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# **Fairfield County ADAMH Board Youth Survey Analyses**

**A Segmentation Analysis  
A Statistical Modeling Analysis**

**August 16, 2006**

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## The Backdrop

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Behavioral health care needs assessments typically rely on two types of data analysis for identifying service needs:

1. Frequency Counts and Percentages for each survey item

- 464 Youth, or 18.6% of the sample, report using another person's prescription medications.

2. Frequency Counts and Percentages for each survey item by subgroups (known as crosstabulation tables)

- 21.1% of 12<sup>th</sup> Graders report using another person's prescription medications, only 17.5% of 10<sup>th</sup> Graders do.



## **The Backdrop (Continued)**

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### **The Benefits**

1. Universally applied
2. Easy to interpret and understand
3. Provides sufficient information to achieve most research objectives

### **Limitations**

1. Too micro in its ability to describe.



## The Backdrop (Continued)

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“Attempting to describe the world through use of frequency counts, percentages and crosstabulation tables.....*is like describing the ocean floor, one sand pebble at a time.*”

**Robert Goyer, PhD**  
**Graduate Professor**  
**Ohio University, Athens, Ohio**  
**1976**



## **The Backdrop (Continued)**

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### **Limitations**

2. Can lead to overly generalized interpretations.
3. Can lead to inaccurate interpretation of results.



## The Backdrop (Continued)

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The expectations of Behavioral Health Care Needs Assessment research are twofold:

- Broadly identify the needs within the community.
- Provide information allowing boards and agencies to design and craft new services.
- Private sector equivalent is *New Product Development*, using more qualitative research and segmentation research

Achievable

Less Achievable

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## The Backdrop Summary

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This presentation seeks to supplement the analysis of this needs assessment project by studying the data patterns within the database, rather than focusing exclusively on responses to a single question by everyone in the database or by sub-groups.



## **The Backdrop Summary**

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With two deliverables:

- A. A “big picture” interpretation of the data through a segmentation analysis.
- B. Determining the importance of family structure, parenting skills, school achievement and other issues in preventing the adoption of high risk activities, not achievable through simple “crosstabs”.



## **A Segmentation Analysis**

Creating the “Big Picture”...

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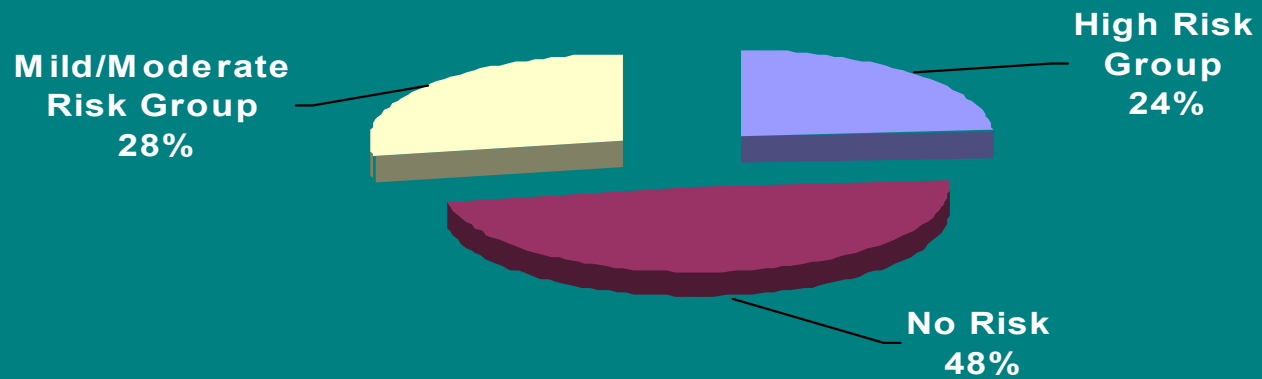


## What are High Risk Youth Activities

- Exhibiting emotional conditions typified by frequent anxiety, thoughts of suicide and/or a history of self-mutilation or attempted suicide.
- Frequent use of alcohol, marijuana, other street drugs and/or taking prescription medications belonging to others.
- Engaging in sexual intercourse.

