

**ADOLESCENT DEVIANCE: WHY STUDENT ROLE PERFORMANCE MATTERS**

A Thesis by

Sarah J. Victory

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Advised by Dr. David Wright

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I have examined the final copy of this Thesis for form and content and recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts with a major in Sociology.

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Dr. David W. Wright, Committee Chair

We have read this Thesis  
and recommend its acceptance:

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Dr. Jodie Hertzog, Committee Member

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Dr. Brian Withrow, Committee Member

## DEDICATION

To My "Honey, Honey", Dominic Alexander Victory

"The only difference in doing something and not doing something  
is doing it." (Dr. David Wright)

## **ACKNOWLEDGMENTS**

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## **ABSTRACT**

The focus of this research project is on the relationship of student role performance and deviant behavior in adolescents. I use the Education Longitudinal Study of 2002 to analyze the relationship of the given alternative model across student role performance factors, school factors, and family factors. The first two hypotheses deal with the student role performance level, stating that males are more likely to be deviant than females, and students who are held back a grade are more likely to be deviant. The next two hypotheses deal with the school level, stating that students in schools with increased rules will more likely be deviant and higher teacher-student ratios will increase deviance. The final two hypotheses deal with the family level and state that as family SES increases, deviance decreases, and students in two-parent families will have less deviance than students in single-parent families. The results of the analyses revealed that the first set of hypotheses was supported. In the second set of hypotheses, the first hypothesis was supported, but the second hypothesis was not supported. The final set of hypotheses was supported. It was concluded that student role performance had a significant effect on deviance.

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## 1. Introduction

Educational success is a determinant of an individual's likelihood to attend college and obtain a good job. The relationship between educational success and career achievement is demonstrated by the national policy *No Child Left Behind (US Government, 2001)*. This policy measures the performance of schools and teachers based on national standardized test scores of students. However, certain factors can cause a regression in academic success, such as deviance which can negatively affect student role performance. The future success of students will be determined by understanding and acknowledging the factors responsible for hindering student role performance.

Previous literature addresses different factors that can affect the likelihood of an adolescent engaging in deviant behavior such as sex, educational commitment, attendance patterns, and handicaps. School demographics and rules, parental involvement, class sizes, and school environments have also been noted as factors that relate to deviance in adolescents. Past studies have indicated that socioeconomic status, family demographics, family resources, communication, and family rules can also be factors in relation to deviance. All of these factors listed can be put into three main categories: 1) student role performance (SRP), 2) school factors, and 3) family factors. This study uses the 2002 Education Longitudinal Survey (ELS) to



examine the influence that each level has on adolescent deviance.

## **2. Literature Review**

### 2.1 Deviance

Previous studies conducted on deviance have generated several theories. One theory is the Akers Social Learning Theory where deviance is defined as violent, destructive, and illegal behavior. This theory states that the likelihood for adolescents to engage in deviant behavior is affected by their attitudes regarding deviance, their imitations of people around them, and the consequences (positive and negative) that result from deviant behaviors (Ardelt & Day, 2002). The Control Theory suggests that deviant behavior can be minimized by strong relationships between adolescents and society (Downs, Robertson, & Harrison, 1997). Labeling Theory suggests that if adolescents are labeled as "deviant", they are likely to feel stigmatized and become even more engaged in deviant behavior (Downs, Robertson, & Harrison, 1997).

### 2.2 Student Role Performance

Student role performance (SRP) refers to the indicators by which institutional agents assess students' abilities to meet given expectations. SRP is affected by these agents. Components of SRP include students' sex, race, language, time spent on homework, school attendance, and handicap factors.

An adolescent's sex can have an impact on their likelihood

of becoming involved in deviant behavior. One cause of this is due to the fact that adolescent males and females usually contrast in terms of maturity and social interaction (Crosnoe, Erickson, & Dornbusch, 2002). Studies have shown that adolescent girls are less deviant, have fewer deviant friends, and are less likely affected by their friends' negative behaviors than boys (Crosnoe, Erickson, & Dornbusch, 2002). Both boys and girls who have low self-control and lack social behaviors growing up are likely to engage in deviant behavior as adolescents (Mason & Windle, 2002).

Adolescents' race/ethnicity did not result as having any significant impact upon acts of deviant behavior (Dornbusch, Erickson, Laird, & Wong, 2001). However, race and ethnicity can influence academic performance, which can eventually lead to acts of deviance. African Americans and Caucasians tend to be less committed to their education than Hispanics (Johnson, Crosnoe, & Elder, 2001). According to Epstein (1972), African Americans, Hispanics, and Native Americans have low educational attainment as a result of being minorities in society.

Adolescents vary in their levels of educational commitment, such as spending time doing homework, keeping good grades, desiring to pursue college, etc. One study found that the more time adolescents spend on homework and keeping good grades, the less likely they are to have friendships with others involved in

deviant acts (Erickson, Crosnoe, & Dornbusch, 2000). A high level of educational commitment usually signifies the absence of delinquency and the tendency to obey given rules (Erickson, Crosnoe, & Dornbusch, 2000).

Attendance patterns at school and the possibility of grade retention affect the likelihood of adolescent deviance. Adolescents who do not establish good attendance patterns usually become truant pupils (Bonikowske, 1987). This puts them at a higher risk of becoming involved in such deviant behaviors as gang activity, smoking, and drinking (Garry, 1996). Truancy also causes students to get behind in homework assignments, and the further behind they get, the more likely they are to eventually drop out of school (Bonikowske, 1987). If a child experiences grade retention or begins school at a later age, then they are at a higher risk for future behavior problems (Byrd, Weitzman, & Auinger, 1997). The reason for this higher risk level is due to the fact that adolescents who are older than the rest of their peers may not feel as appropriate in socializing with them. Therefore, they are likely to engage in other devious behaviors. (Byrd, Weitzman, & Auinger, 1997.) They may also feel like they do not meet up to their peers' levels of intelligence, which can cause them to fall behind in homework and completely disengage themselves from school. (Byrd, Weitzman, & Auinger, 1997).

Handicaps and disabilities can be determining factors in

whether or not an adolescent is likely to engage in deviant behavior. This can include feelings of inadequacy, physical disabilities, and mental disabilities (Dekker & Koot, 2003). Physical handicaps, such as speech or hearing impairments, can cause barriers in communication and making friends for adolescents (Redmond & Rice, 1998). These barriers can result in teachers retaining a child, which can ultimately result in deviance, as mentioned earlier (Byrd, Weitzman, & Auinger, 1997).

Individuals with disabilities tend to not be accepted by others, especially by their peers in school. This feeling of low acceptance can be the cause of loneliness, truancy, quitting school, and juvenile delinquency (Cook & Semmel, 1999).

