The Effects of School Membership on Academic and Behavioral Performance of At-risk Students

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ABSTRACT

The purpose of this study was to investigate the relationships between the perceptions of school membership, risk factors, and school outcomes among a sample of alternative school students. The study subjects were 48 7^{th}-9^{th} graders who were at high risk for school failure because of their serious and chronic behavioral and academic problems. All subjects had an Individualized Education Plan (IEP).

A 25 item school membership questionnaire adapted from existing school membership surveys (Psychological Sense of School Membership (PSSM) Scale, Goodenow, 1993; Identification with School Questionnaire, Voelkl, 1996) was used to assess students' perceived school membership. The study participants reported a moderately positive school membership score of 3.63 (SD = .71) on a scale ranging from "1 = being weak" to "5 = being strong." The findings indicated that commonly known risk factors, such as being a male, minority, low SES, no participation in extracurricular activities, and a history of involvement with the juvenile justice system did not negatively affect study participants' perceptions of school membership. The relationships between students' school outcomes and the risk variables were also analyzed. The findings indicated that being a male, minority, low SES, no participation in extracurricular activities, and a history of involvement with the juvenile justice system did not result in significantly negative effects on school outcomes (GPA, number of missed school days, hours spent for in-school suspension, and days spent for out-of school suspension). Instead, academic and behavioral school outcome variables were found to be closely related with each other, and also with some demographic factors, including race/ethnicity and grade levels.

The current study's findings provide implications for academic and behavioral interventions for at-risk students. More broad based research is needed to validate the current study findings. Recommendations for future studies include, first, bigger sample sizes and proportionate subject compositions across gender, race, SES, and grade levels; and lastly, investigations on educational environments and components that have direct impact on at-risk students school outcomes.

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CHAPTER I

INTRODUCTION

Introduction

Professional literature and other sources reveal that current general and special education systems have not been effective in educating an increasing number of students in regular and special education classrooms (Boykin, 2000; Croninger & Lee, 2001; Bost & Riccomini, 2006; Albers, Glover & Kratochwill, 2007). Significant numbers of students have difficulties following directions, demonstrating appropriate interpersonal skills, and meeting grade level academic standards (Albers et al., 2007; Luiselli, Putnam, Handler, & Feinberg, 2005). Although it is not realistic to expect schools to have every student meet or exceed grade level academic standards, it is all too clear that too many students are failing to meet basic learning, behavioral and social standards.

Based on annual enrollment data that each district provides through the Common Core of Data (http://nces.ed.gov/ccd/pub_dropouts.asp, retrieved on October, 2008), the estimated overall graduation rate is only 68%, masking significant disproportion by race/ethnicity, gender, and students with disabilities (Aron, Civil Rights Project at Harvard University, 2006). These data reveal that being male and minority, and/or having a disability positively correlate with dropping out of school. Other factors have also been identified as correlating with early school exit, including below average family income, mental health problems, academic difficulties, and poor interpersonal relationships in school (Finn, & Voelkl, 1993; Lehr, & Lange, 2000; Christenson, Sinclair, Lehr, & Godber, 2001; Mooney, Epstein, Reid, & Nelson, 2003; Severson, Walker, Hope-Doolittle, Kratochwill, & Gresham, 2007).

The consequences of early school exit have seriously damaging effects on the nation's social capital over generations. According to the 2000 U.S. Bureau of the Census report, adults with a high school or GED diploma earned about a 30% more income per year than those who have not completed high school. In addition, on average, a college graduate made more than twice as much as an individual who does not complete high school per year (Stewart, & Knagg, 2005). Students who fail to complete secondary education face not only substantially higher unemployment rates, but also higher incidence of adjudication (Laird, DeBell, Kienzl, Chapman, 2007). Unfortunately, the negative consequences of parents' early school drop-out are highly likely to put the next generation at risk for school maladjustment and repeat the malevolent cycle of school failure (Croninger & Lee, 2001).

The No Child Left Behind Act (NCLB) of 2001acknowledged the seriousness of the early school drop-out problem, by encouraging states and school districts to develop proactive interventions that would help all students, especially those exposed to academic and environmental risk factors, to successfully complete secondary education programs (Title I, NCLB, 2001). NCLB (2001) defined at-risk status as the following:

> The term 'at-risk', when used with respect to a child, youth, or student, means a school aged individual who is at-risk of academic failure, has a drug or alcohol problem, is pregnant or is a parent, has come into contact with the juvenile justice system in the past, is at least 1 year behind the expected grade level for the age of the individual, has limited English proficiency, is a gang member, has dropped out of school in the past, or has a high absenteeism rate at school. (§1432 (2), Part D, Subpart 3)

However, arbitrary definitions of at-risk status by states and schools, ambiguous criteria for educational service eligibility, and lack of schools' capacity to identify and serve students who are in need of academic and emotional support make it difficult to implement the law as

intended (Croninger & Lee, 2001; Walker, Cheney, Stage & Blum, 2005; Waxman, Gray & Padron, 2002). Indeed, state statutes concerning at-risk students contain widely varying definitions and methods for defining and identifying at-risk students (Rhim, Ahearn, Lange, 2007). Some states lend more weight to academic and/or language performance while others more heavily rely on socio-economic traits when defining at-risk pupils (Baker, 2001). Without question there is a lack of conformity in local definitions of at-risk students, thus allowing school personnel significant flexibility in determining which types of "at-risk" students they will serve. Although NCLB (2001) emphasized school-wide early intervention and identification of students' academic and behavioral difficulties within inclusive settings, with the budgetary constraints and the accountability pressure, far too many schools find it difficult to implement educational services that will satisfy the needs of all students including those who are most difficult to engage in integrated settings (Kauffman, 2004). As the result, schools and state education agencies have failed to reduce the increasing number of students who drop-out of school.

At-Risk Student Research

Although research studies on the regional or national level regarding at-risk students contain wide variation in descriptions of so called at-risk students (Prevatt & Kelly, 2003), it is well established that students who drop out of school often first exhibit patterns of emotional and behavioral withdrawal and disengagement from school (Finn, & Voelkl. 1993; Christenson & Thurlow, 2004). Christenson and her associates (2001) defined drop-out as "a *process* of disengaging from school, not a discrete event or instantaneous student decision (pp. 472)." Other researchers also agreed that dropping out of school is a developmental process (Fredricks,

Blumenfeld, & Paris, 2004; Jimerson, Egeland, Sroufe & Carlson, 2000). Researchers commonly have reported that dropping out is most likely to occur when a history of academic failure, truancy, and misconduct are accompanied by environmental variables such as, low income, early parenthood, and substance abuse problems (Alexander, Entwisle, & Kabbani, 2001; Nash, 2002). Correlated risk factors that are strong predictors of drop-out include (a) absenteeism (Finn, 1993; Kearney, 2008), (b) academic problems (Alexander et al., 2001; Daniel, Walsh, Godlston, Arnold, Reboussin, & Wood, 2006; Englund, Egeland,& Collins, 2008), (c) weak bonding with school (Croniger, & Lee, 2001; Englund at al., 2008; Janosz, Archambault, Morizot, & Pagani, 2008), and (c) predisposing variables, such as family economic and environmental situations (Bratti, 2007; Englund, et al., 2008; Jimerson, Egeland, Sroufe, & Carlson, 2000).

However, risk factors are not a complete or simple explanation for why some students fail (Croninger & Lee, 2001, p. 552). To be sure many students from socially and economically disadvantaged backgrounds drop out of school; Yet, other students from the same communities, circumstances and similar family structures successfully finish high school. Educators don't have control over predisposing risk conditions, such as neighborhood characteristics, family condition, and child's gender/temperament. On the other hand, they can manipulate school-related factors that encourage student engagement (Waxman et al., 2002). School engagement has been reported as the single most crucial variable that impacts students' decisions to remain or exit school (Audas et al., 2001; Fredricks et al., 2004; Janosz et al., 2008).

School engagement is multi-dimensional (Finn, 1993; Sinclair, Christenson, Lehr & Anderson, in press). Cognitive and psychological engagement includes indicators, such as identification with school, sense of belongingness and connection, and relationship with peers

and teachers (Christenson & Thurlow, 2004). On the other hand, academic and behavioral engagement refers to observable indicators such as attendance, grades, and disciplinary history (Christenson & Thurlow, 2004). Attending school and following school rules are among the most basic forms of evidence of school engagement. To be sure, students who are at risk of dropping out of school often have trouble with the basic elements of school participation, including regularly attending classes and following basic codes of conduct (Fredricks at al., 2004).

Consequently, the concept of school engagement and school membership has been explored as a possible counterforce to respond to declining students' academic achievement and social motivation in school (Audas & Willms, 2001; Finn, 1993; Fredricks, Blumenfeld & Paris, 2004; Janosz, Archambault, Morizot & Pagani, 2008; Libbey, 2004). A consistent finding over the past several decades is that school acts to either buffer or exacerbate engagement or membership of at-risk students (Audas & Willms, 2001; Bryk & Thum, 1989; Ensminger & Slusarick, 1992; Rumberger & Thomas, 2000; Waxman, Gray & Padron, 2002; Wehlage & Rutter, 1986).

Schools' Responses to At-risk Students

Because a basic high school diploma and higher education achievement provides wider employment options in a higher skilled labor force, school success is generally believed to bode well for success in life (Cooper & Crosnoe, 2007). Due to the conventional belief that there is a close connection between academic achievement and life success, some schools have adopted the philosophy that their main responsibility is more or less limited to academic instruction.

Consequently, schools have generally not been as effective in supporting students' social and emotional development and preventing students' disengagement from school (Walker et al., 2005). Even among students who come to school ready to learn, undiagnosed learning problems and a history of academic struggles may be connected to feelings of embarrassment, frustration, feeling of inadequacy and poor student-teacher interactions (Osterman, 2000). These problems and circumstances may lead a child or adolescent to behaviorally and emotionally withdraw from school (Audas, & Willms, 2001; Janosz et al., 2000). Academic and emotional/behavioral risk factors are often interdependent (Finn, 1993), thus intervention is needed long before high-school students with low academic motivation and behavioral problems decide to leave school before graduating (Finn, 1993).

Although school membership has been identified as a safety valve to prevent the dropout process, schools have not been effective in addressing students' dropout risk at early ages and engaging marginalizing students (Walker et al., 2005). Bost and her associate (2006) argued that despite some schools implementing seemingly beneficial dropout prevention strategies, such as academic programs or family involvement, the scope of implementation remained inadequate to significantly impact dropout rates.

The federal government has recognized the lack of capacity of schools to efficiently and effectively identify and support students who are at risk for early school exit and demanded that states and local education agencies develop prevention and intervention programs for children and youth who are neglected, delinquent and at-risk (Part D, Title I, NCLB, 2001). Part H of Title I (NCLB, 2001) especially addresses the importance of school drop-out prevention. However, with the increased accountability pressure from NCLB, many schools still find it

difficult to implement educational services for their most difficult to teach students in integrated settings (Rex, 2003).

One of the solutions schools often choose as a response to the aforementioned requirements is to rely on alternative education programs for at-risk students. The U.S. Department of Education (2002) reported that during the 2000-2001 school year, 39% of public school districts administered at least one alternative program for at-risk youths. About 54% of local school districts (representing about 42 states) reported that between the years 2000-2003 the demand for enrollment exceeded capacity (General Accounting Office, 2003). In 2005, approximately 11,000 alternative schools were reported as serving students who were at-risk of dropping out of school (Educational Testing Service (ETS), 2005). Students with disabilities, especially students with emotional/behavioral disabilities and learning disabilities are often included in this population (Lehr, Tan, & Ysseldyke, 2009).

The tremendous increase of alternative education programs requires high standards for the students served in these settings so that alternative schools can provide quality school experiences. However, NCLB (2001) has not delineated how to measure the effectiveness of these alternative programs beyond the general metric of a school's Annual Yearly Progress (AYP). As a consequence, there is very little known about alternative schools in general (Quinn et al., 2006; Cox, 1999; Foley & Pang, 2006) and specifically their role or ability to reduce school drop-out rates of at-risk students when compared to regular education schools.

Traditionally, alternative schools were characterized by small sizes, individualized instructions, flexibility in structure, and a supportive environment to facilitate students'

engagement (Lehr, Tan, & Yssedyke, 2009). Development of student engagement is a key factor to promote academic success among at-risk students (Akey, 2006). However, the rapid increase of alternative schools in recent years caused a concern for the quality of their educational services. In fact, the California Dropout Research Project reported (2007) that a high percentage of dropouts were represented by students at alternative schools. The consequential concern for current alternative schools is that they are not effective in developing students' school engagement and may be used merely as a transitory place before students ultimately drop out of school.

Rationale of the Study

With relatively smaller school sizes and more social services available, alternative schools in general are expected to provide more engaging educational atmosphere for students who are at risk of early school exit for various academic, emotional, and behavioral difficulties (Cox, 1999). However, there is empirically very little we know about how the unique educational environment of alternative schools impact student engagement. To date, and relative to at-risk students who attend alternative education programs, no studies have been conducted that have investigated students' psychological engagement and its relationships with risk factors, and behavioral and academic engagement indicators. In this regard, this study was designed as a descriptive and quantitative research project to investigate (1) the degree of school membership perceived by at-risk students who attend alternative schools and (2) correlations between emotional engagement, student risk status, and behavioral and academic engagement indicators, including grades, attendance, and discipline.

Purpose of the Study

The purpose of the proposed study was first to investigate the sense of school membership perceived by at-risk students who attend an alternative school. Another purpose of this study was to investigate whether a strong sense of school membership positively correlates with academic and behavioral school engagement of at-risk students. School membership, which represents the psychological aspect of school engagement, was indicated by students' sense of belongingness in school, and value of schooling as revealed by student survey responses. Behavioral school engagement took the form of student's attendance and number of disciplinary referrals within a given period of time. Academic engagement was measured by students' grade point average (GPA).

Theoretical Model of the Study

This study mainly examined the relationships among three constructs: 1) risk factors, 2) school membership (psychological school engagement), and 3) student performance (behavioral school engagement). Students' grades, attendance, and behavioral records were used as a manifestation of academic and behavioral engagement to school. Figure 1 presents the theoretical framework of the study.

Figure 1. *Theoretical Model: Risk Variables, School Membership, and Student Performance*

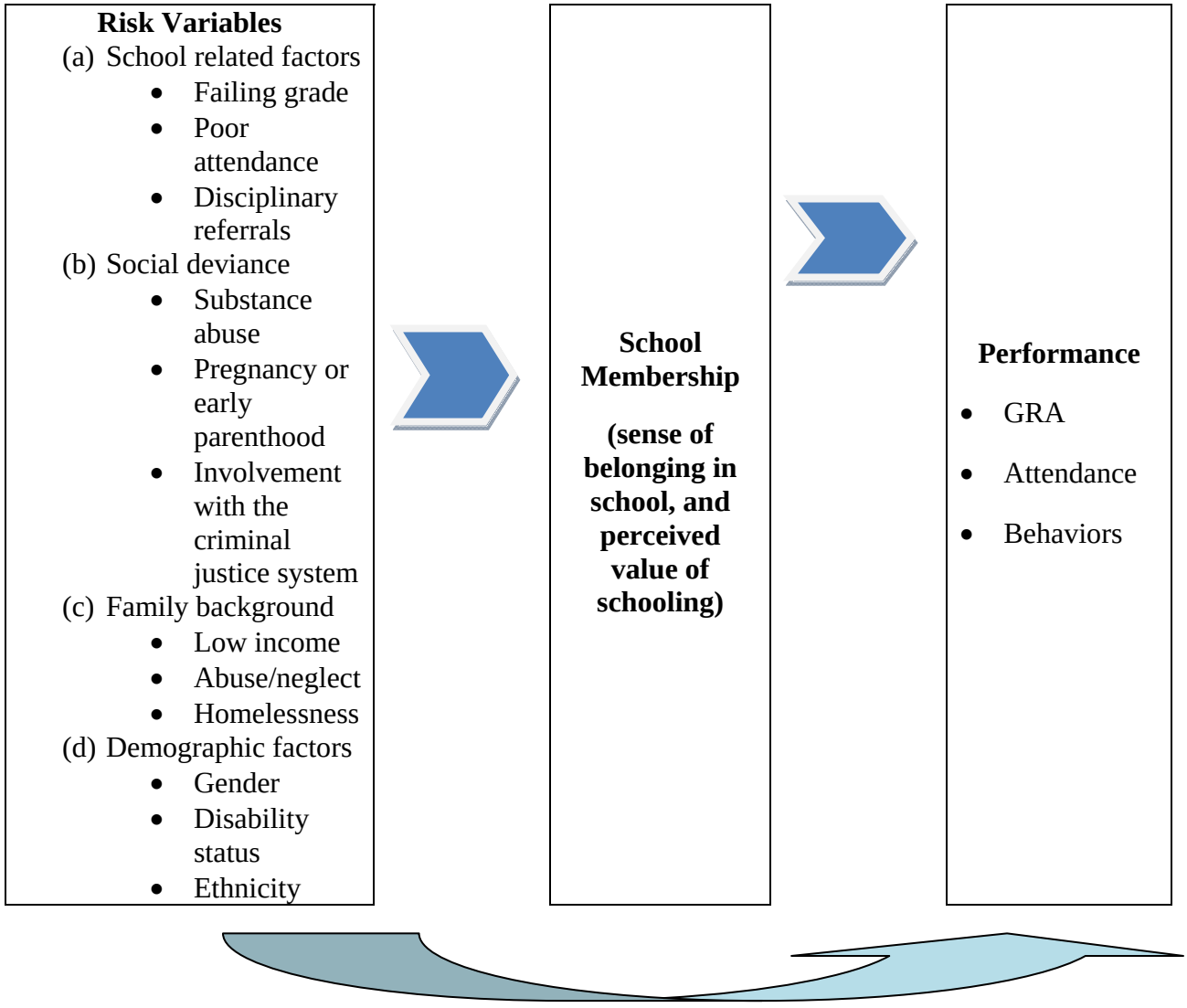


Figure 1 provides a framework for the major investigation of the study:

Does perceived school membership buffer the effects of the risk variables and positively correlate with the academic and behavioral engagement of at-risk students? This investigation will be guided by the following research questions.

