for School Engagement database (n.d.) hosts a directory of available truancy prevention and intervention programs for students in kindergarten through twelfth grade across the US. The vast majority of these programs target middle and high school students when rates of truancy and grade retention often

peak. However, early interventions for elementary-age students also have been steadily increasing in the last decade and the state of Louisiana has followed suit with much of the country.

Louisiana is unique for several reasons. First, much of the Deep South is considerably poorer, as compared to the rest of the US, and minorities are notably overrepresented in the population, particularly African Americans. According to the Council for A Better Louisiana [CABL] (2011) approximately one-third of Louisiana residents report an annual income of less than \$25,000. Moreover, one-fifth of all children in Louisiana are currently living in poverty which represents the 17th highest rate in the nation (CABL, 2011). In addition, at least two thirds of Louisiana public school children (67%) are eligible for free or reduced priced lunches (CABL, 2011).

Louisiana has one the poorest public school systems in the US. According to CABL (2011), the Louisiana state review system (i.e., School Performance Score of ≥ 100) found 3% of Louisiana public schools (43) to be academically deficient. An additional 62% did not meet the state's 10-year goal for academic growth (CABL, 2011). Florida has the highest rate of failing schools at 72% and Oklahoma has the lowest rate at 5% (NCES, 2009). Approximately 27% of all schools in the US did not meet the federal guidelines for yearly academic progress for 2004-2005 (NCES, 2009). Since 2002, approximately 8% of public schools in Louisiana showed a decline in academic performance, and almost one fifth of school-aged children (19%), are enrolled in private education, one of the highest rates in the country (CABL, 2011). Nationally, only 11% of students are enrolled in private education (NCES, 2010). The above statistics shed light on why Louisiana had more than 65,000 students drop out of the public school system since

2006 (CABL, 2011). Louisiana has a graduation rate of 60% as compared to the national average of 73% (NCES, 2009).

Louisiana recognized the need for an early truancy intervention program in the 1990's when the state began seeing the effects of truancy, primarily an increase amongst students that dropped-out and a rise in juvenile delinquency. In order to address these problems, the Louisiana state legislature partnered with the School of Social Work, Office of Social Service Research and Development (OSSRD), at Louisiana State University (LSU), to create an early truancy intervention program (Rhodes, Thomas, Lemieux, Cain, & Guin, 2010).

Purpose of Study

The purpose of this study was to assess the effectiveness of the Louisiana Truancy Assessment and Service Centers (TASC) intensive case management intervention with youth at risk for continued truancy. The TASC program is an innovative approach to truancy intervention in which both the child experiencing truancy and the family of the child are assessed, linked to needed services in the community, and then monitored for the remainder of the school year.

The TASC program is aimed at elementary age youth that have five or more unexcused absences in a single school year. Grounded in both ecological theory and the social development model, TASC utilizes a holistic intervention approach that incorporates school social work, a relatively new field of practice for social workers in which the dynamic relationship of the school and child are the focus (Dupper, 2003). School social workers are charged with assessing the interface between school policies, the school environment, and the children and families attending the school (Dupper, 2003). School social workers are often utilized for educating families about school policy, linking children to health and mental health resources, counseling students, and serving as mediators between the school and the students' families (Dupper, 2003).

Research on school social work describes efforts to change dated and flawed school policies pertaining to students and their families (Openshaw, 2008), and harmful school environments (Dupper, 2003), as well as to evaluate prevention and intervention programs in the educational setting (Openshaw, 2008). Thus, the problem of truancy and high school dropout has become one of the primary focal points of research and intervention amongst school social workers and researchers given that these are some of the most prominent issues facing schools in the US (What Works Clearinghouse [WWC], 2008). Because the field of school social work is a fairly new field of practice, only a few of the truancy prevention and intervention programs being utilized in schools are grounded in school social work literature and best practices.

In order to assess the effectiveness of the TASC intervention, this study utilized secondary data for one school year (2006-2007) at one urban TASC site in Louisiana. A quasi-experimental group design, Regression Discontinuity (RD), was used to assess the effectiveness of TASC for both low- and high-risk participants¹. This study also examined interrelationships among participants and program characteristics, regarding changes in the rate of truancy after the intervention.

This study is unique because it examines the effectiveness of an early truancy intervention with RD, a relatively rigorous design, as compared with those used in truancy program evaluations. Although randomized experiments are still the program evaluation design of choice amongst social work researchers, RD ensures that the neediest clients receive treatment. Further, this study examined truancy as an outcome, rather than as a contributor to

¹ Secondary data were originally gathered by this researcher to evaluate TASC while employed with the TASC program. This was not a conflict of interest because this researcher is no longer employed with the TASC program and has permission from the director of the OSSRD to examine the effectiveness of the intervention for one cohort of students in one parish for one year.

other forms of delinquency, which is a frequent focus in the truancy literature (e.g., Dryfoos, 1990; Halfors et al., 2002). Finally, the current study is important because it examined the influence of various service characteristics on truancy, data not used in previous evaluations (e.g., Fantuzzo et al., 2005).

Relevance to Social Work

This study is relevant to social work practice, social work education, and social work research. This study assesses an intensive case management intervention grounded in both theory and social work best practices. Few holistic truancy prevention interventions have been systematically assessed. This study substantively contributes to social work practice by informing social workers of the demographic and academic risk factors for truancy and by assessing a truancy prevention intervention. This study also contributes to the social work practice knowledge base by examining an underutilized population and by examining the underlying biological, academic, and social contributors to truancy, both of which have been recommended as best practices by truancy prevention specialists (Gandy & Shultz, 2007). This study also examines current local, state, and federal level policies that impact attendance and academic success.

School social work is relatively new field of practice for social workers. However, school social work is a field in which social work practitioners can effect positive change. It is the job of social work educators to make social work aware of the growing problem of truancy and to familiarize students with truancy prevention interventions that have been empirically assessed for students experiencing chronic truancy (Council on Social Work Education [CSWE], 2010). Because truancy is linked to a plethora of adverse life course outcomes, it is imperative that social workers understand how to intervene with the problem of truancy and ensure that

truancy interventions being used has shown evidence of success with specific populations. The primary goal of the social work profession, as stated in the Code of Ethics, is to assist and empower vulnerable populations and persons who are socially and economically oppressed (National Association of Social Workers [NASW], 2008). Truancy disproportionately affects minority children and their families and is highly correlated with poverty. School social workers are at the forefront for intervening with children and families as soon as truancy becomes an issue. Social workers who possess knowledge of relevant theory (e.g., ecological theory, the person in environment perspective, the strengths perspective) and case management skills, are well positioned to quickly assess the needs of the family, plan a course of action, provide or link clients with needed services, and then follow through with the child and family to prevent further chronic absenteeism (Rose, 1992). Thus, there is a logical progression from theory to practice.

Over one fourth of students in the US (26%) dropped out of school during the 2006-2007 school year (NCES, 2010). There is a pressing need for research that identifies risk and protective factors because the rate of truancy and drop-out are rapidly increasing (NCSE, 2007). This study contributes significantly to social work research in several ways. This study is one of two studies to incorporate a rigorous quasi-experimental design and the first to feature a regression discontinuity design to assess the effectiveness of a truancy prevention intervention. This study is also one of the first to assess the predictive nature of demographic and academic characteristics on changes in truancy. Moreover, the current study examines program characteristics, namely case outcome, service referrals, service completion, and service type, as predictors of changes in truancy, something which has not been done in existing empirical evaluations. This study furthers social work research by advancing knowledge about risk factors

for truancy, incorporating rigorous methodological procedures for intervention assessment, and demonstrating the effectiveness of a truancy intervention for elementary-aged school children.

CHAPTER 2: LITERATURE REVIEW

This review begins with the historical context of compulsory education laws and truancy. Next, pertinent theories that explain the problem of truancy are examined. Risk and protective factors for truancy are then discussed and correlates of truancy are reviewed. Programs specifically targeting truancy with suggestive and promising evidence of effectiveness are described. Finally, this literature review concludes with the implications of the literature reviewed.

Historical Context of Truancy

School absenteeism and truancy has been the subject of much debate for nearly a century in the United States (Reid, 2005; Zhang, 2003). As early as the 1800's, truancy was linked to juvenile misbehavior and delinquency and was referred to as the "kindergarten of crime" (McCluskey, Bynum, & Patchin, 2004, pp. 217). Since that time, the plight of the truant child has waxed and waned as a subject of interest for researchers. Initial academic studies regarding truancy began in the early 1970's but it was not until the 1990's that the US began to recognize and treat truancy as a serious social problem affecting children and schools (NCSE, 2007). Moreover, truancy is a problem that nearly every state in the United States faces. In fact, almost half of the states have some form of federal, state, or community-based program in place to prevent truancy or to intervene when such issues become a major disruption in a child's life (Garry, 1996; NCSE, n.d.).

An examination of educational policies and compulsory school attendance laws is also vital to the discussion of truancy. Education laws have been in place since the inception of this country. In 1642 the Massachusetts Bay Colony enacted education laws to ensure parents were teaching their children religion, reading, writing, and a trade (Katz, 1976). Moreover,

impoverished and orphaned children were required to learn a trade or to participate in an apprenticeship. The very first compulsory attendance law was enacted in 1852 in the state of Massachusetts (Katz, 1976). The law required that children attend school for a period of twelve weeks per year, six of which had to be consecutive if the school was in session (Katz, 1976). Compulsory school attendance laws required that a child be enrolled in some form of education, whether it was public, private, or home schooling for certain age children and for so many days as mandated by individual states and school districts. Although the attendance laws were initially lax and often not enforced, they were established statutory policies.

In 1901 states began to gain the right to enforce compulsory school attendance laws through the landmark case, *State of Indiana vs. Bailey* (Katz, 1976). In this landmark case, a parent challenged the state's power to interfere with a family's child-rearing practices. Ultimately, it was decided that the state had the power to compel school attendance (Provasnik, 2006). There were two reasons to enforce mandatory attendance laws. First, industrialization had begun in the northern states and the US was moving from a strictly agricultural society to one in which individuals were working in factories (Whites, 1988). Second, children were being exploited in the workplace and society had begun to understand the need to educate youth rather than using them for labor purposes (Whites, 1988). While all of the US was implementing compulsory attendance laws during the early part of the 20th century, the north was more industrialized than the south, and enforced their laws more strictly (Whites, 1988).

In 1910 the state of Louisiana passed a compulsory school attendance law and by 1918 all states had passed some form of the same (Katz, 1976). The *Louisiana Children's Code* states that children between the ages of 7 and 17 must be in school during school hours. Moreover, if a child is enrolled in kindergarten at the age of 6 then that child is also required to attend school.

However, there are some exceptions to the law, such as if a child drops out of school with parental consent or if the child is enrolled in a GED program. Louisiana, similar to many other southern states, was one of the last to implement education laws (Katz, 1976) primarily because southern states remained more reliant on agriculture and children were needed to help with the family farm (Whites, 1988).

The enforcement of education and attendance laws brought about class cutting, non-attendance, and truancy, all of which are considered status rather than criminal offenses (Katz, 1976). Truancy has been depicted in a comical manner through American cartoons and movies and until recently has been depicted as a relatively ordinary rebellious side to childhood (Reglin, 1997). However, communities have begun to realize the truly deleterious effects of truancy on generations of families.

Truancy was recognized as a growing problem in the late 1990's when juvenile delinquency and crime significantly increased. Overall, truancy cases remain a relatively small proportion of status offenses, at approximately 35% in 2005; however, this proportion has increased to nearly 60% of statutes offenses (Stahl, 2008). Loeber and Farrington (2000) have found links between truancy, substance use, auto thefts, vandalism, daytime home invasions, and gang activity, which comprise the majority of delinquent offenses.

Theoretical Frameworks

Both ecological theory (Bronfenbrenner, 1977) and the social development model (SDM) (Catalano & Hawkins, 1996) have been used to explain the phenomena of truancy. In this subsection ecological theory and the social development model and their relevance to the problem of truancy are described. A discussion about the pertinence of ecological theory and SDM to the current study is also presented. The subsection concludes with a description of case

management, an intervention for truancy that receives theoretical support from both of these latter theories.

Ecological Theory

Ecological theory is much like systems theory in which the immediate and societal environment plays a pivotal role in individual functioning (Zastrow & Kirst-Ashman, 2010). Ecological theory places greater emphasis on understanding the role of the individual and the family in the social environment, whereas systems theory focuses more on a macro approach to understanding social problems (Clancy, 1995; Brofenbrenner, 1977). Ecological theory was originally introduced by Brofenbrenner in 1977; it has evolved over the last several decades to include the assumptions established by Germain and Gitterman in 1996. The basic concepts underlying ecological theory include person:environment fit, adaptedness, coping, stress, and life stressors (Zastrow & Kirst-Ashman, 2010; Germain, 1979; Germain & Gitterman, 1996).

Person:environment fit refers to how well the environment fits the individual both physically and mentally, while accounting for the history and culture of that individual. Adaptedness refers to how well the individual has adapted to their environmental surroundings and life circumstances, and their ability to adequately deal with the greater environment (e.g., family and workplace; Germain & Gitterman, 1996). The term coping describes how well individuals manage positive and negative input from other individuals (e.g., family and significant others) and their environment (e.g., job and community; Zastrow & Kirst-Ashman, 2010; Germain & Gitterman, 1996). Stressors are both internal and external and they can impede an individual's life goals (Germain & Gitterman, 1996). On the other hand, life stressors refer to the natural processes in an individual's life that concern the routine of living, such as maturation, illness, and death (Germain & Gitterman, 1996). Positive outcomes of adaptedness

include self-direction, self-reliance, relatedness, competence, and habitat and niche (Zastrow & Kirst-Ashman, 2010).

Ecological theory is of particular relevance to the current study. The ecological perspective has come to the forefront as the theoretical choice for school social workers because it incorporates the micro (e.g., the individual), mezzo (e.g., the family) and macro (e.g., the community) level systems in the both the assessment of the problem and the approach to intervention (Clancy, 1995). Ecological theory is also rooted in the strengths perspective, which posits that individuals and families have the ability to change many of the individual and environmental circumstances (Pardeck, 1988). The strengths perspective empowers social workers to work with individuals and families to improve environmental circumstances for the children and families experiencing truancy by analyzing dysfunction at the school and district level and advocating for change within these systems (Pardeck, 1988). One of the benefits of the ecological perspective is that it focuses on the place at which the micro, mezzo, and macro systems interact and then makes use of this information for intervention and change (Clancy, 1995). The ecological perspective suggests that truant behavior in the early years of school can be attributed to the family and/or the school system because this is where children spend the bulk of their time well into adolescence. According to ecological theory, problems emerge when there is a breakdown or dysfunction in one or more of the systems in which the individual is involved (Pardeck, 1988). For example, parents of young children may encounter many life stressors such as poverty and single parenthood to which the parents have difficulties adapting (micro) and the school environment and school system (mezzo and macro) are also inadequate for meeting the intellectual and social needs of students, especially minority students, which creates systematic problems for the students involved. Therefore, ecological theory indicates

that the appropriate targets for intervention would include the student, the family, and the school (Clancy, 1995). Historically, Ecological theory has not been used as lens through which to view the problem of truancy. However, much of the literature indicates that a holistic approach is needed to both assess the problem of truancy and to intervene with children and families experiencing truancy (Chang & Romero, 2008; NCSE, 2007).

The Social Development Model

The Social Development Model (SDM) examines causal developmental pathways to both pro-social and antisocial behavior and is based on prevention science (Hawkins, 2006; Hawkins & Weiss, 1985). The SDM combines Social Control, Social Learning, and Differential Association Theories (Catalano & Hawkins, 1996). Each of these latter theories makes a unique contribution to the overall SDM. Social Control Theory explains causal pathways to delinquency and conformity. Social Learning Theory suggests that pro-social and antisocial behaviors are either maintained or extinguished based on positive or negative feedback. An example of positive feedback is receiving an award for perfect attendance so the student continues to attend regularly. An example of negative feedback is receiving an after school detention for an unexcused class absence so the student does not miss a class again without permission. Differential Association theory posits that there are two parallel pathways to either pro-social or antisocial beliefs and that peers, along with family and schools, play influential roles in those pathways (Catalano & Hawkins, 1996). An example of a pro-social belief is that the student believes that graduating from high school will contribute to the student's life goals. In this example, their family has positive attitudes toward school and the student has a peer group that has the same belief. An example of an antisocial belief is one in which the student does not believe graduating from high school will contribute to his/her future goals. In this

example, the student's family has a negative attitude toward education and may not have graduated high school either. This student may also have a peer group that does not attend school either. The SDM accounts for both risk and protective factors in an individual's life and works from an empowerment perspective (Hawkins, 2006). In other words, it is imperative to understand the risk factors associated with a certain behavior in order to mediate or buffer those risks with protective factors (Jenson, 2007). By combining the two previous examples, it is possible to examine both risk and protective factors. For example, the student does not believe that a high school education will contribute to his or her overall life goals (i.e., risk factor) but the student has a family that believes in education (i.e., protective factor) and a peer group where most of the friends believed education was important (i.e., risk and protective factor). According to SDM these risk and protective factors combine to create and maintain either pro-social or anti-social bonds with individuals, families, and institutions. In order to increase pro-social bonds and decrease anti-social bonds, students need opportunities for involvement and activities with others (e.g., cheerleading, football, choir), adequate amounts of involvement, the skills to participate in these activities, and positive reinforcement for participating in them (Catalano & Hawkins, 1996).

The SDM is particularly relevant to school social work best practices because the model is based on developmental pathways with four pivotal transitions points for intervention: preschool, elementary school, middle school, and high school. The four transitional points of the social development model work to allow the problem of truancy to be viewed in a holistic manner that encompasses the child, family, school, and community as possible contributors to the problem as well as holding parts of the solution (Catalano & Hawkins, 1996). While any of the four transition periods can be a critical opportunity for intervention, SDM emphasizes the

importance of intervening in early childhood, particularly before the age of eight (Catalano & Hawkins, 1996). Research examining pathways to delinquency emphasizes intervening with at-risk children as soon as academic or behavior problems are detected (Loeber & Farrington, 2000) and when positive behaviors have a greater likelihood of being established (Catalano & Hawkins, 1996). Such early interventions should be multi-modal and holistic, involving the individual, family, and school (Bell, Rosen, Dynlacht, 1994). Interventions should identify both risk and protective factors at the individual, family, school, and community level that contribute to the child's social development (Catalano & Hawkins, 1996; Catalano, Kosterman, Hawkins, Newcomb, & Abbott, 1996; Hawkins, 2006; Jenson, 2007). Moreover, interventions should interrupt antisocial pathways and encourage pro-social pathways (Catalano et al., 1996).

The SDM is especially pertinent to helping social workers and researchers understand the problem of truancy because it accommodates the idea that pro-social bonds can break down over time, that pro-social bonds may be present for children despite having a parent with antisocial beliefs, and that antisocial behaviors can take place regardless of pro-social bonds. In other words, the model is highly adaptive to individuals and families demonstrating varying degrees of pro-social and anti-social bonds and it also accounts for both risk and protective factors.

In summary, ecological theory provides a lens through which the problem of truancy can be viewed holistically, systematically, and from a strengths perspective (Zastrow & Kirst-Ashman, 2010). Rather than perceiving truancy as an individual issue, ecological theory urges researchers to explore the child's family, school, and community, as well as potential areas of dysfunction, to intervene at the micro, macro, and mezzo levels (Clancy, 1995). The SDM provides a specific framework for intervention by focusing on risk and protective factors early on in a child's life (Catalano & Hawkins, 1996).

When ecological theory is paired with models that focus on risk and protective factors (e.g., SDM) these models have been known as “the risk and resilience ecological framework” (Corcoran & Nichols-Casebolt, 2004 p.212). These models primarily rely on empirical knowledge about correlates and risk and protective factors to inform the design and selection of prevention interventions (Fraser, 2004; Jenson, 2007). The risk and resilience ecological framework provides a conceptual framework for the TASC prevention intervention because the program is rooted in both these latter theories. Furthermore, TASC utilizes a case management intervention model. The TASC intervention has a strong empirical foundation that targets risk factors for continued truancy (i.e., previous grade retention and poverty) and protective factors to reduce truancy (i.e., parental involvement). Moreover, the TASC case management intervention is based on school social work best practices because it emphasizes the importance of rapid detection, assessment, and intervention early on. The TASC case management intervention focuses on children and families interactions with the educational system and addresses barriers to family functioning within multiple systems.

Case Management Intervention Model

The history of case management really begins in the 1970’s in the United States (Rose, 1992). Case management was developed in response to the movement to deinstitutionalize the chronically mentally ill. Much of the federal service delivery system at this time was fragmented, and there was a shortage of available resources. The US federal government created case managers in an effort to help individuals gain access to a needed service to ensure that the services the individual received matched the need, and to ensure continuity in care (Rose, 1992). According to Rose (1992) the five responsibilities of case managers include: 1) identifying and engaging clients, 2) assessing client needs, 3) planning and locating appropriate services,

4) linking clients to those resources, and 5) monitoring outcomes. In essence, the case manager serves three basic functions: to remain aware of the needs of clients, link clients to resources based on their needs, and to monitor services for effectiveness. Case management is unique for several reasons. First, case management allows for each client to have an individualized treatment plan that includes an array of services that meets identified needs (Rose, 1992). Second, the fluidity of case management also allows the case manager to monitor the client for changes, meet new needs as they arise, and then change the plan as necessary. Lastly, case management allows for the case manager to determine the level of intensity of the intervention. In other words, the case manager can be flexible depending on whether the client needs to be monitored twice per week, once per week, every other week, or once per month.

The TASC case management process begins with the school identifying elementary students with five unexcused absences. Each child receives a comprehensive assessment by a case manager to decide if the child is at low or high risk for continued truancy based on referral and risk information. Both the referral and assessment processes occur during a critical period identified by SDM, early on in elementary school and before a pattern of behavior is established (i.e., chronic truancy). If the student is found to be at high risk for continued truancy, a family conference is scheduled. During the family conference, individual and family problems that contribute to the student's truancy are identified by the case manager. Ecological theory prescribes the areas assessed by the case manager, such as the degree of person:environment fit, level of adaptedness, coping skills, and extent of stress and life stressors (Zastrow & Kirst-Ashman, 2010). For example, TASC case managers may assess the student's degree of fit with the school and level of adaptedness (e.g., special education accommodations or tutoring needs) and the family's current living situation and associated stressors (e.g., poverty or child care

needs). Based upon the identified needs of the student and family, the TASC case manager then works with the student's family to develop a case management intervention plan. Both ecological theory and the SDM underscore the importance of providing individualized and comprehensive interventions. The case manager also locates and links clients to services (e.g., tutoring, recreational activities, mental health services, or welfare resources) that target identified needs. Clients are then monitored by a TASC case manager for the entirety of the school year. The SDM indicates the longer a child receives a needed intervention the better the outcomes. Because TASC is an intensive case management intervention, all students receive the same level of monitoring, at least monthly.

In summary, the TASC model is rooted in a risk and resilience ecological framework. The TASC model used knowledge gleaned from the SDM to intervene during a critical intervention point (i.e., elementary school), to identify pertinent truancy related risk and protective factors, and to incorporate services.