### 2.3 School

The composition of schools has been shown in some studies to have an effect on deviance. School demographics, environments, rules, problems, and programs should all be taken into account concerning adolescent deviance. Factors such as public versus private schools, strict rules, classroom environment, student-teacher ratios, teacher-student relationships, low income, school violence, and physical and sexual abuse, can determine whether or not a student becomes involved in deviant behavior.

As more parents become leery of school safety and the lack of discipline enforcement in public school systems, more students are being enrolled in private schools (Schaller, 1979).

Differences between public and private schools can play a factor in whether a child is likely to be deviant or not. One difference is the level of parental involvement, which plays a significant role in students' achievement (Rothstein, 2000). More parental involvement is usually found in private schools, as some private schools mandate parents to sign an agreement stating they will be involved in a certain number of their child(ren)'s activities (Rothstein, 2000).

Rules and regulations vary from district to district, and rules also vary between public and private schools. Some schools have much more rigid rules than others. It is important, as with any structured organization, to have rules and guidelines that are to be followed (Sampson and Raudenbush, 1999). However, it has been shown that some schools can actually be too strict, causing a negative reaction from the students. Intense rule enforcement can make students feel uncomfortable in their environment (Sugai, Sprague, Horner, & Walker, 2000). For instance, the use of metal detectors, security officers, mandatory hall passes, and uniform policies can increase the structure of a school, but adolescent students tend to react negatively to such rules (Sugai, Sprague, Horner, & Walker, 2000). These devices, along with locker and bag searches, can increase fear and anxiety in students, and they do not address the main reason or motivation behind students carrying weapons in

the first place (Juvonen, 2001). Having uniformed officers can create a feeling of apprehension among students, leading to more acts of misbehavior (Juvonen, 2001). Another common policy among schools is the "zero-tolerance" policy. Zero-tolerance policies implement punishment after any single act which violates established rules, and those punishments are usually either suspension or expulsion (Juvonen, 2001). This type of policy may reduce problems inside the school building, but it also decreases the likelihood of academic success for the student, as suspension and/or expulsion gives time and opportunities for delinquency involvement and dropping out of school permanently (Juvonen, 2001).

Student-to-teacher ratios and class sizes can affect a student's academic performance and behavior. There is a high amount of diversity in classrooms, and a reasonable student-to-teacher ratio needs to be maintained for a productive classroom environment (Farrelly, 2001). However, most schools lack the needed funding to balance those ratios appropriately (Farrelly, 2001). When an appropriate ratio is established, teachers can more easily build personalized relationships with their students, which will increase students' efforts in learning (Cresswell & Rasmussen, 1996). Research supports that student-to-teacher ratios have a fair amount of impact on student achievement (Murray, 2000).

The school environment as a whole influences students' academic success. Factors such as violence, absenteeism, vandalism, and disrespect can create poor learning environments. School violence can cause students to form negative feelings towards attending school, especially if they do not feel safe in their environment. Almost 25% of students in public school systems report victimization of violence acts while being at school (Bennett-Johnson, 2004). School violence can be associated with gang activity, flagrant disregard of studies, and void of interest in class (Bennett-Johnson, 2004). Some schools implement programs to help reduce violence, such as having crisis response teams, on-site counselors, and designated staff members who are responsible for reporting incidents to authorities and notifying parents (SVRC, 2002). Community support and involvement from parents, staff, and students can also aid in minimizing violence in schools (Bennett-Johnson, 2004). Vandalism in schools is a common practice by deviant students, especially those involved in gangs (Pappalardo, 2002). Schools used for outside community activities have high susceptibility of vandalism (Pappalardo, 2002). Vandalism prevention provides students with a safer environment and can be implemented by using hidden cameras, eliminating school lockers, monitoring parking lots, and having only one accessible entrance to the school building (Pappalardo, 2002).

## 2.4 Family

There are a number of family-related categories that affect adolescent deviance, including socioeconomic status (SES), family demographics, family resources, family communications, and family rules. Each of these categories has its own factors which contribute to a child's likelihood of being involved in deviant activities. Family demographics consist of such things as SES, family size, household language, employment, parents' education, single parenting, and marital status.

SES is an extremely important factor in the academic performance of students (Wenglinsky, 1997). Low family income can result in a child becoming involved in deviant activities such as stealing or selling drugs (Hofferth, Smith, McLoyd & Finkestein, 2000). Obviously, the higher the SES of a family, the better the child will be capable of performing, academically. This is because a child from a high SES household will have access to a high number of various resources, such as having a computer, having a dictionary, having access to a library, and having the ability to afford extracurricular activities (Hofferth, Smith, McLoyd & Finkestein, 2000).

As for family size, the smaller a family, the more likely the student is to perform well in school (Greenberg, 1985). Families with fewer children can provide necessary study resources and increase the likelihood of satisfactory educational



performance (Downey, 1995). According to Douglas Downey (1995), as families grow in size, the resources available for children are reduced, which can cause poor academic performance. A large family size is a good predictor that those children are likely to obtain a very low education for reasons such as less one-on-one time with parents, and less help on homework from parents (Riala, Isohanni, Jokelainen, & Jones, 2003).

Children may become disengaged in school if the language spoken at home is not the same as the language used by their teachers. This has become a rising issue, seeing that close to three million children are involved in English as a Second Language (Shore, 2001). A California study found that 62% of the lowest test score results belong to kids who are learning English as a second language, showing that language barriers can have a significant impact upon student performance (Wells, 2001).

Greenberg (1985) points out that the higher the education of the father in the household, the more likely the child is to attain an even higher educational level. A mother's educational level has a weaker influence on educational aspirations of males than a father's education (Sewell & Shah, 1968). If a mother is the only parental component in a household, then her education level is a strong predictor of the child's academic achievement. (Matherne & Thomas, 2001). Sewell & Shah (1968) point out that both parents' educational attainment effect the educational

desires of females.

Children of single-parent households engage in deviant behavior much more often than those children from a two-parent, married household (Downey, 1994). Typically, an adolescent from a single-parent household has less supervision than those from a two-parent household due to the amount of time spent working by the parent (Garasky, 1995). As a result, this lack of supervision prevents necessary emotional bonding and attachment for healthy family relationships within the household (Matherne & Thomas, 2001).