Research Questions

1. What is the degree of the sense of school membership perceived by at risk students who attend an alternative school? A student survey adapted from an existing school membership scales (Psychological Sense of School Membership (PSSM) Scale, Goodenow, 1993; Identification with School Questionnaire, Voelkl, 1996) was used to explore this question.

2. Are there statistically significant correlations between at-risk students' demographic variables, school membership, and academic and behavioral engagement?

To explore the above questions, participating students' risk variables were profiled and analyzed (e.g., gender, free/reduced lunch status, disability, history of failing grade, etc.). Next, students' records were reviewed and analyzed, including attendance, discipline, and grade point average (GPA). Behavioral school engagement includes a wide range of behaviors, such as participating in extracurricular activities, paying attention to teachers, focusing on academic tasks, attending school daily, abiding by school rules, and grades. However, for purposes of this study behavioral engagement was measured by student's attendance, disciplinary history, and grades. These variables are widely used as a measure of student performance in school (Converse & Lignugaris/Kraft, 2009; Howell, Lynch, Platzman, Smith, & Coles, 2006; McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008)

CHAPTER II

REVIEW OF LITERATURE

Introduction

Statistics report (ETS, 2005) that the high school completion rate among American youths has been falling. After peaking at 77.1 percent in 1969, currently, one third of American students are leaving high school without a diploma (ETS, 2005). The damaging effects of the early school drop-out problem on both personal and social capital are well documented. Dropping out of school leads many youths to underemployment, lifelong poverty, higher incidence of criminal activity, dependence on the welfare programs, and passing along these negative effects to the next generation (Croninger & Lee, 2001; Laird et al., 2005). Unfortunately, the effects of early school drop-out and the risk factors that place students at risk of dropping out of school often remain reciprocal over generations (Croninger & Lee, 2001; Educational Testing Services (ETS), 1995). Moreover, as poverty and minority status, which are strong indicators for at-risk status, are increasing, the grim reality of the school drop-out problem seems hard to tackle.

Risk Factors Leading to Early School Exit

There is no uniform definition of the risks that place students at higher probability of dropping out of school. However, prior studies have reported a variety of demographic, school, individual, and family characteristics that are related to school drop-out. One common theme found in at-risk student research is that risk is not one-dimensional but rather understood within a context where various social, and individual factors influence each other (Alexander, Entwisle &

Kabbani, 2001; Audas & Willms, 2001; Bost & Riccomini, 2006; Christenson & Thurlow, 2004; Christenson et al., 2001; Janosz, Archambault, Morizot & Pagani, 2008).

In a broad sense, risks that place a child for educational failure can be categorized into two sets. Finn (1993) attributed school drop out to two sets of attributes, status and behavioral risk factors. He referred the status risk factors to demographic and historical characteristics, such as racial or ethnic origin, socioeconomic conditions of the home, or the primary language of the home. According to Finn (1993), behavioral risk factors are manifested through a set of school related behaviors, such as attending school, arriving at class on time, paying attention to a teacher, and completing assigned work. The set of school "participation" behaviors can expand as a student's activities related to both the academic and extracurricular programs of the school (e.g., clubs, student government, etc.) increase. More importantly, unlike the status risk factors, Finn (1993) argued that behavioral risks can be relatively easily modified by school programs, staff, and parents, to increase the likelihood of students' participation and enjoyment in school activities. Croninger and Lee (2001) developed a very similar construct of school drop- out risk factors as Finn's. They categorized the risk factors into the social and academic. They reiterated race, language-minority status, gender, family income, parent's education, and family structure as the social factors. Academic risk factors are characterized by students' disengagement from school activities, low grades, low educational expectations, early grade retention, and discipline problems (Croninger, & Lee, 2001). The academic risk factors defined by Corninger and his associate share overlapping indicators with Finn's behavioral risk factors. However, academic risk factors include psychological aspects through the terms such as, expectations or motivation.

Researchers view drop-out also as a developmental process rather than a discrete event (Christenson & Thurlow, 2004; Croninger & Lee, 2001; Jimerson et al., 2000). They commonly reported that dropping out is the outcome of a cumulative process of disengagement that begins as early as the first grade. The indicators of disengagement often include poor attendance, and academic and behavioral difficulties (Christenson & Thurlow, 2004; Croninger & Lee, 2001). These overt indicators of disengagement are generally accompanied by feelings of isolation, and dislike for school (Christenson & Thurlow, 2004).

Critical Variable: School Engagement

A great deal of research has been conducted to profile the characteristics of dropouts and predict the risk factors that have a close positive relationship with early school drop- out. Regardless of whether dropping –out of school is viewed as a multi-dimensional construct or a developmental process, school participation or engagement has been identified as one of the most critical variables in predicting early school drop-out yet the most malleable variable (Audas, & Willms, 2001; Fredricks et al., 2004; Janosz et al., 2008; Waxman et al., 2002).

Engagement connotes both psychological and behavioral attributes (Finn, 1993; Fredricks et al., 2004). According to Finn (1993), behavioral engagement is manifested through a student's regular participation in classroom and school activities, and affective engagement can be indicated by the degree to which a student feels belonging in school and values school relevant outcomes. Fredricks and her colleagues (2004) defined behavioral engagement as participation in accordance with Finn's earlier definition. However, they further defined psychological

engagement as having emotional and cognitive components. According to Fredricks and her colleagues (2004, p.60),

Emotional engagement encompasses positive and negative reactions to teachers, classmates, academics, and school and is presumed to create ties to an institution and influence willingness to do the work. Finally, *cognitive* engagement draws on the idea of investment; it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend ideas and m aster difficult skills.

School engagement has been studied as a measure to predict school drop-out (Alexander et al., 2001; Egeland et al., 2000; Finn, 1993, Janosz et al., 2000; Janosz et al., 2008) and reported as a strong antidote to signs of student alienation (Fredricks et al., 2004). However, although school membership has been identified as a safety valve to prevent the dropout process, schools have not been effective in addressing students' dropout risk at early ages and engaging marginalized students (Walker et al., 2005). According to Bost and her associate (2006), despite some schools implementing seemingly beneficial dropout prevention strategies, such as academic programs or family involvement, the scope of implementation remained inadequate to significantly impact dropout rates.

Recognition of the Drop-out Problem by the Federal Law

The federal government has recognized the lack of capacity of schools to efficiently and effectively identify and support students who are at risk for early school exit and demanded that states and local education agencies develop prevention and intervention programs for children and youth who are neglected, delinquent and at-risk (Part D, Title I, NCLB, 2001). Part H of Title I (NCLB, 2001) especially addresses the importance of school drop-out prevention.

The purpose of this law is to provide for school dropout prevention and reentry and to raise academic achievement levels by providing grants that (§1802, NCLB, 2001)

(1) challenge all children to attain their highest academic potential; and

(2) ensure that all students have substantial and ongoing opportunities to attain their highest academic potential through schoolwide programs proven effective in school dropout prevention and reentry.

Under this provision, State and Local Education Agencies (S/LEA) are especially responsible for supporting schools that ((a), §1822, NCLB, 2001)

(aa) serve students in grades 6 through 12; and

(bb) have annual school dropout rates that are above the State average annual school dropout rate Areas for SEA and LEAs to support schools in preventing early school drop outs include ; (a) providing professional development, (b) obtaining curricular materials, (c) release time for professional staff to obtain professional development, (d) planning and research, (e) remedial education, (f) reduction in pupil-to-teacher ratios, (g) school reentry activities, (h) efforts to meet State student academic achievement standards, (i) counseling and mentoring for at-risk students, and (j) implementing comprehensive school reform models, such as creating smaller learning communities (§1822, NCLB, 2001).

Although the federal law provides suggestions for an effective program model, due to budgetary constraints and increased accountability pressure from NCLB, many schools still find it difficult to implement educational services that will satisfy both average and most difficult to teach students' needs in integrated settings (Rex, 2003).

Increase of Alternative Schools

One of the solutions schools often chose as a response to the aforementioned effective program requirements for at- risk students is to rely on alternative education programs. Historically, alternative schools were regarded as a harbor for students whom traditional schools could not adequately handle due to their academic and/or behavioral problems. Due to our public schools' increased failure to properly serve students with various academic and social challenges and a consequent increase in drop-out rates, the number of alternative schools has grown tremendously over the past several decades.

The U.S. Department of Education reported that during the 2000-2001 school year, 39% of public school districts administered at least one alternative program for at-risk youth. About 54% of local school districts (representing about 42 states) reported that within the last three years, the demand for enrollment exceeded capacity (GAO, 2003). Among those, 40 states reported that they had alternative education programs with greater focus on disciplinary programs to keep the potentially troublesome youths from "going out on the streets."

Since the beginning of alternative schools in the United States in the 1960s, the growing number of these non-traditional schools has challenged our definition of alternative programs. The formal definition of alternative schools established in 2002 by the U.S. Department of Education is as follows: "public elementary/secondary school that addresses needs of students that typically cannot be met in a regular school, provides nontraditional education, serves as an adjunct to regular schools, or falls outside the categories of regular, special education or vocational education" (Common Core of Data, p. 55).

Formal federal efforts to explore effective alternatives to traditional educational settings appeared in the 1980s, when the Office of Juvenile Justice and Delinquency Prevention (OJJDP) first promoted alternative education programs for delinquency prevention. Delinquency prevention through Alternative Initiatives was based on the premise that schools should, and could, play a significant role in preventing youth crime.

The recognized roles of alternative schools in public education have expanded with the 1997 Amendments to the Individuals with Disabilities Education Act (IDEA). With this law, alternative programs became mandatory for placement of children with disabilities whose behavior is uncontrollable in the traditional setting. In addition, NCLB (2001) stresses the need to offer alternatives to general public education programs that do not currently meet the accountability criteria. However, the law has not delineated what constitutes the alternatives to general public education and how to measure the effectiveness of these alternative programs contrary to the strict sanctions on general education systems according to their Annual Yearly Progress (AYP).

A review of legislation on alternative schools revealed that 48 states indicated that they are now more likely to rely on alternative placement for students with learning and behavior problems, particularly in response to the student achievement accountability requirement (Lehr, Lanners, & Lange, 2003). Therefore, it is now crucial for researchers, educators, and other stakeholders to understand how existing alternative programs are educationally engaging students who are in most need of behavioral and academic supports and reduce the likelihood of the students' decision to drop out of school. In this light, in the following sections, critical issues in operation of alternative education programs will be reviewed in depth. First, overall structure

of alternative schools will be examined. The locale, school schedule, grade levels served, and administrative control are among the issues to be addressed to gain a broad idea about existing alternative schools. Next, funding issues surrounding alternative schools will be discussed based on a review of literature. Lastly, general characteristics and educational atmosphere of existing alternative schools will be reviewed. Factors, such as student composition, curriculum, teacher characteristics, collaborating agencies will be addressed to take a closer look at existing alternative education programs for at-risk students.

Common Structures of Existing Alternative Schools

Thirty-nine percent of public school districts had at least one alternative school or program for at-risk students in grades 1 through 12, representing 10,900 such programs during the 2000-2001 school year (U.S. Department of Education, 2002). Among districts reporting at-risk programming, such programs were offered to mostly secondary-level students, followed by middle school- and elementary-level students (Aron, 2006). Urban school districts, districts with high minority student populations, and districts with high poverty rates were more likely than other districts to have alternative education programs (Cox, 1995; National Center for Educational Statistics, 2002). Further, these programs are delivered in facilities separate from regular school buildings (Aron, 2006; Foley, & Pang, 2006), in juvenile detention centers, or in community centers (Aron, 2006).

Based on Cox and his colleagues' (1999) meta-analysis of the literature on alternative schools between 1966 through 1993, the majority of the schools offered all-day programs with

students attending the programs for over one school year. Some alternative schools provided summer school programs (Foley, & Pang, 2006).

Regarding administration of the program, according to Foley and her colleague (2006), on the regional level, the majority of alternative education programs were administered by the regional offices of education of the State Board of Education, and sometimes by independent school districts, or a consortium of school districts through special education cooperatives. The predominant management approach governing alternative education programs appeared to be site-based management. However, a centralized management approach also appeared to be utilized by some programs (Foley & Pang, 2006).

Funding Issues Surrounding Alternative Schools

Alternative education can be expensive. Program models often involve lower student-teacher ratios than traditional high schools and extensive student support services, social agency involvement, and other extensive help. Beales (1996) found that when partnerships between an alternative school, a mental health organization, and a local police department occur, the school district was responsible for the costs incurred for the collaboration, not the other partnering agencies. In addition, since alternative schools serve students who had struggles in traditional school, it is generally speculated that they serve a higher percentage of students with special needs than the general public K-12 system. Therefore, adequacy of financial resources is crucial to alternative schools.

Alternative schools receive their funding from a variety sources, including federal, state and local dollars, grant monies (e.g., Safe and Drug Free Schools), and community-based

organizations. Although federal funds are available, the amounts are relatively small (Aron & Zweig, 2003). Also, funding at the federal level is not consistent, which puts a burden on program providers to either fit them into existing interventions or change existing interventions to accommodate the goals of the federal programs (Martin, & Brand, 2006). Another funding issue at the federal level identified by Martin and Brand (2006) is that most of the available funding supports discrete, distinct activities, such as counseling, mentoring, substance abuse intervention, or parent/family intervention while alternative schools may have no need for those specific program activities, but instead need ongoing general support, which is often difficult to access.

Another funding challenge at the federal level is that most education grants flow directly to state or local educational agencies or institutions of higher education, and many public schools view alternative schools as a competitor for funding, so many have strong negative concerns about education dollars going to alternative schools outside of the K-12 public education systems (American Youth Policy Forum, 2003). In addition, it is unclear how much money coming to the state or local level is allocated to students in either publicly supported or community-based alternative schools (Martin & Brand, 2006).

According to Lehr et al. (2003), the primary source of funding for alternative schools comes from the state. Foley and her colleague's investigation (2006) of alternative schools in Illinois also found the largest number of the programs (N = 32) that participated in their survey received funding from the state (M = 52.98%). Other programs (N=24) were funded by local school districts (M = 51.86%), federal grants (N = 20; M = 20.50%), and community funding (N = 4; M = 9.25%).

Lehr and colleagues (2003) reported that most of the legislation on alternative schools across states did not identify a consistent mechanism for accessing funding. This makes alternative schools particularly vulnerable to changing economic conditions.

Characteristics of Existing Alternative Schools

Admission criteria and student demographic characteristics. After reviewing the legislation of 50 states and the District of Columbia regarding alternative schools, Lehr and her colleagues (2003, p. 7-8) identified the following four themes:

1. Students are admitted as a result of suspension or expulsion: Depending on which state a student resides, as a consequence of expulsion or suspension, a student is required to be placed in an alternative school. However, in other states, placement in an alternative education program was provided as one of the choices students could make after an expulsion or a suspension.

2. Students must meet some form of at-risk criteria: At-risk criteria typically included dropout status, truancy, physical abuse, substance abuse or possession, and homelessness.

3. Students have been disruptive in the general education environment.

4. Students have been academically unsuccessful and would benefit from a nontraditional school setting: The term “academically unsuccessful” was typically defined as having been retained, having low scores, failing grades, low grade-point average, or credit deficit, or not meeting the state or district proficiency level in reading, mathematics, or writing.

