

Adolescents' Activity Involvement: Predictors and Longitudinal Consequences

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Introduction

Researchers interested in adolescents' involvement in extracurricular activities have typically approached this topic from one of the following three perspectives:

1. The first and most common perspective focuses on the benefits of activity involvement for healthy adolescent development. The release of A Matter of Time by the Carnegie Corporation of New York put the spotlight on the role productive use of time might play in successful adolescent development. It illustrated how much discretionary time adolescents have and how much of this time is spent on unstructured activities like "hanging out" with one's friends, watching television, and listening to music. It argued, consistent with other reports and studies of youth activity, that constructive, organized activities would be a better use of the adolescents' time for the following types of reasons:

Idle time is the devil's playground - doing good things with one's time takes time away from opportunities to get involved in risky activities;

One can learn good things while engaged in constructive activities - things like specific competencies, prosocial values and attitudes; and

Involvement in organized activity settings increases the possibility of establishing positive social supports and networks.

This perspective is also represented in the exciting work of Milbrey McLaughlin, Shirley Brice Heath, and their colleagues on the role of neighborhood organization in the lives of inner city youth (e.g., Urban Sanctuaries by McLaughlin, Irby, and Langman). And in the work on leisure as a setting for experimentation with different roles (e.g., Fine, Mortimer, & Roberts, 1990)

2. Second, studying the activity involvement of adolescents provides us with a more complete picture of the social context of development during this period. Activity choices are assumed to part of larger system of psychological and social forces that we know influence development (i.e., they provide insight into the following intersecting circles of influence: identity, peer groups/crowds, activities). This perspective is represented in the work of people like our discussant (B. Brad Brown. e.g., 1990), Penelope Eckert (e.g. Jocks & burnouts: Social categories and identity in the high school), Gary Alan Fine (e.g., With the boys: Little league baseball and preadolescent culture), Rainer Silbereisen (Silbereisen, Noack, & von Eye, 1992). It is also represented in the work of people like Csikszentmihalyi who focus on activities as a setting in which to self-actualize, and to express one's being/identity and one's passion (e.g., Csikszentmihalyi & Kleiber, 1991; Haggard & Williams, 1992).

The availability of organized activity settings can also be looked at as one of the social setting variables that link macro-social conditions like family SES, poverty, and neighborhood characteristics to adolescent development. This perspective is illustrated in the work already cited by McLaughlin, Brice Heath, and their colleagues. It is also represented in the recent work on neighborhood resource influences on development.

Finally, the participation in organized activities can be looked at as one of the social experiential variables that link family level values and beliefs to adolescent development. Our colleagues and we have developed this perspective as it relates to children's involvement in math, reading, and sports (e.g., Eccles et al., 1993).

3. Third, studying activity involvement provides insights into the psychology of task choice and motivated behavior. The work our colleagues and we have done on the power of our expectancy/value model of activity choice to predict participation in various leisure activities as well

as course enrollment and career choice is one good example of this approach - as is the work by Fishbein and Ajzen on the relation of beliefs, attitudes, intentions, and behaviors (1975) and the work by Feather on the relation of expectancies and values to action (e.g., Feather, 1982). This perspective is also prevalent in work on leisure and sport participation (e.g., Ajzen & Driver, 1991, Deeter, 1990; Gould & Weiss, 1987; Roberts & Duda, 1984).

Today we will report results from a longitudinal study of adolescent development in which we use all three of these perspective to look at adolescents' participation in various leisure activities (extracurricular activities). First we will present findings related to the Eccles et al. Expectancy/Value Model of Activity Choice. Next, we will summarize the evidence we have regarding the protective and risk properties of extracurricular activities on adolescent development between the 10th and 12th grades. Finally, we will present a series of findings related to the intersecting relations among identity, activity involvement, and peer networks.

STUDY OVERVIEW

First, however, let us provide you with a brief overview of the study.

The data come from the Michigan Study of Adolescent Life Transitions (MSALT). This is a longitudinal study that began with a cohort of sixth graders drawn from 10 school districts in southeastern Michigan in 1984. The vast majority of the sample is white and comes from working and middle class families living in primarily middle class communities. Many of the families worked in the automobile industry when we began the study and have been adversely affected by the changes in the auto industry over the last 10-15 years.

We have followed approximately 1800 of these youth through seven waves of data collection: 2 while they were in the sixth grade, 2 while they were in the seventh grade, one while they were in tenth grade, one while they were in 12th grade, and one in 1992-3 when most were 21-22 years old.

The data were collected via self-administered questionnaires which were completed at school during regular school hours. The seventh grade waves were collected in the adolescents' math classrooms. For the 10th and 12th grade waves, the adolescents were released from their classrooms to fill out the questionnaire in a large common room - usually the lunchroom. In addition, complete school records from grade five to grade 12 were collected for all participants - these included grades, absences, courses taken, and any disciplinary measures taken by the schools.

RESULTS DISCUSSION - PART 1: PSYCHOLOGICAL INFLUENCES ON ACTIVITY INVOLVEMENT

One of the primary purposes of this study was to test the utility of Expectancy/Value model of Achievement-related Choices that our colleagues and we have been developing over the last 20 years. This model is illustrated in the Figure 1.

- SHOW FIGURE 1-

As you can see, we predict that activity choices are most directly influenced by an individual's expectations for success at the activity and by the value the individual places on participating in the activity. Although the model was originally developed to study gender differences in course taking decisions and career choice, we have found that it is equally applicable to studying a variety of activity choices. Over the last several years, we have been conducting longitudinal work to investigate how well it does in explaining individual differences in free time involvement with reading, math, science, sports, social activities, and instrumental music. The model works very well in each of these activity domains. But it is especially powerful in explaining

individual differences in leisure type activities like sports. The next figures illustrate one example of these results focused on gender differences in sports participation. In this sample males spent more time engaged in sport activities than females ($F = 63.72$, $p < .001$). Why? We have hypothesized in our model that it is due to gender differences in ability self-concepts and subjective task values.

- SHOW FIGURE 2 -

FIGURE 2 - summarizes the gender differences in these adolescents' self-perceptions and values for sports. As you can see, the females think they are less able at sports, think participating in sports is less important, and enjoy participating in sports less than males. But do these beliefs account for the gender differences in participation?

-SHOW FIGURE 3 -

FIGURE 3 - summarizes the relevant path analytic results. As you can see they do.

We are now trying to determine whether more sociological factors (like family social class) also influence activity participation; and if so whether their effects are also mediated by these two clusters of psychological beliefs. This work is still underway. Although we find some association in the direction one would predict between social class indicators and activity involvement, we have been most impressed by how weak these associations are in three different samples.

-SHOW FIGURE 4-

For example, let us show you some of the demographic type differences that emerge in this sample at the tenth grade. At this wave, we collected detailed information on the adolescents' involvement in a wide variety of activities out of school. We have clustered the positive extracurricular-type activities into four categories: Prosocial Activities - church attendance and participation in volunteer service type activities; Performance Activities - participation in things like school band, drama, and other performing arts; Team Sports; and School Involvement - participation in clubs of various sorts at school.

As you can see in FIGURE 4, mother's education level is related significantly in the predicted linear fashion only to participation in Prosocial Activities (Chi-Square Likelihood Ratio = 11.41, $p < .01$). (No other Chi-Square tests were significant for mother's education).

-SHOW FIGURE 5 -

In contrast gender effects were significant for Prosocial Activities, Team Sports, and School-Involvement ($p < .01$ in each case).

RESULTS AND DISCUSSION PART 2: BUT DOES CONSTRUCTIVE TIME-USE MATTER?

With the publication of A Matter of Time: Risk and Opportunity in the Nonschool Hours, the Carnegie Corporation alerted the nation to the importance of adolescents' after school activity involvement. This report summarized the little existing evidence regarding how beneficial such involvement might be for healthy adolescent development. We now summarize our findings regarding this important question.

In addition to the detailed information we collected on involvement in positive extracurricular activities at both the 10th and 12th grade waves, we also collected detailed information on the adolescents' involvement in risky/problematic activities like drinking, getting drunk, skipping school, and engaging in dangerous behaviors just for the thrill of it. In each case we asked how

often in the last six months they had engaged in each of these activities. We also collected cumulative GPA's at the 11th and 12th grades, and in our 1992-3 wave we ascertained whether they were attending college. In the next series of overheads we will show you the relationship between 10th grade extracurricular activity involvement and these other behavioral outcomes. All effects we point out are significant at $p < .01$ or better.

-SHOW FIGURE 6-

FIGURE 6 illustrates the findings for involvement in Prosocial Activities. As you can see adolescents involved in prosocial activities in 10th grade report less involvement in problem type behaviors; this difference is especially marked at grade 12, two years after the activity data were collected. These results suggest that Prosocial Involvement is a protective factor with regard to the age-related increases in these risky behaviors.

We tested this hypothesis more directly using longitudinal regression analysis. The results are shown on the next figure.

- SHOW FIGURE 7 -

Each bar represents one regression equation. In each equation, we entered the 10th grade level of the risky behavior first in order to get an estimate the extent to which each of the other predictors explained change in frequency of engaging in the particular risky behaviors. We next entered gender and mother's educational level since these have emerged in other studies as predictors of involvement in these types of risky behaviors. Finally we entered 10th grade prosocial activity involvement. The standardized beta's for each of these predictors at the final step are illustrated here in a fashion that lets you easily compare the magnitude of the predictive relationship. As one would expect, the strongest predictor (the blue line) is the 10th grade level of involvement in the risky behavior - suggesting considerable stability in the individual differences in these behaviors over the high school years. Nonetheless, involvement in Prosocial Activities is related to change in this engagement in a protective direction - that is, the students who are involved in activities like attending church and doing volunteer work show less of an increase in these risky behaviors over the high school years than their non-involved peers.