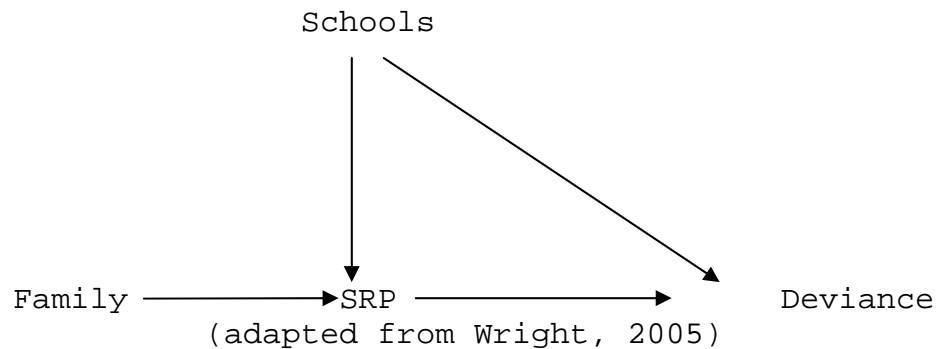
The family resources available to students can affect their overall performance and well-being. Those resources include items such as a dictionary, encyclopedia, computer, books, access to a library, calculator, washer, dryer, microwave, and study space. It is likely that low-income households will be able to provide fewer resources for the children in the family (Hofferth, Smith, McLoyd & Finkestein, 2000). Other family resources which may deter children from deviant behavior include access to religious or community activities. Adolescents who are involved in religious or community activities are not likely to involve themselves in deviant acts (Erickson, Crosnoe, & Dornbusch, 2000).

Communication plays an important role in establishing good relationships between parents and children. Parents who

communicate regularly with the school and teachers regarding their child's performance are more likely to have a productive and open relationship with that child (Chyung, Darling, & Caldwell, 1998). Parents can also encourage their children by discussing future educational plans with them and by being involved with their homework, studies, and school programs (Rothstein, 2000).

Lastly, family rules can influence the way a child chooses to behave outside of the home. Such rules as getting homework checked by parents, limiting television/video game time, and requiring chores to be done are household rules that some families implement. Some parents may also establish a curfew for the child, require homework to be completed before other leisure activities, and insist that good grades be maintained (Chyung, Darling, & Caldwell, 1998). Those children who feel they have an obligation to follow a set of rules enforced by their parents are unlikely to establish friendships with others who are deviant, which decreases their susceptibility in becoming involved in deviant behavior themselves (Chyung, Darling, & Caldwell, 1998).

## 2.5 Alternative Model



In this study, deviance is based on negative behavior displayed by adolescents in school. This negative behavior means the student got in trouble for some act that may have resulted in disciplinary action by school administration.

Student Role Performance (SRP) has a direct effect on deviance. SRP is defined by the indicators used by institutional agents to gauge a student's ability to meet expectations that have been set. SRP is influenced by factors such as sex, race, time spent on homework, school attendance, involvement in religious and community activities, and handicaps. For example, lack of study time and class preparation can result in low SRP, which in turn, increases the likelihood of a student to become involved in deviant behavior.

The school is the structural segment of the alternative model, as it is the institution that defines deviance. Factors such as private versus public schools, strict rules, teaching styles and student expectations, classroom environments, student-

teacher ratios, teacher-student relationships, low income, school violence and abuse directly impact SRP. Thus, the school affects not only the definition of deviance, but also the SRP of the student.

The third segment of this alternative model is the family. Family factors such as socioeconomic status (SES), family demographics (family size, class, and parental education) resources, communication, and rules directly affect SRP. If the parental education and SES are high, it is likely that education will be emphasized in that household. Family resources (dictionaries, computers, calculators, study space, etc.) are most likely going to be available in households with a higher class and SES, reducing the likelihood for the student to engage in deviant behavior.

#### 2.5.1 Hypotheses

1a. Males are more likely to be deviant than females, net of other factors.

1b. Net of other factors, students who are held back a grade are more likely to be deviant.

2a. Net of other factors, students in schools with increased rules will more likely be deviant.

2b. Net of other factors, higher teacher-students ratios will increase deviance.

3a. Net of other factors, as family SES rises, deviance decreases.

3b. Net of other factors, students in two-parent families will have less deviance than students in single-parent families.

### **3. Data & Methodology**

#### 3.1. Data

Data for this research is taken from the Education Longitudinal Study (ELS) of 2002 sponsored by the National Center for Education Statistics (NCES) of the United States Department of Education. The sample for the ELS was taken from a national population of 10<sup>th</sup> graders who were studied throughout high school. There were 752 schools that participated in the study, with approximately 26 students from each school, giving a final sample size of 17,591 participants. Sample restrictions were placed to select out only those participants who had completed questionnaires for each model segment of the study, resulting in a final sample size of 11,046 participants for this research.

The use of standard weights in the ELS allows for an accurate display of the entire population in the study. Since weights usually impose a high number of sample sizes that distort the results by way of collapsing the standard error, a relative weight must be used. The standard weight is used to attain the sample size, but the relative weight is used in order to discuss bivariate and multivariate analyses without producing biased results.

#### 3.2. Variables

##### 3.2.1. Dependent Variable

The dependent variable for this research is deviance. The variable chosen to represent deviance is the variable labeled

'how many times student got in trouble' in the ELS. It is a binary variable coded as 0 for 'not deviant' and 1 for 'deviant'.

### 3.2.2. Independent Variables

#### 3.2.2.1. Student Role Performance (SRP)

The first model segment for this research project addresses student role performance (SRP) variables including: sex, race, language, grade retention, remedial courses, participation in extra-curricular activities, participation in college preparation programs, handicaps, class preparation, homework, hours worked each week, and hours spent watching television/DVD.

The sex variable is a binary variable that identifies the sex of the participant. This variable is coded as 0 for 'male' and 1 for 'female'. It is expected that males will be shown to have a higher level of deviance than females.

The race/ethnicity variable is a nominal variable, and it measures the race/ethnicity of the respondent. For this variable, 1 is 'White, non-Hispanic', 2 is 'Black, non-Hispanic', 3 is 'Hispanic', 4 is 'Asian, non-Hispanic', and 5 is 'other, non-Hispanic'. A binary variable was created from the race/ethnicity variable to measure the respondent's minority status. The minority variable is coded as 0 for 'not a minority' and 1 for 'minority'. It is suspected that these variables can influence the SRP of individuals, and the higher levels of deviance will be seen among minorities.

The non-English variable is a binary variable that identifies whether or not English is the respondent's native language. It is coded as 0 for 'those whose native language is English' and 1 for 'those whose native language is not English'.

The language spoken by each student can possibly affect their SRP, and it is suspected that those who do not speak English will have higher rates of deviance due to language barriers.

To determine whether or not the respondent had ever been held back a grade, a binary variable is created where 0 is for 'those who have never been held back' and 1 is for 'those who have been held back at least one grade'. This variable is expected to show an increase of deviance in those students who have been retained a grade level.

The remedial math and remedial reading variables are binary variables that determine whether or not the respondent ever took a remedial math or reading course, coded as 0 for 'no' and 1 for 'yes'. Then, an index of both variables is created to form a binary variable in order to determine if the respondent had any (either math or reading) remedial courses with the same coding as above, 0 for 'no' and 1 for 'yes'. The presence of remedial courses can be an identifying factor of those students who are more likely to be deviant, and it is suspected that a raise in deviance will be apparent for these students.