Correlates of Truancy

Truancy is defined as any unexcused or unlawful absence from school and includes late check-in (i.e., tardy), early check out, missing a specific class, or even suspension (Reid, 2005; Zhang 2003). Historically, truancy had been more of a male phenomenon (Garry, 1996). However, boys, and in particular African-American and Latino boys, are more likely to be chronically truant (Garry, 1996). Until recently, truancy was also thought to be a problem affecting only middle and high school students; however, researchers are now finding truancy is a serious problem for elementary students (McCray, 2006).

Several studies have linked childhood poverty to truancy (Amatu, 1981; Chang & Romero, 2008; Zang, 2003). This is because impoverished families face an array of problems

that contribute to truancy, such as lack of child care, lack of reliable transportation, and lack of other basic needs (e.g., shelter, proper school attire, and school supplies). Impoverished children that are chronically absent tend to show reduced levels of achievement in math and reading and are more likely to be significantly behind in school by the fifth grade (Chang & Romero, 2008). Moreover, children in poverty tend to switch schools more often than children not in poverty, and by third grade, one in six impoverished children will have attended three or more schools (Chang & Romero, 2008).

Correlational studies have also found that students that are in need of special education provisions are also more likely to be habitually truant and are overrepresented amongst students that are excluded from school (Alexander et al., 2001; NCJRS, 2007). Having been previously retained one or more grades also is associated with absenteeism and truancy (Alexander et al., 2001). A large proportion of the extant literature in social work, education, and criminal justice examines truancy as either a correlate or predictor of other delinquent behavior such as school failure and drop out, drug use, sexual activity, and future criminality (Halfors et al., 2002; Kearney, 2008; Mann & Reynolds, 2006). Researchers are now finding that the younger a child is when truancy begins the more likely that child is to drop out of high school and engage in serious violent offending (Zhang, Katsiyannis, Barrett, Willson, 2007).

Risk Factors for Truancy

Risk and protective factors for truancy focus on four broad areas: individual; family; school; and community. Risk factors are those factors that increase the likelihood of a negative outcome. Protective factors are those factors that moderate negative influences in a child's life that make a child susceptible to truancy and its correlates. In this section, risk and protective for each of the four domains are described.

Individual Risk and Protective Factors

Individual risk factors for truancy include those that are experienced at the individual level (Tremblay & LeMarquand, 2001). Some risk factors are inherent before one is born and others emerge because of certain situations and the passage of time. Inherent individual risks are race, sex, and age, as well as those based upon genes, such as a mental, physical, or learning disability (Tremblay & LeMarquand, 2001). Therefore, being a member of a minority group places one at greater academic and social risk than being White. For example, African-American males are significantly more likely to drop out of school than any other minority in the US (Hursch, 2007). Peer rejection is also an individual social risk factor for truancy (Garry, 1996; Mann & Reynolds, 2006; Teasley, 2004). In a study conducted by Mann and Reynolds (2006), peer rejection was found to be an indicator of future antisocial behavior among half of all children who were rejected in peer interactions (Mann & Reynolds, 2006). Children with unmet mental health needs and those that use or abuse alcohol or drugs are also at greater risk for truancy (DeSocio et al., 2007; Halfors et al., 2002). Research also shows that children who believe that education is not a means to their overall life goals are also at greater risk for truancy (Yeide & Kobrin, 2009).

Individual protective factors for truancy include the presence of an extensive array of educational opportunities, accessible opportunities for social involvement, a good relationship with at least one caring adult, supportive relationships with peers, good self-esteem, intelligence, and good mental and physical health (Murray & Belenko, 2005; Railsback, 2004).

Family Risk and Protective Factors

Family risk factors for truancy include being raised in single parent households, living in poverty, and having parents with low educational achievement (Tremblay & LeMarquand, 2001;

NCCP, 2008). Other family risk factors include substance use or abuse in the home, abuse or neglect, domestic violence, and high family mobility (Teasley, 2004). Family physical or mental health problems (e.g., a parent with schizophrenia or cancer) or financial concerns (e.g., an unemployed parent) that pressure the student either to care for family members or work during school hours also present considerable risk for increased truancy (Yeide & Kobrin, 2009). A lack of knowledge concerning compulsory attendance laws and a lack of making education and school attendance a priority within the family have also been identified as risk factors for chronic absenteeism and school failure (Yeide & Kobrin, 2009).

Examples of family protective factors include family cohesion, regular religious participation, and having both a stable residence and an extensive helping network that includes extended family and friends (Yeide & Kobrin, 2009). Parenting education has been demonstrated to increase awareness of the consequences of early chronic truancy and academic failure as well as to increase school attachment and build problem-solving skills (Grooters & Faidley, 2002). Parental bonding and attachment has been shown to decrease risk in the presence of both poverty and low parental educational achievement (Maddox & Prinz, 2003).

School Risk and Protective Factors

School risk factors for truancy are both individual and systemic. Students with individual school risk factors have excessive absences, grade retention, and social and academic deficits. These students are at increased risk of eventually dropping out of school (Alexander et al., 2001). Children with learning difficulties are often retained, leading to low-self esteem due to being over-aged compared to their classroom peers, as well as being academically and socially behind in school which, in turn, increases the risk of truancy (Chang & Romero, 2008). Systemic school risk factors include improper screening for academic deficits, which means that learning

difficulties and disabilities go unrecognized. Once deficits or disabilities are recognized by the school, screening and assessment can take the equivalent of an entire school year in some school systems (Darling-Hammond, 2007). These systemic risks are compounded by the fact that impoverished children will have attended six schools by the time they are in the third grade, making school attachment and belonging virtually impossible, which also increases absenteeism and truancy (NCCP, 2008). African-American children are also more likely to experience the academic risks that come with poverty and discrimination (Teasley, 2004). Research indicates that teachers do not spend the same amount of time with African-American youth as with others and that African-American students are seen as less intelligent than White and Asian youth (Hursch, 2007).

Schools that are large, have a large student-to-teacher ratio, are impoverished, and educate a large minority population are more likely to place students at risk of dropping out (Dryfoos, 1990). Schools that are impoverished have larger classes, fewer resources and extracurricular activities, are unable to provide up-to-date textbooks to students, and often do not have libraries or computers available to students (Dryfoos, 1990; Hursch, 2007). Failing schools tend to have the least qualified teachers and experience high staff turnover. Failing schools often are located in some of the most impoverished, inner city neighborhoods (Darling-Hammond, 2007; Herrenkohl, Hawkins, Chung, Hill & Battin-Pearson, 2001). Due to the growing number of failing schools that are closed, the remaining schools become very large and unsafe due to increased enrollment of the students from the closed schools. Often the student-to-teacher ratio becomes unmanageable and discipline and bullying problems increase (Hursch, 2007). The attitudes of the administration become increasingly more negative, which in turn creates a hostile and unwelcoming environment for the students. This environment exacerbates a host of other

risk factors for students because teachers and administrators do not have the time, patience, or resources for managing students that are chronically absent, academically behind, or socially inept. The exacerbation of risk factors further pushes students out of the educational system (Darling-Hammond, 2007).

Examples of school protective factors include small class sizes, positive learning environments, flexible teaching methods, and attendance policies that are conducive to keeping children in schools (Railsback, 2004). Early identification of academic and social deficits with proper intervention has also been found to reduce the likelihood of academic failure and eventual drop out (Alexander et al., 2001). Research indicates that attachment to another person with pro-social bonds decreases risk of school failure (Catalano & Hawkins, 1996).

Community Risk and Protective Factors

Community-level risk factors for truancy are concerned with the relative safety of the neighborhood for students to attend school (Yeide & Kobrin, 2009). Community-level risk factors include a lack of emphasis placed on education, impoverished and deteriorating neighborhoods and housing, and the negative effects of a mobile population (Garry, 1996). Impoverished communities are often unable to afford busing for students. Those that are able to provide busing do not include children living within a mile of the school. Parents living in these communities must often choose between letting their young children walk to school in a dangerous neighborhood or keep them home. The risk of negative academic and social outcomes is greater for children who live in neighborhoods with extensive gun and gang violence and neighborhoods where drugs are easily bought and sold (Herrenkohl et al., 2001). In neighborhoods where drugs are readily available, the risk of drug obtainment and abuse increases

significantly. Halfors and colleagues (2002) found that students that were truant were 27% more likely to use drugs and alcohol, particularly marijuana.

Community characteristics such as not having safe parks and available recreational activities, lack of public transportation, and high community mobility and turnover also are considered risk factors for negative developmental outcomes including truancy (Herrenkohl et al., 2001). Another community-level risk factor is the extent to which education is made a priority (Yeide & Kobrin, 2009). Children growing up in communities where most of the adults in their community lack a high school diploma will not make education a community priority; therefore, fewer education-related tax levies are passed and fewer community resources are allocated to the schools (Yeide & Kobrin, 2009).

Examples of community protective factors for truancy include supportive and safe neighborhoods and lower crime rates. Rates of truancy and dropout are lower in communities where schools are supported and individuals feel safe sending their children to school (Yeide & Kobrin, 2009). Communities where education is made a priority also tend to have better funded schools that can offer up-to-date educational materials, recreational activities, and supportive and involved community members (Herrekohl et al., 2001). The presence of social workers in the schools and community also show promise for reducing school-related risk factors and for improving protective factors (Pritchard & Williams, 2001). Researchers found that schools with an in-house social worker had fewer attendance problems, fewer teacher complaints of behavior problems, fewer parental complaints, and showed greater improvements in student behavior (Pritchard & Williams, 2001). In addition, better communication between school officials and parents was achieved and the parents reported feeling more welcome in the school (Pritchard & Williams, 2001).

In summary, risk and protective factors for truancy are found in four broad areas: individual; family; school; and community. Knowledge regarding potential risk factors and protective factors informs truancy prevention and intervention programs. The goal of truancy prevention interventions is to mediate student risk by increasing protective factors in order to decrease truancy and academic disengagement.

Truancy Programs for Elementary Age Students

Historically, truancy has been dealt with in a punitive manner. If a student is found guilty of breaking state compulsory attendance laws, there is often a fine and or/jail time for either the child or the parents. In order to keep truancy court cases to a minimum, many states have enacted truancy intervention programs that usually offer every student the same intervention (NCSE, n.d.). The most common intervention is the truancy court program in which students are charged with truancy and must appear in court before a juvenile judge (see Garry, 1996). These students are then monitored by the court for a designated period of time and must comply with compulsory attendance laws. Other common truancy intervention programs implement token economies in which students receive something in return for attending school (e.g., a pizza party for every 30 consecutive days of attendance; see Epstein & Sheldon, 2002). However, empirical studies indicate that simple truancy court intervention program and token economies are not effective for reducing truancy (Gandy & Shultz, 2007). Truancy interventions are becoming increasingly holistic, individualized, and focused on addressing risk and protective factors (e.g., Fantuzzo et al., 2005). However, a limited number of truancy programs have targeted elementary students, and few have been rigorously evaluated.

A large proportion of the knowledge regarding truancy has come from research that predominantly examines truancy as a contributor to delinquency (Brezina, 2000), high school

dropout (Alexander et al., 2001), and incarceration (Schroeder et al., 2004) rather than as an outcome in and of itself. In other words, little empirical research has looked at predictors of truant behavior. For many researchers, truancy presents the classic chicken-or-the-egg argument: Which comes first for a child, social and academic deficits or chronic absenteeism? However, more current studies are now measuring the actual phenomena of truancy as an outcome, rather than as a predictor of other behaviors (e.g., Chang & Romero, 2008; DeSocio et al., 2007; Epstein & Sheldon, 2002). Because truancy interventions historically have been mandated by the courts, and few programs have followed school social work best practice protocols, the research examining truancy program outcomes is limited with much of it descriptive.

Gandy and Schultz (2007) reviewed over 4,000 truancy intervention programs that were geared toward preventing or reducing truancy. However, over half of the programs reviewed were court-based programs that did not address mental health problems. The authors further narrowed their review to the school- and community-based programs that addressed mental health concerns, could potentially be replicated, and those that involved only elementary students. Amongst the 2,000 identified programs only 14 were replicable evaluations that met some form of objective and external criteria for promising or suggestive evidence of effectiveness. Among these latter studies, eight were eliminated because three were geared toward school-refusal behavior, which is distinctly different from truancy, two described outcomes of child-focused interventions, and three described outcomes of programs that were not specifically geared toward truancy reduction. Thus, the studies reviewed below focus on six community-based truancy intervention programs that provided case management services to both the child and family.

Truancy Program Evaluations: Promising and Suggestive Evidence of Effectiveness

Gandy and Shultz (2007) distinguish between truancy program evaluations that show suggestive evidence of effectiveness, which include those that demonstrate a reduction in truancy, but lack comparison data; and those that show promising evidence of effectiveness, which incorporate a rigorous quasi-experimental design. Among the reviewed case management programs that were associated with increased attendance rates, only one, Project START (Stop Truancy and Recommend Treatment), showed promising evidence of effectiveness. The remaining five showed suggestive evidence of effectiveness: Check & Connect, Family and Community Involvement, The School Attendance Initiative, Early Elementary Truancy Initiative, and Kern County Truancy Reduction Program (Gandy & Shultz, 2007).

Project START

The evaluation of Project START showed promising evidence effectiveness using a quasi-experimental matched group evaluation design. Project START is a community-based court intervention aimed at decreasing truancy among elementary, middle, and high school children (Fantuzzo et al., 2005). The program liaises with schools, juvenile court, the Department of Human Resources, and local service providers to address the underlying causes of truancy (Fantuzzo et al., 2005). In order to be referred to the program, the child had to have had 25 or more unexcused absences the previous school year, and also be showing attendance problems (14% of days) in the current school year. Referred students were assigned to the community court program (START), traditional court intervention, or no intervention. The community court program was set up in schools and participants that were referred to the program were assessed for academic and social difficulties and were offered case management and social services related to those needs (Fantuzzo et al., 2005). Participants from each of the three groups were

matched on sex, age, race, and unexcused absences for a total of 189 per group. Only students who had completed the program and had at least 60 days left in the school year were included in the analysis. A total of 567 students comprised the sample. Of these participants, 63% were African American, 15% were Caucasian and 15% were other racial minority. Roughly half the sample was male (48%). Absences were measured at baseline, and then again at post intervention, and at 30 days, 60 days and 1 year. Both the community court and traditional court referrals showed short-term decreases in absenteeism immediately after the intervention (Fantuzzo et al., 2005). The community court group leveled off at 30 days post intervention and stayed that way, whereas traditional court referrals gradually increased and students who received no intervention showed no changes in absences. However, no statistically significant differences in the number of absences emerged among the three groups (Fantuzzo et al., 2005).

Check & Connect

Check & Connect is a program aimed at decreasing drop out by reducing truancy and increasing school engagement amongst elementary-school children with emotional and behavioral disabilities (Lehr et al., 2004). The program targeted students that missed more than 12% of school days during either the previous year or months prior to referral as well as presented with other risk factors such as previous grade retention, educational problems, and social service involvement (Lehr et al., 2004). Students meeting these criteria were referred to the program by school personnel and a letter was sent to the parents requesting permission for their child to participate in the program. All children received either the basic or intensive intervention based on their engagement score (i.e., number of unexcused absences, number of previous grade retentions, GPA) at the time of referral. Children in the basic program received a blanket intervention consisting of group education and monitoring. Children receiving the

intensive intervention ($N = 147$) were provided with academic support, problem solving skills, and opportunities to participate in community service events and recreational activities (Lehr et al., 2004). The sample was approximately 75% Caucasian, with 32% enrolled in special education classes and 85% deemed at high risk for disengagement. The program assessed the child's school engagement during the intervention by monitoring attendance, behavior problem referrals, and academic problems for a period ranging from 21 to 30 months.

The intensive case management intervention was evaluated using a quasi-experimental group design. Absences and tardies for children in the program for two to five years were compared with the number of absences and tardies for children in the general school population with similar characteristics at the same points in time. Results showed that more students in the Check & Connect program than in the general school population were enrolled in school (at 91% and 70%, respectively) and attended regularly (at 85% and 64%, respectively). Results also showed that older students were more likely to be on track to graduate (68%) than their counterparts in the general school population (25%; Lehr et al., 2004).

Family and Community Involvement

Epstein and Sheldon (2002) conducted a three- year longitudinal evaluation of the Family and Community Involvement program which used a multi-faceted family and community approach to increase overall school attendance and to decrease absences among children who were chronically absent. The intervention consisted of attendance incentives, parent calls, home visits, the use of an appointed attendance officer and truant officer, family workshops, counseling, and court referrals. Approximately 18 self-selected schools took part in the intervention, 12 of which were schools serving elementary-aged students (Epstein & Sheldon, 2002). Among the 12 schools, the average racial composition of the schools was 54% African

American and, on average, 60% of students received free or reduced priced lunches (Epstein & Sheldon, 2002). Attendance data were collected from each school at three different points in time, at baseline, mid-year, and the end of the school year. Attendance data were collected on approximately 5,000 students from the elementary schools. Over the 3-year time period, the average daily attendance increased approximately 1% (from 93% to 94%) and absences decreased 1.9% among the most at-risk, chronically truant children (Epstein & Sheldon, 2002). The best predictors of student engagement included: a) rewards for improved attendance, b) having a truancy officer assigned to students that continued to have attendance problems, c) home visits, d) family workshops that focused on school attendance, e) frequent referrals to counselors and community services, and f) targeted outreach to ethnically diverse families (Epstein & Sheldon, 2002).

The School Attendance Initiative

The School Attendance Initiative was an early, intensive case management intervention aimed at elementary and middle school aged children who had missed three or more days of school during a one-week period (Holbert, Wu, & Stark, 2003). The school then contacted the family by letter informing the parents that the school principal had referred the family to the program. Case managers made phone calls and home visits to evaluate the reason for the absences and to work with family to address the child's attendance problems. Case managers also referred families to needed services, which included tutoring, mentoring, medical assessments, parent education, and other support services (Holbert et al., 2003). External evaluators found significant decreases in rates of absenteeism and tardiness from pretest to posttest each year, for a 5-year period from 1999 through 2003 (Holbert et al., 2003). Participants enrolled in the School Attendance Initiative showed, on average, a 10% increase in

attendance at posttest (Holbert et al., 2003). In addition to this attendance increase, 27% of the participants met the 90% attendance rate at five years after referral.

Early Elementary Truancy Initiative

The Early Elementary Truancy Initiative was a pilot intervention instituted in three schools that had a history of attendance problems. At least half of the children attending the schools targeted for intervention were minority and more than three quarters of the students received free or reduced price lunches. The intervention used a multi-modal, tiered approach to improve attendance among elementary-age students who had missed 20% of school days during the 6-week period prior to the time of referral (McCluskey et al., 2004). Families of 281 children meeting inclusion criteria were initially sent a letter with a copy of the compulsory attendance laws. If absences ceased the family was mailed a congratulatory letter from the school principal. If absences continued the family was referred to the truancy officer who subsequently followed up with the family with a home visit. The truancy officer assigned the family to a case manager if the family's problems and needs warranted such a referral. The case manager then provided specific services for identified needs. If these latter interventions were unsuccessful, parents were then petitioned to truancy court (McCluskey et al., 2004). Program effectiveness was assessed for a period of one school year, with individual data collected at multiple points over that year. However, valid data was attained for only 162 (58%) students. Results showed that the proportion of students with 30 or more absences was reduced by half over the duration of the program (McCluskey et al., 2004). Further, students who had missed an average of 25% of days before the intervention, showed a 6% reduction in absences after the intervention. Overall, there was a significant decrease in truancy among children whose families received the letter and the

visit from the truant officer; however, truancy did not decrease among children whose parents were petitioned to truancy court (McCluskey et al., 2004).

Kern County Truancy Reduction Program

The Kern County Truancy Reduction Program is an intensive case management program aimed at children in grades 1 through 12 who have 4 or more unexcused absences or tardies within a school year. Since 1989, the Kern County Truancy Reduction Program has provided intensive case management services to families of approximately 6,000 students in 39 school districts to increase attendance and reduce risk factors for future truancy (Van Ry & Garcia, 2006). Children referred to the program receive case management and targeted service referrals for identified needs. Services include assessments, home visits, incentives for attendance, weekly school contacts, counseling, and mentoring (Van Ry & Garcia, 2006). The program has been evaluated yearly by following each cohort of students for one year and examining the rate of program completion and further truancy. Results an external evaluation in 2004-2005 indicated that 94% of participants successfully completed the program. Furthermore, at two months post intervention students had 1.4 fewer absences than the two month pre-intervention and approximately one fourth of students (26%) acquired no unexcused absences or tardies for the remainder of the school year (Van Ry & Garcia, 2006).

Findings

Among the six programs showing promising and suggestive evidence for effectiveness reviewed above, several contained features that were linked to more positive outcomes for children. Community-based court approaches have been shown to facilitate the elimination of social and economic barriers related to court attendance and to connect families with community resources (Fantuzzo et al., 2005). Individualized intensive case management approaches that

provided services to both the child and the family were also found to show more favorable outcomes including overall reductions in truancy (Van Ry & Garcia, 2006; Holbert et al., 2003). Providing home visits, incentives, and connecting families with one school contact person for attendance were also linked with more positive outcomes (Epstein & Sheldon, 2002). Programs that showed favorable outcomes were multi-faceted or multi-modal, targeting the underlying contributors to a child's truancy (e.g., serious mental health problems, transportation issues, and economic barriers; McCluskey et al., 2004). In addition, programs that used a staged approach (i.e., letter, home visit, services, court) with individualized treatment components also showed favorable outcomes (e.g., Gandy & Shultz, 2007; Lehr et al., 2004; Epstein & Sheldon, 2002). Long-term, relationship-based interventions also showed more favorable outcomes for students, especially those lasting more than one school year (Lehr et al., 2004). Programs components that did not show short- or long-term impacts on attendance were those involving referral or petitions to juvenile court, traditional court intervention and adjudication, and solution focused group interventions for at risk students (Gandy & Shultz, 2007).

Summary

In summary, the correlates of truancy include being poor, minority, and male (Dryfoos, 1990; Garry, 1996). Risk factors occur at the individual (e.g., behavior problems), family (e.g., single parents), school (e.g., large school size), and community (e.g., high crime rates) level. Protective factors mediate risk and also occur at the individual level (e.g., high self-esteem), family level (e.g., parental educational achievement), school level (e.g., parental involvement), and community level (e.g., safe neighborhoods; Yeide & Kobrin, 2009). Research shows that the problem of truancy is multi-faceted, and it requires a comprehensive intervention that targets risk factors at the individual, family, school, and community level (Kearney, 2008).

Comprehensive, multimodal interventions should be implemented early on, as well as offer both sanctions and incentives for absences (Gandy & Shultz, 2007). In addition, interventions should be individualized to address the unique needs of student and the family (Dryfoos, 1990). Thus, services provided by the case manager or by other service providers in the community (e.g., parenting education, mental health services) should target the family's specific needs rather than consist of a blanket intervention (Gandy & Shultz, 2007; Kearney, 2008). Research suggests that individualized interventions that target underlying contributors to truant behavior offer the greatest mediation of risk (Gandy & Shultz, 2007; Kearney, 2008; Murray & Belenko, 2005;).

In order to systematically address the problem of truancy, policies pertaining to truancy and truancy intervention must be examined. The following section describes and examines relevant policies at the local, state, and national level.

Truancy Intervention: Policy Implications

Research links truancy with a host of adverse life course outcomes, including school dropout, drug use, teen pregnancy, reliance on the welfare system, and incarceration (McCray, 2006); however, a clear definition of truancy is not available. Without a clear and consistent definition and formula for calculating truancy, making sense of the voluminous amount of literature is a challenge. The following subsections review the policies currently in place at the local, state, and national levels.