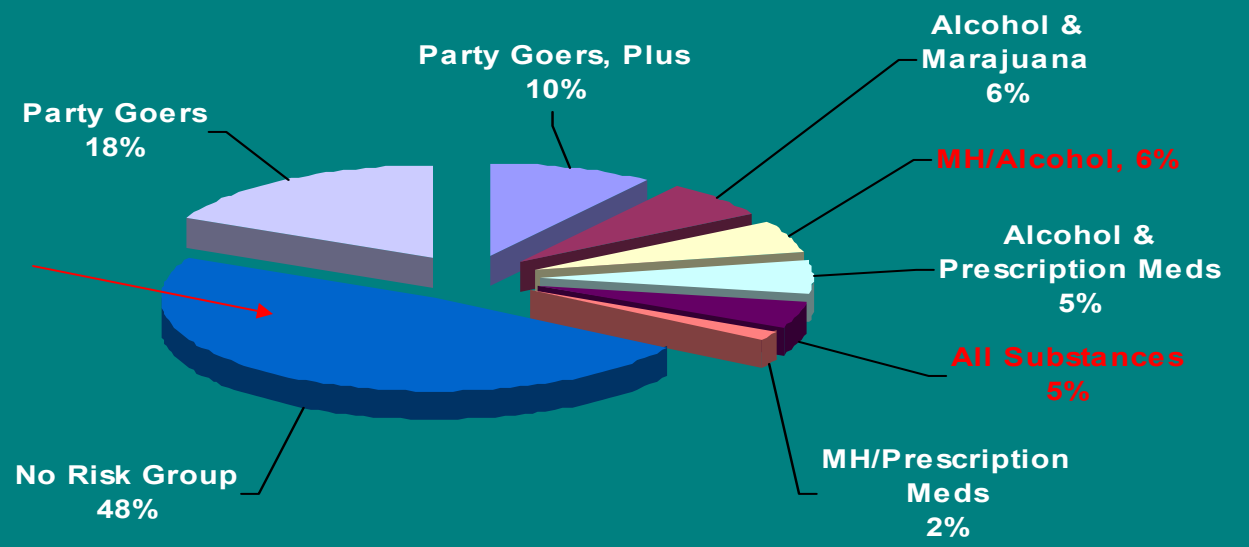


## Fairfield County Behavioral Health Risk Groups





# Fairfield County Behavioral Health Risk Groups



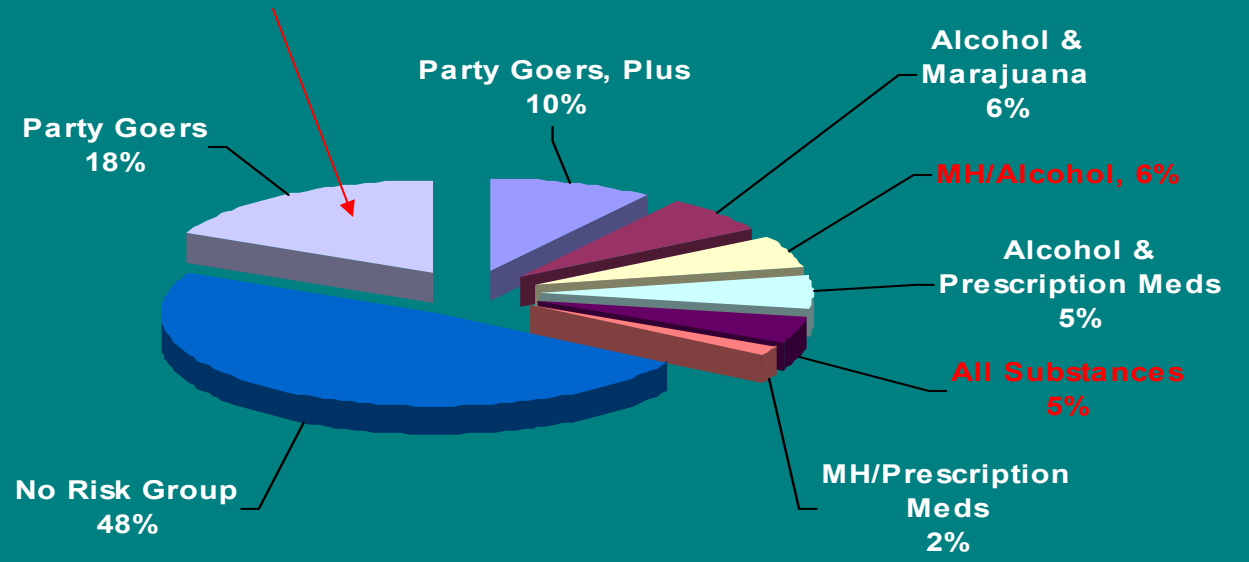


## No Risk Group (48%)

- No current history or limited prior history of involvement in high risk activities.
- Females disproportionately represented.
- Highest percentage of both biological parents present.
- Second highest in academic achievement.
- Highest percentage of involvement in community activities.
- Lowest incidence of sexual activity.



# Fairfield County Behavioral Health Risk Groups



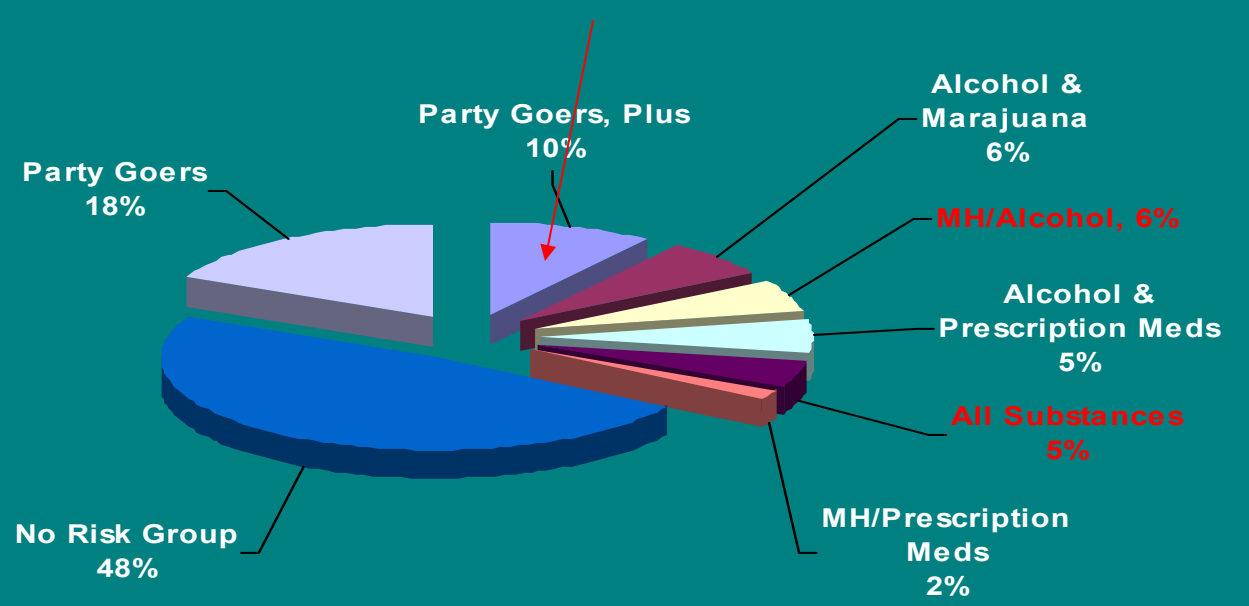


## Mild/Moderate Risk Groups (28%)

- **Weekend Party Goers (18%)**
  - Second highest presence of both biological parents.
  - High involvement in sports activities.
  - Highest grades of all groups.
  - Consume alcohol on a *monthly basis*.
  - 81% sexually active.