Several variables in the ELS refer to various student



impairments including: learning disabilities, speech/language impairments, mental retardation, emotional disturbance, hearing impairments, orthopedic impairments, visual impairments, and other disabilities. These variables are combined to create an index for a handicap variable. The handicap variable is binary, coded as 0 for 'no handicap' and 1 for 'handicap'. It is presumed that this variable will have an effect on deviance, as students with disabilities tend to fall away from meeting normal expectations set by the school, which in turn will cause them to be deviant.

The homework variable consists of several ELS variables that measure the number of hours per week spent on homework for various subjects. The constructed variables ranges from 0 to 21 or more hours spent per week on homework. It is suspected that more time spent on homework will increase the student's SRP level, which will show significance in the student being less likely to engage in deviant behavior.

The class preparedness variable is created by using several variables that represent class preparation to make a scale. The variables included in the scale were how often the student goes to class without a pencil or paper, how often the student goes to class without a book, and how often the student goes to class without having homework completed. The Cronbach alpha for this scale is .770. The variable is coded where 1 means 'never not

prepared', 2 means 'seldom not prepared', 3 means 'often not prepared', and 4 means 'usually not prepared'. Therefore, a higher number indicates that the student is not prepared for class. It is expected that the students who are usually prepared for class will not have high levels of deviance.

The extracurricular activities variable measures the number of hours per week spent on extracurricular activities such as sports, music, or other community activities. The variable ranges from 0 to 21 or more hours spent per week on extracurricular activities. It is suspected that more time spent on extracurricular activities will decrease the likelihood of deviant behavior for the respondent.

The ELS contains variables relating to how many hours the respondent works during the week and during the weekend. These variables are used to create an index to measure how many hours the respondent works in an entire week, and then the variable is recoded to measure whether or not the respondent actually had a paying job. This variable is binary, with 0 as 'not having a paid job' and 1 as 'having a paid job'. It is presumed that the respondents with paid jobs will be less likely to engage in deviance.

#### 3.2.2.2. School Level

The second model segment for this research project addresses school-level variables including: private school, school size,

class size, percent of students in free lunch program, percent of students in college preparation programs, percent of students in ESL, school problems, negative school environment, and school rules.

The private school variable is a binary variable that shows whether or not the respondent attended a private school. The variable is coded as 0 for 'no' and 1 for 'yes'. It is suspected that the results from this variable will show that there is a lower amount of deviance in private schools than in public schools.

The variable for school size is an interval level variable ranging from 200 to 2500 students. This variable will give an idea of how many students were in attendance at the respondent's school, with the expectation that more deviance will occur in larger schools due to larger class sizes and less attention per student. A variable for the class size of the 10<sup>th</sup> grade is interval level, ranging from 50 to 700 students. It is presumed that smaller class sizes will result in low levels of deviance.

An interval level variable is created to show the percent of students on a free lunch program at the respondent's school. The amount of students receiving free lunch can represent a lower income status among those students. It is suspected that schools with higher percentages of students on free lunch programs will have higher rates of deviance.

The variable for the percent of students in a college prep program is an interval level variable. This variable is expected to show that schools with more students who are involved in college prep programs will have lower levels of deviance.

Another interval level variable is created to show the percentage of students in the respondent's school who are receiving English as a Second Language (ESL) instruction. Those students who do not understand English are very likely to not understand the expectations of the school, which is expected to result in a higher rate of deviance.

The ELS contains several variables regarding how often certain problems arise at the school. Those problems include: tardiness, absenteeism, class cutting, physical conflicts, robbery/theft, vandalism, alcohol use, illegal drug use, students on drugs/alcohol at school, sale of drugs near the school, possession of weapons, physical abuse of teachers, verbal abuse of teachers, racial tension among students, student bullying, disorder in classrooms, student disrespect for teachers, gang activity, and cult/terrorist group activities. These variables are used to create a scale for an interval level variable that measures school problems. The variable ranges from 1 to 5, and it is coded as 1 for 'never happens', 2 for 'happens on occasion', 3 for 'happens at least monthly', 4 for 'happens at least weekly', and 5 for 'happens daily'. The Cronbach alpha for

the scale is .86. School problems indicate deviant misbehavior, therefore, it is expected that high numbers for this variable will result in high levels of deviance.

Several variables used in the ELS describe a negative school environment that hinders learning. Those variables include: poor conditions of the building, poor heating/air/light, poor science labs, poor fine arts facilities, lack of space, poor library, lack of texts/supplies, too few computers, lack of multi-media, lack of discipline/safety, and poor vocational/tech equipment and facilities. A scale was used to create a new, interval level variable ranging from 1 to 4 based on the amount of negative conditions. The Cronbach alpha is .91. It is coded as 1 for 'not at all', 2 for 'very little', 3 for 'some extent', and 4 for 'a lot'. Consequently, a higher number represents a really poor school environment. Since poor school environments are responsible for learning hindrances, it is suspected that those schools with negative environments will have an increase in deviance.

The final variable in the school segment model is school rules. This variable was created from an index of ELS variables regarding certain rules pertaining to the school. Those variables include: control access to buildings during school hours, control access to grounds during school hours, require students to pass through metal detectors, random metal detector

checks on students, close campus for students during lunch, random dog sniffs to check for drugs, random sweeps for contraband, require drug testing for any students, require student to wear uniforms, enforce strict dress code, require clear book bags/ban book bags, require students to wear badges/picture ID, require faculty/staff to wear badges/picture ID, and use security cameras to monitor school. The created variable ranges from 0 to 12, with 0 as a low number of school rules and 12 as a high number of school rules. It is suspected that the lower number of school rules will show a higher level of deviant behavior.

#### 3.2.2.3. Family Level

The final model segment for this research project addresses family-level variables including: family structure, rural/urban residency, number of siblings, years in neighborhood, parents' education, Socio-economic status, parental involvement with student, parental advice to student, parental involvement with school, number of parental rules in the household, number of siblings who have dropped out of school, family resources, parent-student communication, parent help with homework, and family meal times.

The family structure variable was used to create two binary variables for two-parent families and single-parent families. The two-parent family variable is coded as 1 for 'two-parent' and

0 for anything other than two-parent. The single-parent family variable is coded as 1 for 'single-parent' and 0 for anything other than single-parent. It is suspected that single-parent families will have a greater amount of deviant behavior present.

The urban variable is a binary variable that measures whether the student is in a rural or urban area. It is coded as 0 for 'rural' and 1 for 'urban'. It is presumed that families in urban areas will have higher levels of deviance than those in rural areas.