Local and State Policies

Every state in the US has a compulsory attendance law in place. Compulsory attendance laws dictate the ages at which a child must enroll and attend school until they either graduate or until they are legally old enough to dropout. These laws vary from state to state. According to the *Louisiana Children's Code*, children must be enrolled at the age of seven and attend until the

age of 17. There are several local and state policies that are detrimental to school attachment and engagement, which have been found to be pivotal in the role of retaining students in schools. First, local and state policy makers must decide on a definition of truancy and how it will be measured. Oftentimes, schools have inconsistent attendance-keeping practices resulting in students and parents not being notified of excessive unexcused absences (Yeide & Korbin, 2009). School districts have also enacted policies that remove chronically absent students from school through suspensions or expulsions (Railsback, 2004). The practice of suspending and expelling students for non-behavior-related problems is extremely controversial in the field of education. When suspensions and expulsions are used as a tool to remove students that have been chronically truant, this reinforces the idea that these children are not welcome and that the schools do not have time for them (Teasley, 2004). School suspension and expulsion are often used to get families to cooperate with compulsory attendance laws (NCSE, 2007). A study in Colorado showed that 50% of the students expelled from high school had been chronically truant in the year preceding their expulsion; and among students in this latter group, 20% had been expelled for truancy (NCSE, 2007). Suspension and expulsion are used to remove students exhibiting problematic behavior (e.g., chronic truancy) from the school, to raise test scores, and to punish parents (Darling-Hammond, 2007). In some cases, children are not allowed back to school until a school conference has been conducted with a parent in attendance (Railsback, 2004). On the one hand, school administrators feel student suspension and expulsion is necessary for helping the parent to understand the importance of compulsory attendance laws, but the child ultimately misses more school days, and falls further behind until it becomes too late for redress, and then the child must be retained (Darling-Hammond, 2007). Research

indicates that such practices are outdated, ineffective, and serve to further ostracize the child (McCray, 2006).

School districts also have policies in place stipulating the number of absences a student can accrue before being automatically failed for the school year, which further pushes students out of the school system (Railsback, 2004). Such policies are premised on the belief that if children are not present to learn the material necessary for promotion, then they should be retained, regardless of their performance when they are present. Thus, schools are retaining students with too many absences, as decided by the school system, which usually is approximately 20 or more absences in a school year (Railsback, 2004). It is assumed that retaining a child will help that child catch up both socially and academically; however, research shows that those that are retained for any reason are at increased risk of eventually dropping out of school (Alexander et al., 2001). In addition, survey research suggests that teachers often are reluctant to have chronically truant children introduced back into their classrooms (Reid, 2006). According to educators, students that have missed an excessive amount of days and have fallen behind, disrupt the learning process for other students who attend regularly (Reid, 2006). Requiring teachers to welcome academically disengaged students back into their classrooms without incentives and resources (e.g., tutoring help for the student) perpetuates the problem. Without proper interventions and resources for these students, educators must take responsibility or have incentives in place for ensuring that academically disengaged children get the extra academic and social help that they need to make a successful transition back to school. The intention of school-level attendance policies is to be helpful to both schools and families, but the most socially and academically vulnerable children are being negatively impacted by them (Darling-Hammond, 2007; Hursch, 2007).

National Policies

In an effort to address the growing educational achievement gap between Whites and minorities in the US public school system, President Bush introduced the No Child Left Behind (NCLB) Act of 2001. NCLB was basically an extension of the Elementary and Secondary Education Act (ESEA) of 1965 (US Dept. of Education, 2002). The intention of NCLB is to hold all US public schools, school districts, and states to a unified national educational standard. NCLB also gave students and parents flexibility in school choice. For example, if the school the child attends in his or her school district is a failing school, according to the states review systems, that child is eligible to enroll in another school district during that district's open enrollment period. NCLB gave school districts and states greater flexibility in how they can spend allotted federal money. Lastly, NCLB emphasizes reading and reading achievement, particularly for elementary students.

Unfortunately, The Texas miracle, upon which NCLB is based, turned out to be the Texas mirage (Darling-Hammond, 2007; Hunter & Bartee, 2003; Hursch, 2007; Sherman, 2008). Test scores for pilot schools in Texas went up, not due to the implementation of an effective curriculum, but because low achievers were being pushed and counseled out, students were being retained the year before they tested so they could pass, and high school students were disappearing to other schools (Hursch, 2007).

NCLB is the only federal legislation that addresses the problem of truancy. The formula for annual progress measures attendance, student achievement, and overall academic improvement of the school (Sherman, 2008). While there is no definition of truancy and no set calculation for truancy, schools are expected to achieve 90% or better attendance rates as part of the annual progress formula, which dictates the level of federal funding provided to states

(Hursch, 2007). NCLB has created an educational environment in which students with attendance problems are not tolerated and creates additional incentives for schools to force out students that exhibit poor attendance, thus boosting overall attendance rates to meet yearly progress benchmarks (Darling-Hammond, 2007).

In addition, those not meeting the basic standardized test benchmarks are also being forced out. Research indicates that as more pressure is placed on schools to reach annual progress benchmarks, students increasingly are being retained an extra year before taking benchmark tests, as well as being moved to special education classes where they take different benchmark tests or are being counseled out of schools (Hursch, 2007). Some educators believe that the standardized testing approach is outdated and crippling for students, especially minority students (Darling-Hammond, 2007). Students who are chronically absent are consistently behind in both math and reading, and are more likely to be retained because of achievement problems (Chang & Romero, 2008). These are the same disadvantaged students that are lowering standardized (i.e., benchmark) test scores. The heavy burden of meeting established benchmarks creates an environment in which educators must ensure that the majority of students are able to meet basic requirements. Children that are behind academically and socially have very little chance of catching up to their peers in these environments, resulting in greater disengagement and truancy (Reid, 2006). Students in these situations can be expected to fail and eventually be counseled out of the school system.

The NCLB Act of 2001 has increased the focus on individual students and on benchmark test scores rather than on the failing school and school districts, as was intended by the Act. The policies created under NCLB are particularly relevant to the problem of truancy because the accountability standards of the bill focus on standardized testing scores and serves to further

students already vulnerable to academic failure (Hursch, 2007). Further, testing mandated by the NCLB Act of 2001 is associated with increased grade retention and school dropout (Hursch, 2007).

In summary, a few of the policies addressing truancy are outdated, particularly those that mandate suspending and expelling students for truancy (Darling-Hammond, 2007; Hursch, 2007; Railsback, 2004). Moreover, the aggressive testing practices created under the NCLB Act of 2001 have been exceptionally detrimental to school attendance. Researchers are now suggesting that NCLB be refocused to include other benchmarks for learning outside of standardized testing (Darling-Hammond, 2007; Hursch, 2007). Based upon this knowledge, it is clear that not only are more policies needed to address truancy but the policies currently in place at the local, state, and national level require revamping.

Summary of Reviewed Literature

Truancy can be attributed to the presence of various biopsychosocial risk factors at the individual, family, school, and community levels (Kearney, 2008; Teasley, 2004). Individual risk factors for truancy include being male (Dryfoos, 1990), a member of a minority group (Dryfoos, 1990), and being older (Catalano & Hawkins, 1996). Family risk factors for truancy include low socioeconomic status, single parent households, low parental educational achievement, and physical or mental health problems of a parent (NCCP, 2008). School risk factors are both individual and systemic: Individual school risk factors include being retained a grade level, behavior problems at school, previous suspensions and expulsions, a history of chronic absenteeism, and being placed in special education; whereas systemic school risk factors include large school size, inflexible teaching styles, and an unsupportive school environment

(Alexander et al., 2001). Community risk factors include unsafe neighborhoods and a lack of priority placed on education by the community (e.g., school levy failure and disengaged parents).

As risk factors compound, the likelihood of truancy and other social problems increases for students (Garry, 1996). However, risk can be moderated by protective factors at the individual, family, school, and community level. Individual-level protective factors included positive attitude toward school, and the availability of a multitude of positive educational opportunities and extracurricular activities. Family-level protective factors include the family making education a priority and parental support in the home and school. School-level protective factors include opportunities for positive school and teacher interactions, flexible teaching styles, and well-defined attendance and behavior expectations at school (Garry, 1996; Herrenkohl et al., 2001; Sheldon, 2007). Community-level protective factors include an educational priority, low levels of violence in the community, and well-funded schools (Herrenkohl et al., 2001).

Research indicates that truancy prevention interventions need to be implemented before a child becomes chronically and habitually truant (Chang & Romero, 2008; Dryfoos, 1990). In addition, it is best to intervene early on, by the age of eight (Kearney, 2008). However, the older a child gets, the more difficult it becomes to intervene effectively and interrupt antisocial attitudes and behaviors (Catalano & Hawkins, 1996). By intervening with elementary age children to address identified risk factors before middle school, children can be quickly reintegrated into school (Railsback, 2004). By reintegrating truant children early on, economic resources in middle and high school can be used for educational needs, extracurricular activities, and other programs instead of for engaging children (Railsback, 2004). Research shows that treating academic disengagement and subsequent problems of truancy and its correlates early and effectively has the potential to increase school engagement and reduce drop out (Chang &

Romero, 2008). Further, treating the underlying causes of truancy (e.g., mental health problems or lack of transportation) enables children to form pro-social bonds at school and with peers and to stay on target for grade attainment and academic success, which are associated with graduation and healthy life course outcomes (Catalano & Hawkins, 1996; Hawkins & Weiss, 1985).

Truancy programs have traditionally focused on older children, but programs have increasingly turned their focus to elementary-age students (Gandy & Shultz, 2007). As research expands in this area social workers, educators, and the juvenile justice system are increasingly collaborating to understand best practices for this population and to implement truancy prevention and reduction programs shown to be effective (Kearney, 2008). The literature describing truancy interventions is voluminous. Gandy and Shultz (2007) identified over 4,000 truancy prevention program descriptions in the literature, few of which were rigorously evaluated. Among the 2,000 reviewed programs, only 14 were identified as being effective and replicable outcomes. Promising programs were ones in which intervention was early and rapid, those with staged, multi-modal approaches, those that involved both the child and the family, and those that had an individualized case management component that linked children and families to community services (Gandy & Shultz, 2007). These empirical investigations employed several different definitions of truancy and chronic absenteeism that ranged from the number of absences that occurred in a week (Holbert et al., 2003), six weeks (McCluskey et al., 2004), or the previous school year (Fantuzzo et al., 2005; Lehr et al., 2004; Van Ry & Garcia, 2006). Several used the percent of days a child was absent in the previous year, combined with the number in the current year (Fantuzzo et al., 2005; Van Ry & Garcia, 2006). Four studies did not use a comparison group (Epstein & Sheldon, 2002; Lehr et al., 2004; McCluskey et al., 2004; Holbert

et al., 2003), and two did not track the same cohort of children over time, but rather a new cohort every year (Epstein & Sheldon, 2002; Holbert et al., 2003). Several studies were also unable to report long term outcomes for children that had completed the program (Fantuzzo et al., 2005; McCluskey et al., 2004; Van Ry & Garcia, 2006). Two studies did not show statistically significant results even though participants showed improvements in their attendance (Holbert et al., 2003; Lehr et al., 2004). Furthermore, most of the studies used small samples sizes of fewer than 300 students unless the study evaluated a district wide implementation (Lehr et al., 2004; McCluskey et al., 2004).

First and foremost, policies are needed at the national level that clearly define truancy and that provide a mathematical formula for calculating truancy in a consistent manner across jurisdictions. Second, local policies for constructively responding to and re-integrating habitually truant children are needed. Many local and state policies often condone the suspension and expulsion of students who have excessive unexcused absences. Suspending and expelling students due to excessive absences serves to exacerbate the problem of truancy and to increase the likelihood of delinquency, drop out, substance abuse, teen pregnancy, and incarceration (Railsback, 2004). Lastly, while the intention of NCLB was to increase academic achievement amongst students, and among minorities in particular, aggressive benchmark testing practices have further ostracized the most socially and academically vulnerable children, which has increased both truancy and grade retention. Both of these latter problems are significant risk factors for poor academic performance and eventual school dropout (Darling-Hammond, 2007; Hirsch, 2007).

Implications of the Literature Review

The purpose of the current study is to assess the effectiveness of an intensive case management intervention for reducing truancy among elementary-age students. The literature

review indicated that participants of truancy interventions that were early, individualized, multi-faceted, and based on case management had the best outcomes (i.e., truancy reduction). In order for case management to be effective, the case manager must identify problems of both the student and the family. It is then the job of the case manager to locate and link students and their families to services based on the identified needs. Once the client has been linked to services, it is the job of the case manager to monitor the progress of the student. However, most truancy intervention assessments lack rigorous empirical evaluation and fewer focus on the services that students and their families receive.

Therefore, this study includes important variables identified in both correlational and empirical studies regarding truancy and truancy interventions. Pertinent demographic variables include age (Catalano & Hawkins, 1996), gender (Garry, 1996), and race (Teasley, 2004). Relevant academic variables include previous grade retention (Alexander et al., 2001), enrollment in special education (Alexander et al., 2001), grade level (Catalano & Hawkins, 1996), and the number of unexcused absences (Fantuzzo et al., 2005). Also important to the study of truancy interventions are the level of intervention the participant received (Gandy & Shultz, 2007), the number and type of services the participant was referred to and received (Gandy & Shultz, 2007), and the outcome of individual cases (Van Ry & Garcia, 2006).

Conceptual Framework

This section states the purpose of the study and provides an overview of the TASC program. The research questions that guided the study are presented and key terms and variables are operationalized.

Purpose

This cross sectional study examined the effectiveness of a truancy intervention geared toward elementary aged children. The study used secondary data and incorporated a quasi-

experimental design, RD, to examine the effectiveness of the TASC intervention for children at risk for continued truancy. This study was the first known application of the RD design for truancy intervention assessment. The RD method was used to investigate whether participation in the truancy intervention reduced truancy among participants. Interrelationships among demographic, academic, case closure, service characteristics, and truancy outcomes were also examined.

The Louisiana Truancy Assessment and Service Center (TASC) Program

The Louisiana TASC program is a community-based, rapid assessment, intensive case management intervention aimed at elementary-age students that are chronically absent from school. The program was created by Louisiana State University's School of Social Work in conjunction with the Louisiana legislature in 1999 with the purpose of reducing truancy, delinquency, school dropout, and crime (OSSRD, 2009). The TASC program requirements for individuals, centers, and evaluators are codified in article 731 of the *Louisiana Children's Code*.

TASC was piloted in 1999 with two sites in two parishes in the state. Since the initial pilot, the TASC program has been replicated in over 16 sites that currently serve nearly 500 schools. TASC currently employs more than 140 people including TASC evaluators, site monitors, program directors, and case managers (Rhodes et al., 2010). The TASC centers are monitored regularly by OSSRD via site visits, data audit visits, monthly reports, and with an extensive web-based data collection system. TASC employees receive regular case management and data base training through the OSSRD. Sites are internally evaluated on their performance annually. These yearly, uncontrolled evaluations have shown an overall decrease in unexcused absences and an increase in grade level attainment for participants of the TASC program (Rhodes et al., 2010).

TASC Referral and Assessment

The *Louisiana Children's Code* defines truancy as five unexcused absences at any point during a given school year. Therefore, participants are referred by the school to the TASC program on their fifth unexcused absence. In order to be referred to the program, an official from the participant's school completes the TASC referral form and Risk Indicator Survey I instrument (RISK I). The referral form (see Appendix A), which was developed by TASC researchers, provides demographic (e.g., ethnicity, age, gender), academic (e.g., grade level, special education status), behavioral (e.g., previous suspensions and expulsions), and school history information (e.g., previous grade retention). The RISK I survey instrument (see Appendix B) is a checklist that gauges psychosocial risk observed by the student's teacher. Based upon information collected with the referral and RISK I instruments, participants are deemed to be at either low or high risk for continued truancy. Those deemed at low risk for continued truancy receive notification and are monitored and those deemed at high risk for continued truancy are offered family-based intensive case management.

Low Risk for Continued Truancy

Approximately 50% of students referred to TASC are initially deemed to be at low risk for continued truancy (Rhodes et al., 2010). The families of children at low risk are mailed a letter stating they have been flagged for truancy. A copy of the compulsory school attendance laws is also attached with penalties for breaking those laws. Parents are also notified that their children are being monitored for further absences and, that if the absences continue, a family conference will be scheduled, additional services will be offered, and, if the absences still continue, the parents and children may be petitioned to court (Rhodes et al., 2010). The child is then monitored for the remainder of the school year for further absences. If the absences cease,

the case is closed successfully at the end of the school year. If absences continue, the child is re-assigned to the high risk category and the procedures described below are followed. About 8% of cases per year are moved from the low-risk to the high-risk category (Rhodes et al., 2010).

High Risk for Continued Truancy

The intervention for children at high risk for continued truancy is an intensive case management intervention involving both the child and the family. While chronic absenteeism is the targeted behavior of the intervention, there are often underlying biopsychosocial needs that must be addressed before the child is able to attend school regularly (Bell et al., 1994).

Therefore, TASC works with both the child and the family to assess and address specific needs, thus enabling the child to be able to return to and be successful at school.

The parents of children assessed at high risk for continued truancy are notified by phone or mail by a TASC case manager and an informal family conference is planned (Rhodes et al., 2010). This meeting is scheduled and held within 21 days of the referral, usually at the school or the child's home. During the conference, the family is further assessed for underlying problems contributing to the child's absences with the Risk Indicator Survey II instrument (RISK II), which measures six broad areas of need: medical, financial, educational needs not identified/addressed by the school, family social support, transient related problems, and mental health related problems (Rhodes et al., 2010). Based upon data collected with the RISK I and RISK II instruments and information gathered during the family conference, services are offered to meet the identified needs of both the child and the family, with the goal of reducing further absences (Kearney, 2008). The TASC case manager provides referrals to a variety of services offered both in the school and community to meet the identified needs of the child and family. In order to participate in the program and receive TASC case management services, the family must

agree to fulfill the Informal Family Service Plan Agreement (IFSPA), which is a six-month, legal, binding contract that explains: a) the TASC program, b) penalties for breaking the contract, c) the compulsory attendance laws, and d) the responsibilities of the family and the TASC case manager (Rhodes et al., 2010). The IFSPA identifies recommended services and relevant service providers. Once the family agrees to meet the requirements of the IFSPA, the TASC case manager monitors the child for further unexcused absences and follows up on service referrals. The IFSPA can be extended to 12 months and additional services can be offered based on the continuing needs of the family. Cases are closed at the end of the school year as either successful or unsuccessful. A successful case means that the child has had no or few additional unexcused absences and that the requirements of the IFSPA have been satisfactorily met (OSSRD, 2009). An unsuccessful case is one in which absences continue and the terms of the IFSPA contract have not been fulfilled (OSSRD, 2009). In this latter instance, unsuccessful cases may also be petitioned to court at the discretion of the case manager. About 4% of cases per year are petitioned to court for prosecution (Rhodes et al., 2010).

Research Questions

The study examined the effectiveness of TASC and answered the following research questions:

- 1) What are key demographic and academic characteristics of low- and high-risk participants?
- 2) To what type of services are high-risk participants and their families typically referred?
- 3) Among high-risk participants, what is the average number of service to which participants and their families were *referred* and that were actually *completed*?
- 4) Among all TASC participants, which is the most common case outcome?

- 5) What demographic and academic characteristics and case outcomes are correlated with a change in the rate of truancy for low- and high-risk participants?
- 6) Does the TASC intervention reduce truancy among low- and high-risk participants by the end of the school year?
- 7) Among high-risk participants, what proportion of the variance in the change in truancy can be explained by demographic and academic characteristics, case outcome, and TASC services including: a) whether participants were referred to services, b) the number of completed services, c) the type of service referral?

Operationalization of Key Terms

Demographic Characteristics

Demographic characteristics examined in the study are race, age, and gender (Catalano & Hawkins, 1996; Teasley, 2004). Race is defined as the participant's racial group: African American, Caucasian, Hispanic, Native American, Hawaiian/Pacific Islander, Alaskan Native or Other (OSSRD, 2009). Age is defined as the participant's age at the time of the referral. Gender is defined as being either male or female. These three variables are included on the TASC referral form that the school official completes and forwards to the TASC program.

Race was made a dichotomous variable (minority or non-minority) and measured at the nominal level. Gender is reported on the referral form as a dichotomous variable (male or female) and is measured at the nominal level. The participant's date of birth is included on the referral form, as is the date of referral, which indicates the day that the participant was referred to the TASC program. Age of the participant is measured at the ratio level, and was computed by subtracting the participant's date of birth from the date of referral. The participant's race, gender, and age are independent variables.

Academic Characteristics

This study examined four academic characteristics of all participants in the TASC program: previous grade retention, special education status, grade level, and number of unexcused absences at referral. Previous grade retention is defined as a participant's failure at any academic grade level prior to the school year of the current study (Alexander et al., 2001). This measure is included on the TASC referral form as a dichotomous variable (yes or no). Special education refers to any accommodations made for a student with an identified physical or mental disability (Alexander et al., 2001). A participant's special education status is reported on the referral form and is measured as a dichotomous variable (yes or no). Grade level is defined as the participant's current grade in school, also reported on the referral form; it is measured at the ordinal level, with response options ranging from K (kindergarten) through 5 (5th grade). Lastly, number of unexcused absences is defined as the total number of unexcused absences accumulated by the participant at the date of the referral (Alexander et al., 2001). This number is recorded on the TASC referral form and is measured at the ratio level. The participant's previous grade retention, special education status, grade level, and number of unexcused absences at referral are independent variables.

Low Risk

A low-risk participant has accumulated at least five unexcused absences and has been referred to the TASC program. Low-risk participants have few risk factors for continued truancy, as indicated by data collected with the referral form and the RISK I survey instrument (OSSRD, 2009). Low-risk participants receive the TASC intervention consisting of notification and monitoring. Parents of children considered low-risk are mailed a letter containing the Louisiana compulsory education laws and the consequences of failing to adhere to these

regulations. The letter also notifies the participant and family that the TASC program is monitoring the child for further unexcused absences for the remainder of the school year. If the absences stop, the case is successfully closed at the end of the school year. If the absences continue the child can be moved to the high-risk group and the family is contacted by the TASC case manager for a family conference.

High Risk

A high-risk participant has accumulated at least five unexcused absences and has been referred to the TASC program. High-risk participants have several risk factors for continued truancy, as indicated on the referral form and on the RISK I survey instrument (OSSRD, 2009). A family conference is convened with the parents of the child deemed to be high risk. During this conference, needs of the child and family are identified by the TASC case manager and the family is offered case management services. In order to receive services, the family must comply with the Informal Family Service Plan Agreement (IFSPA) which identifies the services to which the family has been referred. The IFSPA lasts for a period of six months, during which the participant is monitored for continued excused absences. The case manager also follows up on all service referrals. At the end of six months, the IFSPA may be extended for another six months. Once the terms of the IFSPA have been satisfied, the case is closed at the end of the school year. If the participant does not meet the requirements of the IFSPA, the family may be petitioned to court.