# Fairfield County Behavioral Health Risk Groups



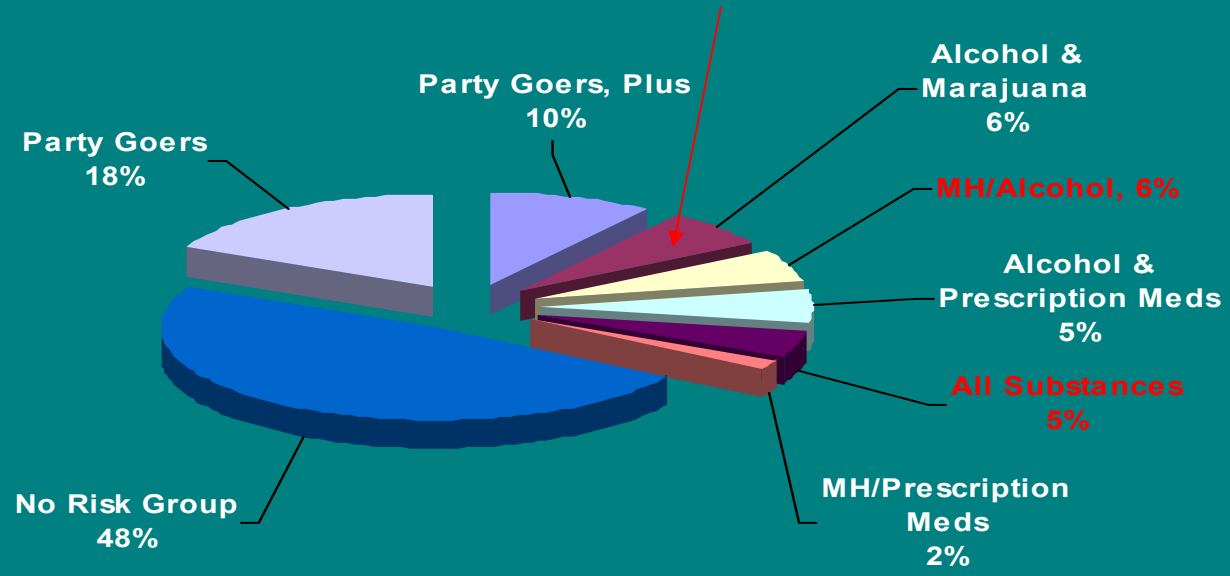


## Mild/Moderate Risk Groups (28%)

- **Weekend Party Goers, plus (10%)**
  - Third highest presence of both biological parents.
  - Highest involvement in sports activities.
  - Mediocre grades
  - Consume alcohol on a *weekly-to-monthly basis*.



# Fairfield County Behavioral Health Risk Groups



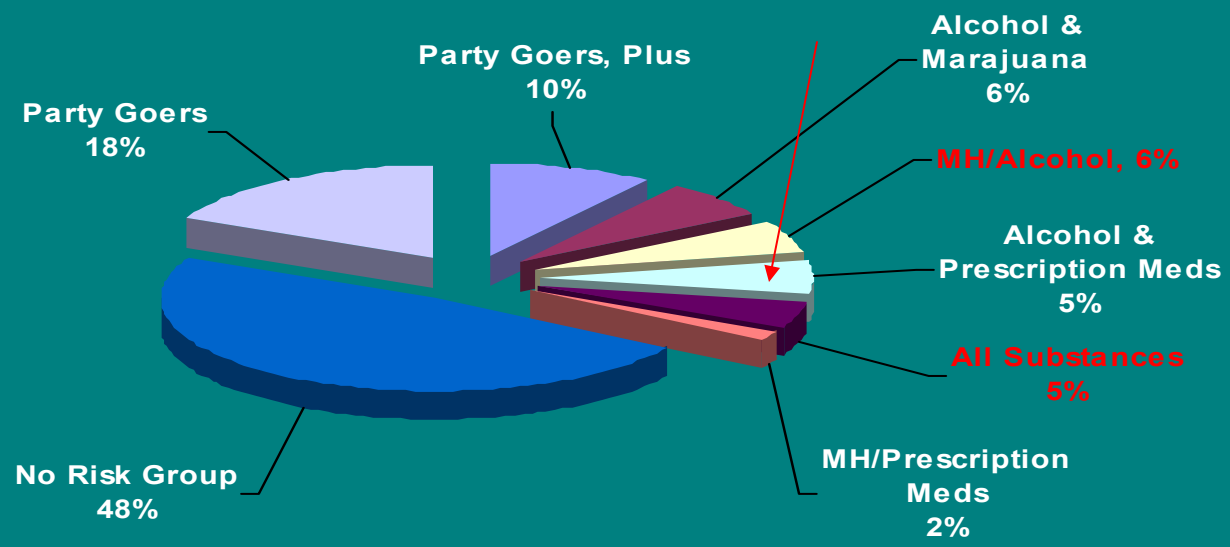


## High Risk Groups (24%)

- **Alcohol and Marijuana Group (6%)**
  - Predominantly male.
  - Low community involvement with moderate sports involvement.
  - Mediocre grades.
  - Consumes alcohol and uses marijuana on a *weekly-to-monthly basis*.
  - 82% sexually active.