The siblings variable is an interval level variable that will show the number of siblings of the respondent. This variable ranges from 0 to 6. It is expected that the more siblings a student has, the more likely they will be to engage in deviant behavior.

An interval level variable is used to show the number of years the respondent has lived in a particular neighborhood. This variable ranges from 0 to 50. It is presumed that those who remain stationary for longer periods of time will tend to have lower levels of deviance.

A binary variable is used to show whether or not a respondent's parent(s) have a college degree. This variable is coded as 0 for 'no' and 1 for 'yes'. It is expected that respondents whose parents have college degrees will not be likely to engage in deviant behavior.

An interval level variable is created using a scale of several variables in the ELS to show involvement between the parent(s) and student. Those variables include: attended school activities with 10<sup>th</sup> grader, worked on homework/school projects with 10 grader, attended concerts/plays/movies with 10<sup>th</sup> grader, attended sports events outside school with 10<sup>th</sup> grader, attended religious services with 10<sup>th</sup> grader, attended family social functions with 10<sup>th</sup> grader, took day trips/vacations with 10<sup>th</sup> grader, worked on hobby/played sports with 10<sup>th</sup> grader, went shopping with 10<sup>th</sup> grader, went to restaurants with 10<sup>th</sup> grader, spent time talking with 10<sup>th</sup> grader, and did something else fun with 10<sup>th</sup> grader. The Cronbach alpha is .80, and the variable ranges from 1 to 4. It is coded as 1 for 'never', 2 for 'rarely', 3 for 'sometimes', and 4 for 'frequently'. A lower level of deviance will be seen among those who have a high level of parent-student involvement.

The variable for parental advice is an interval level variable created from a scale of several variables in the ELS regarding advice provided about: selecting courses or programs, plans for college entrance exams, applying to college/school after high school, jobs to apply for after high school, information about community/national/world events, and things troubling the 10<sup>th</sup> grader. The Cronbach alpha for this scale is .76, and the variable ranges from 1 to 3. It is coded as 1 for



'never', 2 for 'sometimes', and 3 for 'often'. Those who have more advice will be less likely to be deviant.

An interval level variable is created from a scale of variables in the ELS relating to parents' involvement with the school. Those variables include: belong to parent-teacher organization (coded as 1), attend parent-teacher organization meetings (coded as 2), take part in parent-teacher organization activities (coded as 3), act as a volunteer at the school (coded as 4), and belong to other organizations with parents from school (coded as 5). Zero represents those parents who are not involved with the school. The Cronbach alpha for the scale is .71. It is suspected that lower levels of deviance will be seen among those whose parents are most involved with the school.

The parent rules variable is an interval level variable ranging from 1 to 8 which represents the number of rules the parents enforce at home. It is suspected that those students who have more rules enforced at home will be less likely to engage in deviant behavior.

An interval level variable is used to show the student's number of siblings who have dropped out of school. This variable ranges from 0 to 6. It is expected that a higher number of siblings who have dropped out will result in the student being more prone to deviance.

The family resource variable is an interval level variable

created from a scale of several variables in the ELS. Those variables identify families' resources including: daily newspaper, regularly received magazine, computer, access to the Internet, DVD player, electric dishwasher, clothes dryer, more than 50 books, student has his/her own room, and fax machine. It ranges from 0 to 10. Those who have access to several resources will be less likely to be deviant than those who have a limited amount of resources.

The parent helps with homework variable is a binary variable that identifies whether or not a parent helps the student with their homework. It is coded as 0 for 'does not help' and 1 for 'helps with homework'. It is suspected that those students who receive help with homework will not be likely to engage in deviant behavior.

The meals variable is an interval level variable that states how many meals are eaten together as a family in the student's household. This variable ranges from 0 to 7. Those who spend more time together eating meals will be less likely to partake in deviant activities.

### 3.3 Methodology

This research project uses SPSS to run univariate, bivariate, and multivariate analyses. The univariate analysis is performed to determine and identify various groups within the study sample. The tests consist of those such as 'frequency' and

'descriptive' in order to obtain the mean values of both dependent and independent variables. A bivariate analysis is used to show differences between two independent variables across the dependent variable, deviance. A t-test is used to determine whether or not the differences between groups are statistically significant or not. Multivariate analysis is used to identify which variables are significant, net of other factors. Logistic regression is a multivariate analysis that is used to examine the relationship between the binary dependent variable, deviance, and the other independent variables in relation to family structure.

This method of multivariate analysis can determine the probability of group membership across other independent variables.

#### **4. Results**

##### 4.1 Univariate and Bivariate Analyses

Table 1 provides univariate and bivariate measures for the mean values of those students who are deviant or not deviant. The table also provides the bivariate measures for student role performance, school level, and family level factors. Data is taken from the 2002 Education Longitudinal Survey which is a national probability data set of 10<sup>th</sup> graders in the United States.

Forty percent of the entire sample is deviant. Among students who are not deviant, 59% are female (59% vs. 37%). This means the other 41% are male, which supports Hypothesis 1. Among students who

are not deviant, 13% are non-English speakers (13% vs. 10%). Students who are not deviant spend an average of 11.1 hours per week on homework, whereas students who are deviant spend only 9.0 hours per week on homework. Students who are not deviant spend more time in extracurricular activities than students who are deviant (5.97 vs. 4.02). Among students who are not deviant, 20% are enrolled in a college prep program (20% vs. 16%). Among students who are deviant, 35% percent are minority (35% vs. 30%), 16% have been held back (16% vs. 11%), 13% partake in remedial coursework (13% vs. 9%), and 14% have a handicap (14% vs. 9%). Students who are not prepared for class are more likely to be deviant than those who are prepared for class (2.06 vs. 1.75). Students who are deviant spend an average of 13.93 hours per week working (13.93 vs. 10.47) and 10.69 hours per week on tv/dvd (10.69 vs. 9.43). Statistical significance is seen in all of the SRP factors.

On the school level, the average class size of those students who are not deviant is larger than the average class size of students who are deviant (355.13 vs. 336.98). Among students who are not deviant, approximately 61% of the schools offer a college prep program (60.9% vs. 59.6%). The average number shown for school problems of students who are not deviant is 2.40 (vs. 2.38). Among the deviant students, there is a higher rate of those who attend a private school (11% vs. 6%). The variables for school environment

and the number of school rules did not show any statistical significance.

On the family level, the average SES percentile of students who are not deviant is higher than those who are deviant (51.7% vs. 48.3%). Among students who are not deviant, the average number shown for parent involvement with the student is 3.15 (vs. 3.08), parents advising the student is 2.25 (vs. 2.21), and parents involved with the school is 1.88 (vs. 1.78). The average number of resources available to students who are not deviant is 6.51 (vs. 6.30). Among non-deviant students, a result of 0.49 is given for those who receive help with their homework from parents (vs. 0.42).