Services

TASC case managers refer participants in the program to services in the community to address risk factors for continued truancy. Services are defined as those to which participants and their families are referred that they actually complete (OSSRD, 2009). TASC services

include eight major types: mental health, basic needs, education, family, medical, enrichment, child protection, and other services (e.g., Laundromat tokens or anger management classes). Service referral information is recorded on the IFSPA form by the TASC case manager and then entered by the case manager into the TASC case management system database. Each of the eight service categories is checked as either yes (the participant was referred to the service) or no (the participant was not referred to the service). In terms of completed services, the TASC case manager enters a yes in the database when a client completes a service and no if the client has not, also a dichotomous variable.

Mental health services consist of Attention Deficit Hyperactivity Disorder (ADHD) screening, crisis intervention, counseling, and mental health assessments. Basic needs services include clothing assistance, financial support services, and hygiene education. Educational services consist of educational tutoring and the School Building Level Committee (SBLC), a school district level agency that works to ensure students are referred for special education screening and accommodations when necessary. Family services consist of home visits and parenting education. Medical services include referrals to Medicaid, which includes Louisiana Children's Health Insurance Program (LaCHIP) and other primary healthcare referrals. Enrichment services consist of mentoring programs, recreational activities, or the TASC-sponsored summer program. Child protection services include referrals to a state child protection agency. Lastly, other services consist of any service referrals that are not included in any of the seven aforementioned service categories (e.g., Laundromat tokens or anger management classes). The eight service categories are included in the current study as independent variables.

Case Outcome

Case outcome is defined as the outcome of the case at termination of the intervention.

In the TASC program, cases are closed within one school year as either successful or unsuccessful, as determined by the case manager. Successful cases are those in which there are no or few unexcused absences after intervention and the family has satisfactorily completed the IFSPA. Unsuccessful cases are those in which unexcused absences continue and the obligations of the IFSPA have not been met. The case outcome is entered into the TASC database by the TASC case manager. Case outcome is measured as a dichotomous variable (successful and unsuccessful) and serves as an independent variable.

Change in the Rate of Truancy

Change in the rate of truancy is defined as the rate of truancy at time of the referral subtracted from the rate of truancy after the referral. The change in the rate of truancy is measured by first giving each school day for the 2006-2007 school year, based on the district-wide school calendar, an ordered number (August 1st, is day 1, August 2nd is day 2, etc). The number of unexcused absences at referral is recorded and collected by the researcher from the TASC referral form. The number of unexcused absences after the referral date until the end of the school year is collected from the TASC database. To create the rate of truancy at referral, the number of unexcused absences at referral is divided by the number of scheduled school days up until the time of the date of referral. The rate of truancy after referral is measured in the same manner, the number of unexcused absences after the date of referral to the TASC is divided by the number of remaining school days that are scheduled in the calendar. The change in the rate of truancy is measured at the ratio level because participants can technically miss zero percent to 100% of days before and after the referral, or both. Change in the rate of truancy serves as the dependent variable.

TASC Intervention

The TASC intervention is defined as either the low- or high-risk intervention that

participants receive once they have been referred to the program. As described above, the low-risk intervention consists of notification and monitoring while the high-risk intervention consists of intensive case management. TASC case managers are trained by OSSRD to identify a low- or high-risk case based on the information contained in the participant's referral and RISK I form. Once the case manager determines if the participant is low- or high-risk for continued truancy, this information is entered into the TASC database by the case manager or data entry personnel. The TASC intervention is a dichotomous variable (low or high) and is measured at the nominal level.

CHAPTER 3: METHODOLOGY

Method and Procedures

This study examined the effectiveness of the Truancy Assessment and Service Center (TASC) intervention for young children at risk for continued truancy through the use of a Regression Discontinuity (RD) design. This study also examined interrelationships among demographic, academic, and service characteristics and continued truancy.

This chapter first describes the sample used for this study and addresses issues around representativeness, as well as describes the steps taken to ensure the protection of the human subjects. The RD design is described, followed by a discussion about the threats to internal and external validity. The instruments used for this study are then described including issues around reliability and validity of the instruments. This chapter concludes with a discussion about how the findings of the current study contribute to the knowledge base.

Sample

The population for this study includes all children enrolled in TASC during the 2006-2007 school year ($N = 10,153$). Participants for this study comprise a convenience sample ($N = 869$) drawn from one urban parish in the state of Louisiana. Among the 869 participants, 169 left the program at some point during the school year (19%). For the RD analysis, low-risk participants ($n = 369$) comprised the control group, and high-risk participants ($n = 331$) comprised the treatment subsample, for an overall sample of 700.

Representativeness

Because this study uses a nonprobability sample, generalizability is limited (Rubin & Babbie, 2005). There are several problems with nonprobability samples, and with convenience samples, in particular. First, convenience sampling does not rely upon probability theory which

enables researchers to calculate the odds that sample participants are representative of the population of interest (Trochim, 2006). Thus, there is no scientific way to tell whether the sample is representative of the study population. This, in turn, means that the results gleaned from the analysis may or may not be generalizable to the intended population (Rubin & Babbie, 2005). Only one TASC site in an urban school district in Louisiana serves as the setting for this study, which further limits generalizability. Findings of the of the current study, to the extent they are generalizable, shed light on the characteristics of relatively poor elementary students in the urban Deep South with similar histories of excessive absences and the possible outcomes for such students if they participated in a similar truancy intervention.

Protection of Human Participants

Only secondary data were collected and analyzed for this anonymous study. Because archival data were used for this study, there were no physical, psychological, social, or legal risks to the participants. Students' personal information cannot be traced back to them because all identifying information was stripped from the data prior to analysis and a unique identification number was assigned to each participant. Research on the TASC program in Louisiana public schools is permitted because of a Memorandum of Understanding that is in place between TASC and the Louisiana State Department of Education. Thus, the need for child verbal assent and parental consent were not required for this study because the Memorandum of Understanding is in accord with the Family Education Rights and Privacy Act (FERPA/34 CFR Part 99). TASC researchers submit an annual project update to the Louisiana State University Institutional Review Board, which allows this author and other TASC researchers to continue the project.

Research Design

This cross sectional, quasi-experimental, study used secondary data to examine the

effectiveness of a case management truancy intervention for elementary students.

The RD design was utilized to determine whether participation in the intervention reduced truancy among students. This is the first known study to assess the effectiveness of a truancy intervention using a RD design. One year of data were used to examine interrelationships among truancy rates, demographic and academic characteristics, case outcomes, and TASC services.

Regression Discontinuity

RD is a quasi-experimental, pretest-posttest group design that has most often been used for evaluating a program or examining the effectiveness of interventions (Trochim, 1984). The RD design is economically feasible and flexible. It can be used to test practically any type of intervention, as well as multiple interventions and intervention packages (Shadish, Cook & Campbell, 2002). RD can also be used as a longitudinal design with the same cohort of participants. In addition, it can be used in conjunction with an experimental design (Shadish et al., 2002). The RD name refers to the displacement of the regression slope at the cut point between the control and treatment groups (Shadish et al., 2002). This discontinuity is visible on a regression scatterplot. A visible discontinuity means the regression fit line is actually broken at the pre-program assignment score cut point (i.e., 27) in the scatterplot. In order to create this break, the data for the control group are first plotted with the pre-program assignment score on the x-axis and the outcome variable (i.e., for the current study, the change in truancy) on the y-axis with a regression fit line. The same process is done for the treatment group. The interpretation of the RD design is discussed in below.

RD is especially appropriate for examining the effectiveness of social service and educational programs because it precludes the need for random assignment (Shadish et al., 2002). Unlike random assignment, RD does not assign those in need of a particular intervention

to a no-treatment control group or wait list (Trochim, 2006). Rather, the rigor of the design lies in the RD model's "exact or sharp selection process" that creates unbiased effect estimates, which is essential for inferring causality (Shadish et al., 2002, p. 227). A sharp selection process occurs when no more than 5% of the participants are either assigned to the wrong group or change from one group to the other. If there is cross over between groups or participants are improperly assigned to groups, then the discontinuity becomes fuzzy and the model is less reliable for inferring causality and treatment effectiveness.

RD is a quasi-experimental design that assigns participants to two conditions based upon a predetermined cut-off score: those on one side of the cut point are the control group, and those on the other are the treatment group. An important feature of the RD design is that the pre-program assignment score does not have to be the same as the outcome measure, which allows a program to select a measure using research-based practice guidelines, thus enabling the program to identify participants in greatest need and then assign them to the intervention (Trochim, 2006). The ability to use either the same or different pretest-posttest measures is useful for assessing holistic interventions like TASC, which focuses on psychosocial difficulties that often manifest as other social problems (viz., truancy).

RD has been used to evaluate educational programs such as Head Start (Ludwig & Miller, 2007) and it is currently being used to evaluate reading achievement among students in conjunction with the No Child Left Behind Act of 2001 (USDOE, 2006). In fact, RD was used more than 200 times between 1965 and 1980 to help evaluate several Title 1 compensatory education programs (Boruch, 1979; Trochim, 1984). However, RD has not been used to research or evaluate any truancy intervention to date, even though rigorous evaluation of such programs is warranted.

In 2004, the TASC program piloted an RD design in one TASC site in the largest urban parish in South East Louisiana. Although the RD design was developed to eventually evaluate the effectiveness of the TASC program, the current study incorporates the RD design to test the effectiveness of the TASC intervention with the primary goal of increasing empirical knowledge about the academic, demographic, and service characteristics that predict a reduction in truancy for young children at risk for continued truancy.

Pre-Program Assignment Score

The principles of the RD design dictate that a pre-program measure be administered to all persons referred to the program. For the current study, the pre-program assignment score was created by OSSRD researchers with the help of the TASC site director and TASC case managers, and in consultation with an external program evaluation specialist, Dr. Mark Lipsy of Vanderbilt University (personal communication Elizabeth Winchester, June 2008).

The pre-program assignment score determines whether the participant is placed in the control or treatment group. The TASC pre-program assignment score is a composite measure based on information collected with the referral form and RISK-I instrument, and it was developed as follows: Each piece of pertinent risk information from the referral form was assigned a score from 0 to 10, with 0 indicating no risk and 10 indicating high risk. Each of the RISK-I indicators also was assigned a score ranging from 0 to 5 (0 = no risk, 5 = high risk; See Appendix C). Using this latter process two years of data (2004-2005 and 2005-2006) were retroactively scored to calculate the mean pre-program assignment score. The mean score was then used as the cut point for determining whether a child was placed in the low- or high-risk group.

The mean pre-program score for the current study was a 27. Thus, children with a composite risk score of 27 or higher were considered at high risk for continued truancy and were placed in the treatment group. These children received TASC intensive case management services. Children with a composite risk score of 26 or lower were considered at low risk for continued truancy and were placed in the control group. These children received the intervention consisting of notification and monitoring. TASC case managers entered the referral and RISK I information for each child into the online statewide database, which automatically calculated the pre-program assignment score and placed the child in either the low- or high-risk group. This automated process reduced the risk of both mathematical and group assignment errors. Pre-program score is a scale and measured at the ratio level.

Issues of Validity

The RD design accounts for many of the known threats to internal validity including selection biases, history, testing, instrumentation, statistical regression, and maturation (Shadish et al., 2002). The notable threats to this design include model misspecification, representativeness, and attrition, also discussed below (Shadish et al., 2002).

Internal Validity

The rigor of the RD design is due to an (assumed) exact selection process that ensures that participants are assigned to the correct group and that no more than 5% of participants are mis-assigned or crossed over to the opposite group (Shadish et al., 2002). By knowing and perfectly measuring the selection process, the RD design produces unbiased effect estimates and eliminates selection biases that can be seen in an Analysis of Covariance model (ANCOVA) (Shadish et al., 2002). Differences in level of participation, which typically plague most observational studies, are actually required in the RD design. In addition, several common

threats to internal validity (i.e., selection bias, history, maturation, testing and instrumentation) are threats in an RD design only if they are present exactly at the cut point, a highly unlikely scenario (Shadish et al., 2002). Other than ceiling and floor effects in which symptoms disappear after a single intervention, a naturally occurring discontinuity is presumably impossible outside of an actual program treatment effect (Shadish et al., 2002). Moreover, regression to the mean is not a threat to RD designs because, if regression occurs, then both the control and treatment regression lines flatten out, thereby indicating no treatment effect.

One notable threat to the internal validity of a RD design is a misspecified model (Shadish et al., 2002; Trochim, 1984). When the model is misspecified, the relationship between the pre-program assignment score and the dependent variable is incorrectly presented as linear when it is not (Shadish et al., 2002). In order to address this potential problem, the pre-program assignment score and dependent variable (change in the rate of truancy) was modeled as an interaction and also as a quadratic and cubed relationship (Shadish et al., 2002). This latter modeling was done to ensure that any observed difference was a true treatment effect.

Another notable threat to internal validity for the RD design is attrition. Attrition is a problem if those in the control and treatment group do not attrition out of the sample at the same rate making the groups grossly unequal. Also, RD designs require almost three times the amount of participants of a randomized design. If too many participants attrition out of the sample, the statistical power is lowered and the RD analysis cannot be done. Compared to the other studies of truancy interventions (Fantuzzo et al., 2005; Lehr et al., 2004), the attrition rate for TASC was relatively low at 19%. Attrition of the TASC sample was due to one of the following reasons: inability to locate the participant, the participant relocated outside of the parish school system

during treatment, the participant left the public school system for home or private schooling, or the participant was petitioned to the District Attorney's office.

External Validity

External validity refers to the extent to which the findings can be generalized to other settings and populations (Rubin & Babbie, 2005). Threats to external validity can be minimized by clearly operationalizing all conceptual terms, including theoretically based constructs, by fully describing all participant characteristics that are relevant to the study, by increasing the sample size, and by ensuring fidelity of the treatment. External validity was enhanced in the current study by clearly operationalizing conceptual terms (e.g., truancy, case outcome, services). The current study reports pertinent information about participants' demographic, academic, and risk-related characteristics. The risk of confounding constructs was minimized by clearly defining constructs of the intervention (e.g., low-risk intervention and high-risk intervention) and by using theoretically sound instrumentation for examining risk factors for truancy (Trochim, 2006). In addition, the current study includes 700 participants, which exceeds the number needed ($N = 108$) to show a medium effect size at the .05 level of significance for multivariate analyses (Cohen, Cohen, West, & Aiken, 2003).

Lastly, a high degree of treatment fidelity counters threats to external validity. The TASC program is approved by the Louisiana legislature and operates under articles 791.4 and 791.5 in the *Louisiana Children's Code*. In order for a TASC program to obtain funding, each site submits a program plan that details how the site's procedures are compliant with the TASC model and planning guide (OSSRD, 2009). In order to insure treatment fidelity, the TASC model has been standardized. Case managers and directors at each site receive extensive training about administering the instruments, utilizing the IFSPA, implementing the case

management intervention, and evaluating client success. Under the requirements of the *Louisiana Children's Code*, each TASC site must undergo a biannual case management and data audit along with a yearly program evaluation. OSSRD uses these audits to examine treatment fidelity within and across sites. An OSSRD site monitor visits each TASC site and observes a family conference facilitated by one of the TASC case managers at that site. After the conference, the case manager is given a performance review that reflects the extent to which the case manager provided accurate information about the TASC program to the family, the thoroughness of the assessment, and the appropriateness of service recommendations. The site monitor also randomly selected several case files to examine the fit between the needs indicated by the family and the services that were recommended. The monitor also assesses the extent to which monitoring and follow-up activities have been properly documented. The OSSRD site monitor also conducts a data audit. Several case files are randomly selected and the information in the paper file is compared to the information in the TASC database to assess the accuracy of data entry.

The yearly program evaluation is a comprehensive process evaluation that examines critical program features at each site including: a) overall adherence to the TASC model (e.g., participants are in grades K-5), b) adherence to TASC timelines (e.g., referrals are made within two days and screened within one day), c) accuracy of the data (viz., data audit score as determined by OSSRD monitor), d) the adequacy of case management services (viz., family conference score, also determined by OSSRD monitor), and e) outcome at the end of the school year (viz., proportion of children promoted, post program truancy rate). Based upon this information, each site receives a score between 0 and 100 that is used to identify strengths and weaknesses of each TASC site. Process evaluation results are shared with the TASC site,

including recommendations for improvement. OSSRD staff provide additional training, as needed, to address program-wide problems and to further improve treatment fidelity.

Mode of Observation

Measurement

The current study used secondary data collected from the TASC database. In terms of this original database, TASC-employed case managers and/or data entry personnel entered all raw data that were recorded in paper files into the TASC case management system database. These TASC data are stored in ACCESS files housed by the Louisiana Supreme Court data managing system that is maintained by an information technology company with whom OSSRD contracts. ACCESS is a relational database in which files are stacked or grouped. For example, all referral information is grouped together in a referral table for each child, whereas IFSPA information is stored in another table. In order to examine data about one child, query reports are used to link tables together by a common identifier. In the TASC ACCESS database, all information is stored by a randomly assigned unique identification number, rather than by a person-level identifier. In order for these data to be usable in the current study, the researcher had to extract all data for every child with a new referral to the particular TASC program site during the 2006-2007 school year. The researcher then converted the data from the relational or stacked form to a wide or flat form commonly used in the Statistical Package for the Social Sciences (SPSS). The new flat data files contained all relevant variables that were extracted from the ACCESS database for each participant who received the TASC services at the selected site.

Secondary Data Concerns

There are four general concerns when using secondary data in social science research.

First, large data sets that are maintained by private entities are often outdated by the time they are released for public use, which compromises their utility (Rubin & Babbie, 2005). In the current study, the original TASC data had been collected during the five years prior to when the secondary analysis was undertaken. Thus, the age of the data is not a concern in the current study. Often, large public data sets have been heavily used for publication purposes by the original researcher, which limits the usefulness of the data for subsequent researchers (Rubin & Babbie, 2005). The TASC data for the current study had never been used for the purpose of evaluating outcomes. Thus, the potential utility of the data was not a concern. The third issue with secondary data is that the researcher must rely on the sampling method used in the original study. For the current study, TASC participants were not randomly selected from the population of all TASC participants, thus limiting the generalizability of the findings. However, the current study was drawn from a large, region-wide population, which minimizes concerns about the sampling method. Finally, Rubin and Babbie (2005) observe the original data may have been collected with instruments designed to answer a set of questions different than those posed in subsequent research. This is problematic because the original measures may not be appropriate to answer the questions posed in the secondary analyses. In the current study, the main limitation was that the TASC database did not include a reliable measure of poverty, one of the primary predictors of truancy (Amatu, 1981; Zhang, 2003). Because information about family poverty was not available in the current study, the researcher was compelled to use data measuring poverty at the district level, a different unit of analysis. The original TASC database did include measure for all other risk factors that could be reliably used in the current study. In sum, the only potential limitation of using secondary TASC data for the current study is the absence of an individual-level measure of poverty.

Instrumentation

This section describes instruments used to collect data for the current study. Instruments that have been deemed reliable and valid for the population being studied are the preferred choice of researchers. This subsection provides an overview of the different types of measurement reliability and validity as well as describes information about the reliability and validity of the instruments used in the current study.

Types of Reliability and Validity

A reliable instrument produces the same results each time it is used (Rubin & Babbie, 2005). There are three types of reliability: interobserver or interrater, test-retest, and internal consistency. Interrater reliability is the degree to which different observers or raters agree that the instrument is measuring the intended concept. By convention, a measure is considered reliable if raters agree 80% of the time (Rubin & Babbie, 2005). Test-retest reliability refers to the stability and consistency of a measure or an instrument over time (Rubin & Babbie, 2005). In order to assess test-retest reliability, the measure or instrument is administered to the same participants on two separate occasions and then the first and second set of responses are correlated. If the correlation coefficient is .70 or greater then, the instrument is considered to have good test-retest reliability. Internal consistency reliability measures the extent to which items within the scale are correlated with each other (Rubin & Babbie, 2005). Internal consistency reliability is assessed by computing a coefficient alpha for all scale or subscale items. An instrument reaching a coefficient alpha of .90 is considered to have excellent internal consistency, whereas .80-.89 is considered good (Rubin & Babbie, 2005). A coefficient alpha less than .80 but greater than .70 may be acceptable for larger scales.

A valid instrument truly measures the intended concept (Rubin & Babbie, 2005). There are four main types of validity: face validity, content validity, criterion-related validity, and construct validity. Face validity and content validity are not measured statistically whereas, criterion and construct validity are. A fifth type, factorial validity, is becoming more common in social work (Rubin & Babbie, 2005). Face validity refers to the idea that the measure or instrument appears to be measuring the intended concept (Rubin & Babbie, 2005). Content validity is a form of face validity, except with content validity, several researchers with expertise agree that the instrument measures the range of meanings for the intended concept. Face and content validity are the weakest types of validity and are not measured empirically.

Criterion-related validity is established by comparing one instrument with a different instrument that measures the same concept (Rubin & Babbie, 2005). There are two subtypes of criterion-related validity: predictive and concurrent. Predictive validity is how well the measure predicts future behavior, whereas, concurrent validity is how well the measure is correlated with a concurrent criterion (Rubin & Babbie, 2005). To illustrate concurrent validity using an example relevant to the current study, if students rate themselves as being on time for school every day and their school records indicate that this is true, then students' self-reports could be considered a valid measure of attendance (using school records as a concurrent criterion).

Construct validity is the idea that the items within a scale or measure are theoretically related and are consistent with theoretical expectations. Convergent validity and discriminant validity are the two major types of construct validity. A scale has convergent validity when the scores are similar to scores yielded from other instruments measuring the same concept. On the other hand, discriminant validity means that the obtained scores do not correspond with those

yielded with other constructs that were not included in the instrument or those for which the instrument was not intended to measure (Rubin & Babbie, 2005).

Factorial validity refers to whether the scale fits with the theoretical constructs from which the scale was built. Factorial validity is measured by confirmatory factor analysis (Rubin & Babbie, 2005). This is done to ensure the instrument measures the theoretical constructs it was intended to measure and to also assess the number of constructs it measures.

TASC Instruments

Original data for the current study were collected using three paper forms: the TASC referral form, the RISK I, and the IFSPA. As described above, original data collected with these paper forms were entered into the TASC case management system database by case managers or data entry personnel at the TASC sites. For the current study, specific data were collected by this researcher from the TASC case management system database and then used as secondary data for RD and other analyses.

TASC Referral Form

According to TASC protocol, the school “attendance clerk” or the participant’s teacher completes the TASC referral form for each child with five unexcused absences. The TASC referral form includes four sections (see Appendix A). The first section contains the referring person’s contact information and the legal grounds of the referral (i.e., truancy). The second section contains the child’s information which includes sex, race, date of birth, home address, and contact information for the child’s parent. The third section of the form contains the child’s academic information, which includes current grade, number of previous grade retentions and which grades, number of suspensions, number of expulsions, special education status, number of unexcused and excused absences, and number of days the student was tardy. The last section is

for the TASC case manager or data entry person to complete when the referral is received, and it includes the date the referral was received, the date the referral was screened (i.e., assessed for low or high risk), the group to which the child was assigned, and the initials of the person that screened the referral.

Reliability and validity of the TASC referral form have not been systematically assessed, but the form appears to have adequate content validity. Several research-based risk factors are included on the form including special education status (Alexander et al., 2001), free or reduced priced lunch (Epstein & Sheldon, 2002), previous suspensions (Alexander et al., 2001), previous expulsions (Alexander et al., 2001), and previous grade retention (Alexander et al., 2001).