# Fairfield County Behavioral Health Risk Groups





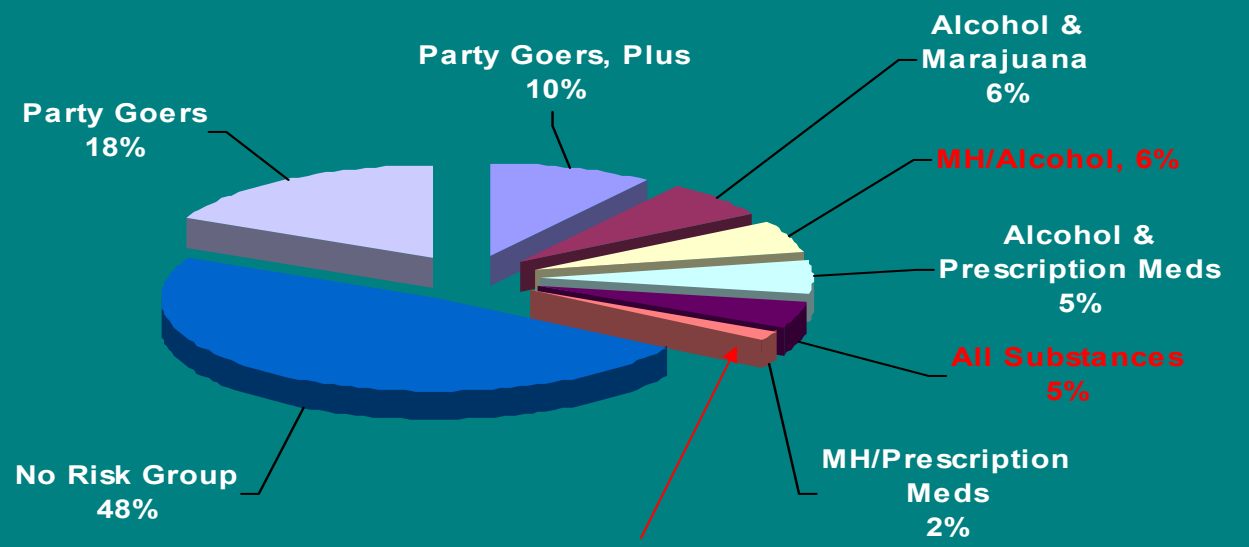
## High Risk Groups (24%)

- **Alcohol and Prescription Meds (5%)**

- Predominantly male.
- Low community involvement with moderate sports involvement.
- Mediocre grades.
- Consume alcohol and uses others prescription medications on a *weekly-to-monthly basis*.
- 82% sexually active.



# Fairfield County Behavioral Health Risk Groups



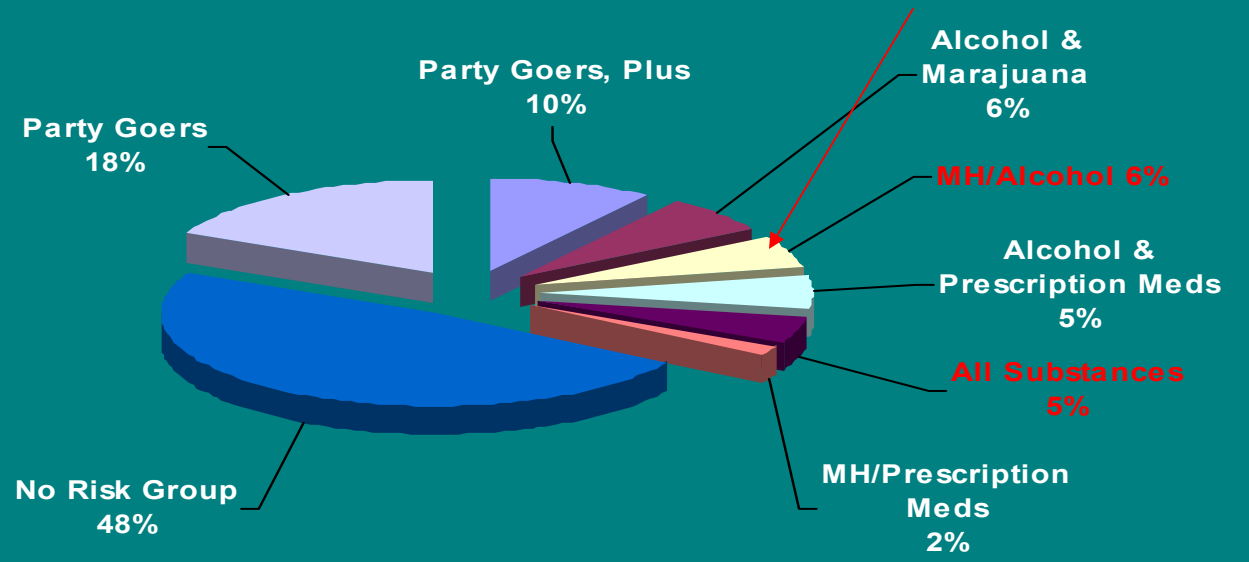


## High Risk Groups (24%)

- **MHRisk with Others Prescription Meds Use (2%)**
  - Elevated symptoms of anxiety and depression, monthly use of others prescription medication.
  - Second highest grades of all groups.
  - No regular use of alcohol or marijuana.
  - Lowest involvement in sexual activity.
  - Highest percent of established rules and enforcement of rules.



# Fairfield County Behavioral Health Risk Groups



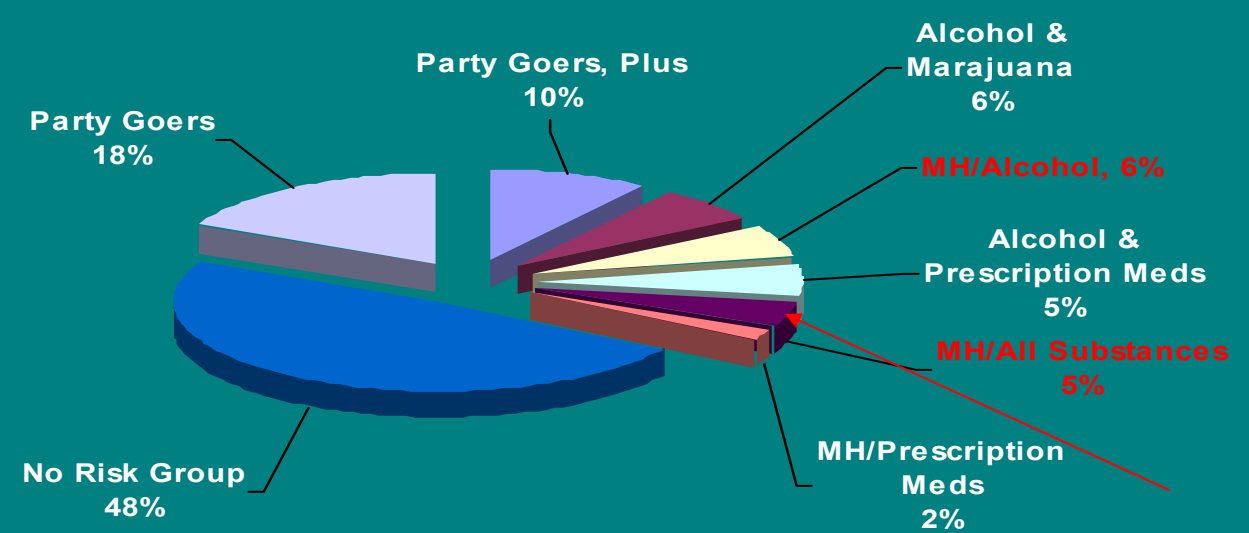


## High Risk Groups (24%)

- **High MHRisk with Alcohol Use (5%)**
  - Widespread symptoms of *anxiety and thoughts of suicide*, with little to no prior history of self-mutilation or attempted suicide.
  - Use of alcohol on a *monthly basis*.
  - Predominantly female.
  - Poor grades.