- SHOW FIGURE 8 -

What about involvement in Team Sports? FIGURE 8 illustrates the relation of involvement in Team Sports to engagement in risky behaviors. Apparently, involvement in team sports at grade 10 is a risk condition for engagement in these risky behaviors at grade 12. When one tests this hypothesis using the type of longitudinal regression analyses just described for Prosocial Activities, being involved with Team Sports does indeed contribute significantly to an increase in alcohol use and getting drunk over the high school years after controlling for mother's education and student gender. But as we shall see later, involvement in Team Sports serves as a protective conditions for academic outcomes.

Before leaving the discussion of Team Sports, we need to point out a very interesting gender effect at grade 10 only.

- SHOW FIGURE 9 -

At grade 10, Team Sports appears to be related in a protective way for females and in a risky direction for males for alcohol use. Because this is not also true at grade 12, we will not try to explain it in the short time we have today. But it is an intriguing finding.

- SHOW FIGURES 10-12 -

The next three figures focus on participation in the Performing Arts. The mean level differences indicate that adolescents involved in Performing Arts at grade 10 are less frequently engaged in risky behaviors at both grade 10 and 12. This is particularly true for alcohol-related behaviors. However, when one controls for prior levels of drinking, we could find no evidence that 10th grade involvement in performing arts affects the direction or magnitude of change in drinking behavior over the high school years.

Like the data for Team Sports, we found an intriguing gender difference associated with participation in Performing Arts. Although there is no association between participation in Performing Arts and school attendance for females, there is for males: Males who participate in Performing Arts report skipping school less frequently peers and are reported as absent less often in their school records than their non-involved males.

Thus far, we have focused on the role of extracurricular activities as a protective or risk condition for involvement in problem or risky behaviors. We did not present any findings for the School Involvement category because it was unrelated to any of these risky behaviors. The strongest evidence of a protective role emerged for participation in Prosocial activities like church and volunteer activities. One would have to conclude based on what we have presented thus far that participation on Team Sports is a risk condition for drinking behavior.

- SHOW FIGURE 13 -

But what about academic outcomes? We will present evidence of two types of academic outcomes: grades and college attendance. FIGURE 13 summarizes the findings for 11th grade GPA. Again these bars summarize the standardized regression coefficients from a step-wise regression analysis. We entered both the quantitative and verbal scale scores from the DAT test (a standardized achievement test given in all of the schools in our sample) as a control for prior achievement levels. We entered mother's education level as a control for relevant family background characteristics and we entered gender to control for the fact that females get better grades than males in high school. We then entered participation in each of the four extracurricular activities in four separate regression equations. (It should be noted that all four also make independent significant contributions when they are entered together in the same regression equation.) The purple section illustrates the size of these beta's. Each one is significant at the $p < .01$ level. Each one predicts in the positive direction indicating that participation in each of these activities is related to obtaining a higher than expected GPA at grade 11 based on the usual predictors of GPA. Clearly, the background characteristics account for much more of the variation in GPA than does activity involvement. Nonetheless, these analyses provide pretty clear evidence that participation in these types of extracurricular activities provides a protective context in terms of academic performance during the high school years.

-SHOW FIGURE 14-

These conclusions are given further support by the next Figure which illustrates the same type of regression analyses with full time college enrollment at age 21 as the dependent measure. In this case, three of the four types of extracurricular involvement are predictive of college enrollment after controlling for the relevant background variables ($p < .01$): School Club Involvement, Team Sports, and Performing Arts. Involvement in Prosocial Activities is not predictive of this outcome.

What can we conclude? The evidence presented thus far is mostly consistent with the conclusion reached in the Carnegie report A Matter of Time. However, the pattern is not as simple as one might expect. Both the magnitude and the direction of the relations depends on the outcome being considered and, to some extent, on the gender of the adolescent. For example, although

participation in Team Sports is related to increased GPA and increased probability of attending college FT, it is also related among males to such risky behaviors as drinking alcohol. Similarly, although being involved in school clubs does not appear to reduce the frequency with which one does risky things like use drugs, drink alcohol and skip school, it is related in a positive direction to our indicators of academic success. We think this pattern of results makes good sense when one considers the nature of high school peer groups - which we will do shortly. The findings are also consistent with other studies reporting that some involvement in risky activities like drinking and cutting school are not necessarily problematic in terms of their consequences for long term educational success (e.g.,). One must take into account the meaning of the particular behavior in the broader context of the adolescent's life and development.

RESULTS AND DISCUSSION, PART III: SYNERGISTIC FORCES

Which brings us to final portion of our talk. To fully understand both the meaning and the potential influence of adolescents' extracurricular activity choices, one needs to step back and consider this behavior in the larger context of adolescent behavior and development. Figure 15a presents a very global schematic representation of the overlap between three very important spheres of influence on adolescent development. As you can see activity involvement is one of these spheres. But the meaning of any particular activity is likely to be related to its connection to the adolescent's identity and peer group - the other two spheres.

We have chosen to represent these three spheres as overlapping circles rather than as a set of causally ordered relations because it is likely that these three domains influence each other in reciprocal fashion over time. But if we were forced to predict the causal ordering of these relations we would predict that identity drives changes in both one's peer network and one's activity choices. Such a prediction is inherent in the expectancy/value model we presented earlier.

We would like to end our talk with some examples of our attempts to study the interrelations among these three spheres of influence. At the tenth grade, we asked the participants to make a prototype judgment regarding their identity. Since the movie The Breakfast Club was quite popular at the time, we asked the participants to indicate which of five characteristics was most like them. We told them to ignore the sex of the character and base their selection on the type of person each character was. The adolescents had no difficulty with their selection - less than 5% left the question blank. But how did their selection relate to kinds of activities, both positive and negative, in which they were engaged?

-SHOW FIGURES 15a and b-

FIGURE 15b illustrates the distributions of identity types for each of our four extracurricular groups. The largest concentration of identity types engaged in prosocial activities is the Brain. No single identity type stands out among the group of adolescents involved in performing arts so we won't talk further about this group today. As one might expect, the Jocks stand out in the Team Sports group. And as was portrayed in the movie, the Princess types stand out in the School-Involvement group. Let us now look at the association of each of these identity types with our outcome measures.

- SHOW FIGURES 16 and 17 -

FIGURE 16 shows the expected pattern for 11th grade GPA. The Brain has the highest GPA and the Delinquent has the lowest. FIGURE 17 shows the same pattern for college attendance.

- SHOW FIGURES 18 and 19 -

Finally, FIGURE 18 shows a predictable pattern for involvement in risky behaviors. Not surprisingly, the Delinquent is highest on all three of these behaviors and the Brain is the lowest. But consistent with the results we reported earlier on the association of activity involvement with drinking behavior, both the Jock and the Princess report relatively high levels of alcohol use at grade 10. This effect is even more evident at grade 12 (see FIGURE 19).

These preliminary results suggest that there is a link between identity and activity involvement. But if the notion of overlapping spheres of influence is correct one needs to look at the association of both identity and extracurricular involvement to the nature of one's peer network. To look at this association, we asked the participants to indicate what proportion of their friends had various characteristics with 5 = all, 3 = about half, and 1 = none.

-SHOW FIGURE 20 -

FIGURE 20 illustrates the results for the five characteristics most directly related to the outcomes we have focused on thus far. The Delinquent stands out as having the fewest proportion of friends who are doing well academically and plan to attend college, and as having the highest proportion of friends engaged in the three indicators of risky behavior. The Brain has the most consistent set of friends - both high on academic outcomes and low on risky behaviors. But interestingly, once again the Jocks and Princesses have a more mixed peer network. On the one hand, the proportion of their friends who look good on our academic outcomes is about the same as the Brain's network. On the other hand, the proportion of their friends who drink and skip school is significantly higher than the proportion of the Brain's friends who engage in these risky behaviors. This could be one reason why being involved in Team Sports leads to increases in both drinking and academic achievement.

- SHOW FIGURE 21 -

This brings us back to the association between extracurricular involvement and one's peer network. The results are illustrated in Figure 21. We have organized this table slightly differently because so many of the adolescents did not report participating in some of the categories of activities. This figure illustrates the mean level of the responses for those adolescents who reported being involved in each of the four types of extracurricular activities as well as the grand mean for comparison purposes. Again what is interesting is that those youth involved in either Team Sports or School Clubs and Organizations report a relatively high proportion of friends (compared to the grand means) who are both doing well on our academic outcomes and drinking alcohol regularly. In contrast, those youth involved in prosocial activities like the Brain's have a higher proportion of friends than the population mean who are doing well on our indicators of academic success and are less involved in these three indicators of risky behaviors than the population mean.

These two patterns could help explain why only prosocial activities appear to serve a protective function in terms of both sets of outcomes. It is among this group of adolescents that the three spheres of influence converge on both positive academic outcomes and low involvement in risky behaviors.

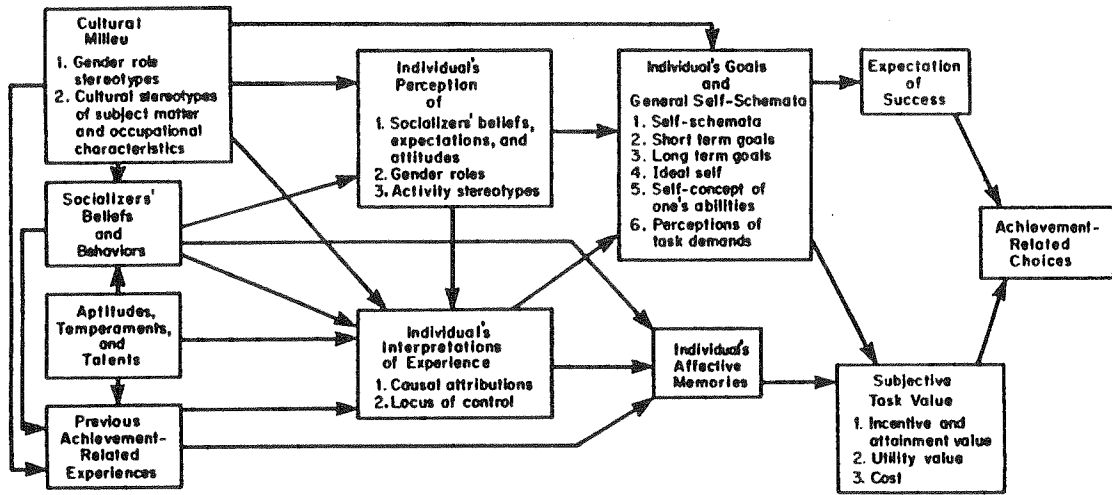
A different pattern of convergence characterizes those youth involved in team sports and school clubs and organizations. For these two groups, both one's identity group and one's peer group are associated with positive academic outcomes and relatively high levels of alcohol consumption. Consequently, it should not be surprising that involvement in these activities are related to a different pattern of change over the high school years than participating in prosocial activities.