Teachers or school personnel complete the referral form and different TASC personnel enter the information that was collected, thus compromising the reliability and validity of the data. To enhance accuracy, the OSSRD trains teachers and attendance clerks how to properly complete the referral form and also trains case managers and data entry personnel how to enter information into the database. However, human error in completing the forms and entering referral information into the database compromises the reliability and validity of the data. Thus, the original data collected and entered by school and TASC personnel were compared to participants' paper files located at the TASC office. This researcher discovered numerous inconsistencies and errors with the TASC referral form and the RISK I instrument, in particular. Thus, the researcher created a decision tree for handling discrepancies between the paper and electronic files. When information could be changed in the original database to accurately reflect that contained in the paper file, the TASC data entry person made corrections. For discrepancies that could not be changed in the original database the researcher entered correct information into the secondary dataset to be consistent with the paper file.

RISK I Instrument

The RISK I survey instrument is completed by the participant's teacher at the same time as the referral. Often, the attendance clerk will complete a referral form when a child accumulates five unexcused absences and send the RISK I form to the child's teacher for completion on the same day. The RISK I form (see Appendix B) is a checklist comprised of 12 broad areas of characteristics or risk factors for academic failure and truancy which include: defiant, aggressive, parental attitudes, emotional response, risk-taking behavior, developmental issues, manipulative, isolated, attention seeker, unmotivated, unstable home life, and hyperactivity. Each of the 12 areas contains a list of more specific behaviors and risk indicators that the child's teacher can check. For example, the characteristic defiant, includes argues with authority figures and uses obscene language. The participant's teacher checks off the indicators he or she believes to be true for a student.

Referral and RISK I forms either are faxed to the particular TASC site or the TASC case manager assigned to the school collects them daily. RISK I data are entered into the TASC case management system database at the same time as the referral data by the case manager or data entry personnel at the TASC site.

While specific risk indicators from the RISK I survey instrument are not included in the analyses as independent variables, they were used to develop the composite risk measure which was used to calculate the pre-program assignment score (see Appendix C). For the original data, TASC researchers programmed a scoring algorithm into the database so that items measuring the different risk factors were automatically scored as they were entered into the database. The scoring algorithm produces a composite score, which this researcher extracted from the TASC case management system database, and then used as the pre-program assignment score.

In terms of reliability, the RISK I instrument is completed by different teachers, and there is no way to know if the instrument is completed in the same manner by different teachers and if the items on the instrument are interpreted similarly across teachers, schools, and school districts. The TASC site used in this study offers training to the teachers at the schools about properly administering the instrument, but no interrater reliability studies have been done to date.

In addition, RISK I data may be entered inaccurately which also would compromise the reliability of the RISK I, overall. Thus, it is possible that some of the RISK I data gleaned from the database for secondary analysis for the current study may be inaccurate, unreliable, or both. The RISK I survey instrument has been deemed a reliable and valid measure of truancy risk by Kim and Barthelemy (in press). The authors used a sample of over 6,000 elementary school children (K-5) to statistically assess the validity of the RISK I instrument. The original 59-item scale was reduced to a 32-item scale through the use of exploratory factor analysis (Kim & Barthelemy, in press). Six subscales emerged, accounting for 49% of the variance in the dependent variable, risk of truancy: conduct related problems, lack of motivation, social problems, unstable home life, self-harm, and attention problems (Kim & Barthelemy, in press). Confirmatory factor analysis indicated an adequate fit of the model ($GFI = .97$), but the self-harm and attention problems factors were removed due to low factor loading. The final model consisted of 29 items and 4 subscales (Kim & Barthelemy, in press). To assess predictive validity the authors correlated each of the four subscales with the total number of unexcused absences for each child at the end of the school year, and all four correlations were statistically significant (Kim & Barthelemy, in press). Coefficient alpha was also computed to assess the internal consistency of both the four subscales and the 29-item scale. Coefficients for the

subscales ranged from -.47 to .90, whereas coefficient alpha for the overall scale was .88, indicating adequate internal consistency of the 29 items (Kim & Barthelemy, in press).

Informal Family Service Plan Agreement

The IFSPA form is completed by the assigned TASC case manager during the family conference. The form contains several parts (see Appendix D). The first part identifies the child and the date of the family conference. It also identifies the start and end date of the agreement, which usually is about 6 months. The second part of the agreement outlines the family service needs. The TASC case manager is responsible for identifying the need, indicating for whom the service is ordered, who the provider will be, who is responsible for making contact with the provider (e.g., TASC case manager or the parent), and the time frame for contacting the service provider (e.g., seven days). The third part of the agreement indicates the six conditions of the IFSPA with which all families must comply (e.g., that the child not be truant, suspended, or expelled). The fourth part of the form outlines how often certain case management activities are expected to take place by the TASC case manager, such as attendance monitoring (i.e., biweekly or monthly), how often service referral monitoring will take place (e.g., monthly), and how often the TASC case manager will make phone contact with family. The final part of the agreement also includes the compulsory attendance law. The case manager and the participant's parent(s) sign and date the contract.

As noted above, the service data are entered into the database by either the case manager or the data entry personnel at the particular TASC site. When entering services into the database, the case manager selects "yes" for referred and "no" for not referred, for each of the 18 service categories. As the case progresses, the case manager enters into the database a yes when the family completes a service to which they were referred. In cases where the family is neither

referred to a service nor completes a service, the case manager enters a “no” in each of the categories. For the current study, the researcher extracted information about referred and completed services for each family and entered these data into the flat file database.

The reliability and validity of the IFSPA form have not been systematically assessed. In order to increase accuracy of the IFSPA data, OSSRD trains TASC case managers about properly completing the form during the bi-annual training. Twice yearly, an OSSRD monitor also sits through a family conference to ensure that it is properly conducted and that the case manager accurately records identified needs and appropriate services on the IFSPA form. Similar to the referral and RISK I forms, several individuals are sometimes involved in collecting the IFSPA information and in entering these data. The other major source of error and missing data is failing to indicate when a service referral has been made. If a service referral is indicated in the TASC database, the case manager is unable to close the case without indicating whether the service was completed or not. However, this does not apply to services that were mistakenly never entered. Service data were also cleaned during the extensive auditing procedure undertaken by this researcher. During the data audit, it appeared that the services to which clients were referred matched their identified needs. In other words, the IFSPA form appears to have both face and content validity.

Case Outcome

Case outcome is not recorded on any of three aforementioned TASC forms; rather it is determined by the case manager at the end of the school year and entered into the TASC database during the closure process. Most cases are closed as either successful or unsuccessful; however, cases may also be closed when a participant cannot be located, or when a participant relocates, enrolls in a different school, or is petitioned to juvenile court because of continued

truancy. While the latter reasons are fairly straightforward, determining what constitutes a successful or unsuccessful case outcome is not always clear. OSSRD establishes guidelines for what constitutes a successful or unsuccessful case outcome; however, case managers determine this on a case-by-case basis. For example, a case outcome would be considered successful if the participant had no or few unexcused absences after the referral and completed the requirements of the IFSPA and any service referrals. On the other hand, a case outcome would be considered unsuccessful if the participant had several unexcused absences after the referral and if the requirements of the IFSPA were not met or the service referrals were not completed.

The reliability and validity of case outcome data have not been systematically assessed. Although only one case manager enters the information for each participant, there is variability across case managers because whether a case is deemed successful or unsuccessful is largely a judgment call. Although completion of a truancy program is associated with better outcomes for children (Fantuzzo et al., 2005) there is no way to confirm that different case managers used the same criteria for closing a case either successfully or unsuccessfully.

In summary, the data for the current study were collected from one site, thereby reducing problems with interrater reliability of this measure. The TASC instruments used in the original data collection procedures show good face and content validity because they are well grounded in the research on truancy and risk factors for truancy. However, only the RISK I instrument has been empirically assessed. It is possible that multiple data collectors and data entry personnel compromised the reliability and validity of the data collected; however, only the referral and RISK I forms were completed by different individuals. The IFSPA and case outcome data were collected and entered by one individual. A strict data cleaning process was undertaken to correct

mistakes but differences in interpretation still remain, particularly regarding when participants are referred to services and case outcomes.

Data Analysis

Power Analysis

A Type I error is defined as falsely rejecting a null hypothesis, whereas a Type II error is defined as failing to reject the null hypothesis when it is, in fact, false (Rubin & Babbie, 2005). A Type I error would result if the findings showed a significant treatment effect when there was none. A Type II error would result if findings did not show a treatment effect, when there was one. Increasing sample size simultaneously reduces the risk of committing a Type II error and inflates the risk of committing a Type I error (Rubin & Babbie, 2005).

Statistical power refers to the probability that the null hypothesis will be rejected when it is false (Rubin & Babbie, 2005). For the current study, a power analysis was conducted to ensure that the sample size was sufficient for detecting a medium effect size at the .05 level of significance for multivariate analyses. The RD design requires 2.75 times the number of participants needed for the same level of statistical power needed for a randomized experiment (Bloom, 2009). The power analysis indicated that a sample size of 324 was needed for undertaking the analyses (Cohen et al., 2003). The sample size of the control and treatment groups, at 369 and 331, respectively, exceeds the minimum number of subjects needed for multivariate analysis. The results of the power analysis confirmed that the alpha could be set at .01 to detect a medium effect size (Cohen et al., 2003).

Descriptive Statistics

Univariate statistics, including frequencies and measures of central tendency and dispersion, were used to describe and summarize data. Descriptive statistics were used to

summarize demographic and academic characteristics of TASC participants as well as to summarize participants' rates of truancy before and after the intervention. Program-related characteristics, such as pre-program assignment score and case outcome, were also summarized with descriptive statistics, along with number and type of services to which TASC participants were referred and completed.

Bivariate analyses were conducted to examine empirical relationships between two variables. The most common non-parametric statistic, chi-square, was used to examine associations between nominal-level data, specifically the joint distribution of case outcome and service referral and service completion.

To examine interrelationships among continuous and nominal level variables, biserial point correlations (r_{pb}) were used (Cohen et al., 2003). In SPSS, the point biserial correlation coefficient is the same as a Pearson correlation as long as the dependent variable is an interval- or scale-level variable (Cohen et al., 2003). In SPSS, the point biserial correlation coefficient is automatically computed. The point biserial coefficient is interpreted in the same manner as the Pearson coefficient, by strength and direction (Cohen et al., 2003). Thus, associations among change in truancy rate, academic characteristics (e.g., previous grade retention, grade, and special education status), and demographic characteristics (e.g., gender, race, age) were examined. A second correlation matrix was computed to assess the interrelationships among change in truancy rate and the eight service categories (i.e., mental health, basic needs, educational, family, medical, enrichment, child protection, and other) for both referred services and completed services.

Inferential Statistics

Multiple regression analysis is used to examine the independent correlations between multiple independent variables and one or more dependent variables (Rubin & Babbie, 2005).

The multivariate analyses used in a RD design are undertaken in a manner similar to OLS regression in which there are multiple independent variables and a dependent variable measured at the interval or ratio level. RD results are interpreted similar to those of OLS regression, with the direction and significance of the group membership variable being the most important (Trochim, 2006). For example, in the current study, if the group membership coefficient is positive and significant (0 = control, 1 = treatment), this indicates that there is a treatment effect and that participating in the treatment group reduced truancy (Trochim, 2006). One of the most notable weaknesses of the RD design is concerned with misspecification of the model due to interaction effects (Shadish et al., 2002). If a true non-linear relationship exists between the pre-program assignment score and the dependent variable (change in truancy rate), and only a linear relationship is examined, the model may yield a treatment effect when there is none. In the current study, for example, it was necessary to confirm that the relationship between the pre-program assignment score and the change in truancy rate was linear. In RD, once the proper functional form of the dependent variable and the pre-program measure has been modeled, further analysis of the other relevant predictors is done similar to an OLS regression model (Shadish et al., 2002).

In the current study, the RD OLS regression was first modeled to test for a treatment effect among the high-risk subsample. The regression equation in this latter case is similar to an OLS equation that contains the dependent variable (change in truancy rate) and multiple independent variables. The RD model included the following independent variables: previous grade retention, case outcome, gender, grade, race, and special education. A significant interaction between the pre-program assignment score and the dependent variable was found and included in the model and is further explained below.

Summary

This study examined the TASC intervention through a cross sectional, quasi-experimental, group design using one year of secondary data. This study utilized the RD design to test the effectiveness of the TASC intensive case management intervention for elementary students at risk of continued truancy. It also examined the interrelationships among the change in truancy rate, service referrals, completed services, and individual service categories. It was anticipated that the results of this study would demonstrate whether the TASC intervention was effective for reducing truancy among high-risk participants. It was also anticipated that the relevant demographic and academic characteristics would be identified for inclusion in subsequent research on truancy and truancy interventions. In addition, it was expected that the results of this study would show which high-risk participants received the most benefit from the intensive case management intervention and which services were most important for reducing rates of truancy.

In summary, this study has several limitations, including lack of random assignment and use of a convenience sample. However, RD is considered one of the most rigorous quasi-experimental designs because causality can be inferred with some confidence (Shadish et al., 2002; Trochim, 1984). Additional methodological issues include some limitations due to the use of secondary data, as well as the questionable reliability of some measures due to instrumentation and multiple raters. Despite methodological concerns, it is anticipated that this study will add to the knowledge base in several ways. For example, findings will inform school social workers and other education professionals about the social and academic risk factors that are most relevant when implementing truancy prevention interventions. In addition, this study will shed light on the effectiveness of an intensive case management intervention with young

children, with particular emphasis on the association between services and outcomes.

Understanding what services are associated with the most optimal outcomes ensure that resources are being used wisely in school settings where truancy is a problem. The current study lays the groundwork for additional rigorous testing of truancy prevention intervention with at-risk young children.

CHAPTER 4: ANALYSIS AND RESULTS

The purpose of this study was to examine the effectiveness of the TASC intervention, which was assessed using a RD design. This chapter answers each of the seven research questions in the order in which they were presented in Chapter Three posed to guide this study.

Q1: What Are the Key Demographic and Academic Characteristics of Low- and High-Risk Participants?

Demographic and Academic Characteristics of the Overall Sample

Complete data were available for 700 of the 869 (81%) low- and high-risk students who were eligible to participate in the current study. The non participants ($n = 169$) who were eligible but were not included in the current study, left the program at some point during the school year. As seen in Table 1, approximately half ($n = 358$, 51%) of all participants were male. Non-white youth were overrepresented in the sample, comprising 91% of all participants ($n = 635$). Younger students were also overrepresented, with more than half in kindergarten and first grade (59%; see Table 1). Less than one fourth (18%) of the participants had been retained at least one grade and 62 participants (9%) were in special education (see Table 1). Unexcused absences before the referral for all 700 participants ranged from 0 to 19 with an average of 6.49 ($SD = 2.84$). Although family income data were not collected from TASC participants, approximately two thirds of the population of the school district in which this current study was conducted (67%) qualified for free or reduced priced lunches (Louisiana State Department of Education, 2009).

Demographic and Academic Characteristics of the Low- and High-Risk Subsamples

Among the 700 participants comprising the combined sample, 369 (53%) were assigned to the low-risk (control) group and 331 (47%) were assigned to the high-risk (treatment) group.

As seen in Table 2, the demographic characteristics of participants in the low-risk and high-risk groups were similar.

Table 1
Participant Characteristics (N = 700)

	<i>N</i>	%
Grade		
K	251	36
1 st	160	23
2 nd	69	10
3 rd	83	12
4 th	89	13
5 th	48	7
Gender		
Male	358	51
Female	342	49
Race		
White	65	9
Non-White	635	91
Previous Grade Retention		
Yes	125	18
No	575	82
Special Education Status		
Yes	62	9
No	638	91
Case Outcome		
Successful	587	84
Unsuccessful	113	16

Among the high- risk participants, the majority was non-White (93%) and slightly over half were male (55%) and in kindergarten or first grade (56%). The number of unexcused absences at the time of the referral among high-risk participants ranged from 0 to 19, with an average of approximately 7 days ($SD = 3.13$). The majority of participants in the low risk group ($n = 369$) also was Non-white (89%). Just over half were female (53%) and almost two thirds were in kindergarten or first grade (61%). The number of unexcused absences at the time of the referral among those deemed low risk ranged from 0 to 14, with an average of approximately 6 days ($SD = 2.43$).

Table 2
Participant Characteristics by Group (N = 700)

	Control ($n = 369$)		Treatment ($n = 331$)	
	n	%	n	%
Grade				
K	130	35	121	37
1 st	95	26	65	20
2 nd	39	11	30	9
3 rd	44	12	39	12
4 th	33	9	56	17
5 th	28	8	20	6
Gender				
Male	175	47	185	55
Female	194	53	146	45
Race				
White	41	11	23	7
Non-White	328	89	308	93
Previous Grade Retention				
Yes	50	14	75	23

(Table 2 continued)

No	319	86	256	77
Special Education Status				
Yes	19	5	43	13
No	350	95	288	87
Case Outcome				
Successful	301	82	286	86
Unsuccessful	68	18	45	14

Attrition Sample

Analyses were undertaken to ascertain whether students in the attrition sample were significantly different from those included in the study. Thus, key demographic (i.e., gender and race) and academic characteristics (i.e., grade, previous grade retention, and unexcused absences) of participants in the study were compared to participants comprising the attrition group ($n = 169$) for whom complete data were available ($n = 164, 97\%$). Among the 164 participants in the attrition sample, over half were in kindergarten and first grade (55%) which was similar to the study sample (59%; see Table 3). More than half of the attrition sample was male (54%) which was also similar to the study sample (51%). As seen in Table 3, the majority of the sample was predominantly non-White (98%), which was about 5% higher than the study sample (93%). A fourth of the attrition sample had been previously retained (25%), as compared to 18% of the study sample (see Table 3). The number of unexcused absences at referral for the attrition sample ranged from 1 to 16, with an average of 6.85 days which was comparable to the study sample mean of 6.49. Independent samples t-tests were computed to determine whether the study and attrition samples differed with regard to unexcused absences at the time of the referral and the pre-program assignment score. The difference in mean pre-program assignment scores was statistically significant ($t = -5.37, df = 862, p < .05$), indicating that students in the attrition

group were at greater risk than those in the study. The two groups did not differ on mean number of unexcused absences at the time of referral; however, the more high-risk participants did not complete the program.

In sum, students in the attrition sample were at higher risk for continued truancy than those in the study sample. Moreover, the attrition sample contained more minority students and more students that had been previously retained. Further, students not in the study had significantly higher risk score than those who were. However, the attrition sample was comparable to the study sample on many other demographic and academic characteristics.

Table 3
Attrition Sample Characteristics (N = 164)

	Attrition Sample (n = 164)		Participants (n = 700)
	N	%	%
Grade			
K	45	27	36
1 st	46	28	23
2 nd	22	13	10
3 rd	16	10	12
4 th	20	12	13
5 th	5	9	7
Gender			
Male	88	54	51
Female	76	46	49
Race			
White	4	2	7
Non-White	160	98	93
Previous Grade Retention			

(Table 3 continued)

Yes	41	25	18
No	123	75	82

Q2: To What Type of Services Are High-Risk Participants and Their Families Typically Referred?

Amongst the 331 participants in the high-risk group, approximately 61% of the students ($n = 237$) and their families were referred to 415 individual services in the 8 service categories (see Table 4), which included mental health, educational, enrichment, medical, child protection, basic needs, family, and other services. Almost a third (29%) of the participants in the treatment group were not referred to a service. The majority of the service referrals were either for mental health (31%) or education (32%). Among the 127 mental health services to which participants were referred, 124 (98%) of those services were reported as completed in the TASC database (see Table 4). Among the 131 educational services to which participants were referred, 120 (92%) of those services were reported as completed in the TASC database (see Table 4). However, among the 60 enrichment services to which participants were referred only 36 (60%) of those were reported as being completed in the TASC database.

Table 4
Service Referrals and Services Completed by Service Category

	Services Referred		Services Completed	
	<i>N</i>	%	<i>N</i>	%
Mental Health	127	31	124	98
Basic Needs	22	5	22	100
Educational	131	32	120	92
Family	37	9	32	86
Medical	19	5	17	89
Enrichment	60	14	36	60
Child Protection	1	0	1	100

(Table 4 continued)

Other	18	4	17	94
Totals	415		369	

Q3: Among High-Risk Participants, What Is the Average Number of Service to Which Participants and Their Families were Referred and Completed?

Amongst the 331 high-risk participants who were referred to services, 92% ($n = 218$) completed at least one service. The number of services to which participants and their families were referred ranged from one to seven, with the majority of participants being referred to one ($n = 102$, 43%), two ($n = 73$, 31%), or three services ($n = 39$, 17%). The average number of service referrals was two (see Table 5). The number of services completed ranged from zero to five, with participants completing an average of 1.7 services (see Table 5). Moreover, amongst the 415 services to which participants were referred, 89% ($n = 369$) were reported in the TASC database as being completed (See Table 4).

Table 5
Service Referrals and Services Completed

	N	Range	Mean	SD
Services Referred	415	1-7	2	1.15
Services Completed	369	0-5	1.7	1.06

Q4: Among All TASC Participants Which is the Most Common Case Outcome?

Among all 700 participants, most of the cases ($n = 587$, 87%), were closed successfully at the end of the 2006-2007 school year. A similar proportion of cases among low- and high-risk participants were closed with a successful outcome at 82% and 86%, respectively (see Table 6).

Q6: Does the TASC Intervention Reduce Truancy Among Low- and High-Risk Participants by the End of the School Year?

RD analysis was used to assess the effectiveness of the TASC intervention in reducing truancy among low-and high-risk participants.

Table 6
Case Outcome at the End of the 2006-2007 School Year (N = 700)

	Low-risk participants (<i>n</i> = 369)		High-risk participants (<i>n</i> = 331)	
	<i>N</i>	%	<i>N</i>	%
Successful	301	82	286	86
Unsuccessful	68	18	45	14

In order to answer this question, this section first describes the steps taken to create the pre-program assignment score and the dependent variable (change in truancy rate). Next, the process of building the OLS regression model used in the RD analysis is described. This section concludes with a description of the RD analysis and results.

Pre-Program Assignment Score Variable

The TASC pre-program assignment score is a composite measure that is based on information collected with the referral and RISK-I instruments. Each indicator of risk from the referral form was systematically assigned a score from 0 to 10, with 0 indicating no risk and 10 indicating high risk (see Appendix C). Each of the RISK-I indicators also was assigned a score ranging from 0 to 5 (0 = no risk, 5 = high risk; see Appendix C).

For the overall sample, the mean pre-program assignment score was 27. Thus, participants with a score of 27 or higher were considered at high risk for continued truancy and were placed in the treatment group and offered TASC intensive case management services. Participants with a score of 26 or lower were deemed at low risk for continued truancy and were placed in the control group. These latter participants received the TASC intervention consisting of notification and monitoring. Pre-program assignment scores ranged from 10 to 26 among participants in the control group (*n* = 369), while those for children in the treatment group (*n* = 331) ranged from 27 to 116. Although the pre-program score could be measured at the ordinal

level, it was treated as interval-level data. According to Long and Freese (2006), it is appropriate to do this if the intervals on the scale are equally spaced. Because of the precise scoring algorithm used for the risk data, the intervals between the low-risk scores are the same as the intervals between the high-risk scores. Thus, the pre-program assignment scores were treated as interval-level data.

Posttest Measure and Dependent Variable

This subsection describes the process followed to calculate the dependent variable, which is the change in the truancy rate from date of the referral to the end of the school year. As indicated in the truancy literature (Alexander et al., 2001), using the raw number of absences before and after a particular intervention creates a biased measure of truancy because students referred at the beginning of the school year have the opportunity to miss more days than those referred later in the school year.