Students who are not deviant have an average number of 5.44 for the days per week that they have at least one meal with their family (vs. 5.18). Among students who are deviant, an average of 26% are from single-parent families (vs. 21%), and they have an average of 2.37 siblings (vs. 2.29). The average number of parental rules for deviant students is 6.96 (vs. 6.85), and the average for number of siblings who have dropped out is 0.26 (vs. 0.18). Statistical significance is not seen with the rural and urban residence variables or the years in neighborhood variable.

Table 2 provides univariate and bivariate measures for the mean values of those students who are deviant or not deviant according to family structure. This table also provides the bivariate measures of student role performance, school level, and

family level factors for single-parent versus two-parent families.

Among students who are not deviant and live in single-parent families, 61% are female (vs. 58%), 45% are minorities (vs. 26%), and 15% are held back at least one grade in school (vs. 10%). An average of 1.9 is shown for students not being prepared for class (vs. 1.72). They spend an average of 11.48 hours per week working (vs. 10.20) and an average of 9.81 hours on tv/dvd (vs. 9.34). For students who are deviant and live in two-parent families, an average of 11.2 hours per week is spent on homework (vs. 10.6), 5.34 hours is spent in extracurricular activities (vs. 4.07), and 20% are enrolled in a college prep program (vs. 16%). Among non-deviant students, the variables for non-English speaking, remedial coursework, and handicaps are not statistically significant according to family structure. For students who are deviant and live in single-parent families, 40% are female (vs. 35%), 47% are minorities (vs. 30%), 22% have been held back at least one grade in school (vs. 14%), and 18% have a handicap (vs. 12%). An average of 2.1 is shown for students not being prepared for class (vs. 2.0). They spend an average of 11.10 hours on tv/dvd (vs. 10.54). Among deviant students in two-parent families, an average of 9.2 hours per week is spent on homework (vs. 8.3), and an average of 4.31 hours is spent in extracurricular activities (vs. 3.2). Of these students, 16% are enrolled in college prep programs (vs. 14%). Among deviant students, the variables for non-English speakers,

remedial coursework, and hours students works per week are not statistically significant.

As for school level factors of non-deviant students in single-parent families, the average number shown for a negative school environment is 1.79 (vs. 1.73), and the average number of school rules is 4.81 (vs. 4.59). Seven percent of non-deviant students in two-parent families attend a private school (vs. 4%), and 61.7% partake in college prep programs (vs. 58.5%). Class size and school problems are not statistically significant according to family structure. Among deviant students of single-parent families, an average of 2.40 is given for school problems (vs. 2.37), an average of 1.78 is given for negative school environment (vs. 1.71), and an average of 4.89 is given for number of school rules (vs. 4.65). For deviant students of two-parent families, 12% attend a private school (vs. 7%), and 61% partake in college prep programs (vs. 55.6%). Class size for deviant students is not statistically significant according to family structure.

For family level factors of non-deviant students in single-parent families, 37% live in an urban residence (vs. 25%). They have an average of 2.43 siblings (vs. 2.26), and the average number of siblings who have dropped out is 0.27 (vs. 0.16). Among non-deviant students in two-parent families, 21% live in a rural residence (vs. 18%), and they have lived in their neighborhood for an average of 11.11 years (vs. 9.94). The average SES percentile

for these students is 54.8% (vs. 40.4%). The average number given for parents being involved with the student is 3.17 (vs. 3.07), and the average number given for parents being involved with the school is 1.97 (vs. 1.57). The average number of family resources available to the student is 6.75 (vs. 5.65). An average of 0.51 is shown for those who receive help with homework from their parents (vs. 0.42), and they have an average of 5.51 for days a week that the student has at least one meal with their family (vs. 5.18). For non-deviant students, the variables for parents advising students and number of parental rules are not statistically significant. For deviant students in single-parent families, 33% are from an urban residence (vs. 27%), and they have an average of 0.32 siblings who dropped out of school (vs. 0.23). Among deviant students from a two-parent family, the average SES percentile is 51.5% (vs. 39.2%). The average number shown for parental involvement with these students is 3.11 (vs. 3.00), parental advice to the student is 2.23 (vs. 2.15), parental involvement with the school is 1.89 (vs. 1.46), and the number of parental rules is 6.99 (vs. 6.87). The average number of family resources available to deviant students in two-parent families is 6.53 (vs. 5.66). The average number shown for parents helping the student with homework is 0.43 (vs. 0.38), and they have an average of 5.29 for the number of a days a week that they have at least one meal with their family (vs. 4.88). Statistical significance is not found for variables



regarding rural residence, number of siblings, or number of years lived in the neighborhood.

#### 4.2 Multivariate Analysis

Table 3 provides multivariate measures for single-parent and two-parent households using logistic regression. This analysis identifies which of the independent variables are identified with deviance across family structure.

As expected, being in a single-parent family increases odds of being deviant by 1.14 compared to that of two-parent family. Table 3 shows that there is a difference of 14% caused by family structure net of all other factors. Looking at SRP factors, students are less likely to be deviant if they are female and non-English speakers as well as if they spend more time on homework and extracurricular activities. The standardized rank shows that being female and not being prepared for class have the most impact on deviance.

At the school level, no significance was found using logistic regression except with the private school variable. The insignificant variables include class size, school problems, negative school environment, and number of school rules. The standardized rank shows that among school level variables, the private school factor has the most impact on deviance.

For family level factors, odds of being deviant decrease for those with higher SES percentiles, those who have a high level of

parent involvement with the student, and for those whose parents help them with homework. Odds of being deviant increase for those who come from a single-parent family, have a high number of parental rules, and have siblings who have dropped out. The variables for urban residence and number of siblings are not statistically significant. The standardized rank at the family level shows that parent involvement has the greatest impact on deviance.

## **5. Discussion**

It can be seen from the results section of this literature that several clear conclusions can be drawn when it comes to the relation between deviance and the three levels of independent variables used in this study, as seen in the Alternative Model (2.4). Those three levels consist of SRP (including sex, minority status, language, and handicaps), school level factors (including class size, school problems, school environment, and school rules), and family level factors (including family structure, socioeconomic status, parents' involvement, parent rules, and parent help with homework). Using previous studies and the given Alternative Model, the following hypotheses were generated:

1a. Males are more likely to be deviant than females, net of other factors.

1b. Net of other factors, students who are held back a grade are more likely to be deviant.

2a. Net of other factors, students in schools with increased rules will more likely be deviant.

2b. Net of other factors, higher teacher-students ratios will increase deviance.

3a. Net of other factors, as family SES rises, deviance decreases.

3b. Net of other factors, students in two-parent families will have less deviance than students in single-parent families.