In a meta-analysis of alternative education literature covering the years 1966 through 1993, Cox et al., (1995) found that the majority of the participating schools were alternative high

schools serving urban youths targeting special populations, either low academic achievers or delinquents.

Other studies at the regional level have identified admission criteria for students to be eligible for the alternative schools. For example, in an experimental study, Cox (1999) reviewed the admission criteria for alternative schools in a large Midwestern city. This review identified admission criteria very similar to those reported by previous studies. According to Cox, in the schools included in the study, administrators at alternative schools stressed at-risk criteria to protect against the referral of students whose personal or behavioral problems exceeded the ability of the alternative school to help them. These at-risk criteria consisted of;

1) having a police contact for delinquent behavior,
2) behavior problems in school resulting in a suspension, excluding students involved in numerous fights or assaults on school staff, and
3) having at least 20 documented absences in the past nine-week school term or
4) being at least one year behind in grade level.

Students had to meet at least one of these criteria to be eligible for the program.

Foley and Pang (2006) investigated student demographic characteristics in alternative schools in the state of Illinois. In their study, on average, the most frequently reported ethnic backgrounds of students were Caucasian (62.86%) and African-American (31.28%). Other ethnic groups included Hispanic (15.07%), Native American (3.68%), and Asian (1.64%). The number of male students was slightly larger than that of female. While the majority of students ranged in age from 12 to 21 years, the age spanned from 7 to 20 years. In alternative schools in

Illinois, youth with disabilities appear to comprise a large portion of student population. On average, about 50% of students had an emotional and/or behavior disorder. Other disabilities included learning disability, attention deficit with hyperactivity, and various developmental disabilities.

Teacher characteristics. According to the national data (Lehr et al., 2003), 29 states (60%) have included legislation or policy language on staffing at alternative schools. In general, teachers must be certified or comply with state teaching standards. However, no specifications such as subject areas or grade level certifications were found in the legislation related to alternative schools. In a study on a regional level, Foley and Pang (2006) reported that a small number of special education teachers were available in the alternative schools and that programs utilized a number of paraprofessionals to support their program activities. No national data are available on how teachers are assigned to alternative schools (Kochhar-Bryant & Lacey, 2005).

According to a survey conducted by the National Center for Education Statistics (2002), 86% of districts surveyed hired teachers specifically to teach in alternative schools. The report further indicated that 49% of the school districts reported that teachers were transferred from traditional education settings by choice. Some school districts assigned teachers to alternative schools with no choice provided. Finally, large school districts, with high minority enrollment, and high poverty concentration were more likely than their counterpart districts to report assigning teachers involuntarily.

Collaborating social agencies. Alternative schools appear to collaborate with a number of community services to support the educational needs of their students. According to Foley and

Pang (2006), the agency most frequently working with alternative school youth was juvenile justice. Thus, 82% (N = 41) of the programs participating in their study were collaborating with probation officers. On a more positive note, 70% (N = 35) of the programs used service learning programs and community social services. Further, 60% (N = 30) utilized community work-study programs, and community health services were accessed by 50% (N = 25) of the programs. Child care services, including daycare and preschool, were made available to students in 16% of the programs.

Educational resources/atmosphere. Lack of access to various physical facilities seemed to be an issue for many existing alternative school. For many alternative schools, access to educational resources, such as libraries, gyms, and/or science/computer labs, appeared to be an area of concern (Foley &Pang, 2006). Which many alternative schools were experiencing limited access to various physical facilities, human resources and services didn't seem to be lacking.

The predominant educational services support provided, as identified by Foley and Pang (2006), were social workers, counselors, paraprofessionals, school nurses, school psychologists, and vocational educators in that order. Other less frequent supports included child advocates, speech-language pathologists, transition specialists, clinical psychologists, and community counselors. Service providers reported as being rarely utilized were probation officers, truancy officers, and case managers.

The atmosphere of the typical alternative school is more relaxed, caring, supportive, and friendly than the traditional school, according to Cox's findings (1999). Availability of various

service providers and the lower student-adult ratio seem to allow students to receive more individualized care.

Curriculum. The National Center for Educational Statistics (2002) reported that over 75% of alternative school districts had curricula leading toward regular high school diploma (91%), academic counseling (87%), policies requiring smaller class size (85%), remedial instruction (84%), opportunity for self-paced instruction (84%), crisis/behavioral intervention (79%), and crisis/career counseling (79%). Similar findings were identified by Lehr et al. (2003) from their legislation review as follows:

1. Twenty-eight states had policy stating that curriculum should consist of "Core Curriculum Content Standards" or standards adopted by the state. Many states had language that indicated students must complete state graduation requirement.

2. Twelve states had legislation or policy stating that social services must or should be available to students in alternative schools. Social services were typically defined as counseling, life skills, and social skills.

3. Policy language regarding work or community-based learning requirements was apparent in 10 states. Issues that were addressed included multi-disciplinary work-based learning and community service.

4. States also included legislative or policy language requiring an individual instruction plan for each student. Some states referred to an Individualized Program Plan (IPP) or Individual

Instruction Plan (IIP) while others referred to having written plans for each student – both intended to individualize instruction.

On the regional level, Foley and Pang (2006) reported that the predominant education provided to youth was the general education high school curriculum. Other available programs included work readiness programs, vocational education, functional curriculum, and General Education Development programs. The availability of remedial programs such as Chapter 1 or Title I reading, math and language programs seemed limited, with only two programs reporting Title I/Chapter 1 reading programs. Other programs made available to youth were life skills instruction, career awareness, college level coursework and independent study.

Summary

With relatively flexible structure, smaller school sizes and more social services available, alternative schools seem to have a great potential to provide quality educational experiences to struggling students. However, currently, there is a paucity of information and objective data about student outcomes and program effectiveness of alternative schools. The two divergent conclusions from literature reviews regarding the effectiveness of alternative education are:

1. These programs have been effective in achieving positive outcomes in student attitudes, academic achievement, self-esteem, and student behavior (Cox, 1999; Young, 1990).

2. It was not possible to reach a conclusion regarding the effectiveness of alternative schools or factors that correlate with success (Cox, 1999; Escobar-Chavez, Tortolero, Markham,Kelder, & Kapadia, 2002).

It is clear that alternative schools serve students who have many serious risk conditions that lead them toward early school drop-out (Cox et al., 1995; Cox, 1999; Foley & Pang, 2006; Lehr et al., 2003). Related to school drop-out, school engagement has been reported as a strong safety valve to prevent the dropout process (Fredricks et al., 2004). However, to date, no study was found that examined relationships between risk variables and psychological and behavioral school engagement of students who attend alternative schools. In this light, this study was designed to investigate the degree of perceived psychological school engagement of students who attend alternative schools and its effects on students' academic and behavioral performance at school.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

This chapter describes the methodology for the study. It begins with the purpose of the study, research questions/hypotheses and variables. Next is a description of the study design, instruments, subject selection, data collection, and the procedures that were followed by the investigator. This chapter concluded with information about the data analysis procedures.

Purpose of the Study

The primary purpose of the proposed study was to investigate how at-risk students' perceived psychological school engagement correlated with risk factors and academic and behavioral engagement. According to Finn (1993) and Fredricks et al. (2004) behavioral school engagement is manifested through students' regular participation in classroom and school activities. Psychological school engagement encompasses students' sense of belongingness in school, including thoughtfulness and willingness to exert the effort necessary to comprehend ideas and master difficult skills.

Research Questions and the Statements of Hypothesis

The following questions and hypotheses were addressed.

Research Question 1:

What is the degree of school membership perceived by at risk students who attend an alternative school? Are there differences in the mean scores of the School Membership Scale by students' gender, grade levels, ethnicity, and socioeconomic status (SES), involvement in extra-curricular activities, and involvement with the Juvenile Justice Systems?

Research Question 2:

What is the relationship between school membership, student risk status and behavioral engagement among at risk students who attend an alternative school? To address this question, the correlations between students' school outcomes, risk variables, and school membership scores were analyzed. Reviewed school outcome indicators included discipline history, attendance, and grades. Specific questions of interest are noted below.

(a) To what extent are at-risk students' academic and behavioral engagement predicted by various risk variables?

(b) To what extent does at-risk students' school membership correlate with the demographic factors and behavioral engagement?

Relative to the above inquiries, it was hypothesized that: 1) risk variables negatively affect the degree of school membership perceived by students and their behavioral school outcomes; 2) Perceived degree of school membership positively correlates with the academic and behavioral engagement of at-risk students. Risk factors and students' academic and behavioral engagement measures are discussed in more detail under the **Instruments** section of this document.

Study Design

Quantitative research methodology was used for this study. A Likert-type scale based on an adaptation of existing school membership scales (Psychological Sense of School Membership (PSSM) Scale, Goodenow, 1993; Identification with School Questionnaire (ISQ), Voelkl, 1996) was developed to address the degree of the sense of school membership perceived by at-risk students who attend an alternative school. The adaptation of PSSM and ISQ for this study is

described in detail later in this chapter under the **Instruments**, ***Student Membership Survey*** section.

Reported school membership scale scores were compared by various demographic factors. That is, various demographic factors were entered as the independent variables in the data analysis. The demographic factors will be discussed in more detail under the **Instruments, *Student Demographics*** section. Next, participating student performances in attendance, discipline incidences, and GPA for the academic semester were examined and entered into analysis to address the relationship between school membership, student risk status and behavioral engagement.

Participants

Voluntary student participants were recruited for this study once permission to conduct the research was received by the University of Kansas' Internal Review Board's Human Subjects Committee (HSC-L). Participants were a sample of convenience. Specifically, at-risk students in 7^{th} to 9^{th} grades who attended an alternative school in Topeka Kansas were selected as the subjects of the study.

Neild, Stoner-Eby, and Furstenberg (2008) suggested that the experience of the ninth-grade year not only reflects student characteristics measured by the pre-high school years, but also is a strong dropout predictor. Inevitably, dropout prevention requires paying attention to critical transition years to high school. In this light, participants of this study were selected among students in 7^{th} to 9^{th} grades.

Participants of this study consisted of 48 (n = 48) seventh, eighth, and ninth graders. All 7, 8, and 9^{th} graders (n=83) in the school were invited to participate in the study. Parents of 51

students (61.4%) returned the signed informed parental consent forms to approve their children's participation in the study. Despite the parental consent, 2 students decided not to participate in the study, and 1 student left school. Consequently, subject attrition rate of the present study was approximately 0.6%. All 48 participants of the study had an Individualized Education Plan (IEP) for their serious emotional and/or learning disabilities. The primary disabilities of participating students included Emotional Disturbance (n=33, 69%), Other Health Impairment (Attention Deficit Hyperactivity Disorder, n=8, 17%), Learning Disability (n=4, 8%), Autism (n=1, 2%), and Traumatic Brain Injury (n=1, 2%), and Mental Retardation (n=1, 2%). Student ages ranged from 12 to 17 (SD = 1.14). The following table shows the subject composition by grade and age.

Table 3-1. *Subject Composition by Grade/Age*

Grade	7		8		9		Total	
Age	n	%	n	%	n	%	n	%
12	1	2.1	0	0.0	0	0.0	1	2.1
13	8	16.7	4	8.3	0	0.0	12	25.0
14	2	4.2	12	25.0	4	8.3	18	37.5
15	0	0.0	0	0.0	10	20.8	10	20.8
16	0	0.0	0	0.0	5	10.4	5	10.4
17	0	0.0	0	0.0	2	4.2	2	4.2
Total	11	22.9	16	33.3	21	43.8	48	100.0

Numbers in the left column represent students' ages and those at the top of the table show the grade levels. The mean and median for student grade was 8th grade (n=16, 33.3%, SD = .80). The mean and median for student age was 14 years (n= 18, 37.5%, SD= 1.14). Despite the relatively larger age range for the 9th graders, no participant had a history of repeating a grade since they graduated from the 3rd grade.

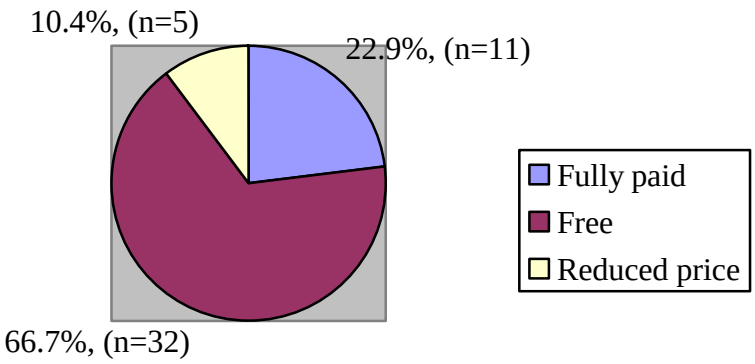
White (n=25, 50%) and male students (n=41, 85.4%) represented the characteristics of the majority of the study participants. In addition, most of the study participants were from families with low socio-economic status. 77.1% of the study participants (n= 37) were eligible for free/reduced priced lunch. Among them, students eligible for free lunch composed the majority (n=32, 66.7%)

The following table and charts provide the subject description by gender, race/ethnicity and the poverty level defined by free/reduced lunch eligibility.

Table 3-2. *Subject Composition by Gender/Ethnicity*

Gender	Male		Female		Total	
Race/Ethnicity	n	%	n	%	n	%
White	21	43.8	3	6.3	24	50.0
Black	12	25.0	3	6.3	15	31.3
Hispanic	6	12.5	1	2.1	7	14.6
American Indian	2	4.2	0	0.0	2	4.2
Total	41	85.4	7	14.6	48	100.0

Chart 3-1. *Subject Description by Poverty Level Defined by Free/Reduced Lunch Eligibility*



Identities of students who participated in this study were kept anonymous. Furthermore, each participant was assigned a numeric ID number for the purpose of data analysis. In addition, collected information regarding individual students and schools remained strictly confidential and did not serve any other purpose than this research.

Setting

This study took place in an alternative school in the urban community of Northeast Kansas. Education Week (June, 2009) reported a graduation rate of 75.4% for Kansas in the class of 2006. This rate was yielded from the Cumulative Promotion Index (CPI) method. The CPI represents graduating from high school as a process rather than a single event. Specifically, it captures the four key steps a student must take in order to graduate: three grade-to-grade promotions (9 to 10, 10 to 11, and 11 to 12) and ultimately earning a diploma (grade 12 to graduation). The CPI counts only students receiving standard high school diplomas as graduates within the standard number of years, following the definition of a graduate established by the No

Child Left Behind Act (NCLBA 2007). The following formula depicts the CPI method used for the report by Education Week (June, 2009).

$$\text{CPI} = \frac{\text{10th graders, fall 2005}}{\text{9th graders, fall 2004}} \times \frac{\text{11th graders, fall 2005}}{\text{10th graders, fall 2004}} \times \frac{\text{12th graders, fall 2005}}{\text{11th graders, fall 2004}} \times \frac{\text{Diploma recipients, spring 2005}}{\text{12th graders, fall 2004}}$$

Although the average graduation for Kansas was higher than the national average of 69.2% (Education Week, June, 2009), there existed serious gaps among student subgroup. In particular, Black, Hispanic, and American Indian/Alaska Native students showed significantly lower high school completion rates of 58.9, 55.1, and 61.3%, respectively. In these vulnerable groups, male students reported even lower graduation rates that were clustered around 50%. The following table shows Kansas graduation rates by student gender and ethnicities.

Table 3-3. *Kansas Graduation Rates for the class of 2006 by Student Gender and Ethnicities*

%	Male	Female	All students
All Students	74.7	78.6	74.3
White (not Hispanic)	78.1	81.1	81.0
Asian/Pacific Islander	81.1	‡	83.5
Black (not Hispanic)	51.5	64.4	58.9
Hispanic	49.3	58.5	55.1
American Indian/Alaska Native	53.5	‡	61.3

‡ Value not reported because of insufficient data for reliable estimate.
Source from Diplomas Count 2009 (Education Week, June, 2009).

To preserve anonymity, the school district that contributed the study subjects was renamed as K school district. Also the alternative school study participants were attending was renamed as U school. K school district is a public school district serving 35 Pre K-12 schools. K district had significantly higher minority (53.1%) and economically disadvantaged populations (65.3%) compared to the state average (SchoolDataDirect, 2007, retrieved June, 2009 from http://www.schooldatadirect.org). Economically disadvantaged student population was determined by the free reduced lunch eligibility. A significantly lower graduation rate of 75.8% was reported for this school district compared to the state average of 89.7% (SchoolDataDirect, 2007, retrieved June, 2009 from http://www.schooldatadirect.org).