In order to achieve an unbiased posttest measure of the dependent variable, the rate of truancy was calculated for the period of time before the referral and for the period of time after the referral, until the end of the school year for both low- and high-risk participants. The rate of truancy for the time period before the referral was calculated as follows: the district school calendar was obtained and each day of the 2006-2007 academic school year was assigned a number from 1 to 178 (i.e., August 1 = Day 1, August 2 = Day 2, etc.). The date of the referral to TASC was used as the start date of the intervention for both groups. So, for example, if a participant was referred to TASC on Day 56 and had 5 unexcused absences, then the number of unexcused absences at the time of the referral (5) was divided by the number of days that could have been potentially missed at that point in the school year (56), resulting in a truancy rate of 9% for the time period before the referral was made to TASC (5/56). Similar steps were taken to

calculate the truancy rate for the period of time between the time at referral and the end of the school year, except the number of days missed after the time of referral was divided by the number of days remaining in the school year. To extend the example, if the participant was referred on Day 56, then there were 122 days remaining in the school year that the student potentially could miss ($178 - 56 = 122$). If the final attendance roster indicated that the participant missed 3 additional days after the referral to TASC, then the number of absences after the referral (3) was divided by the number of days left in the school year at the time of the referral (122), resulting in a truancy rate of 2% ($3/122$) after referral to TASC. To complete the calculation for the dependent variable using the above example, the rate of truancy (2%) after time of referral was subtracted from the rate of truancy (9%) prior to referral, indicating a positive change in the rate of truancy (of 7%). If, on the other hand, the child had missed 13 days after referral (rather than 3), the truancy rate would have been 11% ($13/122$). The rate of truancy (11%) after referral to TASC, subtracted from the rate prior to referral (9%), would have resulted in a change in the rate of truancy of -2%, which indicates a decrease in the participant's attendance after referral to the TASC program ($9 - 11 = -2$). In sum, the process for calculating the change in the rate of truancy was undertaken for each participant and it served as an unbiased measure of the dependent variable in the RD analysis.

Change in the rate of truancy was treated as ratio level data because the intervals between the data points (rate of truancy) and the measured behavior (truancy) are consistent. Long and Freese (2006) argue that this is enough evidence to treat ordinal-level variables as ratio-level data.

Building the OLS Regression Model

Several steps must be taken prior to developing regression discontinuity analyses. According to Trochim (1984), a reliable and valid RD design is obtained when fewer than 5% of

the participants are either moved to a different group or are mis-assigned to a particular group. Although several discrepancies were found in the pre-program assignment scores due to data entry problems, 100% of cases had been properly assigned to either the control or treatment group, thus ensuring a “sharp” RD design (Shadish et al., 2002, p. 227).

The second step was to examine the frequencies and each group mean for the dependent variable. In this case, the mean change in the rate of truancy should decrease after the intervention for the participants in the treatment group. While this did not ensure a significant treatment effect, it did indicate whether the RD model should be created. Among participants ($n = 369$) in the control group, 48 (13%) had no further unexcused absences after the referral (see Table 7). Moreover, 125 (34%) accumulated one to five unexcused absences and 88 (24%) accumulated six to 10 unexcused absences (see Table 7). Among the 331 participants in the treatment group, 56 (17%) had no further unexcused absences following the intervention. Furthermore, 31 (31%) participants accumulated one to five unexcused absences and 90 (27%) had six to 10 unexcused absences after the intervention (see Table 7).

Table 7
Unexcused Absences after the Referral by Group (N = 700)

	Control ($n = 369$)		Treatment ($n = 331$)	
	<i>N</i>	%	<i>N</i>	%
0 Unexcused Absences	48	13	56	17
1-5 Unexcused Absences	125	34	103	31
6-10 Unexcused absences	88	24	90	27
11 or more Unexcused Absences	108	29	82	25

Among the overall sample of 700 participants, the rate of truancy at time of referral to TASC ranged from 0 to 40%. As seen in Table 8, the mean rate of truancy at time of referral for

participants in the control group was 8.2%, whereas the mean rate for those in the treatment group was slightly higher, at 9.9%. The rate of truancy at the end of the school year for all 700 students ranged from 0 to 95%. After referral to TASC, the control group showed a slight increase of .7% in the mean rate of truancy to 8.9%, while the treatment group showed a decrease of 1.9% in the mean rate of truancy to 8.0%. Thus, because the change in the rate of truancy showed a decrease for the participants in the treatment group, it was appropriate to continue the RD analyses.

Table 8
Truancy Rates by Group

	Control (<i>n</i> = 369)			Treatment (<i>n</i> = 331)		
	Range	Mean	<i>SD</i>	Range	Mean	<i>SD</i>
At Referral	0-26.32	8.20	4.15	0-40.00	9.98	5.50
After Referral	0-94.74	8.90	9.22	1-46.27	8.06	8.27

The next step in creating the RD model was to examine correlations amongst the pre-program assignment score and the dependent variable and amongst all independent variables. Shadish et al., (2002) recommend including the raw pre-program assignment score as an independent variable in the OLS regression equation, along with a dummy variable indicating group membership (0 = control, 1 = treatment). In order to use dummy variables in a correlation matrix, a point biserial correlation coefficient must be computed (Cohen et al., 2003). The point biserial correlation coefficient is interpreted in the same manner as a Pearson product moment correlation coefficient as long as the dependent variable is measured at the interval or scale level (Cohen et al., 2003). In SPSS, dummy variables are treated the same as interval- or scale-level variables in a correlation matrix, and the point biserial correlation coefficient is automatically computed. The point biserial coefficient is interpreted in the same manner as the Pearson

product moment correlation coefficient, by strength and direction (Cohen et al., 2003). Thus, for a dichotomous dummy variable coded as 0 or 1, a positive coefficient would indicate a positive relationship with the dependent variable, while a negative coefficient would indicate a relationship. A value close to 1 indicates a relationship with the higher category, whereas a value close to 0 indicates a relationship with the lower category.

Including the pre-program assignment score and the group membership variable can contribute to multicollinearity (Shadish et al., 2002). Thus, a correlation matrix was computed with results showing a strong correlation ($r = .698$) between the pre-program assignment score and group membership (see Table 9). However, VIF factors were well below the generally accepted cutoff of 4 (2.051 and 2.046, respectively). Thus, both of these latter variables were retained in the model (Cohen et al., 2003). As seen in Table 9, correlational analyses showed a strong relationship between age and grade ($r = .90$). VIF statistics were above the generally accepted cutoff of 4 (at 5.878 and 5.756, respectively). Age was removed and grade was retained to reduce possible inaccuracies in reporting and to enhance measurement reliability. The remaining intercorrelations among independent variables were weak, ranging from .01 to .39 (see Table 9).

The next step in building the RD model was to assess for a linear relationship between the pre-program assignment score and the group membership variable. Shadish et al., (2002) recommend testing for an interaction effect between the pre-program assignment score and group membership, which, if non-linear, reveals differences in the treatment effect among subjects. Shadish et al., (2002) also recommend examining quadratic and cubed relationships between the pre-program assignment score and the dependent variable (change in truancy rate) to further

assess for the proper functional form of the relationship between the pre-program assignment score and the dependent variable.

Table 9
Correlation Matrix

	1	2	3	4	5	6	7	8	9
1 Change in Truancy Rate	1								
2 Pre-program assignment score	.029	1							
3 Group Membership	.131**	.698**	1						
4 Retained	-.160**	.140**	.119**	1					
5 Case Outcome	.398**	-.024	.066	-.262**	1				
6 Gender	.015	.129**	.079*	.142**	-.002	1			
7 Grade	.034	.060	.044	.029	.029	.021	1		
8 Age	.030	.105**	.123**	.040	.034	.050	.907**	1	
9 Race	-.114**	.105**	.076*	.072	-.073	.081*	.104**	.136**	1
10 Special Education	.052	.101**	.138**	.025	.014	-.017	.177**	.187**	.013

* $p \leq .05$, ** $p \leq .01$

If not fit appropriately, the RD model can indicate a treatment effect when there is none.

A significant interaction was detected between the pre-program assignment score and group membership ($B = -.28, p < .05$), indicating that the effect of treatment differed across participants in the treatment group, with higher risk children receiving less of a benefit from the TASC program than lower risk children. In other words, those scoring higher on the pre-program assignment variable continued to miss more days after being referred to TASC than did those children with lower pre-program assignment scores in the treatment group. In addition, both the quadratic and cubed relationships were non-significant, indicating that including the interaction

term (pre-program assignment score x group membership) created the model that best fit these data.

The Final Regression Discontinuity Model

Several regression diagnostics were computed, including a normal probability plot and histogram, and the regression residuals were examined. Two significant outliers were removed ($D_i = .267$ and $.168$, respectively), which then created a normal distribution of the dependent variable. Considerable clustering of the regression residuals was noted around the cut point of the pre-program assignment score. An abnormal heaviness to one side of the cut-point, and in the treatment group in particular, could indicate some manipulation of the scoring process whereby more individuals were assigned to the treatment group (Schochet et al., 2010). However, this is not problematic in RD, as it is expected that there would be clustering at the cut-point (Schochet et al., 2010). Instead, the density and smoothness of the clustering were examined as recommended by Schochet and colleagues (2010). In the current study, both the density and smoothness of the clustering around the cut-point appeared to be normal.

In addition, a log transformation of the pre-program assignment score was conducted due to non-normality of the distribution of the pre-program assignment score. This was computed in order to create a normal distribution, so the effect of the interaction could be verified (Cohen et al., 2003). The interaction term remained significant. For ease of interpretation, the log transformation was removed and the original pre-program score was retained in the model, assuming that a non-linear relationship was the proper functional form of the relationship between the pre-program assignment score and the group membership variable. Thus, the final model examining the variance in the change in truancy rate contained the following independent variables: gender (0 = female, 1 = male), race (0 = White, 1 = non-White), grade (0 – 5),

previous grade retention (0 = no, 1 = yes), special education status (0 = no, 1 = yes), case outcome (0 = unsuccessful, 1 = successful), group membership (0 = control, 1 = treatment), mean pre-program assignment score, and the interaction term (pre-program assignment score X group membership).

Results of the Regression Discontinuity Analysis

The overall RD model was significant, at $F(9) = 19.71$, $R^2 = .205$, $p < .001$.

Approximately 21% of the variance in the change in truancy rate was explained by the inclusion of the independent variables. Among predictors, non-White race, previous grade retention, successful case closure, treatment group membership, the pre-program assignment score, and the interaction term (pre-program assignment score X group membership) proved significant (see Table 11).

In terms of ascertaining whether the TASC intervention was effective in reducing the rate of truancy, the variable measuring group membership was positive and significant ($B = 8.80$, $p < .01$), indicating that the intensive case management intervention reduced unexcused absences among high-risk children (see Table 11). The change in the rate of truancy among treatment group participants was 1.9%, whereas the change for the control group was -.7% indicating an improvement in attendance amongst the treatment group participants and further truancy amongst the control group participants.

Because the group membership variable was significant in the equation ($B = 8.80$, $p < .01$), a regression discontinuity in the scatterplot is visible between the control and treatment groups at the pre-program assignment cut point of 27 (see Figure 1). Although there is a positive treatment effect, the fit lines in Figure 1 have a negative slope. This is partially due to the interaction effect (pre-program assignment score X group membership) indicating variability in

the effectiveness of the intervention across participants in the treatment group. The negative slope also is an indicator of the number of children who had no further unexcused absences after referral.

Table 11
OLS Regression Results: Change in Rate of Truancy from Pretest to Posttest (N = 698)

Variables	B	Std E	β	t
Gender	.461	(.649)	.025	.709
Race	-4.705	(1.123)	-.145	-4.189**
Grade	.351	(.209)	.063	1.684
Previous Grade Retention	-2.290	(.880)	-.094	-2.602**
Special Education Status	.709	(1.150)	.022	.616
Case Outcome	9.237	(.922)	.362	10.021**
Group Membership	8.806	(3.008)	.469	2.928**
Pre-Program Assignment Score (Centered)	.250	(.126)	.401	1.991*
Interaction Term (pre-program assignment score x group membership)	-.282	(.131)	-.701	-2.161*
Constant	-2.740	(.538)		-1.787

* $p < .05$

** $p < .01$

As seen in Table 11, both non-White race ($B = -4.70, p < .01$) and previous grade retention ($B = -2.29, p < .01$) showed a negative association. These results indicate that the truancy rate increased among non-White students in the treatment group by almost 5%, as compared with their White counterparts in the control group. Results also indicate that students who had been retained at least once showed increased rates of truancy by approximately 2%, as compared with those who had never been retained. Because the sample was predominantly non-White, two separate interaction terms were computed (viz., race X group membership, race X previous grade retention); however, both interactions were non-significant. Successful case

outcome was also positive ($B = 9.74, p < .01$), indicating that the truancy rate decreased by approximately 9% among children in the treatment group whose cases were successfully closed, as compared to those in the control group whose cases were not.

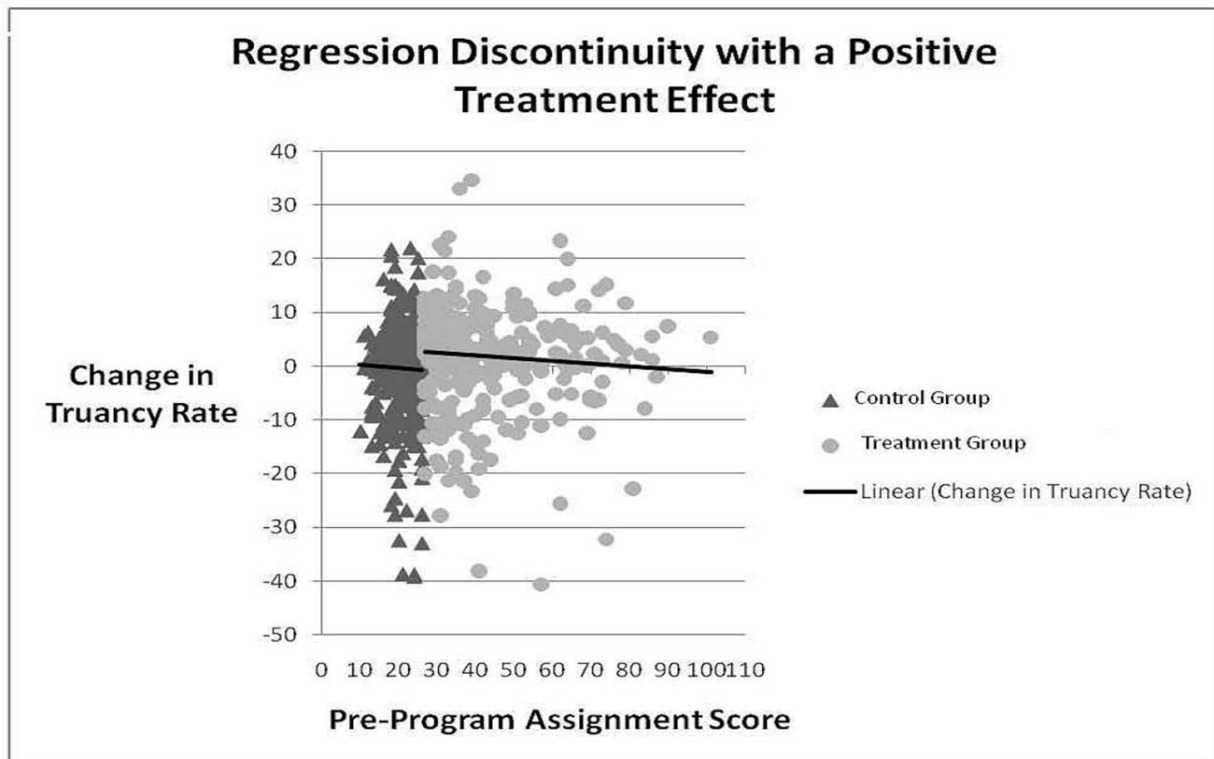


Figure 1
Regression Discontinuity Scatterplot

The RD analysis indicates that the TASC intensive case management intervention reduced further truancy among high risk participants in the treatment group. The significant interaction term indicates that the treatment effect differed across participants (pre-program assignment score x group membership). A major component of the TASC intensive case management intervention is referring families to services in the community. Therefore, it is expected that TASC would have an impact on further truancy. The last research question addressed the relationship between services and change in the rate of truancy.

Q7: Among High-Risk Participants, What Proportion of the Variance in the Change in Truancy can Be Explained by Demographic and Academic Characteristics, Case Outcome, and TASC Services Including: a) Whether Participants were Referred to Services, b) the Number of Completed Services, c) the Type of Service Referral?

In order to answer this question, the high-risk subsample ($n = 331$) of participants was selected from the overall sample. Among these latter participants, approximately three fourths ($n = 237, 72\%$) were referred to services. Correlational analyses were undertaken to assess whether service referrals or completed services were associated with a change in the rate of truancy. The first correlation matrix consisted of the dependent variable, change in the truancy rate, and each of the eight service categories to which participants were referred. Again, point biserial correlation coefficients were computed because the service categories were measured at the nominal level (0 = not referred, 1 = referred) and the dependent variable was measured at the ratio level (Cohen et al., 2003). Correlational analyses showed a weak negative relationship between referral to a mental health service and a change in the truancy rate ($r = -.139, p < .05$), indicating that being referred to a mental health service was associated with an increase in the rate of truancy at the end of the school year. The results of the correlations indicated that further analysis of the relationship between services and the change in the rate of truancy after intervention was warranted.

To examine the relative influence of TASC services on the change in the truancy rate, several different OLS regression models were developed. The first OLS regression model was tested with the 237 high-risk participants that were referred to services. Variables in the model were entered in hierarchically (Pehazur, 1982) and included: service referral (0 = no service referral, 1 = service referral), gender, race, grade, previous grade retention, special education status, and case outcome. The overall model proved to be significant ($F(7) = 9.80, R^2 = .175, p < .001$) and explained nearly 18% of the variance in the change in the rate of truancy (see Table

12). Non-White race and successful case outcome were significant predictors of change in the rate of truancy. Non-White race was negative and significant ($B = -5.68, p < .05$) indicating that truancy increased by over 5% amongst non-White race participants (see Table 12). On the other hand, successful case outcome was positive and significant ($B = 10.78, p < .01$) indicating that the truancy rate decreased by over 10% for participants whose cases were successfully closed (see Table 12). Thus, being referred to services did not contribute to the change in the rate of truancy.

Table 12
 OLS Regression Results: Change in Rate of Truancy for Participants Referred to Services
 (N = 237)

Variables	B	Std E	β	t
Service Referral	.090	1.098	.004	.082
Race	-5.683	1.971	-.149	-2.883*
Gender	-.281	1.002	-.014	-.280
Grade	-.238	.296	-.042	-.805
Previous Grade Retention	-.035	1.256	-.002	-.028
Special Education Status	1.556	1.491	.054	1.044
Case Outcome	10.776	1.524	.380	7.027**
Constant	-1.799	2.474		-.727

* $p < .05$

** $p < .01$

The second OLS regression model was tested with the subsample of participants that completed the any of the services to which they were referred ($n = 217$). Variables were entered in hierarchically (Pehazur, 1982) and included number of completed services (1 to 5), gender, race, grade, previous grade retention, special education status, and case outcome. The overall model was again significant ($F(8) = 6.85, R^2 = .208, p < .001$), with approximately 21% of the variance in the change in the rate of truancy was explained by inclusion of the independent

variables. Among predictors, non-White race and successful case outcome were significant (see Table 13). Non-White race was negative and significant ($B = -6.34, p < .05$) indicating that the rate of truancy increased by over 6% for non-White. Successful case outcome was again positive and significant ($B = 10.88, p < .001$) indicating that the rate of truancy decreased by over 10% among participants whose cases were successfully closed. Thus, the number of services completed did not contribute to the change in the rate of truancy.

Table 13
 OLS Regression Results: Change in Rate of Truancy for Participants that Completed Services
 ($N = 700$)

Variables	B	Std E	B	T
Number of Completed Services	-.900	.574	-.097	-1.569
Gender	.130	1.195	.007	.109
Race	-6.558	2.667	-.153	-2.459*
Grade	-.150	.357	-.026	-.419
Previous Grade Retention	-.833	1.488	-.036	-.560
Special Education Status	-1.077	1.679	.038	.642
Case Outcome	10.144	1.778	.365	5.705**
Constant	1.088	3.317		.328

* $p < .05$

** $p < .01$

A third, and final, OLS regression model was tested to examine whether a specific type of was predictive of a change in the rate of truancy. Thus, this latter model included only participants who were referred to services ($n = 237$). Mental health and educational services were the services to which participants were most often referred. Therefore, these two service types were re-coded as follows: mental health service (0 = no mental health services, 1 = one or more mental health services) and educational service (0 = no educational service, 1 = one or more educational services). An additional service variable was computed that combined the six

other service categories (viz., basic needs, family, medical, enrichment, child protection and other) and was recoded as 0 (no other service) and 1 (one or more other services).

The final OLS regression model examining variance in the change in truancy rate of truancy included mental health services (0 = no, 1 = yes), educational services (0 = no, 1 = yes), and other services (0 = no, 1 = yes) gender, race, grade, previous grade retention, special education status, case outcome, and were entered hierarchically (Pedhazur, 1982). Because the service categories were not mutually exclusive, meaning a participant could have completed a service in one or more categories, all three variables were included in the model (Pedhazur, 1982). The overall model proved significant ($F(9) = 5.75, R^2 = .186, p < .001$), indicating that approximately 19% of the variance in the change in truancy rate was explained by the inclusion of the independent variables. However, none of the service types were significant predictors of a reduction in the rate of truancy (see Table 14). Significant predictors did include non-White race ($B = -6.59, p < .05$) and successful case outcome ($B = 10.20, p < .001$). Non-white was again negative and significant, indicating that the rate of truancy increased by more than 6.5% for non-White students. Successful case outcome was again positive and significant, indicating that the rate of truancy decreased by nearly 10% among those participants whose cases were successfully closed.

Table 14
OLS Regression Results: Change in Rate of Truancy for Service Types (N = 700)

Variables	B	Std E	β	t
Mental Health Service	-.644	.845	-.048	-.762
Educational Service	-.886	1.093	-.052	-.810
Other Service	-1.387	.966	-.092	-1.436
Gender	-.053	1.238	-.003	-.043
Race	-6.586	2.676	-.154	-2.461*

(Table 14 continued)

Grade	-.153	.359	-.027	-.425
Previous Grade Retention	-.933	1.521	-.040	-.613
Special Education Status	1.061	1.694	.039	.626
Case Outcome	10.201	1.795	.367	5.683**
Constant	1.287	3.345		.385

* $p < .05$

** $p < .01$

Because services, as defined and measured several different ways, were not significant predictors of a change in the rate of truancy, post hoc analyses were undertaken to examine associations among referred services, completed services, and case outcome. This was done because there is an implied relationship between being in need of services, completing those services, and having a successful case outcome. Recall that a successful case outcome generally means that the participant had no or few unexcused absences after the intervention, and that the participant and the family complied with the IFSPA agreement, which includes referrals to needed services.