Hypothesis 1a is supported by Table 1. Among those students who are deviant, 63% are male and 37% are female. This hypothesis is also supported by Table 2 when looking at family structure. Of students who are deviant in a two-parent household, 65% are male, and in a single-parent household, 60% are male.

Hypothesis 1b predicts that students who are held back at least one grade are more likely to be deviant than those students who are not held back. According to Table 1, we can see that among deviant students, there is a higher percent of handicaps than there is among non-deviant students.

The next hypothesis states that more deviance will be seen in school with an increased amount of rules. We can see that for deviant students the average number of rules is higher than for students who are not deviant (Table 1).

We know that a larger class size indicates a high student-teacher ratio. According to Table 1, the average class size is smaller for a deviant student than for a non-deviant student which supports Hypothesis 2b by stating that a high student-teacher ratio will increase the likelihood of deviant behavior.

Hypothesis 3a predicts that a higher SES will show a smaller amount of deviance. Table 1 supports this prediction with 51.7% being the average SES percentile of families for students who are not deviant.

Finally, the last hypothesis is supported in Tables 1, 2, and 3. It is clear in all three analyses that a higher amount of deviance occurs in single-parent households than in two-parent households.

Just like any other study, this study has some limitations. One limitation involves the operationalization of the term deviance, which is the dependent variable. Since the definition of this variable is provided by the school, it is somewhat biased in regards to institutional discipline, and it lacks meaning of other forms of deviant behavior in society. Another limitation involves the classification of students who are or are not reported as deviant. Those students who are classified as deviant are the ones who got caught in some act of deviance. Most likely, there are many more acts of deviance that are not counted for simply because the adolescents are not caught doing them.

As seen in this study, adolescents' educational success is often affected by deviance. School administrators need to implement incentive programs (such as rewarding students for being prepared for class) to keep students in school and increase their performance. Community mentoring programs need to be available for

students who receive minimal support from their parents regarding their education. Structural level changes in policies need to be made to make it possible for parents to spend more time with their children and be more involved in their activities. Until then, no improvements will be seen in student role performance. When individuals begin to understand and acknowledge the existing relationship between student role performance and deviance, then perhaps future studies will be able to identify an increase of individual success in our society.

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## APPENDICES

**TABLE 1**  
**Values for Full Sample by Deviance**

Variables:	Full Sample	Deviant	<sup>1</sup>	<sup>2</sup>	Non-Deviant
<b>Dependent Variable:</b>					
%Deviance (0,1) (mean):	40%				
(stddev):	0.49				
<b>Independent Variables:</b>					
<b>SRP factors:</b>					
%Female (0,1)	50%	37%	***	^	59%
	0.50	0.48			0.49
%Minority (0,1)	32%	35%	***		30%
	0.47	0.48			0.46
%Non-english (0,1)	12%	10%	***		13%
	0.32	0.30			0.34
%Held back (0,1)	13%	16%	***		11%
	0.34	0.37			0.32
%Remedial coursework (0,1)	11%	13%	***		9%
	0.31	0.34			0.29
%Handicap (0,1)	11%	14%	***		9%
	0.31	0.34			0.29
Hours per week homework	10.2	9.0	***	^	11.1
	8.98	8.48			9.20
Not prepared for class(1-4)	1.88	2.06	***	^	1.75
	0.80	0.76			0.80
Hours in extra curricular activity	4.65	4.02	***		5.07
	5.78	5.53			5.91
%Enrolled in college prep program (0,1)	18%	16%	***		20%
	0.38	0.36			0.40
Hours student works per week	11.86	13.93	***	^	10.47
	14.90	15.96			13.98
Hours spent on tv/dvd	9.94	10.69	***	^	9.437
	5.19	5.39			5.00
<b>School-level factors:</b>					
%Private school (0,1)	8%	11%	***		6%
	0.27	0.31			0.24
Class size	347.85	336.98	***		355.13
	200.61	199.98			200.71
% College prep	60%	59.6%	*		60.9%
	29.94	29.86			29.98
School Problems(1-5)	2.39	2.38	**		2.40
	0.34	0.35			0.34
Negative school environment(1-4)	1.73	1.72			1.74
	0.57	0.56			0.58
Number of school rules(0-12)	4.67	4.72			4.64
	2.21	2.24			2.19

Continued on next page.

<b>Family-level factors</b>			
%Rural residence (0,1)	21%	21%	20%
	0.40	0.41	0.40
%Urban residence (0,1)	28%	29%	28%
	0.45	0.45	0.45
%Single Parent Family (0,1)	23%	26%	21%
	0.42	0.44	0.41
Number of siblings	2.32	2.37	2.29
	1.52	1.54	1.50
Years in neighborhood	10.79	10.69	10.86
	8.75	8.96	8.61
SES Percentile	50.3%	48.3%	51.7%
	28.87	28.35	29.13
Parents involved w/ student(1-4)	3.12	3.08	3.15
	0.48	0.49	0.47
Parents advise student(1-3)	2.23	2.21	2.25
	0.58	0.60	0.57
Parents involved w/ school(0-5)	1.84	1.78	1.88
	2.29	2.28	2.29
Number of parental rules(1-8)	6.89	6.96	6.85
	1.24	1.19	1.28
Number of siblings dropped out	0.21	0.26	0.18
	0.64	0.72	0.58
Family has resources(0-10)	6.43	6.30	6.51
	3.15	3.24	3.09
Parent helps w/ homework(0,1)	0.46	0.42	0.49
	0.50	0.49	0.50
Days a week student has one meal w/ family	5.34	5.18	5.44
	1.81	1.85	1.78
<b>Sample n (weighted):</b>	<b>10,886</b>	<b>6,517</b>	<b>4,370</b>
	100%	59.9%	40.1%

1 = \*\*\* p < 0.0001; \*\* p < 0.01; \* p < 0.05

2=effect size greater= >.20

**TABLE 2**  
**Values for Full Sample by Family Structure**

Variables:	Not Deviant		Deviant	
	1	2	1	2
	<i>Two-Parent</i>	<i>Single-Parent</i>	<i>Two-Parent</i>	<i>Single-Parent</i>
<b>Independent Variables:</b>				
<b>SRP factors:</b>				
%Female (0,1)	58% * 0.49	61% 0.49	35% ** 0.48	40% 0.49
%Minority (0,1)	26% *** ^ 0.44	45% 0.50	30% *** ^ 0.46	47% 0.50
%Non-english (0,1)	13% 0.34	12% 0.32	10% 0.30	9% 0.29
%Held back (0,1)	10% *** 0.30	15% 0.36	14% *** ^ 0.35	22% 0.41
%Remedial coursework (0,1)	9% 0.28	10% 0.30	13% 0.34	13% 0.34
%Handicap (0,1)	9% 0.29	9% 0.28	12% *** 0.33	18% 0.38
Hours per week homework	11.2 ** 9.20	10.6 9.19	9.2 ** 8.53	8.3 8.30
Not prepared for class(1-4)	1.72 *** 0.78	1.9 0.86	2.0 * 0.76	2.1 0.78
Hours in extra curricular activity	5.34 *** ^ 5.95	4.07 5.66	4.31 *** ^ 5.67	3.2 5.05
%Enrolled in college prep program (0,1)	20% ** 0.40	16% 0.37	16% * 0.37	14% 0.35
Hours student works per week	10.20 ** 13.63	11.48 15.19	14.04 16.00	13.62 15.83
Hours spent on tv/dvd	9.34 ** 4.98	9.81 5.07	10.54 ** 5.27	11.10 5.67