# Fairfield County Behavioral Health Risk Groups





## High Risk Groups (24%)

- **MHRisk and all Substances (5%)**
  - Elevated symptoms of *anxiety and thoughts of suicide*, with use of *alcohol, marijuana, and others prescription meds on weekly basis*.
  - Predominantly male.
  - Poor grades.
  - Fewest to experience rules and their enforcement.
  - Begin substance use earlier than all other groups, 12-14.



## Segmentation Summary

- Fairfield County adolescents, in grades 10<sup>th</sup> and 12<sup>th</sup>:
  - Reveal a pervasive use of alcohol in combination with other adolescent risk activities.
  - High risk groups contain distinctive sub-groups, which based on the mix of their high risk activities, suggest the need for no single approach to servicing these youth.



## Segmentation Summary

- Fairfield County adolescents, in grades 10<sup>th</sup> and 12<sup>th</sup>:
  - The distinctiveness of these subgroups infer differing patterns in values, dress, social relationships and the like.
  - A common characteristic which appears to cut across all risk groups is “social withdrawal.”



## **A Statistical Modeling Analysis**

Determining the Relative Strength of Youth  
Assets in Preventing the Adoption of High  
Risk Activities

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## The Candidates

### 1. Presence of both biological parents.

- Consistently found to be in greater numbers among low and no risk groups.

No-Risk Group 60.1%

Moderate Risk Groups

- Party Goer Group 57.7%
- Party Goer Group, plus 56.3%

High Risk Groups

- Alcohol & Marijuana 40.5%
- Alcohol & Prescription Meds 39.8%
- MH Risk & Prescription Meds 40.5%
- MH Risk & Alcohol 46%
- MH Risk & All Substances 41.4%



## The Candidates

### 2. Perceived trusted adult at home.

- Consistently found to be in greater numbers among low and no risk groups.

No-Risk Group 92.7%

Moderate Risk Groups

- Party Goer Group 91.4%
- Party Goer Group, plus 87.4%

High Risk Groups

- Alcohol & Marijuana 79.9%
- Alcohol & Prescription Meds 81.8%
- MH Risk & Prescription Meds 90.2%
- MH Risk & Alcohol 73.2%
- MH Risk & All Substances 73.3%



## The Candidates

### 3. Parents establish rules and enforce the rules.

	<u>Establish</u>	<u>Enforce</u>
No Risk Group	88.9%	87%
Moderate Risk Groups		
• Party Goer Group	84%	79.4%
• Party Goer Group, Plus	79.8%	74.6%
High Risk Groups		
• Alcohol & Marijuana	75.3%	67.8%
• Alcohol & Prescription Meds	82.1%	72.9%
• MH Risk & Prescription Meds	92.7%	92.8%
• MH Risk & Alcohol	72.6%	70.2%
• MH Risk & all Substances	59.1%	50.2%



## The Candidates

### 4. Parents engage in discussions with youth regarding high risk activities.

No Risk Group	88.9%
Moderate Risk Groups	
• Party Goer Group	84%
• Party Goer Group, Plus	79.8%
High Risk Groups	
• Alcohol & Marijuana	75.3%
• Alcohol & Prescription Meds	82.1%
• MH Risk & Prescription Meds	92.7%
• MH Risk & Alcohol	72.6%
• MH Risk & all Substances	59.1%



## The Candidates

5. Adolescent achieves good grades and avoids trouble at school.

	<u>Grades</u>	<u>Trouble</u>
No Risk Group	88%	94.9%
Moderate Risk Groups		
• Party Goer Group	91.2%	95.2%
• Party Goer Group, Plus	78.2%	88.9%
High Risk Groups		
• Alcohol & Marijuana	70.7%	81.6%
• Alcohol & Prescription Meds	70.6%	77.5%
• MH Risk & Prescription Meds	83.4%	91.2%
• MH Risk & Alcohol	63.4%	86.3%
• MH Risk & all Substances	66.9%	73.1%