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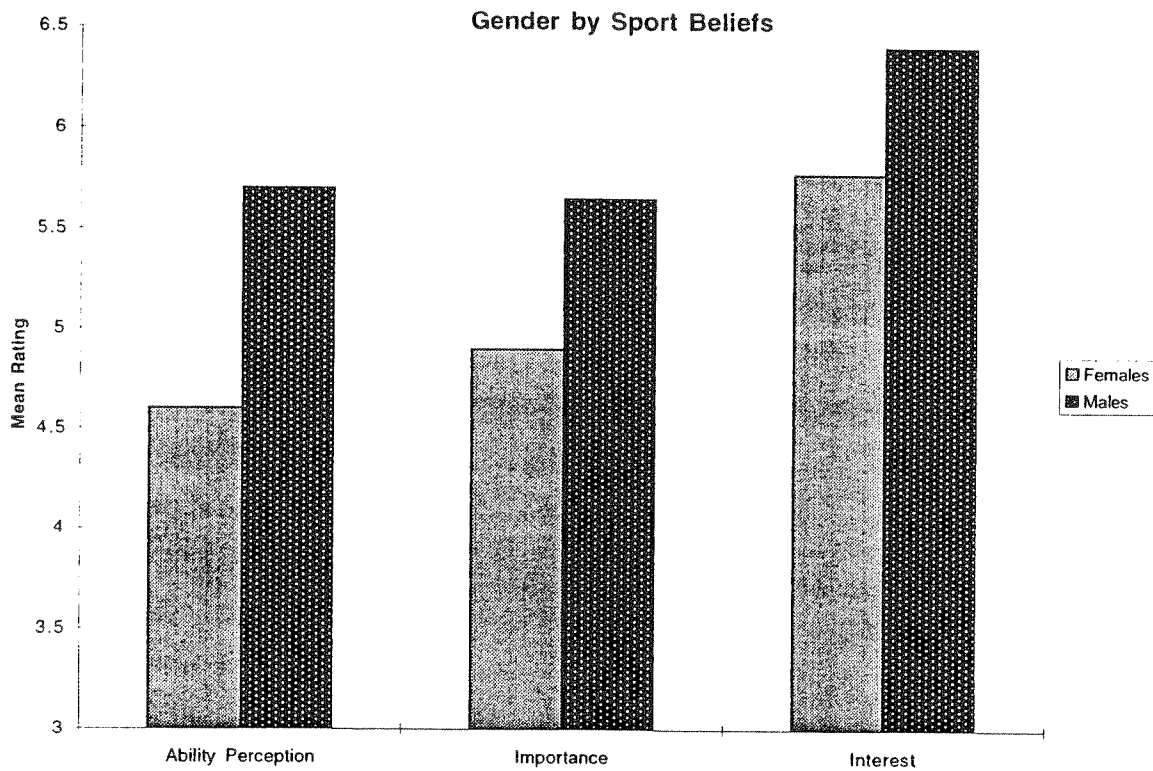
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Figure 1



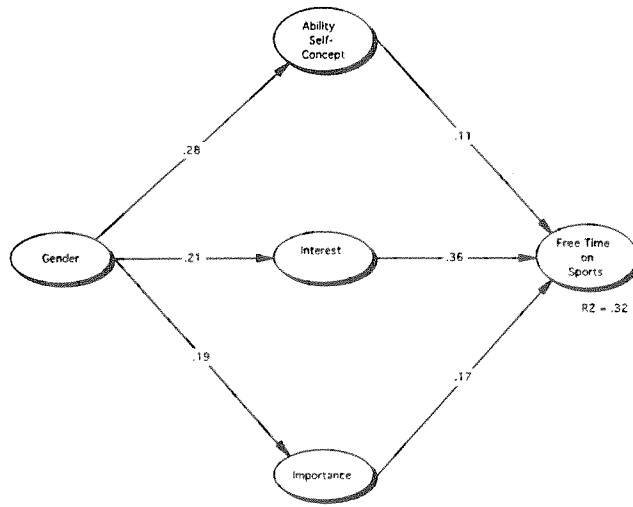
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Figure 2



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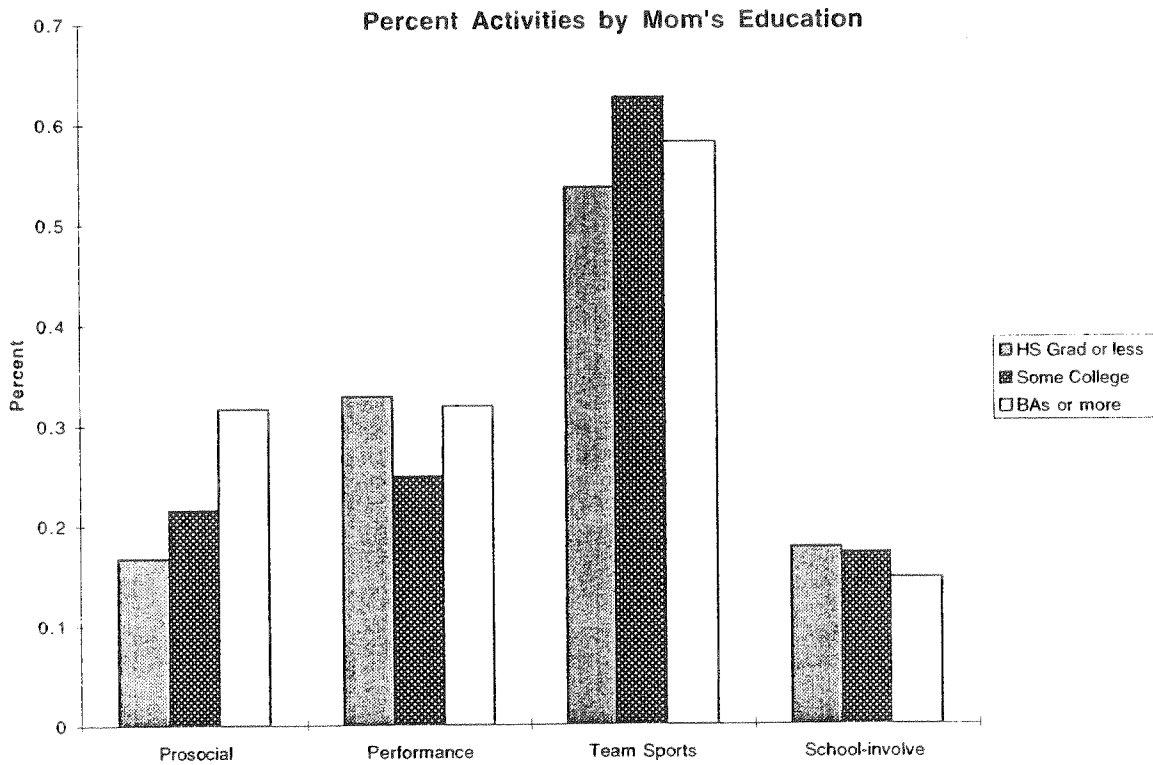
Figure 3
 Predicting Sport Involvement:
 Grade 7 - MSALT Data



Zero-Order Correlation:
 Gender-Time Spent = .14

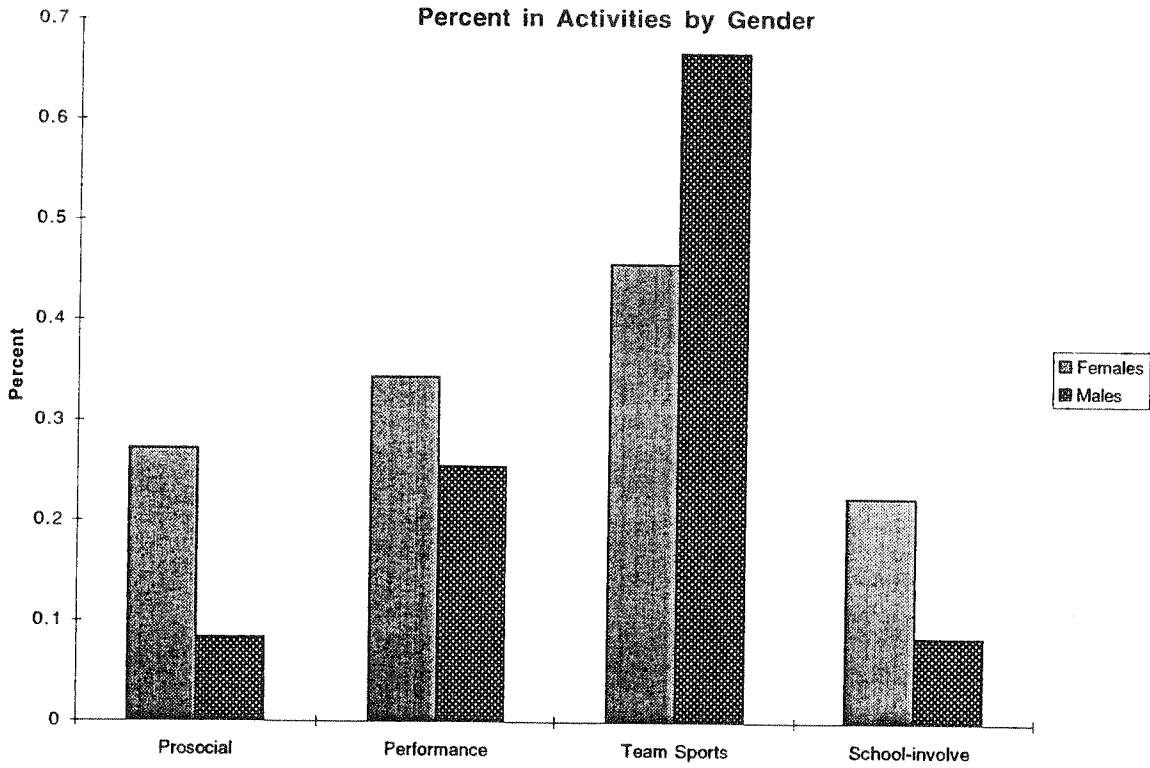
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Figure 4