U school is a special purpose public alternative school serving grades 5-12 with severe emotional, behavioral and academic problems. U school was specially designed to serve students with learning or behavior disorders. All students at this school had an IEP for their serious learning, emotional or behavioral disabilities and referred by their home schools for placement at U school. In 2009, U school was serving 141 students. Among these students, 56.46 % were members of a minority group and 87.07 % came from economically disadvantaged families. In 2007, U school reported a 23.8% graduation rate (SchoolDataDirect, 2007, retrieved June, 2009 from http://www.schooldatadirect.org). Student –teacher ratio at U school, defined as the number of students with respect to the number of full-time equivalent teacher, was 4-1.

The following table provided comparisons among the State, K district and U school in terms of student racial make-up, poverty condition, gender make-up, and student-teacher ratio.

Table 3-4. *Participating School and District Profile by Student Ethnicity, Economic Status, Gender, and the Student/Teacher Ratio*

	U School	K District	State
Enrollment of Racial/Ethnic Groups	2008-2009	2008-2009	2008-2009
White (%)	47.1	44.6	70.4
Black (%)	28.6	22.9	7.9
Hispanic (%)	14.3	20.0	13.1
Other (%)	10.1	12.4	8.6
Economically Disadvantaged (%)	83.2	67.9	42.8
Enrollment Distribution by Gender			
Female (%)	17.6	48.3	48.5
Male (%)	82.4	51.7	51.5
Student/ Teacher Ratio	2.8	11.5	13.3

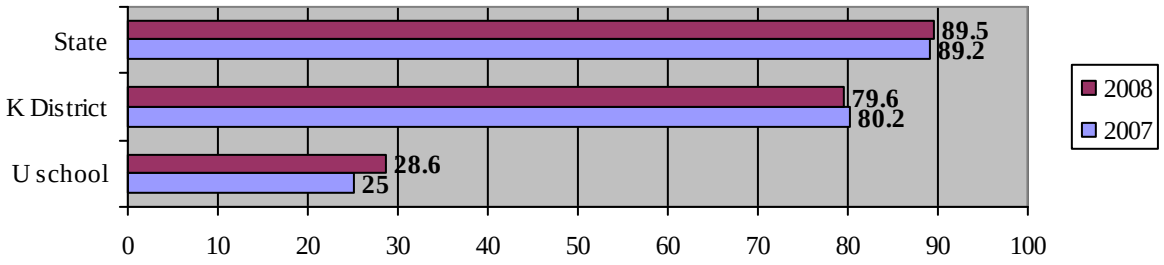
* *Source from Kansas State Department of Education, Report Card 2008-2009, retrieved June 2009 from http://online.ksde.org/rcard/bldg_grad.aspx?org_no=D0501&bldg_no=8552*

Next is a chart describing average graduation rates for Kansas State, K school district, and U school as reported by the Kansas State Department of Education (2009). Graduation rates for years 2007 and 2008 were presented to show the consistent low graduation rates by the school and the school district. The state reported higher graduation rates compared to the rate

reported (74.3%) by the Education Week (June, 2009). The differences stem from different calculation formulas used by the state. Kansas uses the leaver rate for the graduation rate;

$$\frac{\text{graduates} - (\text{retentions} + \text{non-regular diplomas})}{\text{graduates} + \text{2008 grade 12 dropouts} + \text{2007 grade 11 dropouts} + \text{2006 grade 10 dropouts} + \text{2005 grade 9 dropouts}}$$

Chart. 3-2. *Participating School & District Graduation Rate Profile Compared to the State Average*



** Source from Kansas State Department of Education, Report Card 2008-2009, retrieved June 2009 from http://online.ksde.org/rcard/bldg_grad.aspx?org_no=D0501&bldg_no=8552*

Procedures

The study involved the following steps and related activities.

1. Prior to conducting the investigation, the student researcher obtained research approval through the University's Human Subjects Committee-Lawrence application process.
2. After consent was obtained from the Human Subjects Committee, a letter explaining the study and requesting permission to conduct research was sent to major urban school districts in Kansas.
3. Upon approval from a school district, an initial meeting was held among the principal investigator, the school principal, and other school staff to discuss subject recruitment.
4. Since the participants in the study were minors, consent from their parents or legal guardians was first obtained. The parental consent form shown in Appendix B was sent home with each

student and students' parents returned the signed consent form in a provided stamped envelope within a two week period.

5. Once parental consent was received, student records were reviewed, including discipline referrals, GPA, and IEPs. Student IEP included student demographic information, educational and clinical diagnosis and education objectives. Student advisors were interviewed to reassure the accuracy of collected information and for additional information.
6. A student survey enclosed with a student assent form (Appendix C) was given to each student whose parents or guardians consented to their participation in the study. Distribution of the survey was made by student advisors. Students returned the completed survey to advisors.
7. As students returned a completed survey, they were given a brown bag filled with some crackers, fruit and nut snacks, and a drink as a token of appreciation.
8. Parametric and descriptive analyses of data were completed, using appropriate methods to address the previously identified research questions.
9. Results from the data analysis and discussions related to the study were reported.

Data Collection

This study used quantitative and descriptive data to explore the research questions. Student data including student demographic information, survey responses, average attendance, discipline incidences, and GPA, were obtained from participating students and school records.

Collected student survey responses were analyzed to explore research question 1: What is the degree of school membership perceived by students who attend alternative schools? Students' school records, including attendance, discipline incidences, and GPA, were gathered

and analyzed to explore research question 2: What is the relationship between school membership, risk variables, and academic and behavioral performance?

Data was collected on-site. The purpose of the study and what was required for participation was explained to students by teachers. Student record review began once the parental consent was received. The survey packet was handed out by teachers. Students were instructed to complete the survey outside of class, either at home or during free times at school. Completed surveys were collected by teachers. Each survey was number coded so student identity was kept anonymous, and teachers could not link answers on an individual survey to the subject. One student who had difficulty reading was pulled outside class and the survey questions were read to the student by the principal investigator. In this case, it was explained to the student that all the answers to the questionnaire will be kept confidential and will not affect the school's relationship with student.

Instruments

Student Demographics Some student demographic factors have been found to be correlated with school failure (Alexander et al., 2001; Bratti, 2007; Croniger, & Lee, 2001; Daniel et al., 2006; Englund et al., 2008; Finn, 1993; Janosz et al., 2008; Jimerson et al., 2000; Kearney, 2008; Nash, 2002). Four categories of risk variables were found from a review of current literature. The following four categories of risk variables were used to guide the researcher in evaluating students' records and conducting teacher interviews.

(a) School related factors
   1. History of grade retention since the 3rd grade
   2. Poor attendance rate – missed more than 20 days of school within one academic year
   3. More than two disciplinary referrals within one academic year

(b) History of social deviance
    1. Substance abuse
    2. Pregnancy or early parenthood
    3. History of involvement with the criminal justice system
(c) Family background
    1. Low family income determined by free/reduced price lunch eligibility
    2. History of abuse or neglect
    3. Homelessness
(d) Demographic factors
    1. Being a male
    2. Having a disability and an Individualized Education Plan
    3. Minority Status

Not all of the above risk factors were included in this study. (a) 1 *History of grade retention since the 3rd grade*, (b) 2 *Pregnancy or early parenthood*, (c) 3 *Homelessness* did not apply to any of the study participants. On the other hand, (d) 2 *Having a disability and an Individualized Education Plan* applied to all of the study participants. Since there was no variability with those four variables, they were removed from the demographic variables. Also, information on students' substance abuse history or history of abuse/neglect relied on teachers' speculations based on their limited knowledge of students' home lives. Because the teachers' report on these areas lacked accuracy, it was determined not to be included in the data analysis.

(a) 2 *Poor attendance rate* and (a) 3 *More than two disciplinary referrals within one academic year* were also not included as risk factors in this study. All study participants already had a long history of numerous disciplinary referrals and poor attendance in the past, and that resulted in placements of the study participants in U school. Also, attendance and number of disciplinary referrals were defined as the behavioral engagement outcomes in this study that may be predicted by other risk factors. Therefore, the following demographic information was determined as the ***risk factors*** in this study;

1 Being a male

2 Minority Status (African American, Hispanic, or American Indian)

3 Free/reduced lunch eligibility

4 No participation in extracurricular activity

5 History of involvement with the Juvenile Justice System

Other demographic factors that were entered in the data analysis included grade, number of hours students attend school per day (ranging from 1-7), and length of time student attended u school. This demographic information was obtained after thorough reviews of students' school records, including the IEP.

Student Membership Survey The Psychological Sense of School Membership Scale (PSSM) has been widely used to measure students' school membership (Booker, 2007; Morrison, Cosden, O'Farrell & Campos, 2003; Pittman & Richmond, 2007) and the statistical reliability and validity have been supported by previous investigations (Goodenow, 1993; Hagborg, 1994; Hagborg, 1998; Mckay, 2007; Quinn, 2007). Identification with School Questionnaire (ISQ) has also been widely used by many researchers to measure students' school engagement and the statistical reliability and validity have been confirmed (Kenny, & Bledsoe, 2005; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Osborne, & Walker, 2006; Perry, 2008; Voelke, 1996; Voelkl, & Frone, 2004). PSSM and ISQ were adopted and modified for the purpose of this study. The subscales of the PSSM and ISQ will be introduced later in this section.

Coefficient alpha of the total score of the PSSM ranged from .77 (Goodenow, 1993) to .92 (Mckay, 2007). Construct validity of the PSSM has been established through a series of

contrast-group comparisons and correlations involving recentness of student enrollment, school attendance, school location (urban versus suburban), and student social status, motivation, and grades (Goodenow, 1993). Goodenow (1993) reported that a student's subjective sense of belonging appeared to have a significant impact on several measures of motivation and on engaged and persistent effort in difficult academic work. Additional evidence is reported by Hagborg (1994), with correlations found in the areas of self-concept, grades, homework time, social-emotional distress, and student perceptions of school climate. Overall, students with higher school membership were found to be more motivated, to have a more positive self-concept, to experience greater school satisfaction, to have higher academic performance, and to report greater school commitment, more positive teacher-student relations, and lower social-emotional distress (Hagborg, 1994).

PSSM was designed to measure three specific factors: belonging (e.g., "I am included in a lot of activities at this school."), rejection (e.g., "It is hard for people like me to be accepted here."), and acceptance (e.g., "I can really be myself at this school."). The following table shows factor loadings and eigenvalues from the PSSM used by Hagborg (1994).

Table 3.5. *PSSM Factor Analysis*

		Factor 1 Belonging	Factor 2 Rejection	Factor 3 Acceptance	Item # in the current study
1	I feel like a real part of this school.	.53		.41	2
2	People here notice when I am good at something.	.65			3
3	It is hard for people like me to be accepted here.		.81		5
4	Other students in this school take my opinions seriously.	.42			6
5	Most teachers at my school are interested in me.	.58			7
6	Sometimes I feel as if I don't belong here.		.66		8
7	There's at least one teacher or other adult in this school I can talk to if I have a problem.	.44			9
8	People in this school are friendly to me.	.52			10
9	Teachers here are not interested in people like me.	.39			11
10	I am included in a lot of activities at this school.	.53			12
11	I am treated with as much respect as other students.	.57			13
12	I feel very different from most other students here.		.58		14
13	I can really be myself at this school.	.39			15

		Factor 1 Belonging	Factor 2 Rejection	Factor 3 Acceptance	Item # in the current study
14	The teachers here respect me.	.53		.45	16
15	People here know I can do good work.	.62			17
16	I wish I were in a different school.			.68	18
17	I feel proud belonging to this school.			.76	1
18	Other students here like me as the way I am.	.42			19
Eigenvalue (% Variance)		6.26 (35%)	1.44 (8%)	1.21 (7%)	

For the purposes of this study, 7 additional items were added to the original 18 PSSM items. These additional items were adopted from the ISQ (Voelkl, 1996). ISQ is a self report Likert-type scale consisting of 16 items associated primarily with two factors: feelings of belongingness (e.g., “I feel like a real part of this school.”), and feeling of valuing school and school related outcomes (e.g, “School is useful to get a good job,” “Most of the things we learn in school are useless (reverse scored).”). Voelkl (1996) adopted and modified several items from the PSSM for the “belonging” factor of ISQ. However, Voelkl (1996) reported that “belonging” and “valuing” items can be treated as a single factor as an efficient measure of identification with school. She compared the result for both one- and two-factor solutions with four indices of fit (goodness of fit index, root mean square error of approximation, nonnormed fit index, and the ratio of Chi-Square to degrees of freedom). The result of her analysis indicated that the fit of her

one-and two-factor models were highly similar. Voelkl (1996) found a coefficient alpha reliability for the entire scale of .84, and individual alphas for the belonging and valuing subscales of .76 and .73 respectively. Further, she concluded that treating the belonging and valuing items as a single factor was an efficient measure of identification with school. Table 3.6 shows the one-and two-factor loadings from the original ISQ developed by Voelkl (1996). This table displays the similarities between PSSM and ISQ items and shows which ISQ items were incorporated into the School Membership Survey used for the current study.

Table 3-6. *Comparison of ISQ Factor Loadings for One-and Two-Factor Models*

		One factor	Two factor		Repeated or similar item from	Item # in the current study
			Belonging	Valuing		
1	I feel proud of being part of my school.	.54	.57		#17, PSSM	1
2	I am treated with as much respect as other students in my class.	.40	.45		#11, PSSM	13
3	I can get a good job even if my grades are bad.	.26		.28		
4	The only time I get attention in school is when I cause trouble.	.46	.48			4
5	I like to participate a lot of activities (for example, sports, clubs, plays).	.36	.38		#10, PSSM	
6	School is one of the most important things in my life.	.65		.67		
7	Many of the things we lean in class are useless.	.59		.61		23
8	Most of my teachers don't really care about me.	.59	.61		#5, 9, PSSM	
9	Most of the time I would like to be any place other than in school.	.59	.61			24

10	There are teachers or other adults in my school that I can talk to if I have a problem.	.48	.50		#7, PSSM	9
11	Most of what I learn in school will be useful when I will get a job.	.53		.57		21
12	School is one of my favorite places to be.	.62	.63			
13	People at school are interested in what I have to say.	.36	.40		#4, 5, PSSM	
14	School is often a waste of time.	.70		.74		22
15	Dropping out of school would be a huge mistake for me.	.29		.30		25
16	School is more important than most people think.	.56		.59		20
	α	**.84**	**.76**	**.73**		

Construct validity of the scale has been shown in several research studies. ISQ has revealed positive associations with school engagement (r = .30, p <.01) (Voelkl, 2007), career expectations (r = *.33. p < .01)* and career planning (r = .38, p < .01) (Kenny, & Bledsoe, 2005; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003), and academic achievement (r = .07~ .10, p < .05) (Voelkl, 1997).

For the purpose of this study, PSSM and ISQ were combined, producing a single school membership scale. One “belonging” item and six “valuing” items were adopted from the ISQ

and added to the PSSM. Valuing school was regarded as a critical component that affects students' commitment to school (Voelkl, 1996) and has been proven to have a positive correlation with school participation and academic achievement (Voelkl, 1997). The following table shows the School Membership Scale used for this study. For each item, the range of possible response was 1 to 5. High scores on this measure represented a higher degree of sense of school membership perceived by students while low scores represented lower degree of school membership. The internal consistency reliability across the 25 items of the scale for this study was .90. The internal consistency reliability for the 'belonging' and 'valuing' subscales were also calculated. The internal consistency reliability of .87 and .80 were reported for the 'belonging' (item 1-19) and 'valuing' items (item 20-15), respectively.

Table 3-7. *School Membership Scale*

Please rate each statement as true to yourself on the scale of 1-5, indicating 1= *not at all true,* to 5= *completely true.*

		1	2	3	4	5
1	I am proud of being a part of my school.					
2	I feel like a real part of the school.					
3	People here notice when I'm good at something.					
4*	The only time I get attention in school is when I cause trouble.					
5	It is hard for people like me to be accepted here.					
6	Other students in this school take my opinions seriously.					
7	Most teachers at my school are interested in me.					
8	Sometimes I feel as if I don't belong here.					
9	There's at least one teacher or adult in this school I can talk to if I have a problem.					
10	People at this school are friendly to me.					
11	Teachers here are interested in people like me.					
12	I am included in a lot of activities at my school.					
13	I am treated with as much respect as other students.					
14	I feel very different from most other students here.					
15	I can really be myself at this school.					
16	The teachers here respect me.					
17	People here know I can do good work.					

		1	2	3	4	5
18	I wish I were in a different school.					
19	Other students here like me the way I am.					
20*	School is important.					
21*	School is useful to get a good job.					
22*	School is a waste of time.					
23*	Many of the things we learn in school are useless.					
24*	I'd rather be out of school					
25*	It is a mistake to drop out of school					

* Items adopted from ISQ
Items 4, 5, 8, 14, 18, 22, 23, 24 were reverse scored.