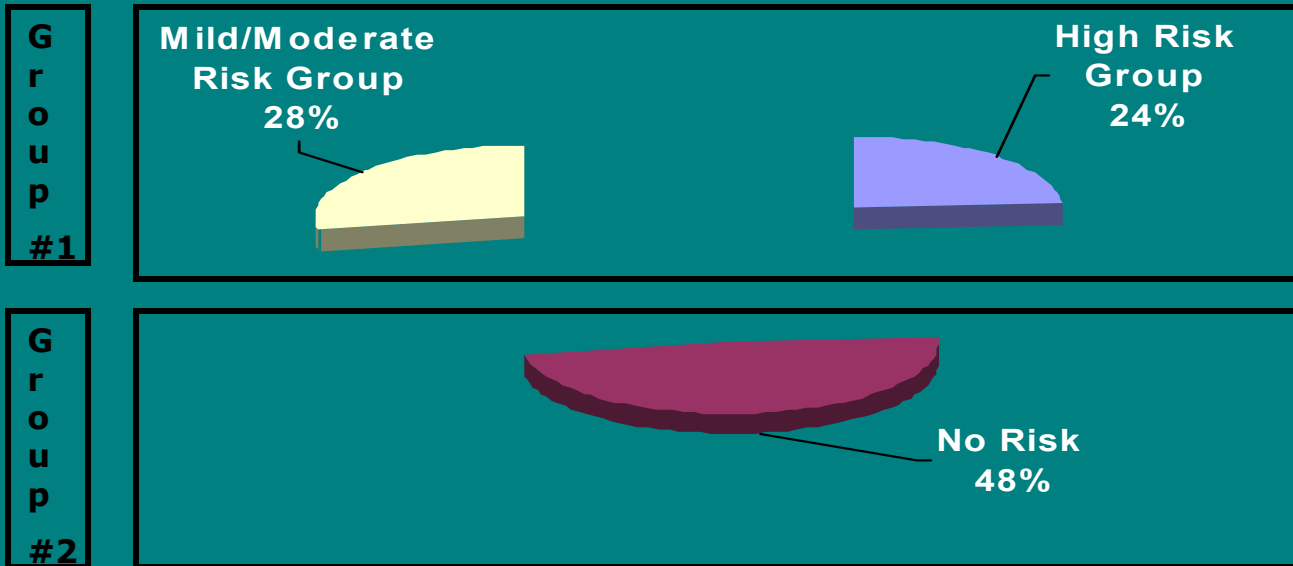
## The Candidates

### 6. Adolescent involved in community or sporting activities.

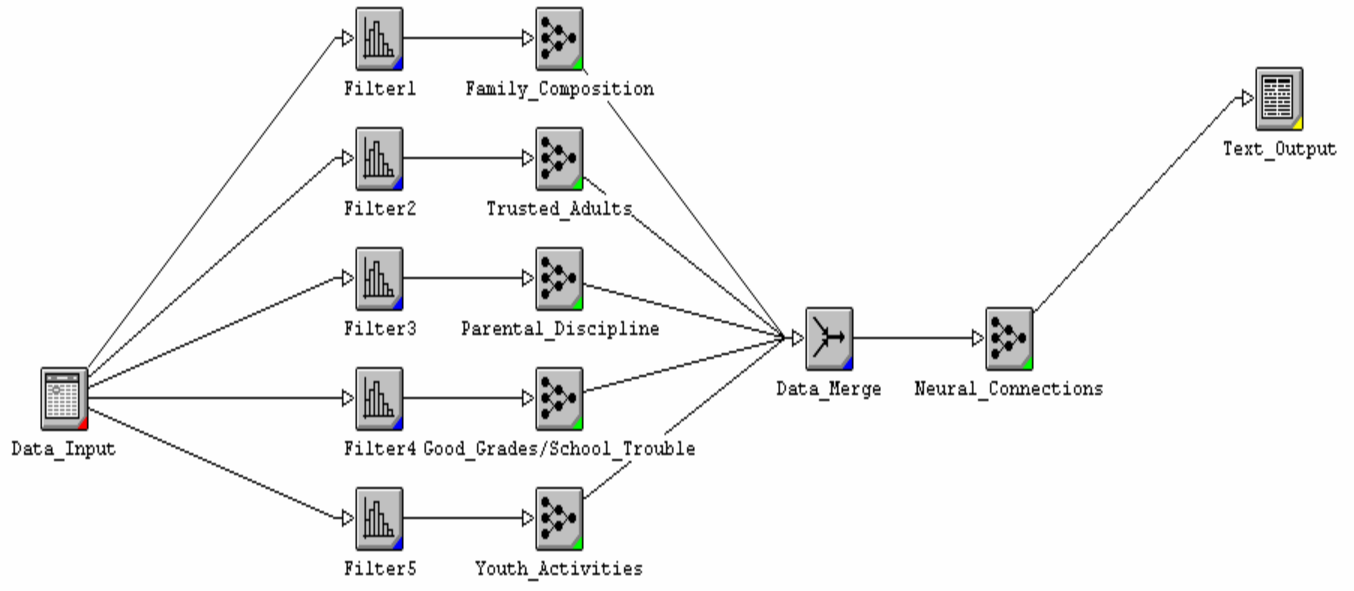
	<u>Community Sports</u>	
No Risk Group	55%	50.6%
Moderate Risk Groups		
• Party Goer Group	39.1%	55.4%
• Party Goer Group, Plus	36.8%	57.5%
High Risk Groups		
• Alcohol & Marijuana	24.7%	48.2%
• Alcohol & Prescription Meds	25.9%	39.9%
• MH Risk & Prescription Meds	40%	45.3%
• MH Risk & Alcohol	29.6%	35.2%
• MH Risk & all Substances	17.3%	35.1%



# Fairfield County Behavioral Health Risk Groups



The Task: To predict whether a respondent will be in Group 1 or Group 2




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# Fairfield County Youth Behavioral Risk Asset Variables