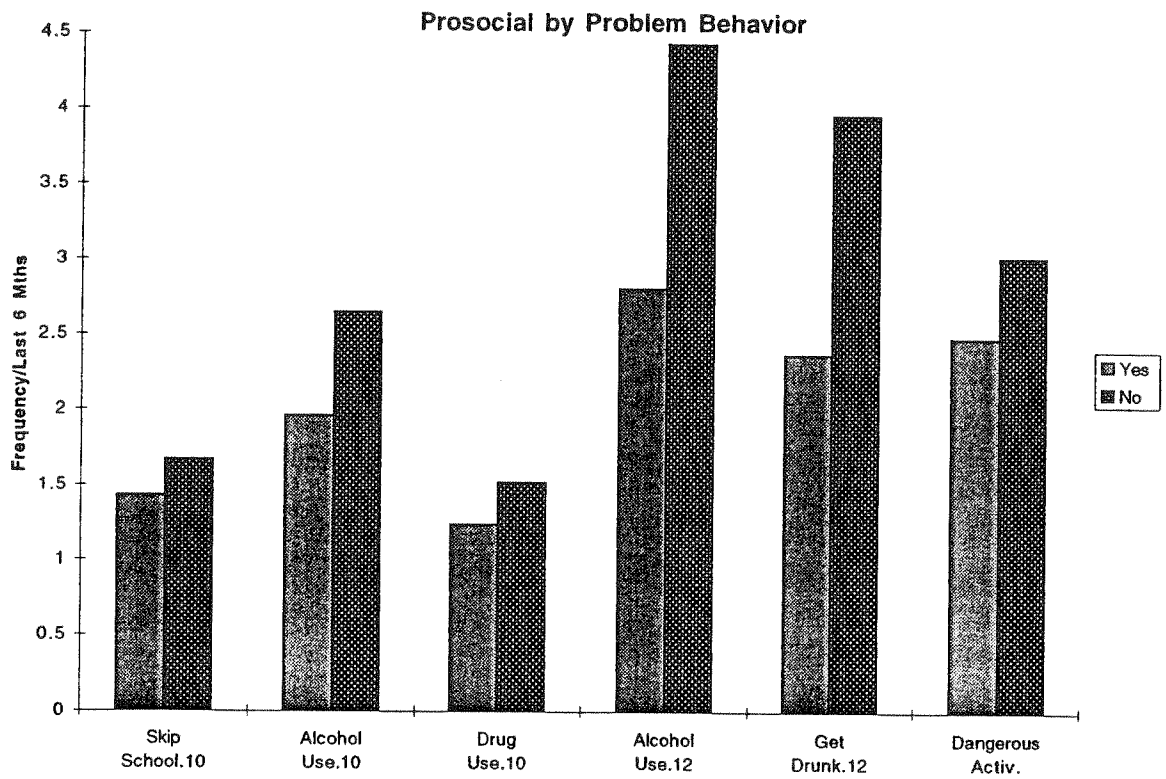
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Figure 5



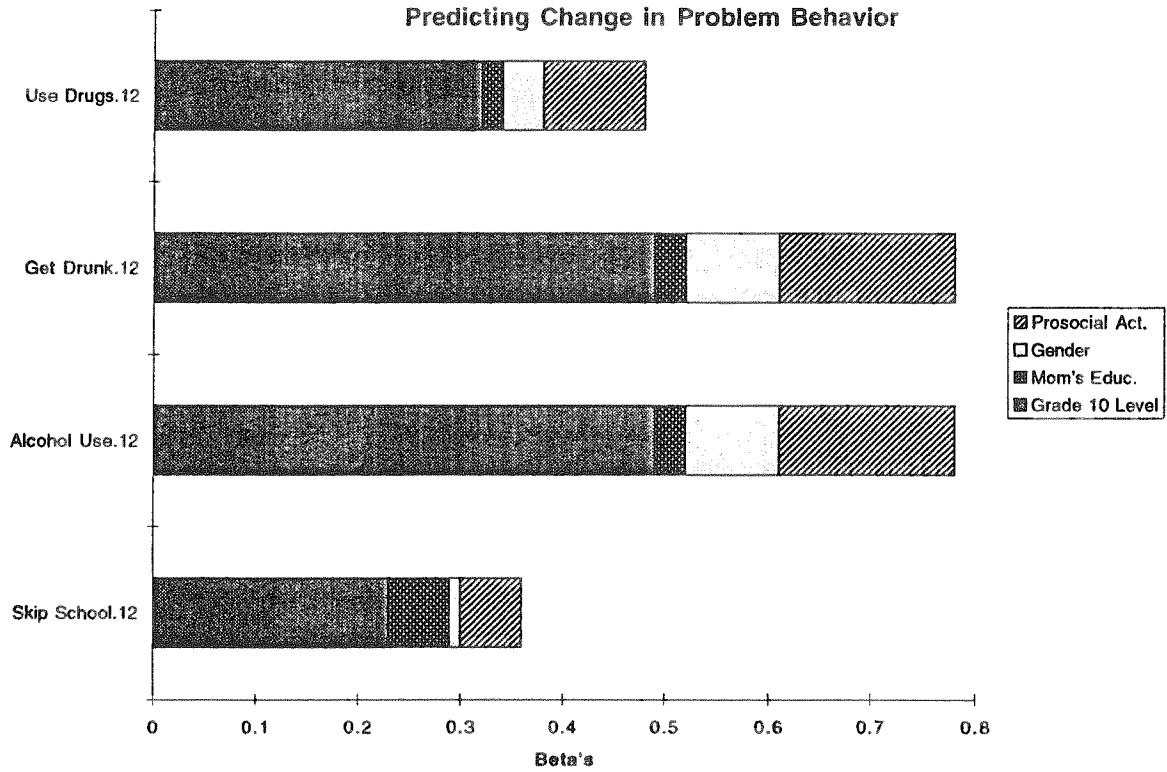
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Figure 6



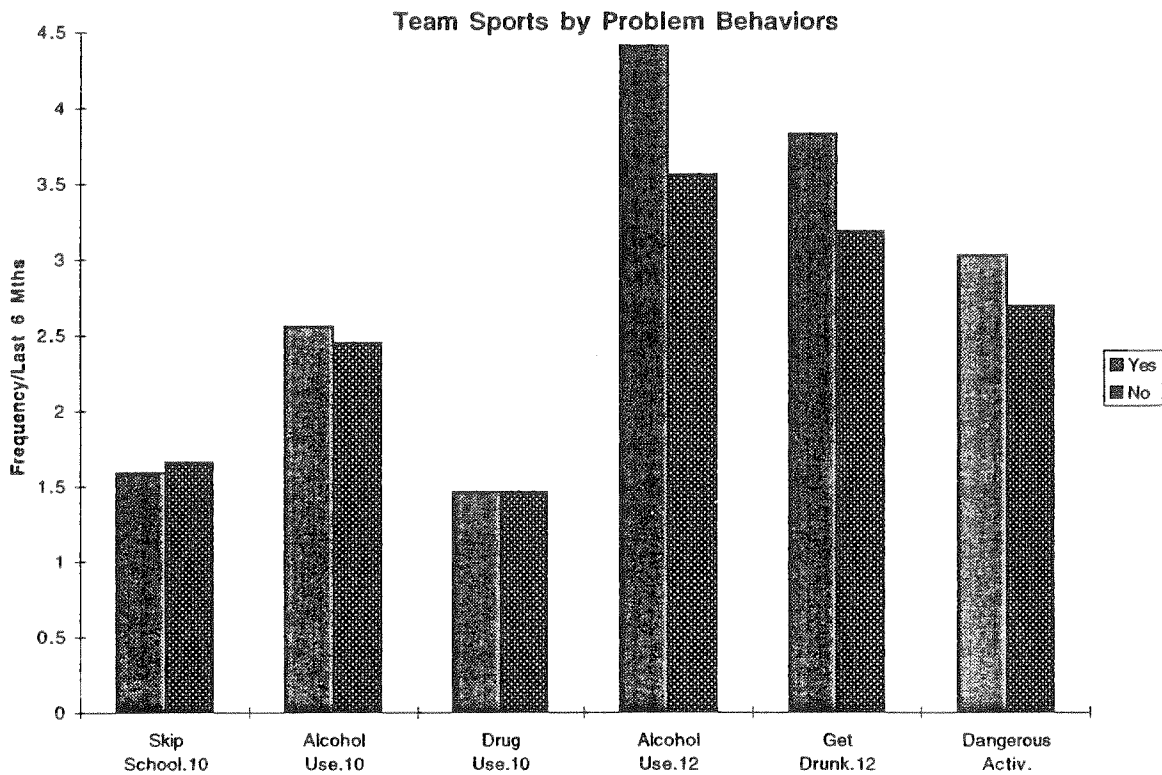
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Figure 7