Correlations between the School Membership Scale items were analyzed. Table 3-8 provides the correlations between the 'valuing' items (item 20-25) of the School Membership Scale that was used for the current study.

Table 3-8. *Intercorrelations among items on the Valuing Subscale of the School Membership Scale (N=48)*

	q20	q21	q22	q23	q24	q25
q20	1.00	.76**	.59**	.50**	.35**	.30*
q21	.76**	1.00	.41**	.35**	.18	.52**
q22	.59**	.41**	1.00	.68**	.61**	.17
q23	.50**	.35**	.68**	1.00	.49**	.25*
q24	.35**	.18	.61**	.49**	1.00	.13
q25	.30*	.52**	.17	.25*	.13	1.00

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

Table 3-9 provided the correlations between the other scale items (items 1-19), viewed as 'belonging' items. Correlations between the 25 items of the School Membership Scale are provided in Appendix D.

Table 3-9. *'Belonging' Item Correlations (N=48)*

	q1	q2	q3	q4	q5	q6	q7	q8	Q9	q10	q11	q12	q13	q14	q15	q16	q17	q18	q19
q1	1.00	.53**	.36**	.41**	.02	.27*	.32*	.37**	-.03	.24*	.44**	.42**	.36**	.19	.21	.22	-.07	.41**	.13
q2	.53**	1.0	.35**	.37**	.06	.29*	.47**	.27*	.18	.28*	.56**	.54**	.41**	.33*	.25*	.29*	.08	.28*	.30*
q3	.36**	.35**	1.00	.18	-.11	.44**	.34*	.10	.37**	.23	.22	.42**	.34*	.22	.37**	.41**	.28*	.28*	.34**
q4	.41**	.37**	.18	1.00	.24*	.15	.16	-.14	.21	.22	.38**	.34*	.48**	.09	.13	.34*	.31*	.13	.27*
q5	.02	.06	-.11	.24*	1.00	-.08	.10	.05	.09	.21	.38**	.08	.13	.15	.39**	.08	.28*	-.25*	.44**
q6	.27*	.29*	.44**	.15	-.08	1.00	.32*	.16	.09	.21	.12	.28*	.19	.15	.08	.15	.02	.13	.25*
q7	.32*	.47**	.34*	.16	.10	.32*	1.00	.02	.30*	.37*	.71**	.48**	.50**	.33*	.22	.50**	.47**	.15	.23
q8	.37**	.27*	.10	-.14	.05	.16	.02	1.00	-.09	.03	.10	-.08	.00	.33*	.11	-.05	-.18	.41**	.08
q9	-.04	.18	.37**	.21	.09	.09	.30*	-.09	1.00	.31*	.40**	.44**	.45**	.19	.43**	.37**	.39**	.11	.34*
q10	.24*	.28*	.23	.22	.21	.21	.37**	.03	.31*	1.00	.54**	.56**	.62**	.02	.52**	.63**	.56**	.09	.64**
q11	.44**	.56**	.22	.38**	.38**	.12	.71**	.10	.40**	.54**	1.00	.61**	.63**	.28*	.44**	.60**	.49**	.01	.52**
q12	.42**	.54**	.42**	.34*	.08	.28*	.48**	-.08	.44**	.56**	.61**	1.00	.62**	.20	.36**	.46**	.30*	.15	.39**
q13	.36**	.41**	.34*	.48**	.13	.19	.50**	.00	.45**	.62**	.63**	.62**	1.00	.21	.55**	.65**	.57**	.28*	.59**
q14	.19	.33*	.22	.09	.15	.15	.33*	.33*	.19	.02	.28*	.20	.21	1.00	-.05	.17	.13	.33*	.05
q15	.21	.25*	.37**	.13	.39**	.08	.22	.11	.43**	.52**	.44**	.36**	.55**	-.05	1.00	.43**	.33*	.02	.65**
q16	.22	.29*	.41**	.34*	.08	.15	.50**	-.05	.37**	.63**	.60**	.46**	.65**	.17	.43**	1.00	.54**	.20	.51**
q17	-.07	.08	.28*	.31*	.28*	.02	.47**	-.18	.39**	.56**	.49**	.30*	.57**	.13	.33*	.54**	1.00	-.03	.50**
q18	.41**	.28*	.28*	.13	-.25*	.13	.15	.41**	.11	.09	.01	.15	.28*	.33*	.02	.20	-.03	1.00	-.13
q19	.13	.30*	.34**	.27*	.44**	.25*	.23	.08	.34*	.64**	.52**	.39**	.59**	.05	.65**	.51**	.50**	-.13	1.00

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

Behavioral Engagement Measures to assess student behavioral engagement outcomes in this study were: (1) number of missed school days, (2) number of incidences of tardiness, (3) hours spent for in-school suspension, (4) days spent for out-of school suspension, and (5) Grade Point Average (GPA). Outcome variables were collected for the spring 2009 semester. Number of missed school days, number of incidences of tardy, hours spent for in-school suspension, days spend for out-of school suspension were collected during the data collection period of January 20–April, 2009. Students' GPA data, reflecting overall academic performance for the spring 2009 semester, were collected at the end of the semester.

Data Analysis

Descriptive and inferential statistical analyses were conducted to address research questions of this study.

Research question 1: What is the degree of the sense of school membership perceived by at risk students who attend an alternative school?

Means and standard deviations analyses were reported to describe the overall degree of sense of school membership reported by the participants. Furthermore, one-way Analysis of Variance (ANOVA), independent sample *t*- tests, and Cohen's d effect size estimates were calculated to investigate whether there were differences in reported school membership scores by different student sub groups. Sub groups were defined by student gender, grade level, race/ethnicity, free/reduce lunch eligibility, involvement in extracurricular activity, and history of involvement with the juvenile justice system. Consequently, **Independent variables** for research question 1 were various demographic factors, including student gender, grade, race/ethnicity, free/reduced lunch eligibility, involvement in extracurricular activity, and history of involvement with the juvenile justice systems. The **dependent variable** for research question

1 was student membership score. There were some missing data in the survey responses. Few returned surveys included items that were not answered. Unanswered items appeared to be random and were treated with pairwise deletion using SPSS statistical software. The amount of deleted items and the item numbers are found on Appendix E. Descriptive Statistics for Student Responses to School Membership Scale Items.

Research question 2: What is the relationship of school membership, demographic variables and behavioral engagement?

(a) To what extent are at-risk students' academic and behavioral engagement predicted by various risk factors?

One sample *t*-tests, one way ANOVA, and Cohen's d effect size estimates were carried out to investigate the effects of demographic variables on students' behavioral school engagement outcomes. To investigate the effect of demographic variables on students' behavioral school engagement outcomes, student gender, grade, race/ethnicity, free/reduced lunch eligibility, involvement in extracurricular activity, and history of involvement with the juvenile justice systems were entered into the data analyses as the **independent variables**. **Dependent variable** for this investigation was the students' behavioral engagement outcomes. In this study, students' behavioral engagement was measured by the number of missed school days, incidences of tardy, hours spent for in-school suspension, days spent for out-of school suspension, and GPA.

(b) To what extent does at-risk students' school membership correlate with the demographic factors and behavioral engagement?

Correlation analyses were conducted to explore the relationships between the study variables.

Chapter IV

RESULTS

This study was an investigation of the relationships between the perceptions of school membership, risk factors, and school outcomes among a sample of alternative school students. The results of this study are presented in this chapter. First, the overall degree of school membership perceived by at-risk participants was examined. Then whether there were differences in the degree of perceived school membership by students' demographic variables and risk factors was examined. Next the extent to which students' school outcomes are predicted by students' demographic variables and risk factors was examined. Finally, the correlations between students' perception of school membership, risk and demographic factors and school outcomes were investigated.

Research Question 1: What is the degree of the sense of school membership perceived by at risk students who attend an alternative school? Are there differences in the mean scores of the School Membership Scale by students' gender, grade levels, ethnicity, socioeconomic status (SES), involvement in extra-curricular activities, and history of involvement with the Juvenile Justice Systems?

Using the School Membership Scale, students reported a mean of 3.63 (SD = .71) on a scale ranging from "1 = not at all true" to "5 = completely true." High scores on this measure represented a higher degree of sense of school membership perceived by students while low scores represented lower degree of school membership. Descriptive statistics for student responses to each item of the School Membership Scale are provide in Appendix E.

Overall results by gender and school membership revealed no statistically significant differences between female and male students ($t(46) = -.01$, $p = .996$. Cohen's d = -.00). The Levene's test for homogeneity of equal variances ($p = .58$) showed that the assumption of equality of variance between the two groups (male and female students) was not violated despite the different sample sizes as shown in Table 4-1. Perceptions of school belongingness were nearly identical for two groups.

Table 4-1. *Mean and Standard Deviations of School Membership by Gender*

Gender	N	M	SD
Male	41	3.63	.74
Female	7	3.63	.62

A series of one-way analysis of variance (ANOVA) and independent sample *t*-test comparisons were conducted to determine whether there were differences in mean School Membership scores existed based on grade levels, ethnicity, and SES as defined by the free/reduced lunch eligibility. No statistically significant differences in the mean scores for school membership were found across the three grade levels ($F(2, 45) = .33$, $p = .72$). Also, the effect size estimates were considered small for the effect of grade level on students' school membership scores (Cohen's d for mean differences between grade 7-8= .27; 8-9 = -.23; 7-9= .09). Table 4-2 presented the means and standard deviations for each of the three grade levels.

Table 4-2 *School Membership Mean Scores by Grade Level*

Grade	N	M	SD
7	11	3.74	1.02
8	16	3.52	.57
9	21	3.66	.65

No statistically significant differences in the mean scores for school membership were found across the four race/ethnicity groups of White, Black, Hispanic, and American Indian students. ($F(3, 44) = 1.87$, $p = .15$). However, the effect size estimates reported moderate to large sized differences in the means of school membership scores for several of the group comparisons (Cohen' d for White vs. Black = -.03; White vs. Hispanic = .83; White –American Indian = .51; Black vs. Hispanic= .89; Black vs. American Indian = .56; Hispanic vs. American Indian = -.33). Black and White students reported higher school membership scores than American Indian and Hispanic Students. Table 4-3 shows the means and standard deviations for the four different race/ethnicity groups.

Table 4-3. *School Membership Mean Scores by Race/Ethnicity*

Race/Ethnicity	N	M	SD
White	24	3.74	.69
Black	15	3.76	.62
Hispanic	7	3.08	.89
American Indian	2	3.36	.79

With regard to SES, no statistically significant differences in the mean scores for school membership were found between students who were eligible for some level of lunch assistance and those who were not ($F(2, 45) = 1.93$, $p = .15$). However, the effect size estimates showed moderate to large differences in the school membership scores for some of the sub group comparisons (Cohen's d= .61 [Full vs. Reduced priced]; -.83 [Reduced priced vs. Free]; .26 [Free vs. Full priced]). The effect size estimated reported the smallest difference between the free and the full priced lunch groups. However, students who were eligible for reduced priced lunch reported lower school membership scores compared to those who received full priced or free lunch. Table 4-4 shows the means and standard deviations of the School Membership scores by student groups relative to their lunch assistance eligibility.

Table 4-4. *School Membership Mean Scores by SES*

Lunch Status	N	M	SD
Full priced	11	3.56	.67
Reduced priced	5	3.09	.86
Free	32	3.74	.70

Extracurricular activities that were available at U school included student council, job skills development, and student groups for violence prevention. Although extracurricular activities that were available in this school seemed to be beneficial to the students, those programs seemed to focus more on rehabilitative rather than recreational purposes. Some traditional types of extracurricular activities (e.g. team sports) were available through students' home schools. Overall, students who were participating in extracurricular activities (e.g., student council, team sports, ROTC, etc) reported slightly higher School Membership scores. However, there was no statistically significant differences in the mean scores ($t(46) = -.95$, $p = .35$, Cohen's d = -.28). Table 4-5 provides the means and standard deviations for students who were participating in extracurricular activities and those who were not.

Table 4-5. *Extracurricular Activities and School Membership*

Involvement in Extracurricular Activities	N	M	SD
Yes	14	3.79	.76
No	34	3.57	.70

Surprisingly, students who had a history of involvement with the Juvenile Justice System reported a slightly higher School Membership mean score than those who did not. The mean difference was not found to be statistically significant ($t(46) = -.67$, $p = .50$, Cohen's d = -.20). Table 4-6 shows the means and standard deviations for students who had a history of being involved with the juvenile justice system and those who did not.

Table 4-6. *Involvement with the Juvenile Justice System and School Membership*

Involvement with Juvenile Justice	N	M	SD
Yes	9	3.78	.60
No	39	3.60	.75

For research question 1, it was hypothesized that risk variables, such as being a male, minority status, being eligible for free or reduced lunch, no participation in extracurricular activities, and having been involved in the Juvenile Justice System would negatively affect the degree of school membership perceived by students. The results did not support the study hypothesis for research question 1. Bing a male, minority, eligible for free or reduced lunch, not

participating in any extracurricular activities, or having been involved in the Juvenile Justice System did not result in a difference that was statistically significant. However, large effect size estimates were found for Hispanic student when compared with White or Black students. Also, moderate level of effect sizes were reported for American Indian students when compared with White or Black students. That is, White and Black students reported higher score on School Membership Scale than their Hispanic and American Indian Counterparts in this study. Another risk factor that caused moderate to large effect size estimates was the lunch status. Moderate sized effect size estimates were detected for students who were eligible for reduced priced lunch when compared with those students who received full priced lunch. Also, even larger effect size estimates were reported for students who received reduced priced lunch when compared with students that received free lunch. That is, students who received reduced priced lunch reported lower scored on School Membership Scale than their counterparts.

Research Question 2: What is the relationship of school membership, student risk status and behavioral engagement?

a) To what extent are at-risk students' academic and behavioral engagement predicted by various risk variables?

First, the outcome variable data were collected and summarized as shown in Table 4-10. Students' average GPA was 2.66 (SD = .88) out of 4.0. Students missed 5.73 (SD= 5.27) school days on average during approximately a 4 month period. Tardiness was another common problem students displayed in this school. On average, approximately 2 (SD = 3.73) incidences of tardiness per student were reported over a 4 month period. Frequent in-school and out-of school suspension was reported for the study participants as well. On average, students spent approximately 5 (SD = 6.60) hours out of class for in-school suspension and 1 (SD = 1.47) day

for out-of suspension for the same period of time. Table 4-7 represented the means and standard deviations of the five outcome variable.

Table 4-7. *Outcome Variables Descriptive Statistics*

	N	Minimum	Maximum	Mean	Median	Std. Deviation
GPA	48	0	4	2.66	2.74	.88
# of missed school days	48	0	22	5.73	5.00	5.27
# of incidence tardy	48	0	21	1.92	0.00	3.73
Hrs of In-school suspension	48	0	28	5.17	3.00	6.60
Days out of school suspension	48	0	7	1.00	0.00	1.47

The extent to which there were differences in these outcomes by different student demographics was investigated. Students' GPA, number of missed school days, number of incidences of tardy, hours spent for in-school suspension, and days spend for out-of school suspension were compared based on students gender, ethnicity, SES, extracurricular activity participation, and involvement with the Juvenile Justice System. A series of independent sample *t*-test and one-way analysis of variance (ANOVA) was conducted to determine if the mean

differences in the behavioral engagement measures between the student sub groups were statistically significant. The results indicated that the independent variables did not make any statistically significant differences in the behavioral outcome variables.

A slightly higher GPA and a lower absence rate were reported for the female students than the male students. However, the differences were not statistically significant (GAP: t (46) = -.99, p = .33, Cohen's d = -.29; # missed school days: t (46) = .16, p = .87, Cohen's d = .04). On the other hand, higher number of incidences of tardy and hours spent for in-school suspension were reported for female students compared to the male students. However, the differences were again not statistically significant (Incidences of tardy: t (46) = -.61, p = .55, Cohen's d = -.18; Hours of in-school suspension: t (46) = -.67, p = .51, Cohen's d = -.20). Same number of days spent for out of school suspension (t (46) = .00, p = 1.00, Cohen's d = .00) was reported for both male and female students as shown in Table 4-8.