Two chi-square analyses were computed with the subsample of participants that were referred to services ($n = 237$). The first crosstabulation analysis examined the joint distribution of being referred to services (1-3 services = 1 and 4-7 services = 2) and completing the services (1-3 service = 1 and 4-7 services = 2). In terms of service referral and service completion, all of the participants who were referred to one to three services completed one to three services ($n = 214$, 100%) as compared to half of those who were referred to four to seven services ($n = 12$, 52.2%). This latter difference was significant ($\chi^2(1) = 117.61, p < .001$). The second crosstabulation analysis examined the joint distribution of being referred to services (1 to 3 services = 1 and 4-7 services = 2) and case outcome (0 = unsuccessful, 1 = successful; $n = 218$). In terms of service referral and case outcome, more than three fourths of the participants that were referred to

services had successful case outcomes ($n = 187, 87.4\%$) as compared to the two-thirds of participants that were referred to four to seven services and had successful case outcomes ($n = 16, 69.6\%$), also a significant difference ($\chi^2(1) = 5.37, p < .05$). A final crosstabulation analysis was computed that examined the joint distribution of completing a service (1-3 services = 1 and 4-7 services = 2) and case outcome (0 = unsuccessful, 1 = successful; $n = 218$). The Chi-square indicated that there was not a significant difference between the number of services participants which participants completed and case outcome.

CHAPTER 5: DISCUSSION AND CONCLUSION

This study assessed the effectiveness of the TASC early intensive case management intervention using a RD design. TASC targets elementary students who have a history of excessive absences and other academic and social risk factors that make them susceptible to chronic truancy. This study examined the extent to which participants' academic and social characteristics (e.g., previous grade retention, gender, and grade) and TASC program components (e.g., service referral, service completion, service type, and case outcome) were associated with a change in the rate of truancy at the end of the school year. This chapter first summarizes the results of the study and then discusses the major findings in the context of reviewed literature. Implications for social work practice, education, and research are addressed, and the chapter concludes with a discussion of limitations and merits and how the current study contributes to the knowledge base on truancy.

Effectiveness of TASC Intervention

TASC Definition of Truancy

For the current study, a child was considered truant and eligible for the TASC program when five unexcused were accumulated. This is similar to the Kern County Truancy Reduction Program, which defined truancy as four or more unexcused absences at any point in the school year (Van Ry & Garcia, 2006), but dissimilar to Project START, which defined truancy as 25 unexcused absences in a given year (Fantuzzo et al., 2005). TASC also differed from the Early Truancy Initiative, which defined truancy as 20% (approximately 35 unexcused absences) of days missed in the previous school year (McCluskey et al., 2004). These findings clearly indicate that there are definitional inconsistencies amongst educators and researchers as to what constitutes truancy. These definitional inconsistencies make it difficult to assess the similarities

and differences of the effectiveness of the TASC intervention with other truancy intervention studies, since such widely varying measures are used.

Sample

Participants included in the current study ($N = 700$) were elementary students that had been referred the TASC program. The majority of the participants in the current study were in Kindergarten and first grade (59%). This sample is different from those reported in published studies of truancy intervention programs, as many of these latter studies were not targeted to only elementary students (see Fantuzzo et al., 2005; Gandy & Shultz, 2007; Van Ry & Garcia, 2006). Previous literature suggests that considerably more boys than girls experience truancy (Dryfoos, 1990; Garry, 1996, Zhang et al., 2007). However, boys and girls were proportionally represented in the current overall study sample (at 51% and 49%, respectively), which is similar to the distribution of gender among students who were enrolled in both the Early Truancy Initiative (McCluskey et al., 2004) and Check & Connect (Lehr et al., 2004) programs. Pritchard and Cox (1998) argue that there is a changing pattern of truancy and delinquency amongst girls that mirrors that of boys. Amatu (1981) found that often families felt it was the responsibility of older children to get themselves to school, while it was the responsibility of the family to ensure younger children attended school regularly. Amatu (1981) also found that when families were in crisis, school attendance diminished. The findings of this study may support Amatu's (1981) findings that families in crisis mode have children that are for more likely to be truant from school since they are not mature enough to get themselves there.

The vast majority of children that participated in the TASC intervention were non-White (91%, and were mostly African-American), unlike Project Start (63%; Fantuzzo et al., 2005) and the Check and Connect program (34%, on average; Lehr et al., 2004). This finding could be due

to several reasons. First, the Deep South has a higher population of non-Whites, particularly African-Americans, than many other regions of the country. The TASC site used for the current study was located in a large, urban city, in which more non-Whites tend to live, as opposed to suburban and rural areas. Second, the TASC program targets public schools that have high rates of poverty and a history of academic failure (OSSRD, 2009). Louisiana has one of the highest rates of private education attendance in the nation which indicates that the families that have the economic resources to send their children to private schools do just that (CABL, 2011). Thus, the poorest, most socially vulnerable children are left to attend the inner city public schools.

Among TASC participants, the vast majority (84%) of cases were successfully closed at the end of the school year which is less than the proportion of cases that was successfully closed (94%) among students in Kern County Truancy Reduction Program (Van Ry & Garcia, 2006). These differences may be due to the fact that case managers did not follow students until the end of the school year. Differences could also be due to the fact that the Kern County Truancy Reduction Program did not operationally define what constituted a successful case closure for their case managers, as the TASC program did. Perhaps, the TASC program had a more rigorous definition of success.

Well over three fourths of participants had not been previously retained (82%), and the vast majority of participants were not in special education (91%). While grade retention and special education have been found to be correlates of truancy, few program evaluations collected or reported this information therefore, making it difficult to assess similarities on these academic characteristics between the sample in the current study and samples used in previous program evaluations (Gandy & Shultz, 2007).

Change in Truancy Rate among High-Risk Participants

Among the students referred to the TASC program, almost half ($n = 369$, 47%) were

assigned to the low-risk group that received the TASC intensive case management intervention. Among participants in the low-risk group, 48 (13%) had no further unexcused absences after the referral until the end of the school year. However, the findings of the study indicate that truancy actually increased slightly (-.7%) on average, for low-risk participants. These findings are similar to those of Project START in which control group participants had little change in truancy from referral to the end of intervention period (Fantuzzo et al., 2005). Among participants in the high-risk group ($n = 331$), 17% ($n = 56$) had no further unexcused absences at the end of the school year and 60% ($n = 199$) had accumulated less than 10 unexcused absences. This finding is in stark contrast to The Kern County Truancy Reduction Program in which 26% of students had no unexcused absences for the remainder of the school year. However, this latter study had a significantly larger sample size of 5,000 (Van Ry & Garcia, 2006).

A RD design was used to assess the effectiveness of the TASC intervention for students at risk for continued truancy. The major finding of this assessment was that the TASC intervention was a significant predictor of decreased truancy among high-risk participants. Among high-risk participants, truancy decreased by 1.9% in one school year. While this finding may seem modest, the Family and Community Involvement program saw the same decrease over a three year time period, as opposed to the one year for TASC participants (Epstein & Sheldon, 2002). Both the Early Elementary Truancy Initiative (McCluskey et al., 2004) and the Student Attendance Initiative (Holbert et al., 2003) reported a greater change in truancy among participants (at 6% and 10%, respectively). While there was a change in truancy among participants in the Early Truancy Initiative, participants still missed an average of 19% of days after the intervention (approximately 33 days), whereas 75% of TASC high-risk participants accumulated 10 or less unexcused absences after the referral. The Student Attendance Initiative

reported a 10% reduction in truancy among participants, but on average, participants were only attending 90% of the time (approximately 20 absences per year). Thus, the 1.9% change in truancy amongst TASC high-risk participants is not as meager as it may appear when compared to similar truancy intervention programs.

Overall, TASC appeared to yield similar results to Project START (Fantuzzo et al., 2005), which used a matched sample, group comparison design. The RD design employed in this study was a far more rigorous quasi-experimental design (Shadish et al., 2001). Project START participants were assigned to either the control group which received a traditional court intervention group or the experimental group, which received a community-based court intervention (Fantuzzo et al., 2005). Project START, obtained immediate reductions in truancy for the participants in the experimental community-based court program; however, the difference in truancy after 90 days between those who received the intervention and those who did not was not statistically significant (Fantuzzo et al., 2005). Treatment effects were found among the TASC high-risk group at the end of the school year, rather than at multiple points during the school year. This finding may indicate that the effects of the TASC intervention were more durable than project START since attendance declined after the initial 30 day post intervention period among participants in the project START treatment group (Fantuzzo et al., 2005).

None of the truancy programs analyzed in the literature review reported results based on the demographics of their study samples (e.g., see Epstein & Sheldon, 2002; Fantuzzo et al., 2005; Lehr et al., 2004). Only a handful of previous truancy intervention studies (Gandy & Shultz, 2007) went beyond reporting simple frequencies, and of those that did, none used regression analyses to examine predictors of truancy. Therefore, the TASC findings presented below cannot be compared to other truancy intervention programs.

Significant predictors of a change in the rate of truancy included African-American race and previous grade retention. Although the TASC intervention was found to be effective for reducing truancy, it was less effective for African-American participants. This latter finding could be directly related to the fact that African-Americans were overrepresented, as TASC targets the most socially and academically disadvantaged youth, or the fact that being African-American is an inherent individual risk factor for truancy (Dryfoos, 1990; Garry, 1996). Current literature indicates that poor, African-American Children are at an increased risk of truancy, school failure, and dropout (Dryfoos, 1990; Garry, 1996). The literature also finds that the achievement gap is widening amongst African-American children and their White counterparts (Fram, Miller-Cribbs, & Van Horn, 2007; Jencks & Phillips, 1998). In Louisiana, poor children, particularly African-American children also attend schools that are failing academically (CABL, 2011). Thus, it would seem that this systemic disadvantage would make African-American children more susceptible to continued, chronic truancy. The TASC intervention was also less effective for participants who had been retained at least one grade. This finding is not surprising considering children that have been retained one grade are at an increased risk of truancy (Dryfoos, 1990; Alexander et al., 2001, Chang & Romero, 2008). Current literature indicates that children that are overage for their grade are more likely to experience truancy (Alexander et al., 2001). Children that are retained are more likely to be behind academically and socially which further ostracizes them from their peers and classmates. Children that are retained may also lose self-confidence and their ability to see themselves as academically successful, which may lead to negative views of education in general (Alexander et al., 2001; Yeide & Kobrin, 2009).

Neither gender nor special education status predicted a change in the truancy rate. This finding was surprising, considering the amount of research showing that males are more likely to be truant from school (Dryfoos, 1990; Garry, 1996). However, some of the literature (see e.g., Amatu, 1981, Zang et al., 2003) suggests that elementary male and female student may experience truancy equally. This is due to the idea that older children are responsible enough to get themselves to school, whereas younger children are dependent upon a family member to ensure they are attending (Amatu, 1981). Special education status was also cited as contributor to truancy in the literature (Herrenkohl, 2001; NCSE, 2007). Because the majority of participants were in Kindergarten and first grade it is possible that academic issues had not been identified. Thus, this correlate may better predict truancy for older children.

Successful case outcome was found to be a positive and significant predictor of a change in the truancy rate. Students whose cases were successfully closed had a decrease in the rate of truancy of over 9%, as compared to their counterparts whose cases were not successfully closed. Successful case outcome was a robust predictor of a positive change in truancy in every regression model. The literature does indicate a positive association between successful case closure and reduced rates of truancy (Fantuzzo et al., 2005; Gandy & Shultz, 2007). The strong association found between successful case outcome and reduced truancy is most likely due to the fact that reduced truancy is part of the definition of a successful case.

A significant interaction effect was found between the pre-program assignment score and group membership indicating that the effectiveness of the TASC intervention differed for participants in the treatment group with higher pre-program assignment scores. The interaction effect was negative indicating the effectiveness of the TASC intervention was reduced for participants in the high-risk group who had higher pre-program assignment scores. Thus, it is

possible that the TASC intervention was simply less effective as the child's risk factors increased (i.e., higher pre-program assignment scores). Moreover, participants with the greatest risk factors may need more intensive case management and monitoring. This finding may also indicate that students with considerably more risk factors may also need a longer intervention period to appropriately address and resolve the issues the student or their family is facing (Epstein & Sheldon, 2002; Gandy & Shultz, 2007; Lehr et al., 2004).

Current literature also recommends providing service referrals in conjunction with intensive case management to address underlying contributors to truancy (Bell et al., 1994; Gandy & Shultz, 2007; Kearney, 2008). Amongst the participants in the high-risk group, approximately 61% ($n = 237$) were referred to 415 individual services. The vast majority of the high-risk participants and their families were referred to an average of 2 services, the majority of which were mental health (31%) and educational (32%). Amongst the 415 service referrals to which participants were referred nearly 90% were reported as being completed and participants completed 1.7 services on average. However, nearly a third (29%) of the high-risk participants received no service referrals. This study examined the extent to which TASC services (viz., referrals, whether services were completed, and the types of service) were associated with a change in the truancy rate. Results showed that TASC services did not influence the rate of truancy. Chi-square analyses were conducted to examine the joint distributions of service referral and whether services were completed, service referral and case outcome, and whether a service was completed and case outcome. Results showed that all the participants that were referred to one to three services completed one to three services ($n = 214$, 100%), whereas only half ($n = 12$, 52.2%) referred to four or more services completed them. This finding may indicate several issues, a) that the children and families received too many service referrals and

were overwhelmed, b) that the service referrals did not actually match the needs identified by the family, c) the family was unable to attend the service due to personal reasons (e.g., lack of transportation), or d) the family may have been on a wait list and the case closed before they had a chance to complete the service. Chi-square analyses also showed that over three fourths ($n = 187, 87.4\%$) of participants referred to one to three services had successful case outcomes as compared to two thirds ($n = 16, 69.6\%$) of participants referred to four to seven services that had successful case outcomes. This finding may indicate that children and families in need of more services were more likely to continue experiencing truancy regardless of services. However, part of the definition of a successful case outcome is whether the family completed all the service to which they were referred, and since more families with one to three services completed them as compared to the families with four to seven services, the findings are not all that surprising. No association emerged between whether services were completed and case outcome. Overall, these latter findings are difficult to interpret. First, nearly a third of high-risk TASC participants (29%) were not referred to a service, presumably because either a service need was not identified or the service that was needed was unavailable in the community. Secondly, completing services may, in fact, not reduce truancy or services may not be sufficiently operationalized and measured by the TASC program. At the time the original data were collected (i.e., 2006-2007) TASC was only able to measure whether a participant was referred to a service and whether the participant completed the service. No information is available about the service provider's qualifications or the dosage and duration of services the client received, which are pertinent to assessing treatment effectiveness (Rose, 1992). Perhaps the effects of services may not be immediate and would be found over time. The majority of service referrals were for education and mental health, possibly indicating a continuing need for intervention. Another possible explanation may be that service

referral, whether a service is completed, and the type of services a client receives is not as important as the academic and demographic characteristics of the participants.

Limitations of Current Study

The major limitations of the current study are concerned with issues around measurement, representativeness and external validity, and the RD design.

Measurement

Issues in the current study relating to measurement reliability concern the multiple instruments used for data collection. The TASC referral and IFSPA forms both appeared to have face and content validity (Rubin & Babbie, 2005). Based on data and case management audits, both the referral form and the IFSPA form appeared to be used by TASC case managers as OSSRD intended, which increases reliability (Rubin & Babbie, 2005). However, the RISK I instrument was the only instrument that had been systematically assessed (Kim & Barthelemy, in press). Although the various indicators that comprise the pre-program assignment score are rooted in the literature (Hammond, Linton, Smink, & Drew, 2007; Teasley, 2004), the reliability of the scores is affected by a teacher's ability to consistently complete the RISK-I form. Because teachers may not have enough information about the student to accurately gauge the child's risk factors, and because these scores may vary across raters, there is the possibility that teachers gave unreliable or incorrect scores on the RISK I instrument. It is possible that students were mis-assigned to either the low- or high-risk group based on unreliable information from the RISK I. For example, there was some expectation that the low-risk participants would exhibit less truancy after the notification letter since they were at low risk for continuing to be truant. There are two possible explanations for this. First, low risk does not equate to any risk and some subsequent truancy is to be expected from this group. Second, this could have been a result of

inaccurate measurement using the RISK I instrument, and some low-risk participants should have been in the high-risk group.

There were also several limitations due to the use of secondary data (Rubin & Babbie, 2005). Poverty was cited in the literature as one of the primary risk factors for truancy and continued truancy (Amatu, 1981; Chang & Romero, 2008; NCCP, 2008; Zang et al., 2003). However, this measure was not collected by TASC upon admission. According to the Louisiana Department of Education (2009), over 65% of the students in this school district were eligible for free or reduced price lunches indicating a very high rate of community poverty. However, this is a different unit of analysis, which cannot be accurately used at the individual level.

Excused absence and tardy information are collected by the school and by the TASC program, but this information is unreliable due to inconsistent policies regarding what constitutes an excused absence or tardy and how they are collected in the school database. Some schools in the district, in which the study was conducted, count three tardies as an unexcused absence while other schools in the same district do not include tardies as unexcused absences, regardless of the number. Further, individual school policies allow a parental note to serve as a valid excuse for an absence while other schools in the same district have policies that only recognize a physician's note as a valid excuse.

Another variable of importance, as cited in the literature, was the number of suspensions a participant accumulated, both before and after the TASC intervention (NCSE, 2007). In the school district in which the study was conducted, suspensions were counted as unexcused absences. Thus, information about suspensions is not reliable. First, the form does not clarify whether the school official should report all previous suspensions or just those that occurred in the current school year. Also, if a child switches schools at any point during the school year, his

or her history of suspension does not always follow to the new school. Second, any suspensions that occur after the referral are recorded by the school as unexcused absences, and therefore appear in the final attendance check. Thus, including both suspensions and unexcused absences after referral in a regression model could lead to high rates of multicollinearity amongst these two variables.

Other variables of interest not currently measured by TASC include information about case manager characteristics, school characteristics, and service characteristics (Kearney, 2008). Little information is also known around the process whereby the IFSPA contract is completed and the reasons behind referring some participants to services while others are not referred. The measurement of services is also incomplete at best. Because these variables and information were not available, there is a chance that the OLS regressions models containing service referral and service completion variables presented in this study could be misleading (Rubin & Babbie, 2005). In other words, the findings of the service models indicate that service referral, completion, and type were not predictive of a change in truancy which may, in fact, be a measurement error.

Representativeness and External Validity

The results of the current study are generalizable to relatively poor and young children of color with a history of truancy. Moreover, participants were located in one urban school district in a southern state, which further limits generalizability of the findings. One fifth of TASC referrals did not complete the program, an attrition rate which is notably lower than both the 37% attrition rate of Project START participants (Fantuzzo et al., 2005) and the 42% rate of Early Truancy Initiative program participants (McCluskey et al., 2004). Attrition from TASC was due to case managers being unable to locate the family at the time of referral, families moving to

other school districts throughout the school year, and families refusing to cooperate with TASC program expectations. The findings also indicate that the children who attritioned out of the sample were different from the population that completed the TASC intervention. In particular, a significantly greater proportion of the participants in the attrition sample had previously failed a grade (25% vs. 18%), as well as were African American (98% vs. 91%).

The RD Design

There are several limitations to the RD design that are of importance. The first is that the RD design is not an experimental design. While the design accounts for most of the threats to internal validity it requires a large sample to do so, nearly three times as many participants as an experimental design, which can be very costly for many programs with restricted budgets. The RD design also requires pre-program score with the traditional cutoff being at the mean. However, to use the mean pre-program score a pilot intervention must be undertaken for a new instrument, or an instrument that has already been systematically assessed must be chosen, which can be very expensive. Further, many researchers have been hesitant to use the design and analysis because RD has been presented as difficult to interpret and understand. Because RD is interpreted in the same manner as OLS regressions it requires a little extra training and expertise for researchers skilled in regression analyses. Like any other specialized design some time and commitment is needed to learn the nuances of the design, but no more than those that would be required of any other design.

Merits of Current Study

Several problems are identified in the literature as compromising efforts to reduce chronic absenteeism and inform best practices for truancy intervention. This section outlines

each of these issues and the ways in which this current study addresses each of them. This section concludes with the merits of the RD design.

Researchers (Gandy and Schultz, 2007; WWC, 2008) have concluded that definitional inconsistencies regarding truancy hinder efforts to understand the problem of truancy and to compare truancy interventions. This study provided a clear definition of truancy, five unexcused absences. Many truancy intervention studies in the current literature also suffer from poor operationalization of concepts, small sample sizes, and poorly constructed empirical investigations (Gandy & Shultz, 2007; WWC, 2008). The current study clearly and methodically defined and operationalized all the concepts used, which include demographic and academic characteristics of the overall sample, the difference between low- and high-risk participants, TASC services, what constitutes a successful and unsuccessful case outcome, and the TASC intervention. No other published study to date has done this (see Gandy & Shultz, 2007). This study also provided a clear formula for computing the pre-program assignment score and the change in the rate of truancy for every participant. While many studies were able to provide the change in the rate of truancy for participants, few had comparison groups (Gandy & Shultz, 2007). As compared to other truancy interventions that were not district wide (see Lehr et al., 2004; Fantuzzo et al., 2005), the current study utilized a relatively large sample of participants ($N = 700$) for one school year. Lastly, this study is the first known study to use a rigorous quasi-experimental design to assess the effectiveness of a truancy intervention program with elementary students of color (Gandy & Shultz, 2007). Regression analyses have not been conducted by any intervention assessment to date, including the evaluation of Project START which used one-way and two-way ANOVA to assess the effectiveness of the program (Fantuzzo et al., 2005). Most studies used far less rigorous designs and reported nothing other than simple

frequencies (Gandy & Shultz, 2007). Because the current study used a form of multivariate regression, RD, the predictive ability of demographic and academic characteristics, case outcome, service referrals, service completion and service types on a change in the truancy rate could be assessed. Although some would consider the findings regarding the effectiveness of TASC modest, several other important variables previously identified as top predictors of truancy stood out including race and previous grade retention. Thus, the current study was able to begin filling the gaps left behind by previous empirical truancy intervention studies. This study has also forged the path for subsequent research to use more rigorous evaluation of truancy interventions.

Merits of Regression Discontinuity

Although the randomized experiment is still the method of choice for rigorous program assessment, its most notable drawback is that clients with the greatest need for intervention could be assigned to either a control group or a wait list, while less needy clients are serviced first (Trochim, 2006). According to Shadish et al. (2002), the rigor of the RD design is comparable to that of a randomized experiment if the researcher is able to control how participants are assigned to the control and treatment groups and how treatment is applied to participants. In fact, Lee and Lemieux (2009) argue that RD should be considered an experimental design because there is random variability in how participants are assigned to treatment and control groups according to the specified cut-off score. The validity of the RD design is determined by how well the proper functional form of the relationship between the assignment variable and the posttest measure is modeled (Trochim, 2006), requiring that both interactions and higher-order polynomials be tested (Lee & Lemieux, 2009). The significant interaction term in the current analysis indicated that the treatment effect differed across participants; however, the main effect remained stable,

indicating a robust treatment effect (Lee & Lemieux, 2009). Furthermore, the RD design and analyses are no more difficult than those required in an experimental design. The treatment effect is also easily pictured by graphing the relationship between the pre-test and post-test which makes the results easier to interpret as compared to other quasi-experimental and experimental designs.

In sum, the merits of the current study include a clear cut definition of truancy, meticulous operationalization of concepts, a large sample size, and a clear-cut mathematical formula for the pre-program assignment score and the change in the rate of truancy. The current study also assessed the effectiveness of the TASC intervention through regression discontinuity and used pertinent correlates of truancy to predict a change in the rate of truancy after the intervention.