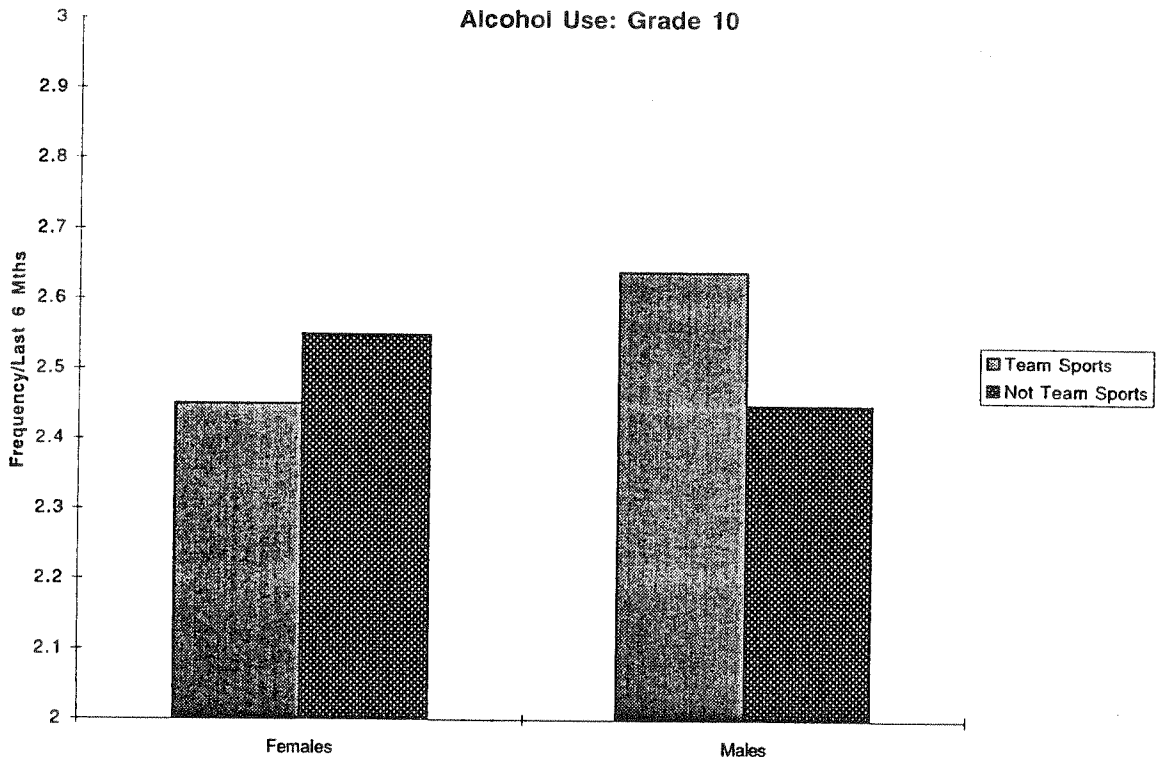
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Figure 8



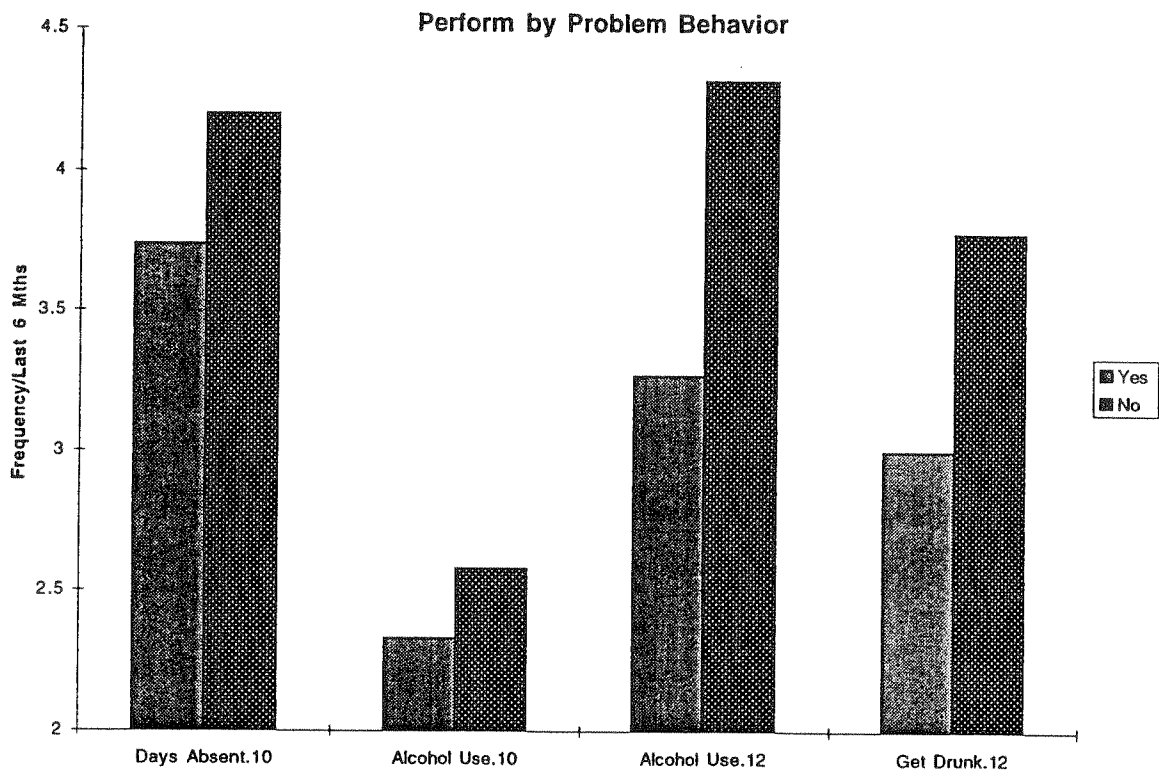
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Figure 9



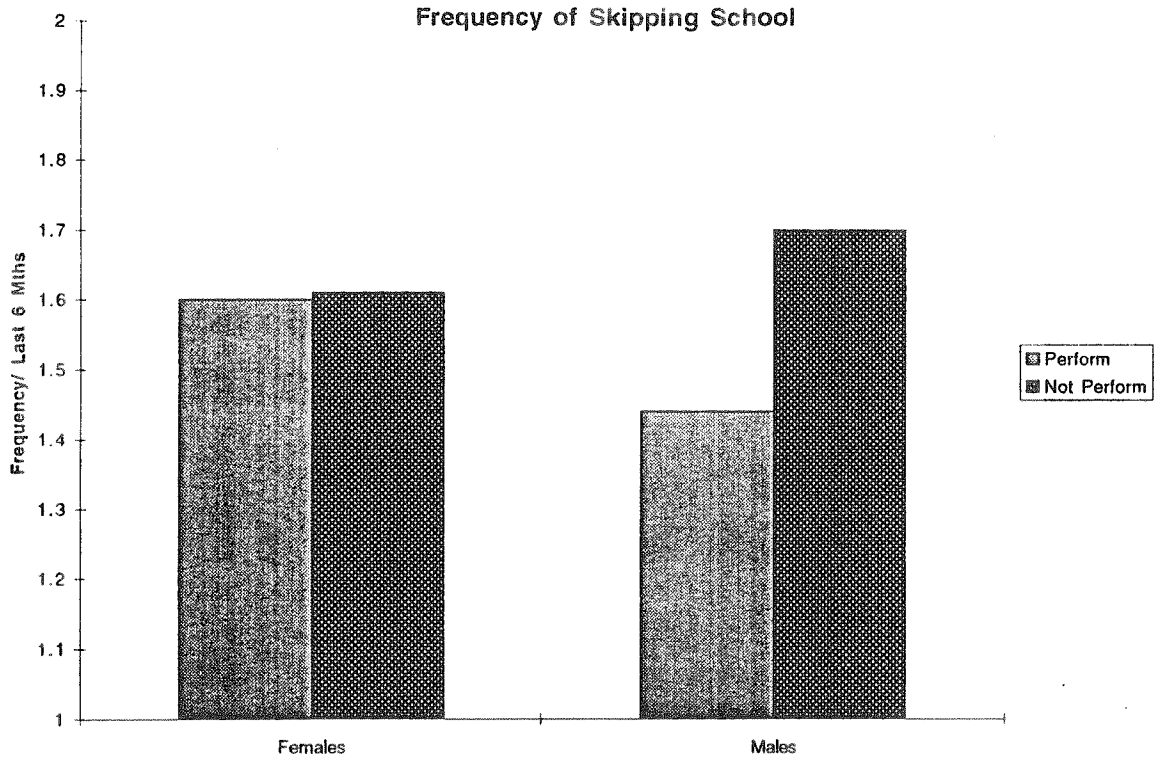
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Figure 10