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<b>School-level factors:</b>						
%Private school (0,1)	7%	**	4%	12%	***	7%
	0.25		0.20	0.33		0.25
Class size	353.25		362.12	335.15		342.12
	201.59		197.33	200.59		198.24
% College prep	61.7%	***	58.5%	61%	***	55.6%
	29.98		29.89	29.58		30.28
School Problems(1-5)	2.40		2.42	2.37	**	2.40
	0.35		0.33	0.35		0.34
Negative school environment(1-4)	1.73	**	1.79	1.71	***	1.78
	0.58		0.59	0.56		0.58
Number of school rules(0-12)	4.59	**	4.81	4.65	**	4.89
	2.16		2.27	2.22		2.28
<b>Family-level factors</b>						
%Rural residence (0,1)	21%	**	18%	22%		19%
	0.41		0.38	0.41		0.40
%Urban residence (0,1)	25%	*** ^	37%	27%	***	33%
	0.43		0.48	0.44		0.47
Number of siblings	2.26	***	2.43	2.361		2.39
	1.47		1.60	1.52		1.58
Years in neighborhood	11.11	***	9.94	10.82		10.31
	8.31		9.57	8.57		9.95
SES Percentile	54.8%	*** ^	40.4%	51.50%	*** ^	39.2%
	28.76		27.67	28.24		26.59
Parents involved w/ student(1-4)	3.17	*** ^	3.07	3.11	*** ^	3.00
	0.46		0.51	0.48		0.51
Parents advise student(1-3)	2.25		2.23	2.23	**	2.15
	0.56		0.60	0.58		0.65
Parents involved w/ school(0-5)	1.97	***	1.57	1.89	***	1.46
	2.29		2.25	2.30		2.19
Number of parental rules(1-8)	6.86		6.81	6.99	**	6.87
	1.27		1.31	1.17		1.24
Number of siblings dropped out	0.16	***	0.27	0.23	**	0.32
	0.55		0.69	0.70		0.76
Family has resources(0-10)	6.75	*** ^	5.65	6.53	*** ^	5.66
	3.05		3.07	3.24		3.16
Parent helps w/ homework(0,1)	0.51	***	0.42	0.43	**	0.38
	0.50		0.49	0.50		0.49
Days a week student has one meal w/ family	5.51	***	5.182	5.29	*** ^	4.88
	1.72		1.96	1.80		1.95
<b>Sample n (weighted):</b>	<b>5,131</b>		<b>1,386</b>	<b>3,221</b>		<b>1,149</b>
	47.1%		12.7%	29.6%		10.6%

1 = \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05

2=effect size greater= >.20



**TABLE 3**  
**Logistic Regression Analysis for the Deviance Model**  
(deviant=1)

Variables:	Full Sample				Two Parent				Single Parent				
	unstd.	1	odds ratio	stdz. rank	unstd.	1	odds ratio	stdz. rank	2	unstd.	1	odds ratio	stdz. rank
<b>SRP:</b>													
Female (0,1)	-0.744	***	0.48	-0.37	-0.759	***	0.468	-0.38		-0.703	***	0.5	-0.35
Minority (0,1)	0.168	***	1.18	0.08	0.211	***	1.235	0.09		0.059		1.06	
Non-english (0,1)	-0.582	***	0.56	-0.19	-0.664	***	0.515	-0.22		-0.369	*	0.69	-0.11
Held back (0,1)	0.007		1.01		-0.068		0.935			0.172		1.19	
Remedial coursework (0,1)	0.284	***	1.33	0.09	0.331	***	1.393	0.10		0.165		1.18	
Handicap (0,1)	0.140	**	1.150	0.04	-0.025		0.976			0.572	***	1.77	0.19
Hours per week homework	-0.017	***	0.98	-0.15	-0.016	***	0.984	-0.14		-0.021	***	0.98	-0.19
Not prepared for class(1-4)	0.426	***	1.53	0.34	0.463	***	1.589	0.37	^	0.333	***	1.4	0.28
Hours in extra curricular activity	-0.021	***	0.98	-0.12	-0.022	***	0.978	-0.13		-0.018	*	0.98	-0.10
Hours student works per week	0.015	***	1.02	0.22	0.017	***	1.017	0.25	^	0.009	***	1.01	0.14
Hours spent on tv/dvd	0.024	***	1.02	0.12	0.023	***	1.023	0.12		0.026	***	1.03	0.14
<b>School:</b>													
Private school (0,1)	0.981	***	2.67	0.27	1.007	***	2.738	0.29		0.811	***	2.25	0.18
Class size	0		1		0		1			0		1	
School Problems(1-5)	-0.003		1		-0.036		0.965	-0.01		0.103		1.11	
Negative school environment(1-4)	-0.050		0.95		-0.047		0.954	-0.03		-0.041		0.96	
Number of school rules(0-12)	0.017		1.02		0.016		1.017	0.03		0.019		1.02	
<b>Family:</b>													
Single Parent Family	0.135	**	1.14	0.00									
Urban residence (0,1)	-0.060		0.94		0.002		1.002			-0.180		0.84	
Number of siblings	-0.006		0.99		0.006		1.006			-0.049		0.95	
SES Percentile	-0.002	*	1	-0.06	-0.002	**	0.998	-0.06		-0.001		1	
Parents involved w/ student(1-4)	-0.306	***	0.74	-0.15	-0.312	***	0.732	-0.15		-0.306	***	0.74	-0.16
Number of parental rules(1-8)	0.106	***	1.11	0.13	0.119	***	1.127	0.15		0.079	*	1.08	0.10
Number of siblings dropped out	0.121	***	1.13	0.08	0.139	***	1.149	0.08		0.082		1.09	
Parent helps w/ homework(0,1)	-0.170	***	0.84	-0.08	-0.202	***	0.817	-0.10		-0.062		0.94	
(Constant):	-0.676	**	0.51		-0.784		0.457			-0.295		0.75	
Model Chi-sq	1483.1				542.45					339.41			
n=	10,886				8,352					2,534			

1=\*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05

2=significant difference between two-parent and single-parent families at the 0.05 level or higher