## Predicting the Adoption of High Risk Youth Behaviors

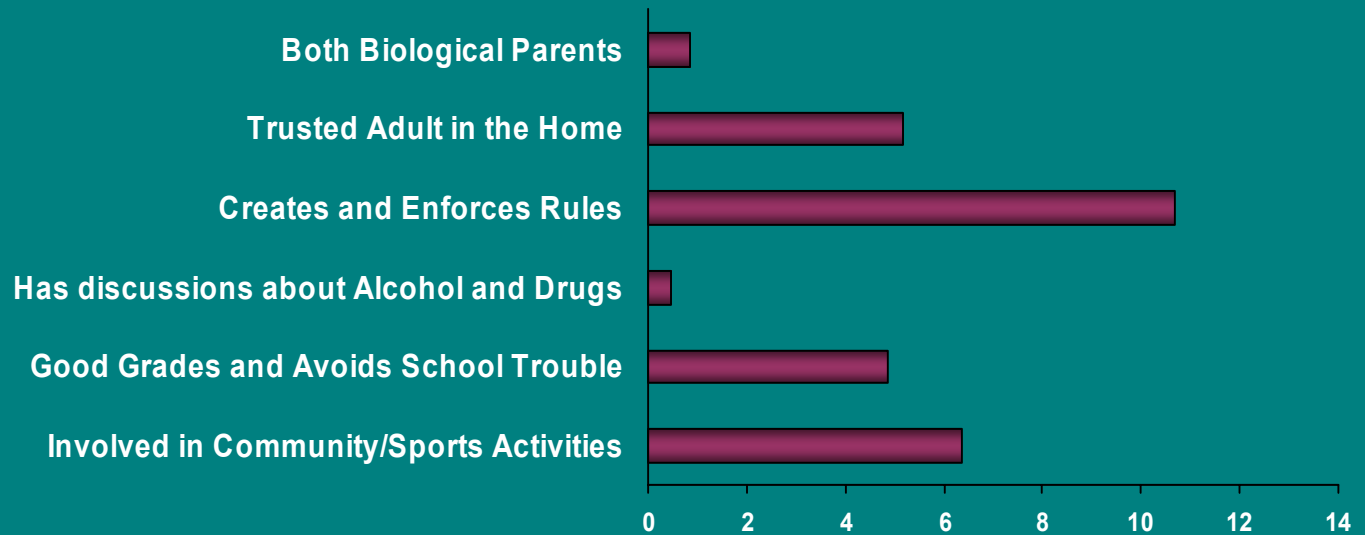



 = 70.6%



# Fairfield County Youth Behavioral Risk Asset Variables

## Predicting the Adoption of High Risk Youth Behaviors

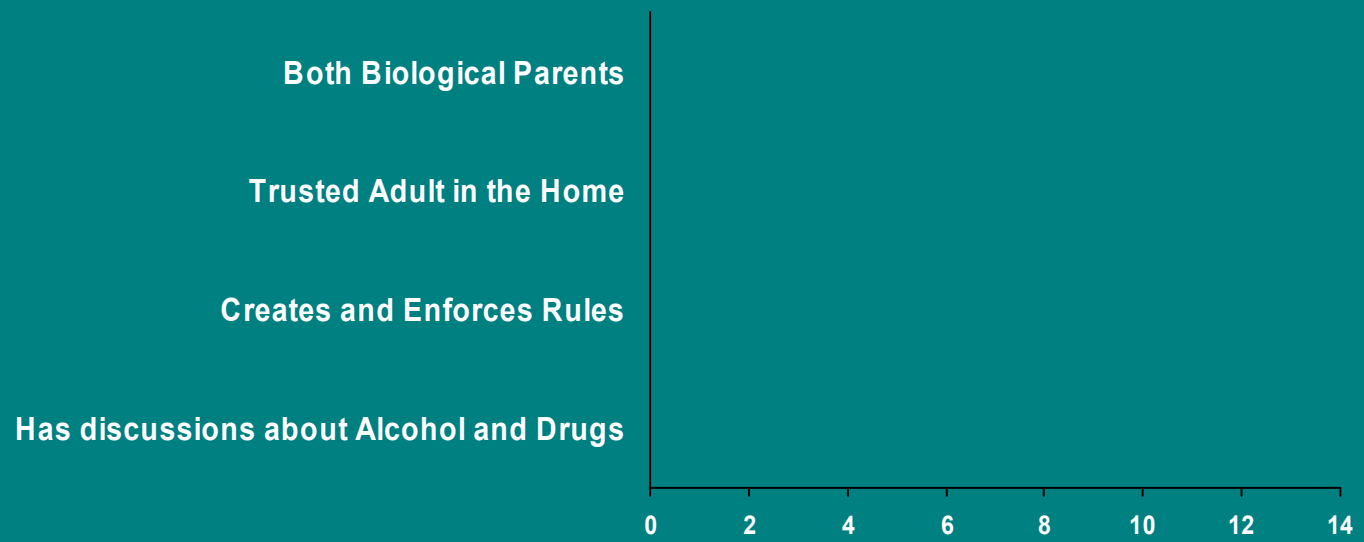



 = 70.6%



# Fairfield County Youth Behavioral Risk Asset Variables

## Predicting the Adoption of High Risk Youth Behaviors

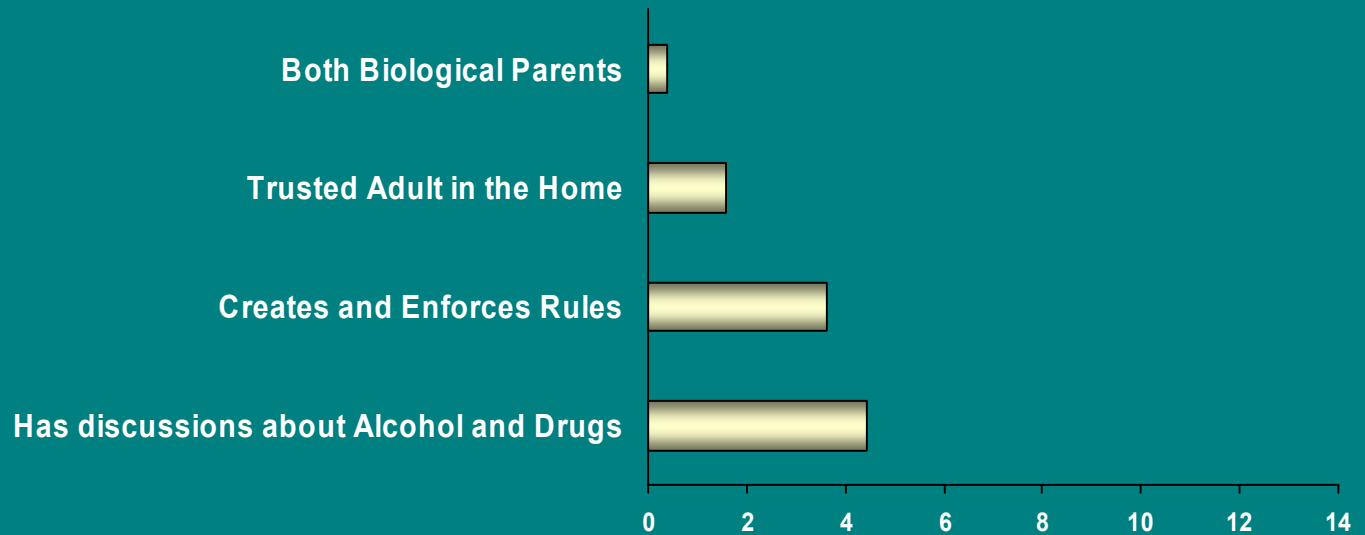



 = 59.1%



# Fairfield County Youth Behavioral Risk Asset Variables

## Predicting the Adoption of High Risk Youth Behaviors



 = 59.1%



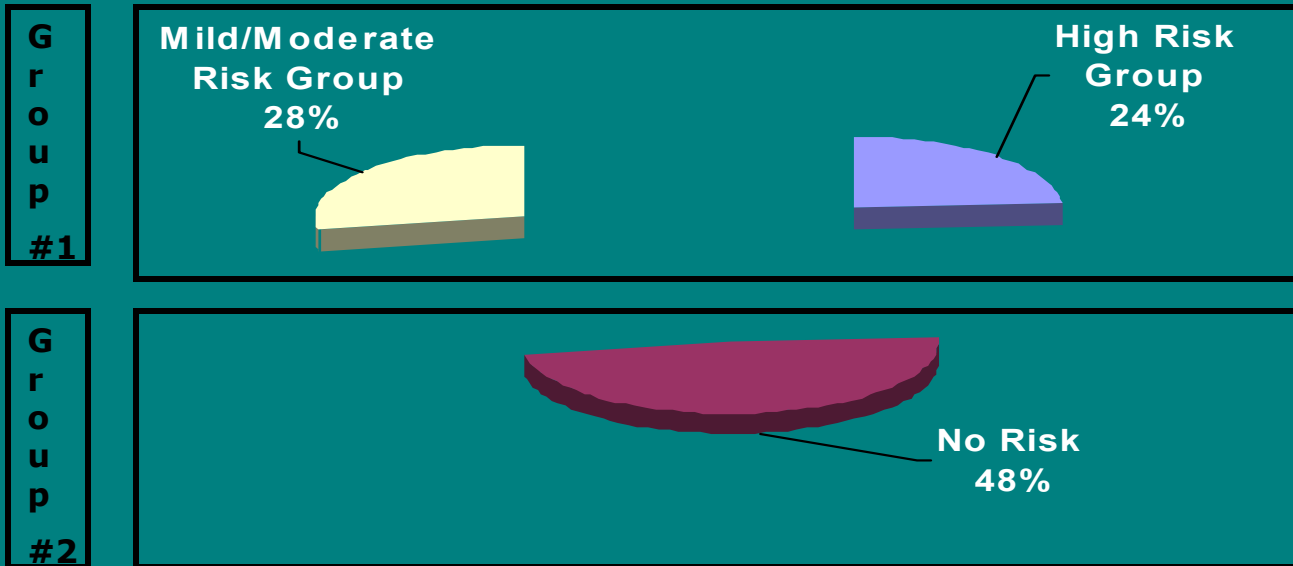
## **Tentative Observations:**

- 1. A redefinition of the impact variable (No Risk Group/Risk Group) will likely change the asset values and allow other asset variables to qualify for acceptance.**