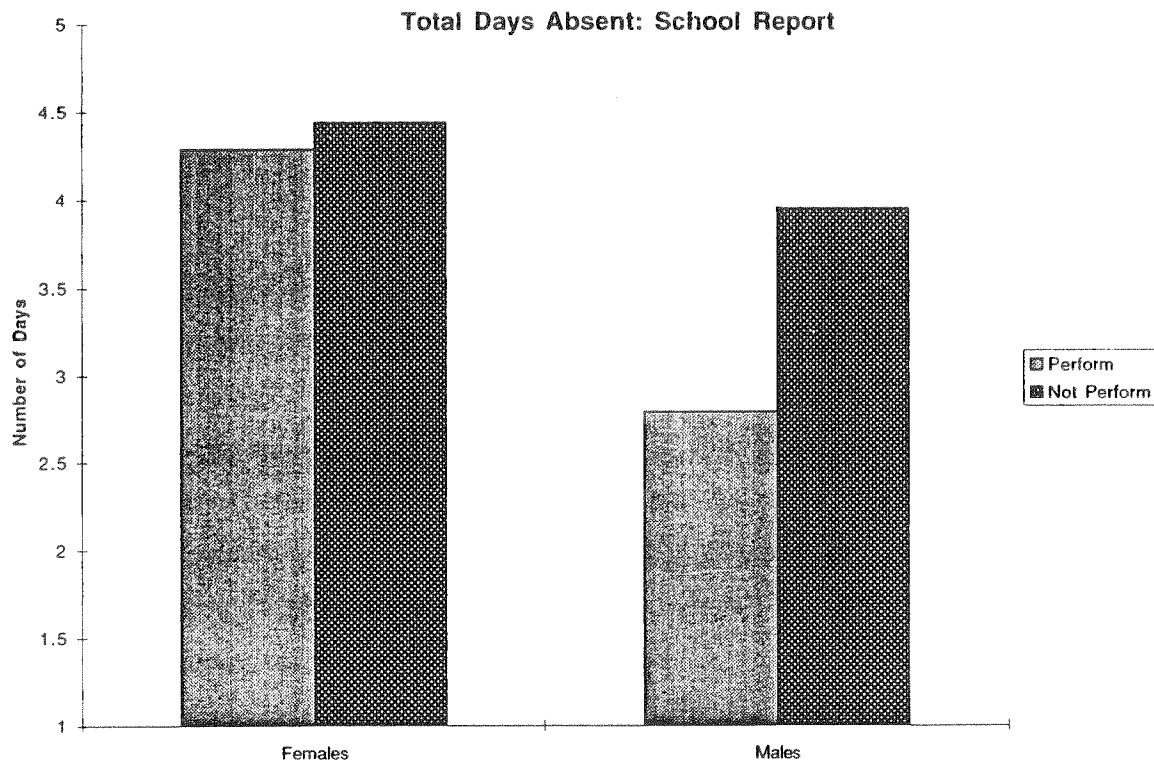
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Figure 11



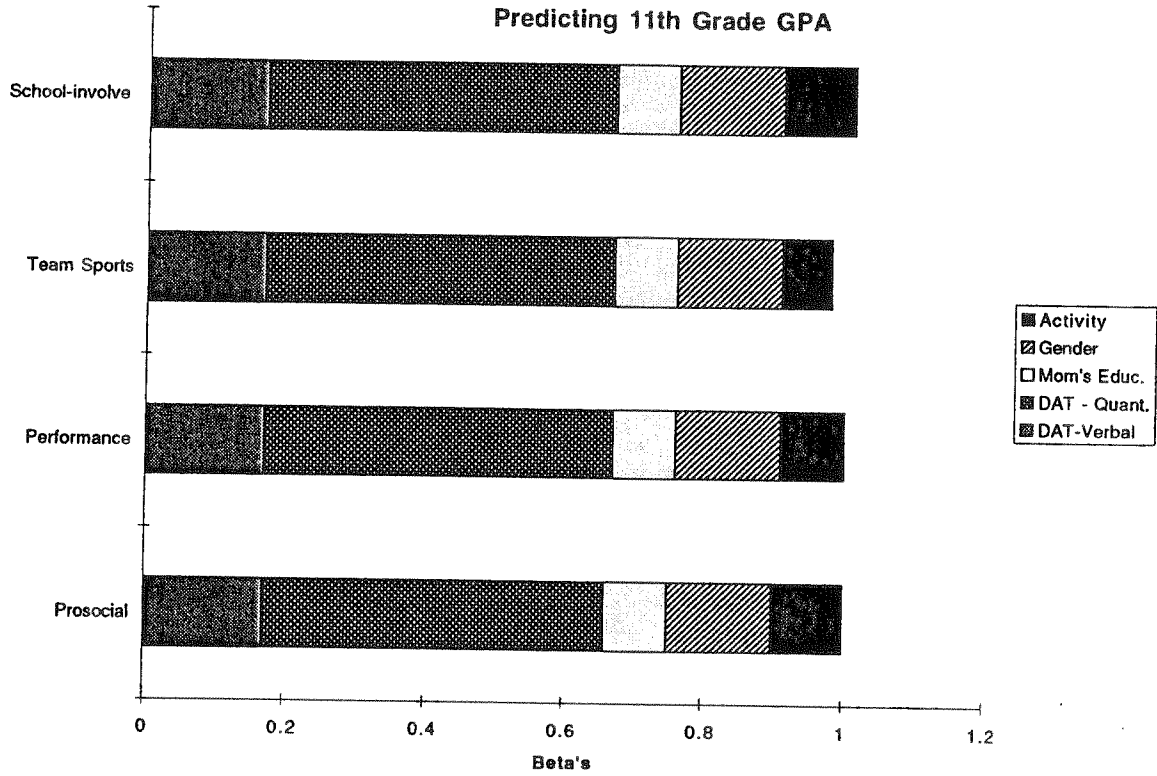
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Figure 12



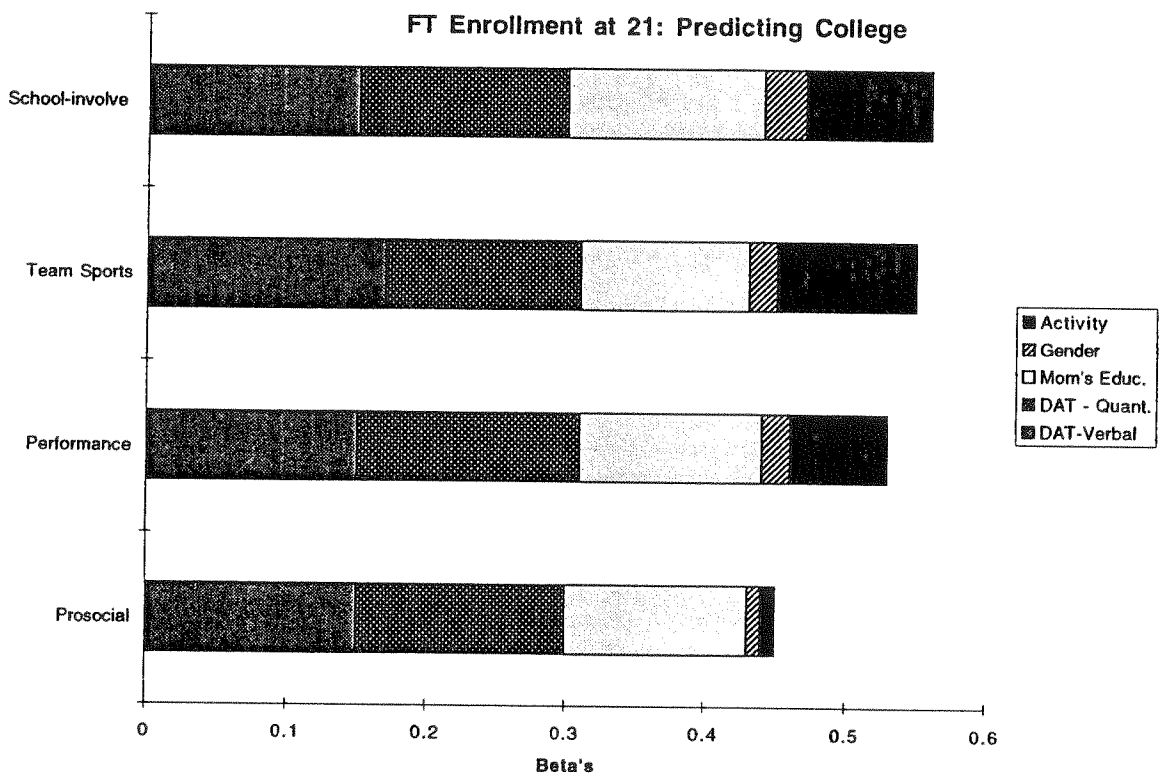
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Figure 13



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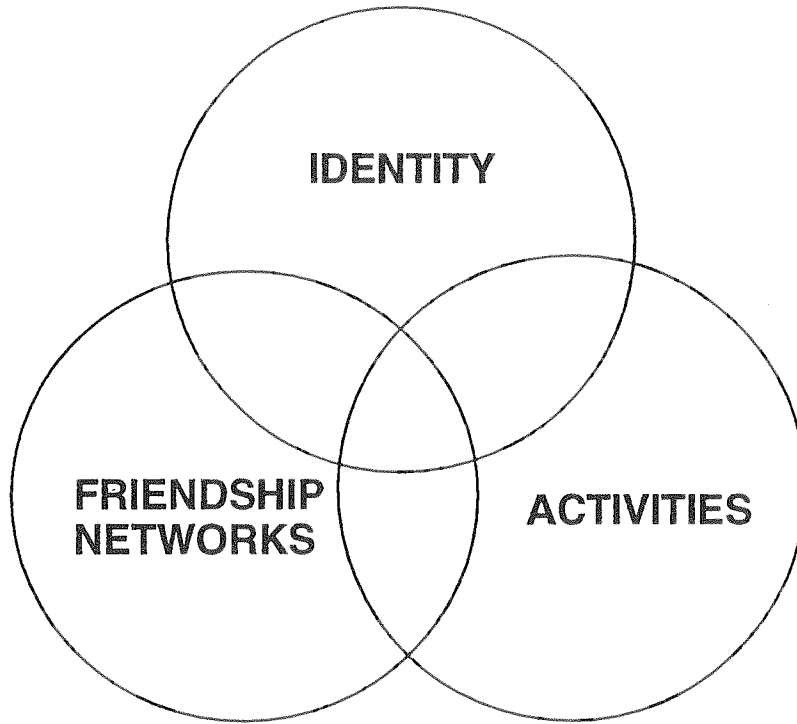
Figure 14