Table 4-8. *Student Outcomes by Gender*

		GPA		# missed school days		# incidences of tardy		Hrs of in-school suspension		Days out of school suspension	
Gender	N	M	SD	M	SD	M	SD	M	SD	M	SD
Male	41	2.61	.90	5.78	5.43	1.78	3.86	4.90	6.48	1.00	1.53
Female	7	2.96	.71	5.43	4.54	2.71	2.93	6.71	7.68	1.00	1.16

No statistically significant differences in the means of student behavioral outcomes were found across the three grade levels (GPA: $F(2, 45) = .57$, $p = .57$; # of missed school days: $F(2, 45) = 1.07$, $p = .35$; # of incidences of tardy: $F(2, 45) = 2.34$, $p = .11$; Hrs of in-school suspension: $F(2, 45) = 1.25$, $p = .30$; Days out of school suspension: $F(2, 45) = 2.06$, $p = .14$). However, effect size estimates showed that being in the 8th grade had a moderate to large effect on the number of incidences of tardy (Cohen's d = .57 [7 vs. 8th grade]; -.72 [8 vs. 9th grade]; -.34 [7 vs. 9th grade]). Also, when compared with the 9th graders, being in the 7th grade had a large effect on the number of days students spent for the out of school suspension (Cohen's d = .30 [7 vs. 8th grade]; .38 [8 vs. 9th grade]; .84 [7 vs. 9th grade]), and a moderate effect on hours students spent for in school suspension (Cohen's d = -.17 [7 vs. 8th grade]; -.34 [8 vs. 9th grade]; -.63 [7 vs. 9th grade]). Effect size estimates did not report any significant effects of the grade levels on other behavioral outcome areas, including student GPA (Cohen's d = .32 [7 vs. 8th grade]; .07 [8 vs. 9th grade]; -.43 [7 vs. 9th grade]), and number of missed school days (Cohen's d = .23 [7 vs. 8th grade]; -.48 [8 vs. 9th grade]; -.27 [7 vs. 9th grade]). Table 4-9 listed the means and standard deviations for each of the three grade levels in the five behavioral engagement outcome areas.

4-9. *Student Outcomes by Grade Level.*

		GPA		# of missed school days		# of incidences tardy		Hrs of in-school suspension		Days out of school suspension	
Grade	N	M	SD	M	SD	M	SD	M	SD	M	SD
7	11	2.90	.63	5.45	4.72	5.45	4.72	3.27	3.00	1.64	1.57
8	16	2.63	1.00	4.38	4.41	4.38	4.41	4.31	8.11	1.13	1.89
9	21	2.56	.90	6.90	6.05	6.90	6.05	6.81	6.59	.57	.87

No statistically significant differences in the means of student behavioral outcomes were found across the four race/ethnicity groups (GPA: $F(3, 44) = .89$, $p = .45$; # of missed school days: $F(3, 44) = .83$, $p = .48$; # of incidences of tardy: $F(3, 44) = .29$, $p = .84$; Hrs of in-school suspension: $F(3, 44) = 1.18$, $p = .33$; Days out of school suspension: $F(3, 44) = .31$, $p = .82$). However, effect size estimates reported that the mean difference in GPA between the Black and Hispanic students were moderate (Cohen's d for White vs. Black = -.04; White vs. Hispanic = .17; White –American Indian = -.09; Black vs. Hispanic= .59; Black vs. American Indian = .22; Hispanic vs. American Indian = -.21). Also, moderate sized effect was found between Black and American Indian students in the mean number of school days students missed (Cohen's d for White vs. Black = .44; White vs. Hispanic = .32; White –American Indian = -.27; Black vs. Hispanic= -.21; Black vs. American Indian = -.56; Hispanic vs. American Indian = -.49). As shown in Table 4-13, American Indian students missed nearly twice as many school days as

Black students did on average. However, American Indian students showed better performance in other behavioral engagement outcome areas than their counterparts. Effect size estimates reported large numbers for American Indian students in the areas of number of incidences of tardy (Cohen's d for White vs. Black = .19; White vs. Hispanic = -.02; White –American Indian = .68; Black vs. Hispanic= -.25; Black vs. American Indian = .97; Hispanic vs. American Indian = .88), hours of in school suspension (Cohen's d for White vs. Black = .58; White vs. Hispanic = .21; White –American Indian = .94; Black vs. Hispanic= -.39; Black vs. American Indian = .43; Hispanic vs. American Indian = .77), and days of out of school suspension (Cohen's d for White vs. Black = -.02; White vs. Hispanic = .03; White –American Indian = 1.11; Black vs. Hispanic= .05; Black vs. American Indian = .79; Hispanic vs. American Indian = 1.22). Table 4-10 provided the means and standard deviations for each of the four race/ethnicity groups in the behavioral outcome areas.

Table 4-10. *Student Outcomes by Race/Ethnicity*

		GPA		# of missed school days		# of incidence tardy		Hrs of In-school suspension		Days out of school suspension	
Race/Ethnicity	N	M	SD	M	SD	M	SD	M	SD	M	SD
White	24	2.56	.86	6.54	6.21	2.21	4.62	6.75	7.58	1.04	1.33
Black	15	2.95	.62	4.33	3.52	1.53	2.23	3.07	4.71	1.07	1.91
Hispanic	7	2.38	1.22	5.00	2.83	2.29	3.68	5.29	6.60	1.00	1.16
American Indian	2	2.68	1.66	9.00	11.31	.00	.00	1.50	2.12	.00	.00

No statistically significant differences in the means of student behavioral outcomes were found between students who were eligible for some level of lunch assistance and those who were not(GPA: $F(2, 45) = 1.36$, $p = .27$; # of missed school days: $F(2, 45) = .07$, $p = .93$; # of incidences of tardy: $F(2, 45) = .60$, $p = .55$; Hrs of in-school suspension: $F(2, 45) = .70$, $p = .50$; Days out of school suspension: $F(2, 45) = .54$, $p = .59$). However, effect size estimates reported that being eligible for reduced priced lunch had a moderate to large effect on the outcome areas of GPA (Cohen's d= -.94 [Full vs. Reduced priced]; .51 [Reduced priced vs. Free]; -.38 [Free vs. Full priced]), in-school suspension (Cohen's d= .59 [Full vs. Reduced priced]; -.64 [Reduced priced vs. Free]; .16 [Free vs. Full priced]), and out-of school suspension (Cohen's d= .54 [Full vs. Reduced priced]; -.60 [Reduced priced vs. Free]; -.15 [Free vs. Full priced]). That is, students

who received reduced priced lunch reported higher GPAs and less time for in or out of school suspension. Effect size estimated reported no significant results for the outcome areas of number of missed school days (Cohen's d= .22 [Full vs. Reduced priced]; -.00 [Reduced priced vs. Free]; .06 [Free vs. Full priced]) and incidences of tardy (Cohen's d= .33 [Full vs. Reduced priced]; -.11 [Reduced priced vs. Free]; .27 [Free vs. Full priced]). Table 4-11 represented the means and standard deviations for the three students groups with different lunch assistance eligibilities in the behavioral outcome areas.

Table 4-11. *Student Outcomes by SES*

		GPA		# of missed school days		# of incidence tardy		Hrs of In-school suspension		Days out of school suspension	
SES	N	M	SD	M	SD	M	SD	M	SD	M	SD
full pay	11	2.36	.90	6.09	6.75	3.00	6.68	6.45	9.70	.91	1.22
reduced priced	5	3.10	.66	5.00	1.87	1.40	1.67	2.20	3.35	.40	.55
Free	32	2.70	.88	5.72	5.18	1.63	2.41	5.19	5.69	1.13	1.64

On average, students who were participating in extracurricular activities (e.g., student council, team sports, ROTC, etc) displayed better school outcomes compared to the non-participants, except in the in-school suspension rate. Yet, no statistical significance was reported for the results (GPA: t (46) = -1.12, p = .27, Cohen's d = -.33; # missed school days: t (46) = .55, p = .59, Cohen's d = .16; # incidences of tardy: t (46) = .07, p = .94, Cohen's d = .02; Hrs of in-

school suspension: *t* (46) = -.56, *p* = .58, Cohen's d = -.17; Days out of school suspension: *t* (46) = .21, *p* = .83, Cohen's d = .06). Table 4-12 provided the means and standard deviations of the behavioral school engagement outcomes for students who were participating in extracurricular activities and those who were not.

Table 4-12. *Student Outcomes by Extracurricular Activity Participation*

		GPA		# missed school days		# incidences of tardy		Hrs of in-school suspension		Days out of school suspension	
Extracurricular Activity Participation	N	M	SD	M	SD	M	SD	M	SD	M	SD
Yes	14	2.88	.59	5.07	4.14	1.86	2.91	6.00	5.75	.93	1.14
No	34	2.57	.96	6.00	5.71	1.94	4.06	4.82	6.98	1.03	1.61

Students who had a known history of an involvement with the criminal justice system displayed poorer school outcomes than those students who did not, except in the out-of school suspension area. Again, the differences in the outcomes were not statistically significant (GPA: *t* (46) = .67, *p* = .50, Cohen's d = .20; # missed school days: *t* (46) = -.94, *p* = .35, Cohen's d = -.28; # incidences of tardy: *t* (46) = -.37, *p* = .71, Cohen's d = -.10; Hrs of in-school suspension: *t* (46) = -1.38, *p* = .17, Cohen's d = -.41; Days out of school suspension: *t* (46) = .50, *p* = .62, Cohen's d = .15). Table 4-13 provided the means and standard deviations of the behavioral school engagement outcomes for students who had a history of being involved with the juvenile justice system and those who did not.

Table 4-13. *Student Outcomes by History of Involvement with the Juvenile Justice System*

		GPA		# missed school days		# incidences of tardy		Hrs of in-school suspension		Days out of school suspension	
History of Involvement with the Juvenile justice System	N	M	SD	M	SD	M	SD	M	SD	M	SD
Yes	9	2.48	.95	7.22	5.97	2.33	2.83	7.89	6.49	.78	1.10
No	39	2.70	.87	5.38	5.12	1.82	3.93	4.54	6.56	1.05	1.56

For research question 2. a), it was hypothesized that risk variables, such as being a male, minority status, being eligible for free or reduced lunch, no participation in extracurricular activities, and having been involved in the Juvenile Justice System negatively affect students' behavioral school engagement measured by their GPA, number of missed school days, number of incidences of tardy, hours spent for in-school suspension, and number of days spent for out of school suspension. The results did not support the hypothesis. Bing a male, minority, eligible for free or reduced lunch, not participating in any extracurricular activities, and having been involved in the Juvenile Justice System did not result in a difference that was statistically significant.

However, effect size estimates reported that the mean difference in GPA between the Black and Hispanic students were moderate with Black students reporting higher GPAs. Also, moderate sized effect was found between Black and American Indian students in the mean number of school days students missed. American Indian students missed nearly twice as many

school days as Black students did on average. On the other hand, effect size estimates reported large numbers for American Indian students in the areas of number of incidences of tardy, hours of in school suspension, and days of out of school suspension. That is, American Indian students displayed less tardy, in school suspension, and out of school suspension than their counterparts. Effect size estimates reported that being eligible for reduced priced lunch had a moderate to large effect on the outcome areas of GPA, and in-school suspension, and out-of school suspension. That is, students who received reduced priced lunch reported higher GPAs and less time for in or out of school suspension when compared with their counterparts.

Additional finding from the results for the research question 2. a) was that being in the 8th grade had a moderate to large effect on the number of incidences of tardy. Also, when compared with the 9th graders, being in the 7th grade was found to have a moderate to large effect on the amount of time students spent for in and out of school suspension.

Next, the relationships between the study variables were explored through research question 2. b) To what extent does at-risk students' school membership correlate with the demographic factors and behavioral engagement? Correlation analysis examined relationships between the study variables. Table 4-14 provided the correlations between the study variables.

Table. 4-14. *Correlations between the Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.Sex [a]	1.00	.03	-.10	.00	.09	.06	.00	.09	.06	-.10	.09	-.28	-.13	.09	.01	.05	.00	-.14	.02	-.09	-.10	.00
2. grade	.03	1.00	-.12	-.03	.08	.11	-.03	.08	.11	-.12	.08	-.17	.02	.34	.12	.41**	-.02	-.15	.14	.19	.22	-.29*
3. Race/Ethnicity (White 0 vs. Black 1)	-.10	-.12	1.00	-.28	-.14	-.67**	-.28	-.14	-.67**	1.00**	-.14	.24	.24	.02	.06	.02	.12	.23	-.18	-.07	-.22	.03
4. Race/Ethnicity (White 0 vs. Hispanic 1)	.00	-.03	-.28	1.00	-.09	-.41**	1.00**	-.09	-.41**	-.28	-.09	-.08	-.07	.06	.12	-.20	-.32*	-.13	-.06	.04	.01	.00
5. Race/Ethnicity (White 0 vs. American Indian 1)	.09	.08	-.14	-.09	1.00	-.21	-.09	1.00**	-.21	-.14	1.00**	-.11	-.03	-.18	-.13	.17	-.08	.00	.13	-.11	-.12	-.14
6. Race/Ethnicity (Black 0_White 1)	.06	.11	-.67**	-.41**	-.21	1.00	-.41**	-.21	1.00**	-.67**	-.21	-.12	-.16	.02	-.09	.05	.15	-.12	.16	.08	.24	.03
7. Race/Ethnicity (Black 0_Hispanic 1)	.00	-.03	-.28	1.00**	-.09	-.41**	1.00	-.09	-.41**	-.28	-.09	-.08	-.07	.06	.12	-.20	-.32*	-.13	-.06	.04	.01	.00
8. Race/Ethnicity (Black 0_AmerIndian 1)	.09	.08	-.14	-.09	1.00**	-.21	-.09	1.00	-.21	-.14	1.00**	-.11	-.03	-.18	-.13	.17	-.08	.00	.13	-.11	-.12	-.14
9. Race/Ethnicity (Hispanic 0 _White 1)	.06	.11	-.67**	-.41**	-.21	1.00**	-.41**	-.21	1.00	-.67**	-.21	-.12	-.16	.02	-.09	.05	.15	-.12	.16	.08	.24	.03

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
10. Race/Ethnicity (Hispanic 0_Black 1)	-.10	-.12	1.00**	-.28	-.14	-.67**	-.28	-.14	-.67**	1.00	-.14	.24	.24	.02	.06	.02	.12	.23	-.18	-.07	-.22	.03
11. Race/Ethnicity (Hispanic 0_AmerIndian 1)	.09	.08	-.14	-.09	1.00**	-.21	-.09	1.00**	-.21	-.14	1.00	-.11	-.03	-.18	-.13	.17	-.08	.00	.13	-.11	-.12	-.14
12. SES [b]	-.28	-.17	.24	-.08	-.11	-.12	-.08	-.11	-.12	.24	-.11	1.00	-.06	-.17	.16	.13	.15	.13	-.02	-.14	-.05	.09
13. FTE	-.13	.02	.24	-.07	-.03	-.16	-.07	-.03	-.16	.24	-.03	-.06	1.00	.29*	.17	.14	.22	.14	.06	-.04	.15	.19
14. Length of time attending U school	.09	.34*	.02	.06	-.18	.02	.06	-.18	.02	.02	-.18	-.17	.29*	1.00	.35*	.09	.22	-.26	.16	.12	.24	.06
15. Involvement in extracurricular Activity [c]	.01	.12	.06	.12	-.13	-.09	.12	-.13	-.09	.06	-.13	.16	.17	.35*	1.00	.04	.14	.16	-.08	-.01	.08	-.03
16. History of involvement with the Juvenile Justice System [d]	.05	.41**	.02	-.20	.17	.05	-.20	.17	.05	.02	.17	.13	.14	.09	.04	1.00	.10	-.10	.14	.05	.20	-.07
17. School Membership mean score	.00	-.02	.12	-.32*	-.08	.15	-.32*	-.08	.15	.12	-.08	.15	.22	.22	.14	.10	1.00	.02	.05	.18	-.21	-.17
18. GPA	-.14	-.15	.23	-.13	.00	-.12	-.13	.00	-.12	.23	.00	.13	.14	-.26	.16	-.10	.02	1.00	-.48**	-.30*	-.44**	-.01
19. # of missed school days	.02	.14	-.18	-.06	.13	.16	-.06	.13	.16	-.18	.13	-.02	.06	.16	-.08	.14	.05	-.48**	1.00	.38**	.07	.11
20. # of incidence tardy	-.09	.19	-.07	.04	-.11	.08	.04	-.11	.08	-.07	-.11	-.14	-.04	.12	-.01	.05	.18	-.30*	.38**	1.00	-.10	-.18

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
21. Hrs of In-school suspension	-.10	.22	-.22	.01	-.12	.24	.01	-.12	.24	-.22	-.12	-.05	.15	.24	.08	.20	-.21	-.44**	.07	-.10	1.00	.21
22. Days out of school suspension	.00	-.29*	.03	.00	-.14	.03	.00	-.14	.03	.03	-.14	.09	.19	.06	-.03	-.07	-.17	-.01	.11	-.18	.21	1.00

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed)

[a] 0 = female, 1 = male.