**For example: “School Activities”**



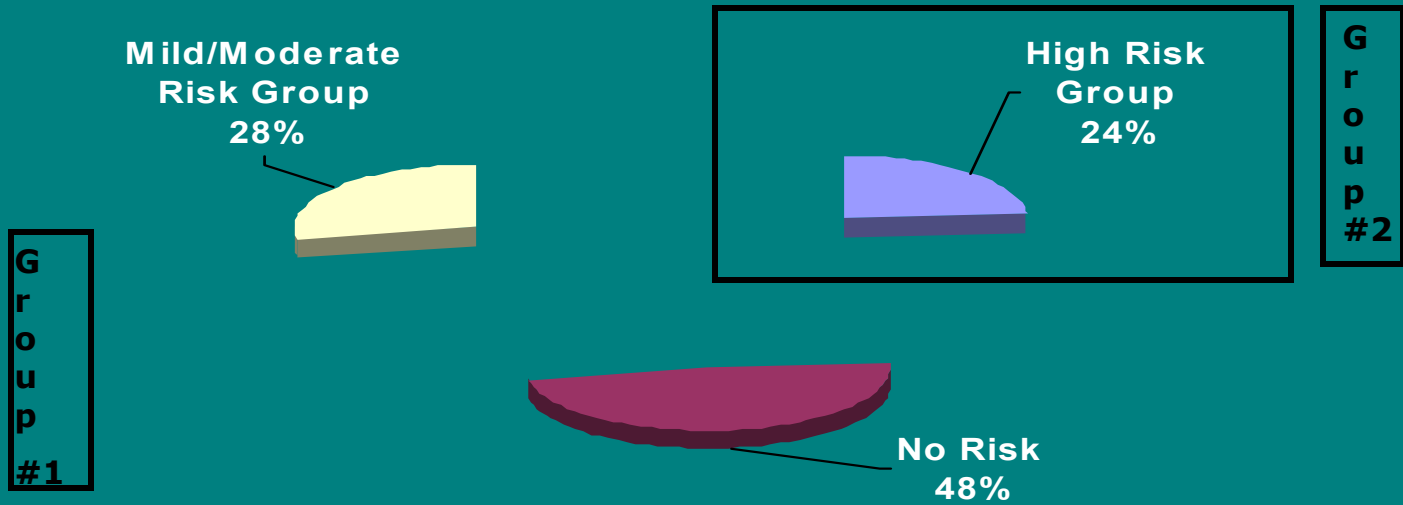
# Fairfield County Behavioral Health Risk Groups



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# Fairfield County Behavioral Health Risk Groups



The Task: To predict whether a respondent will be in Group 1 or Group 2



## Tentative Observations:

- 2. Preliminary modeling suggests that threat variables like peer approval and a lack of perceived harmfulness are potent forces, requiring a maximum number of youth assets.**



## Summary Conclusion:

**While the presence of both biological parents contributes to the deterrence of adopting high risk activities by adolescent youth...**

**The perceived presence of a trusted adult, one who establishes rules and enforces them, and who engages adolescents in discussions about high risk activities is judged to be of greater importance.**