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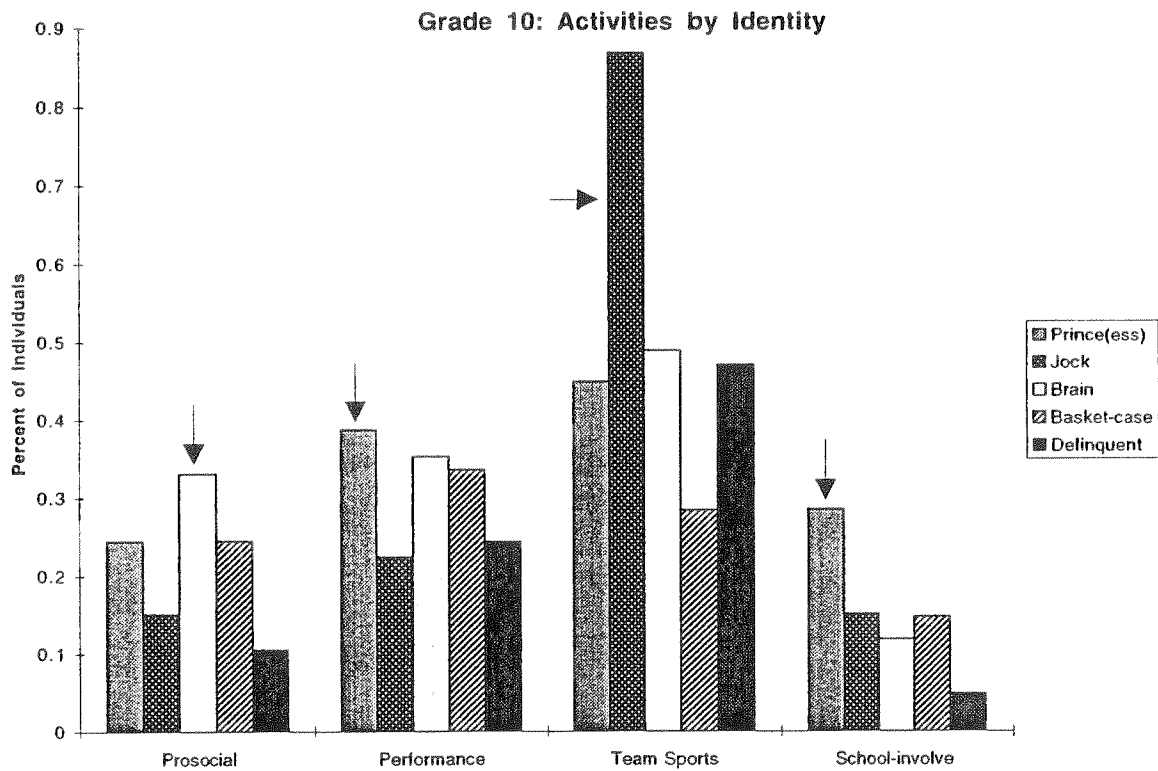
Figure 15a

Synergistic Spheres of Development



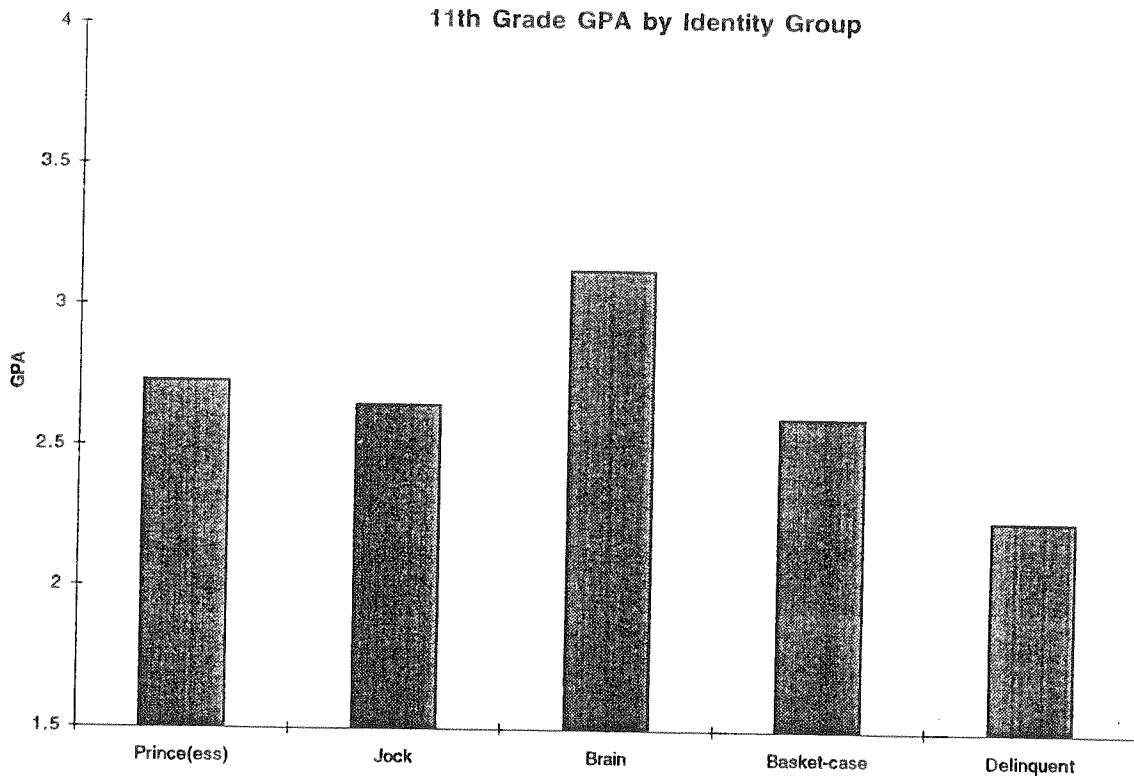
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Figure 15b



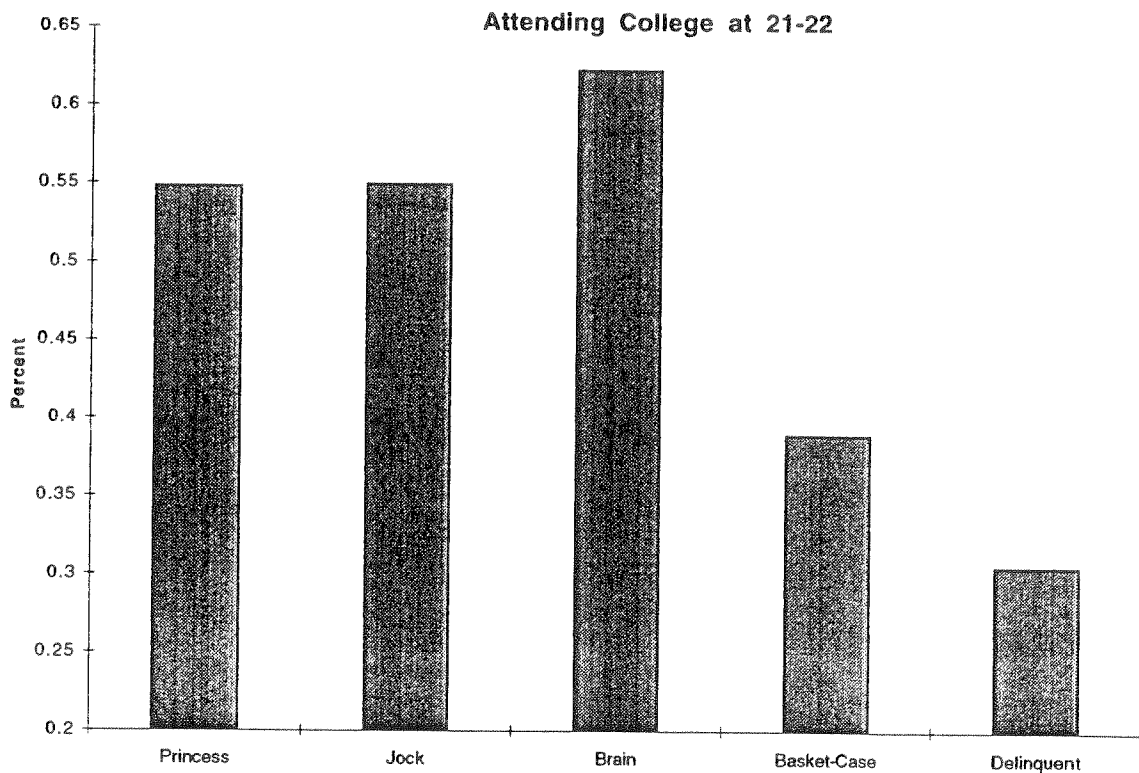
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Figure 16



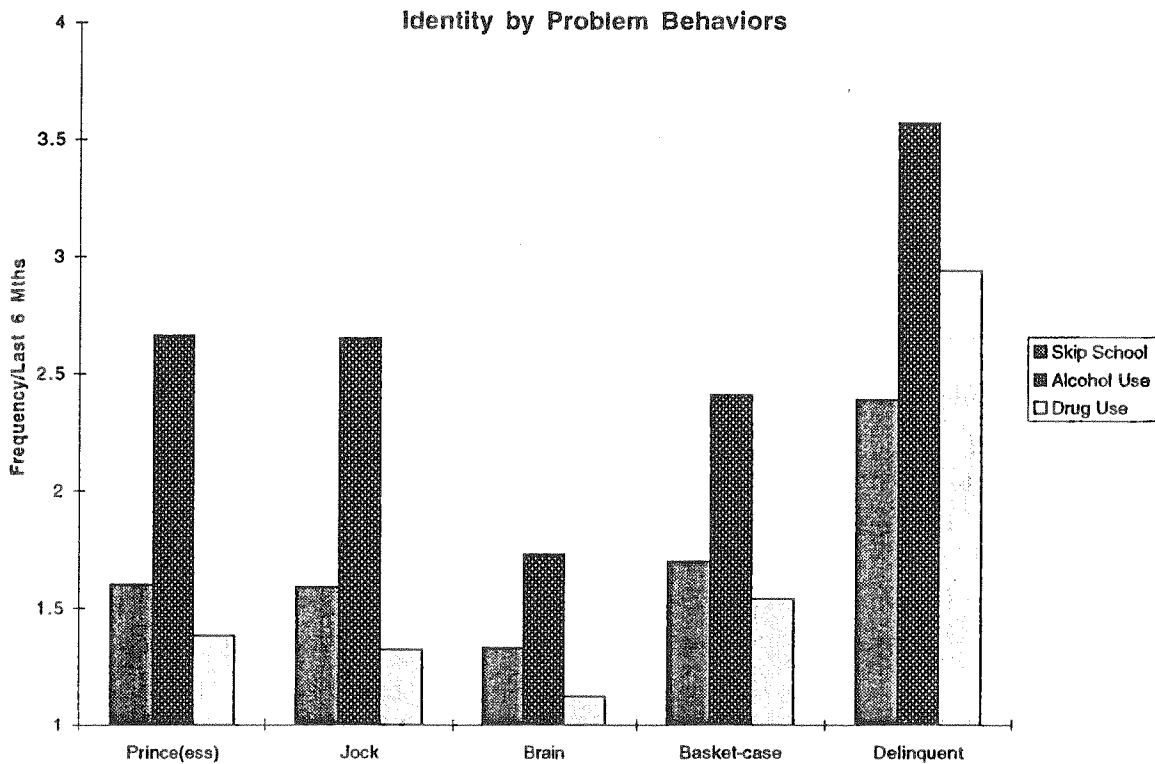
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Figure 17