[b] 0 = Fully paid lunch, 1= Reduced priced lunch, 2 = Free lunch.

[c] 0 = No, 1 = Yes.

[d] 0 = No, 1 = Yes.

As shown in Table 4-14, the mean school membership score was not statistically significantly related to any of the other study variables except race/ethnicity. The school membership mean was strongly correlated (r = -.32, p =.03) with Race/Ethnicity (White 0 vs. Hispanic 1) and Race/Ethnicity (Black 0_Hispanic 1). When compared with White and Black students, being Hispanic seem to have negative effect on students' perception of school membership.

Statistically significant correlations were found between the outcome variables of school engagement (e.g., GPA, number of missed school days, number of in-school/out-of school suspension, and number of incidences of tardy). Students who reported higher GPA also reported less number of missed school days (r = -.48, p =.00), incidences of tardy (r = -.30, p =.04), and hours spent for in school suspension (r = -.44, p =.00). Also, number of missed school days and incidences of tardy showed a strong correlation (r = .38, p =.01). That is, student who missed more school days also reported more incidences of tardy.

Students' grade levels appeared to be an important predictor of students' behavioral engagement in this study. Students in higher grade levels in this school seem to have more experiences with involvement with juvenile justice system (r = .41, p =.00). Also the higher student grade level was, the less amount of time was reported for out of school suspension (r = -.29, p =.05). Students who stayed in this school longer, seemed to be in upper grade levels (r = .34, p =.02), take more classes (r = .29, p =.05), and participate in more extracurricular activities (r = .35, p =.01).

Chapter V

DISCUSSION

Findings

The purpose of this study was to investigate the relationships between perceptions of school membership, student demographic risk variables, and academic and behavioral school outcomes among a sample of high risk alternative school students. The study participants were exposed to high risk of school failure because of their serious and chronic behavioral and academic problems. Each student had a history of numerous discipline referrals, including in and out-of school suspension throughout their school years, starting as early as elementary school years. All students with disabilities had an IEP, including for Emotional Disturbance (n=33, 69%), Other Health Impairment (Attention Deficit Hyperactivity Disorder) (n=8, 17%), Learning Disability (n=4, 8%), Autism (n=1, 2%), Traumatic Brain Injury (n=1, 2%), and Mental Retardation (n=1, 2%)).

The study participants reported a moderately positive school membership score of 3.63 (SD = .71) on a scale ranging from "1 = not at all true" to "5 = completely true." High scores on this measure represented a higher degree of sense of school membership perceived by students while low scores represented lower degree of school membership. This score was higher than those school membership scores reported by other studies for at-risk adolescents. Uwah, McMahon, and Furlow (2008) reported an average PSSM score of 3.10 (SD = .42) for a sample of 40 high risk 9th and 10th grade African American students. Hagborg (1998) reported a mean PSSM score of 3.57 (SD = .81) for 120 typical middle school students. Average PSSM scores reported by Goodeow (1993) for multi ethnic junior high school students in an urban area were also in the lower range of 3.09 (SD = .61) to 3.11 (SD = .70).

The positive results of students' perception of school membership in this study may be due to the differences in educational environment between alternative and typical schools. Previous studies (Uwah, McMahon, & Furlow, 2008; Goodenow, 1993) with high risk students targeted those who attended traditional schools. Whether or not the subjects of the previous studies were at high risk primarily because of their demographic characteristics (e.g., minority, lunch assistance, etc.) or academic struggles, the lower school membership results might imply that regular education environments are less accommodating to students' individual needs. Alternative schools often are smaller in size when compared to traditional schools, thus allowing lower student –teacher ratio, which enables teachers to work individually with students. Also, most alternative schools are believed to serve students who are at risk of educational failure (Kleiner, Porch, & Farris, 2002) and are designed to provide specialized services for these students. In fact, teachers at U school had a good understanding of their students' struggles in home, school and social life, and seemed equipped to deal with students' disruptive behaviors. They maintained a close relationship with a residential clinic for students with mental health issues and organized classes with head teachers who were trained in managing different types of challenging behaviors (e.g., withdrawal type vs. aggressive/conduct disorder type). These accommodations may have caused students to feel more connected and welcome in school. Gold and Mann (1984) presented statistical evidence to support similar findings. They examined disruptive and delinquent adolescents attending three alternative schools and a comparison group attending conventional schools. Gold and Mann (1984) reported that more of the alternative school students felt they were working closer to their capacity, putting in more efforts and were more satisfied with their performance. For this study, there was no norm group to which the school membership scores can be compared. Although the survey instrument used for this study

was based on already existing instruments, the adapted survey has not been tested on the general student population. Therefore the survey result should be considered with caution.

Effects of Risk Factors on Psychological and Behavioral School Engagement

The findings from this study indicated that commonly known risk factors, such as being a male, minority, low SES, no participation in extracurricular activities, and history of involvement with the juvenile justice system, did not have statistically significant effects on students' perception of school membership. Male students (M= 3.63, SD = .74) reported an almost identical average score on the School Membership Survey as Female students (M= 3.63, SD = .62). White students reported a slightly higher average score (M = 3.74) than their minority counterparts, however the differences were not statistically significant. Students who were eligible for free lunch reported higher average score (M = 3.74, SD = .69) on the School Membership Survey than their counterparts. Again, however, the mean differences were not statistically significant.

Studies (Gentry, Gable, & Rizza, 2002; Goodenow, 1992; Griffith, 1999; Nichols & Good, 1998; Osterman, 2000) have shown that students' perception of school belonging vary by student gender and ethnicity. Gentry, Gable and Rizza (2002) and Nichols and Good (1998) reported that females tend to have more positive views of school than do males. In terms of ethnicity, studies (Goodenow, 1992; Griffith, 1999) reported that students' sense of school belonging might positively correlate with a school's racial/ethnic composition. Goodenow (1992) and Griffith (1999) reported that when the majority of students in a school were from an ethnic minority their perceptions of belonging were greater than those of their white peers. Booker (2007) also found that students felt a stronger sense of connection to their school community when they perceived fewer differences between themselves and others in the school

body. Findings from the previous studies leave considerations for the current study findings. Although the statistical significance in the differences of the mean School Membership scores between the student groups were not statistically significant, effect size estimates provided a close-up picture of the practical importance relative to this finding. Medium to large sized effects were detected for Hispanic and American Indian students when compared with their Black and White counterparts (Cohen' D for White vs. Hispanic = .83; White –American Indian = .51; Black vs. Hispanic= .89; Black vs. American Indian = .56). Hispanic (M = 3.08, SD = .89) and American Indian students (M = 3.36, SD = .79) reported the lowest school membership mean scores. Effect size estimates also reported medium to large size differences for students who were eligible for reduces priced lunch. This student group also reported the lowest mean score (M = 3.09, SD = .86) on the School Membership scale compared to those who were eligible for free lunch and who were not eligible for any lunch assistance. Hispanic and American Indian students were the minority groups at U school. U school was predominantly White (47.06%) and Black (28.57%). Hispanic and American Indian students also composed the smallest numbers in the study subjects (Hispanic: N = 7, American Indian: N = 2). Students who were eligible for reduced priced lunch (N=5) were a minority group among the study participants as well. Based on the findings by Goodenow (1992), Griffith (1999) and Booker (2007), Hispanic, American Indian and students who were eligible for reduced priced lunch may have perceived more differences between themselves and others in the school due to their ethnic/cultural and socio-economic status.

However, these differences were not large enough to cause a statistical significance. This may mean that the special challenges the subjects were facing (e.g., disability, academic and behavioral struggles) were stronger than other differences in students' sub-groups, including

gender, ethnicity, and SES. Again, further studies with bigger samples are necessary to pinpoint the factors that directly affect at-risk students' perception of school membership.

Students who were participating in extracurricular activities (e.g., student council, team sports, ROTC, etc) reported a slightly higher mean school membership score (M = 3.79, SD = .76) than those students who were not (M = 3.57, SD =.70). However, the mean difference was not statistically significant. Saelhof (2009) investigated the association between school connectedness and participation in extracurricular activities. From her study with 252 11^{th} to 12 th graders, Saelhof (2009) found a positive association between the amount of extracurricular activities and scores on school connectedness survey. In the current study, the results showed a similar pattern to Saelhof's finding (2009). However, the mean differences on School Membership scores between extracurricular activity participants and non participants were not big enough to cause a statistical significance. The lack of statistical significance from the present study is likely due to the small sample size or the different student characteristics (e.g., at-risk status, ages, racial/ethnic composition, etc.).

Students who had a history of involvement with the Juvenile Justice Systems reported a higher mean score (M = 3.78, SD = .60) on the School Membership Survey than those who did not (M=3.60, SD =.75). Although the difference was not statistically significant, this finding was very interesting considering the general perceptions and findings from previous research. Hirschfield (2009) reported that early arrest increases early school drop-out. However, Unruh, Gau, and Waintrup (2009) found in their study with 320 youth who had been formerly incarcerated and possessed a mental health and/or special education diagnosis that participants who received community integration intervention were less likely to reoffend. Unruh, Gau, and Waintrump's study results argues the importance of post intervention for students who exited the

incarceration period. Since alternative schools are often used as the last harbor that admits former youth offenders, their education program is critical to help these youth to successfully integrate into the community. It was beyond the scope of the current study to investigate educational programs U school was providing specifically for former youth offenders and the effectiveness of those programs. However, the positive results on student school membership by those who had a history of involvement with the Juvenile Justice Systems provided a hopeful outlook relative to their educational programs. Non-statistical significance from this result may be due to the small sample size and replications with bigger sample sizes are necessary for a better understanding of this finding.

Effects of the various demographic factors on students' academic and behavioral engagement outcomes were also examined. Students' average GPA was 2.66 (SD = .88), based on a 4.0 scale. Students missed 5.73 (SD= 5.27) school days on average during approximately a 4 month period (beginning with the Spring 2009 semester). Tardiness was a common problem students displayed in this school. On average, approximately 2 (SD = 3.73) incidences of tardy per student were reported over a 4 month period. Frequent in-school and out-of school suspensions were reported for the study participants as well. On average, students spent approximately 5 (SD = 6.60) hours out of class for in-school suspension and 1 (SD = 1.47) day for out-of suspension for the same period of time. The findings from the data analyses indicated that risk variables, including being a male, minority, low SES, no participation in extracurricular activities, and history of involvement with the juvenile justice system did not result in statistically significant negative effects on school outcomes, including GPA, number of missed school days, hours spent for in-school suspension, and days spent for out-of school suspension.

Medium to large effect sizes were reported for Hispanic and American Indian students in all outcome areas, including GPA, number of missed school days, incidences of tardy, hours of in-school suspension, and days spent for out of school suspension. On average, Hispanic students reported the lowest GPA (M = 2.38, SD = 1.22); and American Indian students missed the most school days (M = 9, SD = 11.31). However, American Indian students reported fewer incidences of tardiness (M = .00, SD = .00), hours of in-school suspension (M = 1.50, SD = 2.12), and days for out of school suspension (M = .00, SD = .00) compared to other race/ethnicity groups.

The seriousness of the problem of academic achievement and high drop out rates among Hispanic youth has been supported by previous reports (Forum for Education and Democracy, 2008; US Department of Education, 2005). However, it was not clear from the current study what factors most negatively affected Hispanic students' school outcomes. For the school performance outcome by American Indian students, it should be considered that there were only two American Indian students among the study subjects. Therefore, despite the large effect sizes, the school performance outcomes by American Indian students in this study cannot be represented for American Indian students in general.

Being eligible for reduced priced lunch also had medium to large effects on the outcome areas of GPA, in-school and out-of school suspension. Students who were eligible for reduced priced lunch (N=5) reported on average a higher average GPA (M = 3.10, SD = .66), spent less time in in-school (M = 2.20, SD = 3.35) and out-of school suspension than their peers (M = .40, SD = .55). Several studies have provided substantial evidence of a link between low academic performance and SES (Caldas & Bankston, 1997; Ma, 2000; Okpala, Smith, Jones, & Ellis, 2000). From previous studies, significant relationships were reported between students' free/reduced cost lunch eligibility and their academic achievement across all core subject areas.

Result from the current study did not correspond with previous studies' findings. This finding is likely due to the small sample size and other predisposing conditions, such as a disability or the majority of the students coming from families with low SES background.

In summary, mixed results were reported for minority students and those who came from families with low socio-economic status. Although being Hispanic, American Indian, or eligible for reduced priced lunch might have negatively affected students' perception of school membership, these demographic factors had different effects on their behavioral school engagement outcomes. Hispanic students reported poorer GPA and American Indian students showed relatively poor attendance. However, American Indian students also performed better in the areas of tardiness, hours of in-school suspension and out-of school suspension. Also, despite their poor school membership scores, students who were eligible for reduced priced lunch showed higher GPA and in-school and out-of school suspension. Nevertheless, no statistically significant and observable effects of risk variables were found in students' psychological and behavioral school engagement, in contrast to findings of previous studies (Anderman, 2002; Gentry, Gable, & Rizza, 2002; Goodenow, 1992; Griffith, 1999; Nichols & Good, 1998; Osterman, 2000). The different results from the current study may be due to the small sample size and unique student characteristics. Although Hispanic student showed somewhat consistent results on their school membership and school performance, and correlation analyses showed a statistically significant correlation between School Membership and Hispanic (r = -.32, p = .03), this result should be considered with caution due to the small sample size of the study. Also, the factors that negatively affected Hispanic students' perception of school membership and school outcomes were not clear based on the methodology and data of this study.

Relationships among Study Variables

Grade levels seemed to play a significant role in students' performance. Incidences of tardy was least likely to be reported among the 8th graders (M = .50m SD = .89). Seventh graders reported the least number of in-school suspensions (M = 3.27, D = 3.00) and the most out-of school suspensions (M = 1.64, SD = 1.57). Correlation analyses revealed that the higher the student grade level the less amount of time was reported for out of school suspension (r = -. 29, p = .05). Kaufman, Jaser, Vaughan, Reynolds, Di Donato, Bernard, and Hernandez-Brereton (2010) reported that the types of disciplinary referrals differed across grade levels. Students in younger grades (k-6) were more likely to be reported for referrals for aggression (e.g., fighting, physical and verbal threats, bullying); middle school 7-8th graders for disrespect (e.g., use of profanity, disruptive behavior, disrespect, lying) and students in high school (9-12th grade) for attendance (skipping class, leaving building without permission). Additionally, Seals and Young (2003) reported that bullying was observed more in 7th grade than in 8th grade.

In-school-suspension was a common problem across grade levels at U school, however the most out of school suspension was reported among 7 graders. The type of behaviors that caused out-of school suspension were generally more serious (e.g., assault, vandalism) and aggressive in nature than those behaviors that caused in school consequences. This result seems to support Kaufman at al. (2010), and Seal and Young's (2003) findings on types of common behavior problems across grade levels. This finding suggests the need to develop interventions that focus on different type of behaviors according to students' developmental stages.

Statistically significant correlations were found between the outcome variables relative to school engagement (e.g., GPA, number of missed school days, number of in-school/out-of school suspension, and number of incidences of tardy). Students who had higher GPA's, as

usually expected, missed fewer school days (r = -.48, p =.00); had fewer incidences of tardy (r = -.30, p =.04); and spent fewer hours in in-school suspension (r = -.44, p =.00). The number of missed school days and incidences of tardy showed a statistically significant correlation (r = .38, p =.01). That is, student who missed more school days also reported more incidences of tardy. Lastly, Students who stayed in the school the longest seemed to be in upper grade levels (r = .34, p =.02), take more classes (r = .29, p =.05), and participate in more extracurricular activities (r = .35, p =.01).

It was not clear from this study which individual risk factors most significantly affect at-risk students' psychological or behavioral school engagement. It was premised in the inception of the study that risk factors are not a complete or simple explanation for why some students fail (Croninger & Lee, 2001). However, this study was designed to investigate whether risk factors affect the components that might be conducive to students' successful school experiences. The study results revealed that overall, risk variables or psychological school engagement, measured by the school membership scale, did not have statistically significant effects on students' behavioral school engagement indicators. Nonetheless, the components of behavioral engagement (GPA, attendance, tardy, disciplinary referrals) were closely related with each other. McIntosh, Flannery, Sugai, Braun, and Cochrane (2008) also reported that there were significant interactions between academic scores and office discipline referrals among 8 and 9th graders. Steward, Steward, Blair, Jo, and Hill (2008) discovered significant negative relationship between absenteeism and GPA among African American first year high school students. Suh and colleague (2007) reported that low GPA had the greatest impact on students' decision to drop-out of high school. The current study findings and the previous research reports suggest that

systematic and intensive instructional and behavioral intervention is most urgent to improve at-risk students' school engagement.