Implications for Social Work Practice, Education and Research

This section examines the implications of the current study for social work practice and policy. Implications for social work education follow, with a focus on the education of social work students and social workers in the field. Lastly, implications for social work research conclude this section.

Implications for Social Work Practice

The TASC program is well grounded in ecological theory and the social development model and within the early intervention school social work best practices literature (Newsome, Anderson-Butcher, Fink, Hall & Huffer, 2008; Rhodes et al., 2010). Results of the current study support the use of intensive case management services with families of young children who are chronically absent from school. It appears that early intervention efforts are effective in a school setting if case managers can refer families to available educational and community-based

services. Moreover, findings from this study seem to indicate that monitoring and services should continue for participants for the entirety of the school year.

Findings of this study indicate that TASC was significantly less effective with non-White children. This finding is not all that surprising given that minority students are most at risk for academic failure and eventual drop out (Jozefowicz-Simbeni & Allen-Meares, 2002).

Contemporary school reform efforts to close the historic achievement gap have been stymied by the long-term effects of entrenched poverty and racism (Fram, Miller-Cribbs, & Van Horn, 2007; Jencks & Phillips, 1998). Although TASC strives to provide a continuum of services that holistically addresses the multiple needs of at-risk children, available school- and community-based supports may be inadequate to meet the particular academic needs of some of the more disadvantaged students and families served by TASC. These findings suggest there is a need for more assertive and culturally-responsive outreach to families of non-White children who have experienced academic difficulties.

Current literature suggests that students who have been previously retained may need more intensive intervention to address academic difficulties (NCSE, 2007). The results of this study parallel these findings. Participants in the current who had been previously retained had 2% more truancy than students who have never been retained. Therefore, it would be prudent for practitioners and educators to consider these students as extremely vulnerable to truancy, further retention, and dropout, and to provide services accordingly. Services should include referral to a school social worker who can create an individualized treatment plan that addresses any identified needs with particular emphasis on tutoring and mentoring (Openshaw, 2008). Additional enrichment and other educational programs may better meet the academic needs of this subpopulation of at-risk students. School districts that engage and provide services to at-risk

youth early in their academic careers may have less need to re-engage students in middle and high school when interventions are more difficult and less successful.

Policy Implications

Due to the fact that the No Child Left Behind Act of 2001 has such large economic implications for schools, the definition of truancy needs to be consistently defined across districts and states (NCSE, 2007). It is almost impossible to examine empirical studies regarding truancy due to the plethora of definitions and formulas used to measure to truancy (WWC, 2008). Findings of this study indicate that policies regarding attendance-keeping and truancy need to change at the local and state level in Louisiana.

The results of this study suggest that early prevention and intervention efforts should be supported. Therefore, the role of social workers, and more importantly school social workers, ranges from educating families about truancy, advocating for policy change, negotiating those subsequent changes, integrating and coordinating the new policies and evaluating the changes the new policies have brought about (Zastrow & Kirst-Ashman, 2010). Social workers that have contact with families with young children should educate families of state compulsory attendance laws. Findings of the current study also indicate that social workers should to advocate for policy changes at the local and state level that support and fund evidence based, individualized, early truancy intervention in schools. Current research indicates that the NCLB Act has widened the achievement gap between whites and non-whites. This study also found that non-White children are at increased risk for truancy. Armed with this knowledge, the appropriate role for social workers is to advocate for change in schools and school curriculum that supports the attendance and participation of students in the educational setting. Further, it is appropriate for social workers to call attention to policies that are detrimental to students that are

experiencing chronic truancy such as grade failure, suspension and expulsion for chronic truancy. Furthermore, social workers should coordinate with educators to outline a policy or plan of action for addressing the problems of students experiencing chronic truancy and grade retention. Lastly, social workers are well equipped to assess the effectiveness of the policy changes with regard to truancy, and should play a role in systematically examining the impact of policy.

Implications for Social Work Education

It is the responsibility of social work educators to familiarize and educate students about the social problems and challenges they will encounter in practice settings (Council on Social Work Education, 2010). Moreover, social work educators are charged with ensuring that students are introduced to the types of settings in which they can practice effectively, including school social work, a relatively new field of practice for social work professionals (Council on Social Work Education, 2010). Traditionally, educators and school counselors were the only service providers in the school systems. However, school social work is a growing field (Dupper, 2003; Openshaw, 2008). Thousands of public schools in the US serve large populations of socially vulnerable and disadvantaged students.

Current research indicates that truancy is a growing problem affecting students, families, schools, and communities (Garry, 1996; McCray, 2006; Teasley, 2004). Truancy has also been linked with a plethora of adverse academic and social outcomes including grade retention (Alexander et al., 2001), suspension and expulsion (NCSE, 2007), school dropout (Alexander et al., 2001), substance use and abuse (Halfors et al., 2002) and even incarceration (Schroeder et al., 2004). Therefore, social work practitioners need to be trained on the underlying contributors to truancy, particularly individual, family, school and community risk factors. Training should

include educating practitioners about the protective factors that moderate truancy risk at all four risk levels. Clinically oriented social work programs often include models of prevention and intervention as part of their curriculum and it is imperative that effective school social work and truancy prevention interventions also be taught. This information could be incorporated into program evaluation classes, macro social work practice courses, or even a school social work elective. Training social workers to navigate between students and families, the educational system, and the policies within educational institutions is a natural fit from the ecological and systems theories taught in the classroom to application in the practice setting (Zastrow & Kirst-Ashman, 2010).

Implications for Social Work Research

This section addresses the next steps for the current study as well as the steps required to extend the current knowledge base regarding truancy. The intention of the current study was not to evaluate the TASC program, however, several improvements are suggested for replicating the current study and for improving TASC instruments.

Implications for the TASC intervention

First, the current study should be replicated with a more diverse sample and at additional TASC sites. Additional research is needed to clarify whether the reduced effectiveness of TASC for non-White students is associated with specific child and family characteristics, insufficient academic resources, or both. Examination of the effectiveness of the TASC intervention for non-white participants should be assessed by examining participants at other TASC sites to understand if this is a site specific problem or an inherent flaw in the TASC intervention.

The rate of attrition for the current study was relatively low (19%) and was not found to be problematic; however, the sample of students that attritioned out of the study were

significantly different in both race and level of risk. Every child referred to the TASC program has a referral and RISK I completed. Therefore, some information is known about the families that do not participate in the TASC program. More effort by TASC personnel should be placed on finding children that were referred to the TASC program, but did not participate, and reporting their final attendance scores. It would behoove TASC to clarify whether systematic differences exist among families, and in particular, among those who cannot be located and those who refuse to cooperate with TASC.

Several variables of importance, as cited in the literature, were missing from the current study including a measure of family poverty (Zhang, 2003), number of suspensions and expulsions (NCSE, 2007), and number of excused absences and tardies (Chang & Romero, 2008). The TASC sites should work with the schools they serve to ascertain how the schools measure and record excused absences and tardies so they can be collected in the TASC database. Future assessments of the TASC intervention should include these latter variables.

The way in which TASC measures and reports services needs considerable improvement. More information about the services and provider is needed to accurately measure the impact of service referrals, service completion, and service type on truancy. This information is currently collected with the IFSPA form. The TASC program needs to first examine the list of service providers and their credentials currently being utilized at each TASC site, and then examine the interventions being offered by the service providers more thoroughly. In an effort to enhance the measurement of services and other case management activities, the TASC program has been working towards the implementation of a new tool called the Case Management Activity Tracking Tool (CMATT; OSSRD, 2009). The intention of this tool is to help case managers record the level of intervention he or she provided and the level of intervention of any service

providers (OSSRD, 2009). This tool would not take the place of the IFSPA form, rather it would be used as a supplement. It would also be used to assess whether the services to which participants were referred match the participants' identified needs. This tool would also track the level and dosage of services each participant received from service providers. Future studies should assess the appropriateness of the instrument as a tool for case managers to track his or her case management activities as well as the services to which clients were referred. There are several ways for assessing the appropriateness of the instrument. First, the instrument should be piloted in one or two TASC sites. Then it should be assessed through satisfaction surveys regarding the instrument, comparing this tool with other valid and reliable case management tools, and by systematically assessing the reliability and validity of the instrument through statistical analyses. This research is needed to gain a better understanding of the impact of TASC case management and services on sustained reductions in truancy.

Future implementation studies of TASC should also assess inter-rater reliability amongst teachers for the RISK-I since this instrument is part of the composite risk measure. Little is known or understood about the process by which teachers complete this form, and this information is imperative to not only insuring participants are correctly assigned to the control or treatment groups, but that participants are getting the level of intervention they need to prevent further truancy. Findings of the current study also indicate that the current score given to previous grade retention in the composite risk measure warrants re-evaluation. Research shows a positive association between previous grade retention and truancy (Alexander et al., 2001), and the results of the current study provide additional empirical evidence that previous grade retention may merit a higher risk score than the one currently assigned on the RISK-I form. Thus, the scoring algorithm to determine the cut-off score for group assignment in the RD design

could be adjusted such that previous grade retention is assigned a higher risk score.

Consequently, in future assessments of the TASC intervention, children who have been retained would most likely be assigned to the high-risk group. Also, the mean pre-program assignment score for the sample included in this study was higher (31) than that obtained in the retro-actively scored samples (27). This indicates that the mean score, or cut-point for the control and treatment groups may need to be adjusted every few years as the population changes in the school or community.

Truancy intervention is also a field in which very few best practice models are available. Therefore, few systematically assessed measures are available for assessing risk and protective factors and other correlates of truancy. Because so few risk instruments are available, particularly for the elementary age populations, creating the pre-program assignment score was a challenge, as well as retro-actively scoring two years of data to compute the mean. Because the integrity of the design is also dependent upon the accuracy of the pre-program assignment score, and the fact that the design required three times as many participants as a randomized experiment, auditing 900 files proved to be cumbersome. Future researchers should assess the accuracy of the assignment scoring process earlier in the year, rather than at the end of every school year, to save time and resources and to improve the process as needed. Furthermore, future research should explore utilizing the RD design with an added random assignment at the cut point to increase the rigor of the design. RD proved to be a useful tool for assessing the effectiveness of the TASC intervention without having to deny services or place students on a wait list for intervention. Overall, the RD method was a worthwhile endeavor and should be used in future intervention research.

Implications for Truancy Intervention Research

The use of a standardized definition of truancy in future evaluations would enable

researchers to better assess different outcomes across programs. This study suggests that a conservative definition of truancy may be associated with better proximal outcomes for students. However, duplication of the current study with different populations and at different TASC sites is needed to compare the benefits of rapid assessment (i.e., 5 unexcused absences) to traditional assessment time frames (i.e., 20 or more unexcused absences). More research linking rapid assessment with reduced truancy could push educators to adopt a conservative definition of truancy.

There is also a plethora of literature that indicates that risk and protective factors are found at the school level and community level, however few studies attend to these areas (Herrenkohl, 2001; Yeide & Kobrin, 2009). To further the empirical knowledge base, future truancy studies should also examine the effects of mezzo- and macro-level variables. One area for inclusion should be case manager characteristics such as education, degree area, part- or full-time employment, and the caseload of the case manager. Another area to include is school-level characteristics such as the size of the school, teacher-to-student ratios, and demographic make-up of the school, which is available on most state Department of Education websites. School district policies should also be included such as suspensions and expulsion for truancy. This information can be acquired from each school's policy handbook. In order to include macro-level variables Hierarchical Linear Modeling (HLM) would have to be undertaken in addition to the RD design. HLM allows for individual and macro level variables to be included in the same analysis to ascertain the impact of micro- and macro-level variables, at the same time, on truancy.

Finally, truancy has been associated with academic failure, school dropout, and other social problems (Grooters & Faidley, 2002; Teasley, 2004). Longitudinal research is most

appropriate for determining whether early intervention can impact high school graduation rates (Alexander et al., 2001). Longitudinal research is also imperative to examining the cost/benefit ratio of continuing a program. Such research is needed to demonstrate how TASC and other truancy programs can enhance the academic success of relatively disadvantaged children. A challenge to longitudinal research, with an elementary school population, is keeping track of the participants over time. Research indicates that individuals in poverty are highly mobile and children in poverty move and attend numerous schools over the course of his or her education (NCCP, 2008). State-wide department of education databases make keeping track of participants easier, however, identifying participant information must be kept on file or in a computer and a research relationship with the state Department of Education must be maintained. However, overcoming these latter challenges is of great importance to understanding the impact of early intervention on continued truancy. Therefore, as participants enter the TASC program consent should be obtained to continue gathering academic data for every child through high school. Academic information could be collected annually or for cohorts of participants. The importance of this information should be relayed to the state Board of Education and a working relationship forged for acquiring academic information for each of the participants over time. Qualitative interviews would add substance to the data over time, as well, to increase the understanding of the challenges participants and the families of participants faced.

Contributions to the Knowledge Base

A greater understanding of the risk and protective factors for truancy is critical for academic success of students and for associated prevention intervention efforts by school social workers and educators. This study extends the knowledge base on truancy prevention interventions in several important ways. Traditionally, the focus of truancy intervention has

been with middle and high school students (McCray, 2006; Reid, 2005). This study is one of the few that assesses the effectiveness of a truancy prevention intervention aimed at elementary-aged children (Gandy & Shultz, 2007). This study is unique because it assesses the effectiveness of a truancy prevention intervention well grounded in both theory and school social work best practices. Further, only one other truancy intervention has been rigorously evaluated (Fantuzzo et al., 2005). However, project start used a comparative group analysis while this study was the first to incorporate a RD design (Gandy & Shultz, 2007). This study substantively contributes to the knowledge base as the only study to use regression analyses to examine the predictive power of demographic and academic characteristics and case outcome on a change in the rate of truancy. This study also utilized regression analyses to examine the predictive power service referrals, completion of services, and service types on a change in the rate of truancy, but the findings were modest and require more research. Findings of this study indicate that the TASC intervention was effective for reducing truancy amongst at-risk students for an entire school year. Furthermore, race, previous grade retention, and case outcome were all statistically significant predictors of changes in the rate of truancy. Another unique aspect of this study is that it examined the relationship of service referrals and service completion on case outcome. Few studies have gone beyond individual contributors of truancy to examine the service components of case management truancy interventions (Gandy & Shultz, 2007). Findings of this study support the assumption that participants referred to services are more likely to complete them and that those referred to services are more likely to have a successful case outcome. Despite limitations, the current study serves as a model for truancy intervention research. Future evaluations of prevention programs should employ rigorous RD designs, thus bolstering the

knowledge base about effective school social work practices that promote academic success
(Franklin, Kim, & Tripodi, 2009).

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APPENDIX A: TASC REFERRAL FORM

TRUANCY ASSESSMENT AND SERVICE CENTER REFERRAL FORM

Referral Date: _____	
Name of person making referral: _____	Referral Person's
Position: _____	
Referring School: _____	Primary Grounds of Complaint: _____
Contact Phone: _____	Secondary Grounds of Complaint: _____

Child's Information

Name: _____	SSN: _____
DOB: _____	Race: _____
Caregiver's name: _____	Gender(circle): M or F _____
Mailing Address: Street _____	Relationship to Child: _____
City _____	Home Phone: _____
Zip code _____	Alternate Phone: _____
Free/Reduced Lunch? (circle) Yes No Unknown	

School Information

Current Grade: _____	Absences at Referral: Unexcused: _____ Excused: _____
	Tardies: _____
Has the student ever failed a grade? (circle): Yes or No	If yes, please circle each grade failed: PK K 1 2 3 4 5 6 7 8 Unknown
Student in Special Education? (circle): Yes or No	If Yes, which status? _____
Number of current year Suspensions: _____	
Number of Expulsions (all time): _____	

FOR TASC USE ONLY

Date Complaint Received: _____	Function Status Assigned: _____
Date Complaint Screened: _____	Initials of Person Assigning Status: _____

Date Function Changed:

New Function Status:

Function Change Explanation:

APPENDIX B: RISK INDICATOR SURVEY I INSTRUMENT

RISK Indicator Survey I

Compiled by: ___ School staff

___ TASC staff

Defiant

- ___ Argues with authority figures
- ___ Uses obscene language or gestures
- ___ Other _____

Manipulative

- ___ Sneaky
- ___ Distorts truth
- ___ Blames others for mistakes
- ___ Other _____

Aggressive

- ___ Bullies/threatens/intimidates others
- ___ Hits/Bites peers or teachers
- ___ Breaks or throws object
- ___ Other _____

Isolated

- ___ Ignored by peers
- ___ Rejected by peers
- ___ Withdrawn
- ___ Other _____

Parental Attitudes

- ___ Minimizes child's problems attention
- ___ Blames others for child's behavior/performance
- ___ Unresponsive to attempts to make contact
- ___ Other _____

Attention Seeker

- ___ Wants teacher's undivided
- ___ Causes class disruptions
- ___ Talks at inappropriate times
- ___ Other _____

Emotional Response

- ___ Inappropriate response to correction
- ___ Lack of empathy
- ___ Flat affect – just stares
- ___ Does not express joy
- ___ Other _____

Unmotivated

- ___ No desire to learn
- ___ Not prepared daily
- ___ Frequently has no homework
- ___ Exhibits little curiosity
- ___ Other _____

Risk Taking Behaviors

- ___ Harms self intentionally
- ___ Sexual acting out
- ___ Suspected substance use/experimentation

- ___ Risky physical behaviors
- ___ Steals

Unstable Home Life

- ___ Poor hygiene
- ___ Regularly complains of hunger
- ___ Inappropriate clothing for weather
- ___ Suspected substance abuse by adult in home
- ___ Chronic illness/ lack of medical
- ___ Lack of school supplies
- ___ Other _____

Developmental Issues

- ___ Sucks thumb
- ___ Enuresis
- ___ Sleeps at inappropriate times

____ Eating problems
____ Speech/language/hearing problems
____ Other _____

Hyperactivity
____ Can't sit still
____ Short attention-span for age/grade

Comments:

APPENDIX C: PRE-PROGRAM ASSIGNMENT SCORING ALGORITHM

0-26 = Control Group; 27+ = Treatment Group

TASC Referral Form	
Category	Assigned Points
Unexcused absence	1 per occurrence
Excused absence	1 per occurrence
Grade level	
Kindergarten	10
1 st	5
2 nd	4
3 rd	3
4 th	2
5 th	1
Previous suspension/expulsion	10
Tardy	1 per three occurrences
Special education status	3
Previous grade level failed	10
Month of TASC referral	
September	9
October	8
November	7
December	6
January	5
February	4
March	3
April	2
May	1

Risk Indicator Survey (RISK-I)

Defiant		
Argues with authority figures	5	(cont'd)
Uses obscene language/gestures	5	
Other	1	
Aggressive		
Bullies/threatens/intimidates others	5	
Hit/bites peers or teachers	5	
Breaks or throws object	5	
Other	1	
Parental Attitudes		
Minimizes child's problems	3	
Blames other for child's problems	3	
Unresponsive to attempts contact	5	
Other	1	
Emotional Response		
Inappropriate response to correction	2	
Lack of empathy	1	
Flat affect – just stares	1	
Does not express joy	1	
Other	1	
Risk-Taking Behaviors		
Harms self intentionally	5	
Sexual acting out	5	
Suspected substance use/experimentation	5	
Risky physical behaviors	2	
Steals	5	
Other	1	
Developmental Issues		
Sucks thumb	1	
Enuresis	1	
Sleeps at inappropriate times	1	
Eating Problems	1	
Speech/Language/Hearing Problem	1	
Other	1	
Manipulative		
Sneaky	1	
Distorts truth	2	
Blames others for mistakes	2	
Other	1	
Isolated		
Ignored by peers	1	
Rejected by peers	1	
Withdrawn	3	
Other	1	
Attention Seeker		
Wants teacher's undivided attention	1	

Causes class disruption	3
Talks at inappropriate times	1
Other	1
Unmotivated	
No desire to learn	4
Not prepared daily	1
Frequently has no homework	1
Exhibits little curiosity	1
Other	1
Unstable Home Life	
Poor hygiene	3
Regularly complains of hunger	1
Inappropriate clothing for weather	1
Suspected substance abuse by adult	3
Chronic Illness/Lack of medical care	3
Other	1
Hyperactivity	
Can't sit still	4
Short attention span for age/grade	4
Other	1

APPENDIX D: INFORMAL FAMILY SERVICE PLAN AGREEMENT FORM

Informal Family Services Plan Agreement (IFSPA)

In the interest of: _____ **SS#** _____ -

_____ - _____

School: _____

TASC Site: _____

Pursuant to the provisions of LA.CH.C. Art. 743-45, a Pre-Adjudicatory Conference was held on ____ day of _____, _____. At this time the FAMILY agreed to enter into an Informal Family Services Plan Agreement. This Agreement suspends the proceedings on the conduct charged provided the terms of this Agreement are satisfied by the family. This contract will expire on the ____ day of _____, _____.

Grounds / Identified Problem(s): _____

Service	Ordered For	Provider	Person(s) Responsible	Time Frame To Start

Conditions of Informal Family Services Plan

1. The child is to attend school regularly: do not be TRUANT, SUSPENDED or EXPELLED.
2. Parents or guardians will notify TASC of change of address and telephone number.
3. The child and parents or guardians are to obey all local, state, and federal laws.
4. The child is to obey all reasonable and lawful demands of his/her parents or guardians.
5. The child and parents or guardians will cooperate fully with all services, if required, until successfully completed.
6. Other Condition(s): _____

TASC’s Responsibility for the Implementation of the Informal Family Service Plan Agreement

Case Management Activity	Responsible Party	Frequency of Contact
School attendance monitoring		
Service referral monitoring		
Parent case management contact		
Child case management contact		
Other:		
Other:		

_____ **Parent /Guardian initials**
 _____ **TASC officer initials**

Additional Comments:

We understand that:

- If this agreement is kept, the charge before TASC will be dismissed at the end of six months and may be extended for an additional six months, for a total of one year.
- If the agreement is **not** kept, the matter may be set for a formal court hearing before an appointed judge.
- We have a right to request this matter be set before a judge in lieu of this agreement.
- This Informal Family Service Plan Agreement is **VOLUNTARY** and is in the best interest of the child, and we agree to cooperate fully with the persons who will monitor this agreement and provide services.

Compulsory School Attendance Law (La. R.S. 17:221)

In compliance with the **Louisiana Revised Statute 17:221**, it is the policy of the Parish School System to require that a child from his seventh birthday to the eighteenth birthday attend a public or private day school in regularly assigned classes during regular school hours or participate in an approved home study program. Any child below the age of seven (7) who is legally enrolled in school is subject to the compulsory school laws.

Whoever violates the provisions of the subsection shall be **FINED** not more than \$250 or **IMPRISONED** not more than 30 days or both.

IT IS UNDERSTOOD AND ACKNOWLEDGED that a violation of any one of the terms and/or conditions set forth herein may, at the option of TASC, void this agreement and will result in a referral to the FINS Committee and/or to the District Attorney for Juvenile Court Proceedings and further disposition.

This SIGNED AND EXECUTED at _____ (City), _____ (Parish), Louisiana,
on this ____ day of _____, 20____, after due reading of the whole.

Signature of Parent/Guardian _____ Date _____
Signature of TASC Officer _____ Date _____
Other Agency representative or _____ Date _____
Concerned Party _____ Date _____
_____ Date _____
_____ Date _____

IFSPA revision

Signature of Parent/Guardian _____ Date _____
Signature of TASC Officer _____ Date _____

VITA

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