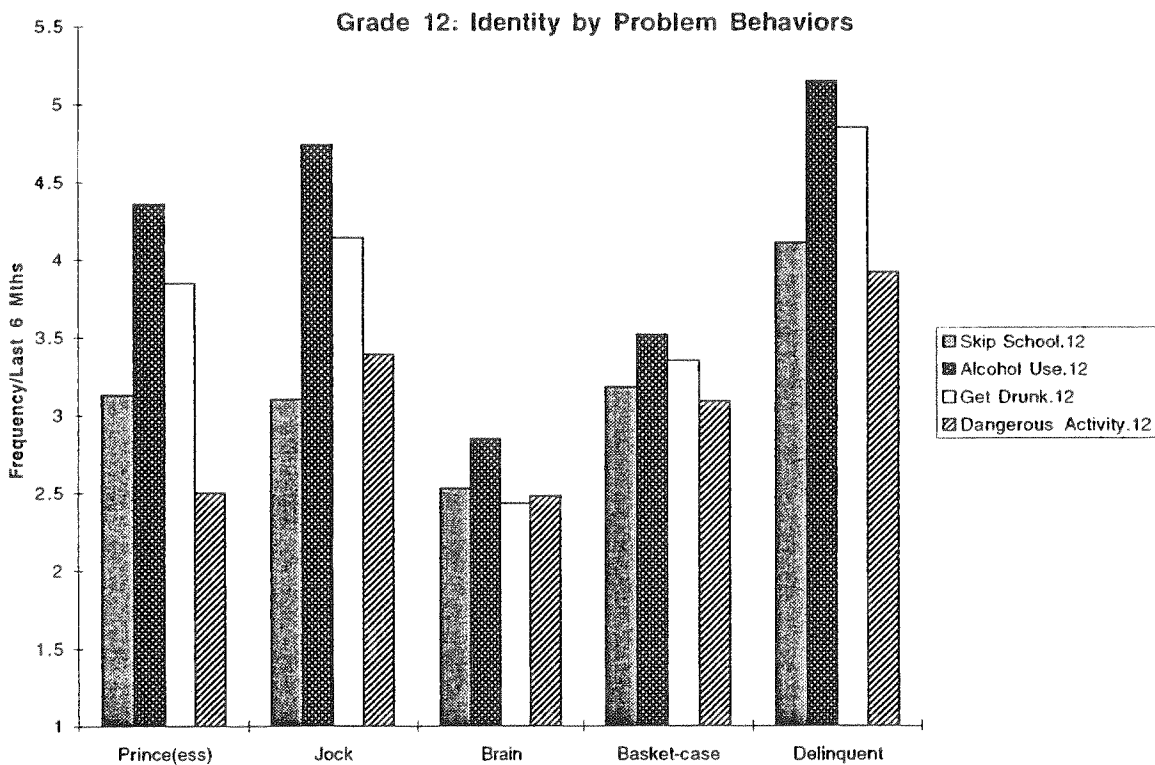
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Figure 18



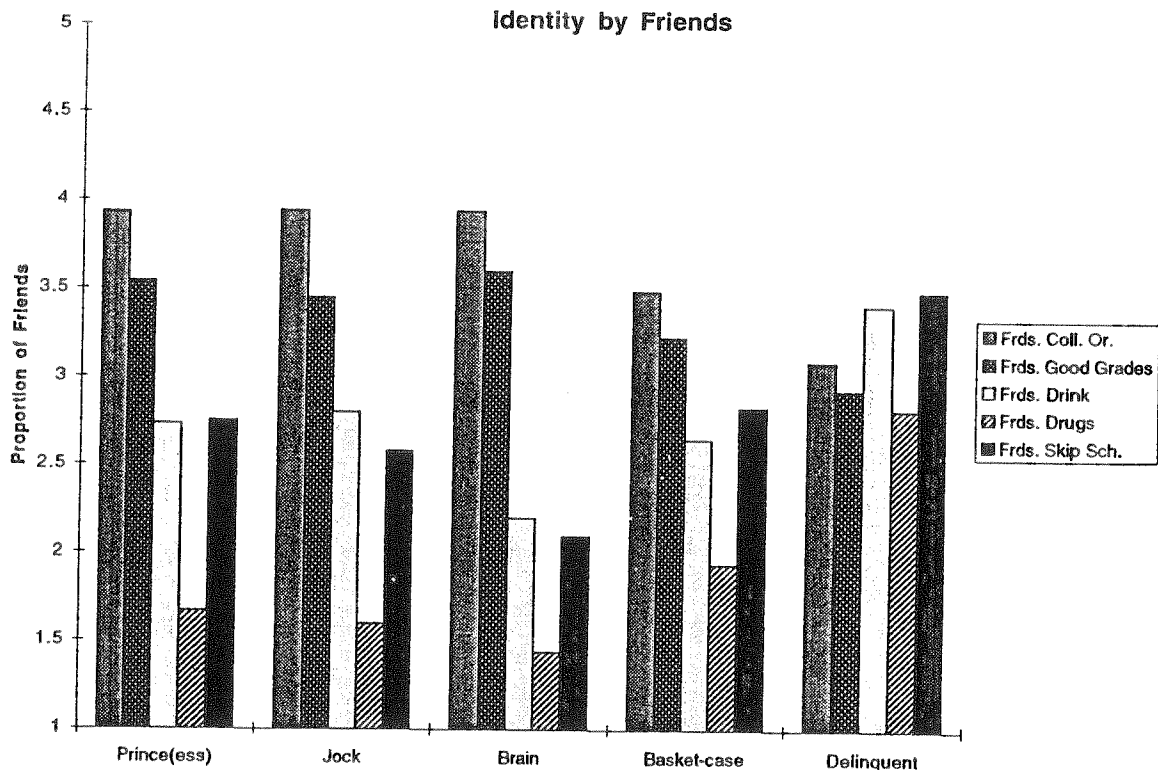
SRCD 1995, MSALT Data

Figure 19



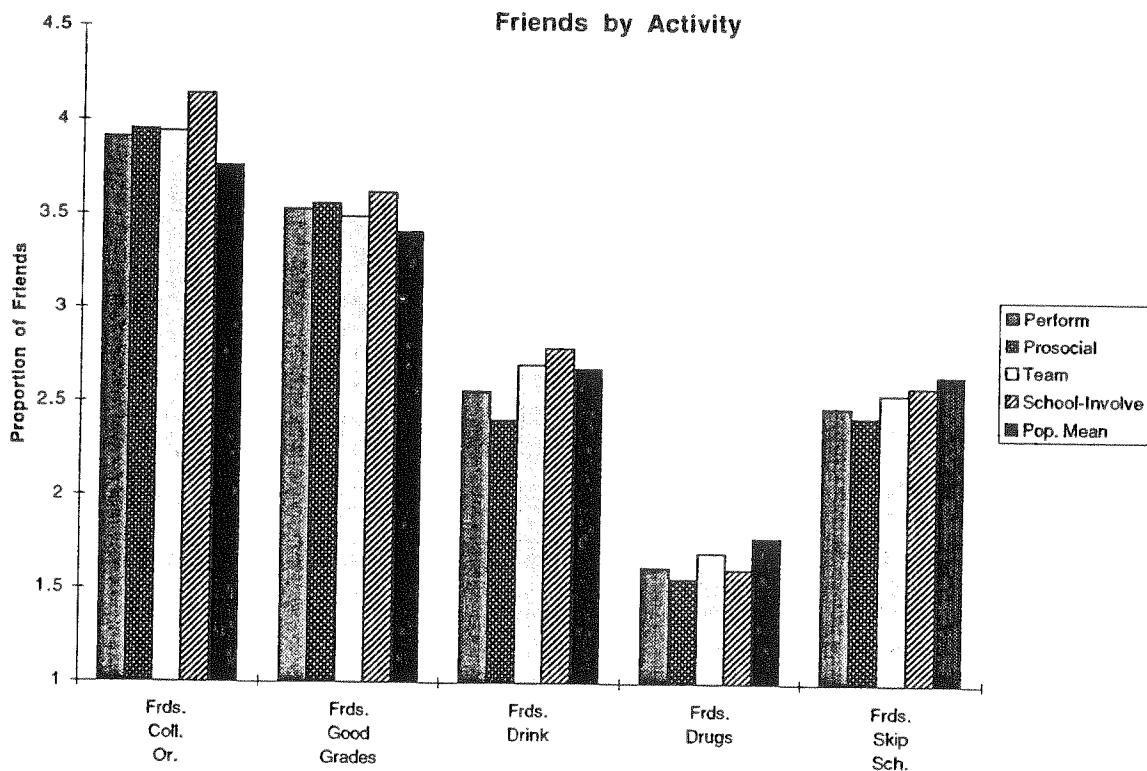
SRCD 1995, MSALT Data

Figure 20



SRCD 1995, MSALT Data

Figure 21



SRCD 1995, MSALT Data