Limitations

This study was limited in several ways. First, the sample used for this study was fairly small (N=48), and was taken from a single school. Therefore, findings should not be generalized to all students with disabilities or those who attend alternative schools. In addition, since the subjects were composed of volunteers, it is possible that the outcomes only represented those students who had more supports from the parents or those who were more motivated to participate in activities in school.

Another limitation of this study is the disproportionate sizes of groups that were used for statistical comparisons. Although, statistical homogeneity of the variances were addressed, markedly smaller sample sizes for the female students, students who were eligible for reduced priced lunch, extracurricular activity participants, students from certain minority groups, and those who had a history of involvement with the criminal justice systems should be noted and the findings need to be considered with caution.

Thirdly, the survey instrument had no norm to compare. Although the survey instrument used for this study was based on already existing instruments, the adapted survey has not been tested on the general student population. Therefore the positive survey result should be considered with caution.

Finally, this study was descriptive and cross-sectional rather than experimental and longitudinal. Longitudinal research that follows two groups of typical students and high risk

students over extended years would provide much richer information on how students' school membership is affected by different variables and how they influence school outcomes.

Implications for Educators

Psychological school engagement, measured by a school membership scale, did not result in statistically significant effects on students' behavioral school engagement. That is, GPA, attendance, tardy, and suspension results did not show statistically significant correlations with school membership scores. Instead, correlation analysis (Table. 4-9) indicated that the dependent variables were strongly correlated with each other. This means that students' academic (e.g., GPA, test scores, etc) and behavioral performance (e.g., attendance, disciplinary referrals) were closely associated with each other rather than with their perception of school belongingness. Thus the current study result does not fully accord with the previous findings on school membership. Using a sample of 58,000 students from 132 schools, Anderman (2002) revealed that school belonging was significantly related to students' GPA and absenteeism. Similarly Goodenow reported (1993) from her study with 454 6^{th}-8^{th} grade students who attended a typical school that school membership was significantly related to academic achievement as measured by class grades. In addition, Goodenow (1993) found that absences and tardiness had relatively weak, but statistically significant correlations with school membership. The different results from the current study may be due to the small sample size and different student characteristics.

The findings from the current study have important implications for education for chronically struggling learners. Although the study participants reported moderately positive psychological school engagement, psychological engagement did not independently seem to bring positive changes in students' school performance. Although students may be aware of the importance of education and feel connected to school they may still skip classes or display

tardiness to avoid challenging academic tasks. These patterns may of course negatively affect their academic achievement. To bring visible changes in school outcomes of chronically struggling learners, strong evidence based strategies should be in place in addition to the supportive and caring atmosphere of most alternative schools.

The study subjects were those who had complex social and academic problems, and who had a history of being unresponsive to typical academic and/or behavioral interventions. In this context, the positive school membership results suggest that alternative school settings may be effective in producing more positive outcomes in these students' attitudes, self esteem, and other school outcomes. An additional finding of this study suggests that the longer students attended this school the more likely they were to participate in extracurricular activities and advance to the next grade levels. Although this result suggests some positive aspects of alternative schools it is not clear whether alternative school programs have long term positive effects on at-risk students' school completion or which components of a program have the greatest impact on students' school outcomes. More controlled, future studies are needed to answer these questions.

This study has implications for behavior management of at-risk students. The study results indicated that lower rates of out-of school suspension were reported as students grade level increased. Although in-school-suspension is still a common problem among upper grade level students, those behavior problems that caused out-of school suspension were generally more serious (e.g., assault, vandalism) and often involved behaviors that caused damage to the community. For these types of behaviors, the juvenile justice systems are also often involved. It seems critical for schools and community to start their violence prevention and behavior management efforts when students are younger and still in school. For students who are challenged with serious behavior problems, the efforts should take a consistent and holistic

approach including family outreach, vocational training, counseling, peer supports, after school programs, as well as academic interventions.

Suggestions for Future Research

More broad based research is required to further investigate variables that affect at-risk students' school outcomes. Larger sample sizes with proportionate gender, race, SES, and grade compositions are needed to validate the current study findings. Also, comparison studies with typical students will help clarify the influence of various factors on students' school engagement. Current study revealed that the perceptions of students' school membership did not have statistically significant impact on at-risk students' school outcomes. Instead, academic and behavioral school outcome variables were found to be closely related with each other and with some demographic factors, including race/ethnicity and grade levels. Additional studies are recommended to investigate the educational environment and components that have the most direct impact on school achievement of high risk students.

Conclusions

This study contributes to the sparse research on alternative schools and at risk students. In particular this study investigated the variables that affect at-risk students' school outcomes. The results suggests that alternative school settings may have positive effects on at-risk students' perception of school membership, however the positive school membership had non-significant effects on at-risk students' academic and behavioral outcomes. The findings from this study have implications for designing interventions for at-risk students. Yet, the implication should not be hastily generalized considering the unique characteristics of the subjects and setting of this study.

APPENDIX A.

Data Collection Protocol

The following tables were developed to facilitate the data collection process.

Table 1. Student Info Chart

ID	Grade	Gender	Race	DOB	Lunch (Free/Reduced/Fully priced)	First day at U school	Full time/ Part time (# of hours)	Survey (C/IC)	Notes
1									
2									
…									
48									

*C/IC – complete/incomplete

Table 2. Student Outcomes

ID	# missed school days	# incidence Tardy	# hours spent for in-school suspension	# days for out-of school suspension	Spring 2009 GPA	School Membership Score
1						
2						
…						
48						

APPENDIX B.

Informed Parent Consent Form

The Effects of School Membership on Academic and Behavioral Performance of At-risk Students

INTRODUCTION

The Department of Special Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You may refuse to sign this form and not participate in this study. You should be aware that even if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your relationship with the school, the services it may provide to you, or the University of Kansas.

PURPOSE OF THE STUDY

The purpose of the proposed study is to investigate the sense of school membership perceived by students who attend alternative school. The specific interests of the research is to determine the manner in which students' perceived school membership interacts with environmental and academic risk variables and correlates with the academic and behavioral school outcomes.

PROCEDURES

Families that agree to participate in this study will receive information regarding detailed procedures and expectations. Participating students will be asked to complete a paper survey which will take approximately 20 minutes to complete.

RISKS

There are no potential physical or emotional harm for the participating student. Students' survey responses will not be shared with the school staff and will only be used for the purpose of the research investigation. Furthermore, we are only interested in group information and data, thus survey responses will not be associated with individual students.

BENEFITS

This study has the potential to provide critical research information on students' sense of belonging to alternative schools and on best practices in teaching students who attend alternative schools.

PAYMENT TO PARTICIPANTS

Participants will not be paid monetarily. However the survey responses can provide valuable input for educational service providers.

PARTICIPANT CONFIDENTIALITY

Your child's name will not be associated in any way with the information collected about your child or with the research findings from this study. The researcher will use a study number instead of your child's name. The researchers will not share information about your child unless required by law or unless you give written permission.

Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give permission for the use and disclosure of your child's information, excluding your child's name, for purposes of this study at any time in the future.

REFUSAL TO SIGN CONSENT AND AUTHORIZATION

You are not required to sign this Consent and Authorization form and you may refuse to do so without affecting your right to any services you are receiving or may receive from the University of Kansas or to participate in any programs or events of the University of Kansas. However, if you refuse to sign, you cannot participate in this study.

CANCELLING THIS CONSENT AND AUTHORIZATION

You may withdraw your consent to participate in this study at any time. You also have the right to cancel your permission to use and disclose information collected about your child, in writing, at any time, by sending your written request to:

Sunyoung Ahn, M. S. Ed.,
Department of Special Education,
University of Kansas,
Joseph R. Pearson Hall,
1122 West Campus Road,
Lawrence, KS 66045

If you cancel permission to use your information, the researchers will stop collecting additional information about you. The researcher may use and disclose information that was gathered before she received your cancellation, as described above.

QUESTIONS ABOUT PARTICIPATION

Questions about procedures should be directed to the researcher listed at the end of this consent form.

PARTICIPANT CERTIFICATION:

I have read this Consent and Authorization form. I have had the opportunity to ask, and I have received answers to, any questions I had regarding the study and the use and disclosure of information about me for the study. I understand that if I have any additional questions about my rights as a research participant, I may call (785) 864-7429 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email dhann@ku.edu.

I agree to take part in this study as a research participant. I further agree to the uses and disclosures of my information as described above. By my signature I affirm that I am at least 18 years old and that I have received a copy of this Consent and Authorization form.

_____ _____

Type/Print Parent's Name Child's name **Parent's Signature Date**

Researcher Contact Information

Sunyoung Ahn, Student Investigator
Department of Special Education
University of Kansas University of Kansas
Joseph R. Pearson Hall
1122 West Campus Road,
Lawrence, KS 66045
(785) 766-4311

APPENDIX C.

Student Assent Form

This survey asks about your opinions about the school you attend. There are no correct or wrong answers to the questions. We are interested in what you think. You are being asked to complete this survey because we are interested in better understanding your opinion about your school. Please be honest and take this opportunity to let us know what you think about your school experiences.

Your answers are private. No one at your school or in your family will see them. Your responses will be combined with those of other students and they will never be identified as yours. Your parent or guardian has given us permission to ask you to complete this survey. However, you can decide whether or not you want to answer these questions. If there is a question you do not wish to answer, skip it. But we hope that you will answer as many as possible so we can understand how students feel about school.

Thank you for taking your time to let us know how you feel about attending school. If you have any questions, please feel free to contact Sunyoung Ahn at (785) 766-4311 or cozmok@gmail.com.

Thank you for your help.

Sincerely,

Sunyoung Ahn

APPENDIX D.

School Membership Scale Item Correlations

	q1	q2	q3	q4	q5	q6	q7	q8	q9	q10	q11	q12	q13	q14	q15	q16	q17	q18	q19	q20	q21	q22	q23	q24	q25
q1	1.00	.53**	.36**	.41**	.02	.27*	.32*	.37**	-.03	.24*	.44**	.42**	.36**	.19	.209	.222	-.07	.41**	.13	.17	.120	.449**	.51**	.31*	-.01
q2	.53**	1.00	.35**	.37**	.06	.29*	.47**	.27*	.18	.28*	.56**	.54**	.41**	.33*	.25*	.29*	.08	.28*	.30*	.21	.24*	.41**	.36**	.15	.09
q3	.36**	.35**	1.00	.18	-.11	.44**	.34**	.10	.37**	.23	.22	.42**	.34**	.22	.37**	.41**	.28*	.28*	.34**	.17	.21	.31*	.32*	.16	-.04
q4	.41**	.37**	.18	1.00	.24*	.15	.16	-.14	.21	.22	.38**	.34**	.48**	.09	.13	.34*	.31*	.13	.27*	.29*	.20	.34*	.34**	.07	.24
q5	.02	.06	-.11	.24*	1.00	-.08	.10	.05	.09	.21	.38**	.08	.13	.15	.39**	.08	.28*	-.25*	.44**	.28*	.19	.12	.19	.22	.18
q6	.27*	.29*	.44**	.15	-.08	1.00	.32*	.16	.09	.21	.12	.28*	.19	.15	.08	.15	.02	.13	.25*	.22	.23	.26*	.25*	.06	.13
q7	.32*	.47**	.34*	.16	.10	.32*	1.00	.02	.30*	.37**	.71**	.48**	.50**	.33*	.22	.50**	.47**	.15	.23	.43**	.22	.42**	.39**	.29*	.10
q8	.37**	.27*	.10	-.14	.05	.16	.02	1.00	-.09	.03	.10	-.08	.00	.33*	.11	-.05	-.18	.41**	.08	-.03	-.11	.20	.30*	.14	-.05
q9	-.03	.18	.37**	.21	.09	.09	.30*	-.09	1.00	.31*	.40**	.44**	.45**	.19	.43**	.37**	.39**	.11	.34*	.36**	.31*	.31*	.12	.14	.17
q10	.24*	.28*	.23	.22	.21	.21	.37**	.03	.31*	1.00	.54**	.56**	.62**	.02	.52**	.63**	.56**	.09	.64**	.64**	.68**	.41**	.31*	.26*	.34*
q11	.44**	.56**	.22	.38**	.38**	.12	.71**	.10	.40**	.54**	1.00	.61**	.63**	.28	.44**	.60**	.49**	.01	.52**	.55**	.47**	.42**	.42**	.25*	.39**
q12	.42**	.54**	.42**	.34*	.08	.28*	.48**	-.08	.44**	.56**	.61**	1.00	.62**	.20	.36**	.46**	.30*	.15	.39**	.48**	.60**	.46**	.22	.23	.16
q13	.36**	.41**	.34*	.48**	.13	.19	.50**	.00	.45**	.62**	.63**	.62**	1.00	.21	.55**	.65**	.57**	.28*	.59**	.82**	.69**	.64**	.43**	.24*	.34*
q14	.19	.33*	.22	.09	.15	.15	.33*	.33*	.19	.02	.28*	.20	.21	1.00	-.05	.17	.13	.33*	.05	.08	.06	.38**	.38**	.24	-.02

q15	.21	.25*	.37**	.13	.39**	.08	.22	.11	.43**	.52**	.44**	.36**	.55**	-.05	1.00	.43**	.33*	.02	.65**	.45**	.42**	.34*	.04	.19	.27*
q16	.22	.29*	.41**	.34*	.08	.15	.50**	-.05	.37**	.63**	.60**	.46**	.65**	.17	.43**	1.00	.54**	.20	.51**	.52**	.48**	.54**	.37**	.28*	.27*
q17	-.07	.08	.28*	.31*	.28*	.02	.47**	-.18	.39**	.56**	.49**	.30*	.57**	.13	.33*	.54**	1.00	-.03	.50**	.61**	.46**	.23	.25*	.08	.24
q18	.41**	.28*	.28*	.13	-.25*	.13	.15	.41**	.11	.09	.01	.15	.28*	.33*	.02	.20	-.03	1.00	-.13	.10	.04	.48**	.35**	.28*	-.31*
q19	.13	.30*	.34**	.27*	.44**	.25*	.23	.08	.34*	.64**	.52**	.39**	.59**	.05	.65**	.51**	.50**	-.13	1.00	.51**	.55**	.33*	.27*	.12	.49**
q20	.17	.21	.17	.29	.28	.22	.43	-.03	.40	.64	.55	.48	.82	.08	.45	.52	.61	.10	.51	1.00	.76	.59	.50	.35	.30
q21	.12	.24*	.21	.20	.19	.23	.22	-.11	.31*	.68**	.47**	.60**	.69**	.06	.42**	.48**	.46**	.04	.55**	.76**	1.00	.41**	.35**	.18	.52**
q22	.45**	.41**	.31*	.34*	.12	.26*	.42**	.20	.31*	.41**	.42**	.46**	.64**	.38**	.34*	.54**	.23	.48**	.33*	.59**	.41**	1.00	.68**	.61**	.17
q23	.51**	.36**	.32*	.34*	.19	.25*	.39**	.30*	.12	.31*	.42**	.22	.43**	.38**	.04	.37**	.25*	.35**	.27*	.50**	.35**	.68**	1.00	.49**	.25*
q24	.31*	.15	.16	.07	.22	.06	.29*	.14	.14	.26*	.25*	.23	.24*	.24	.19	.28*	.08	.28*	.12	.35**	.18	.61**	.49**	1.00	.13
q25	-.01	.09	-.04	.24	.18	.13	.10	-.05	.17	.34*	.39**	.16	.34*	-.02	.27*	.27*	.24	-.31*	.49**	.30*	.52**	.17	.25*	.13	1.00

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed)

APPENDIX E.

Descriptive Statistics for Student Responses to School Membership Scale Items

	Mean	Std. Deviation	Analysis N	Missing N
q1	3.35	1.16	48	0
q2	3.40	1.23	48	0
q3	3.90	1.08	48	0
q4	3.68	1.34	47	1
q5	3.96	1.34	48	0
q6	2.54	1.17	48	0
q7	3.55	1.27	47	1
q8	3.17	1.53	48	0
q9	3.73	1.51	48	0
q10	3.65	1.14	48	0
q11	3.28	1.28	47	1
q12	3.30	1.52	47	1
q13	3.66	1.20	47	1
q14	3.19	1.25	47	1
q15	3.55	1.43	47	1
q16	3.91	1.14	47	1
q17	4.23	1.06	48	0
q18	2.85	1.71	48	0
q19	3.68	1.34	47	1
q20	4.08	1.33	48	0

q21	4.30	1.12	47	1
q22	4.09	1.27	47	1
q23	4.10	1.21	48	0
q24	3.44	1.62	48	0
q25	4.12	1.51	48	0

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