Role of parental involvement in the relationship between perceived availability and use of marijuana among youths aged 12 to 17

Mian Bazle Hossain

School of Community Health and Policy
Morgan State University
Baltimore, Maryland

Introduction

➢ In 2005, an estimated 19.7 million Americans aged 12 or older were current (past month) illicit drug users.

➢ This estimate represents 8.1 percent of the population aged 12 years old or older.

➢ Number of factors know to influence substance use, including perceived availability and parental involvement

Focus

The focus of this research is to examine the the interrelationship of these factors on marijuana use among youth ages 12-17 using the National Survey on Drug Use and Health 2005 data set.

Illicit Drug Excluding
Marijuana

25.8%

54.5%

Marijuana Only

Marijuana and
Other Illicit Drug

19.6%
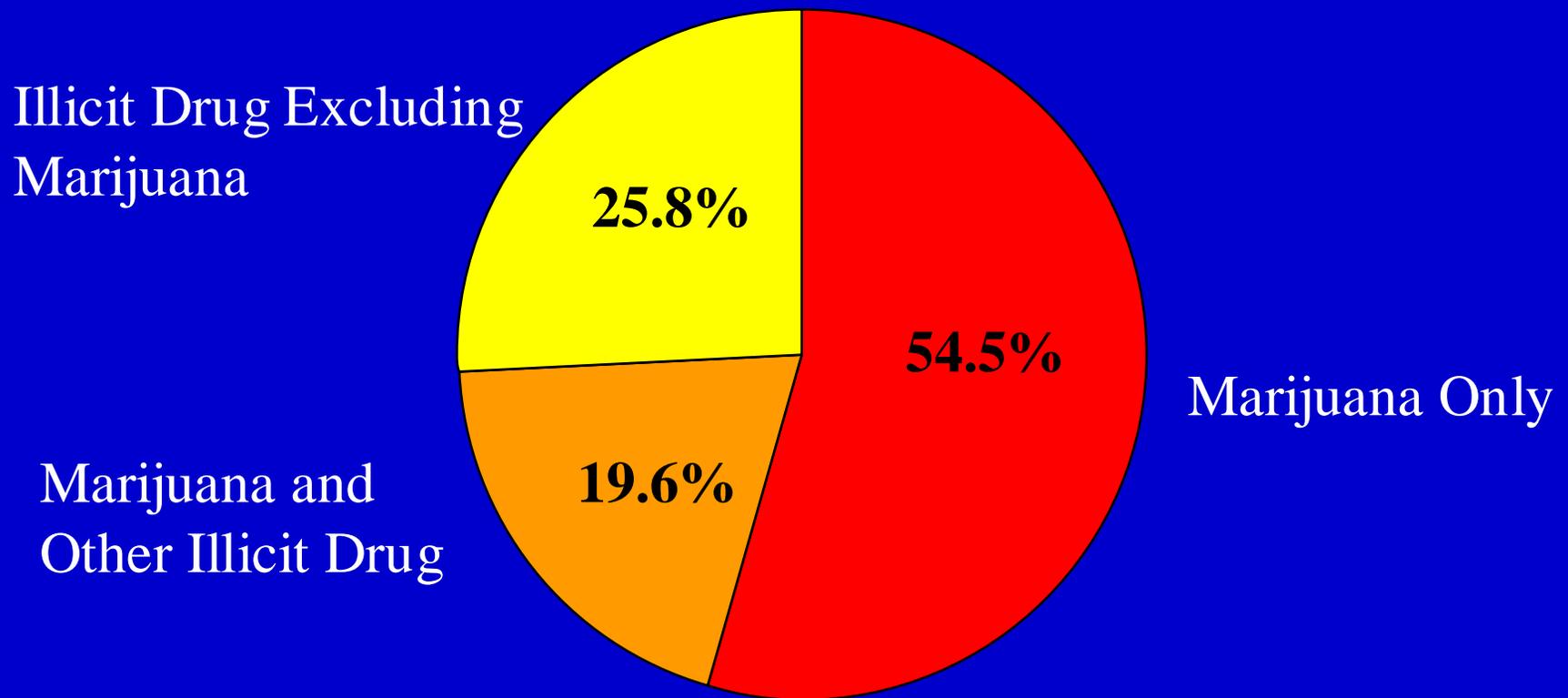
Among current illicit drug users, Marijuana is
the most commonly used illicit drug.
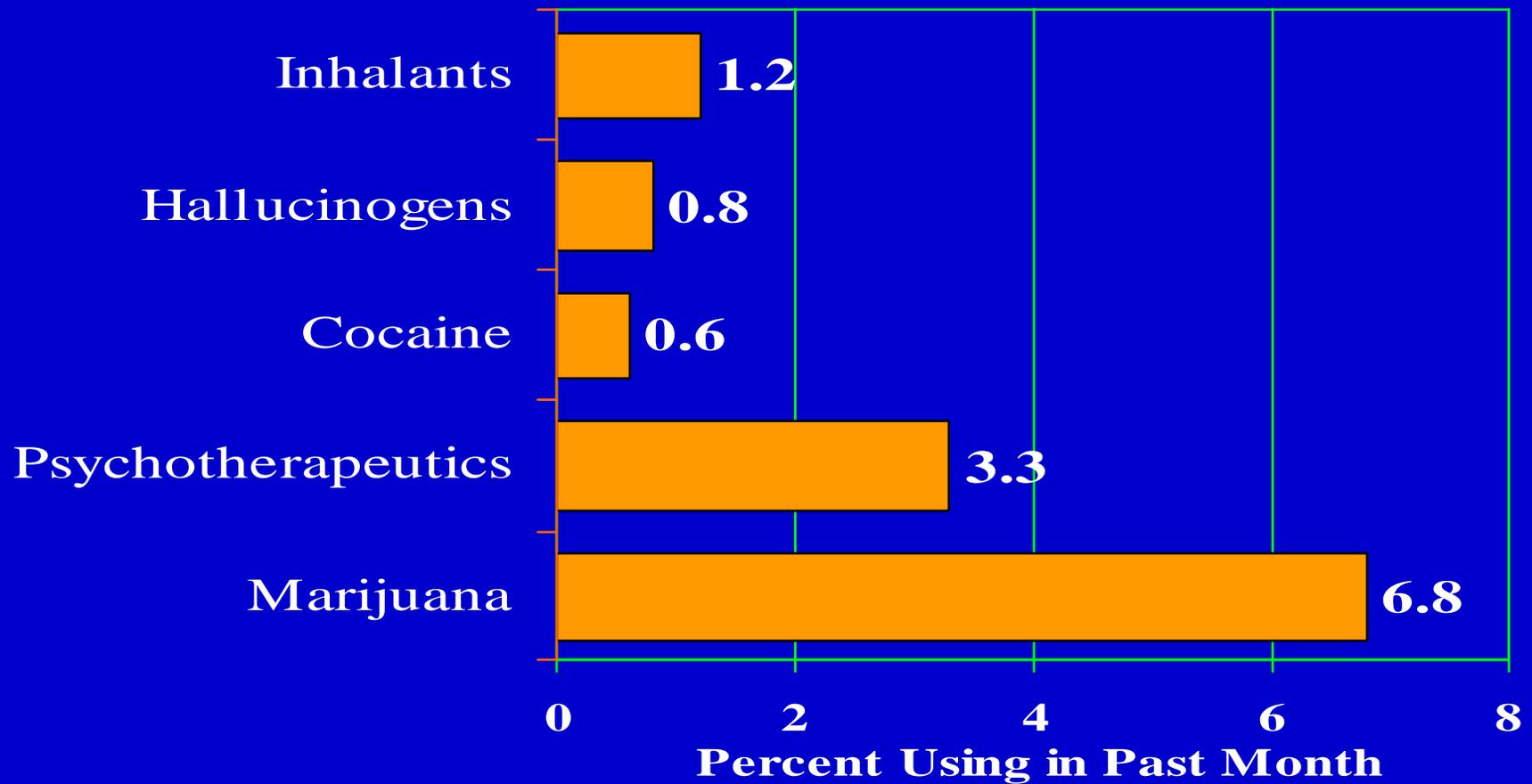
Rate of current marijuana use among youths 12-17
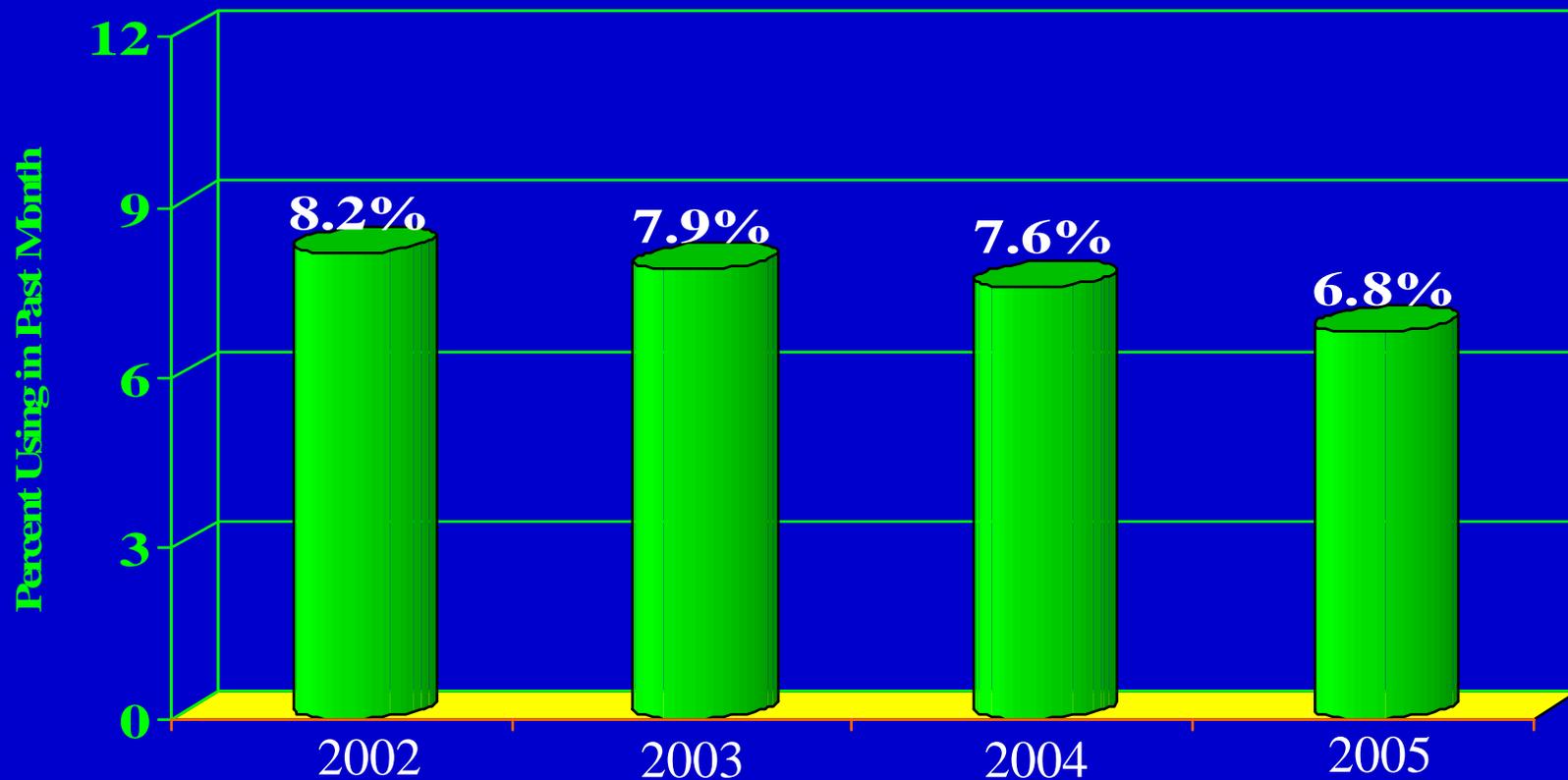
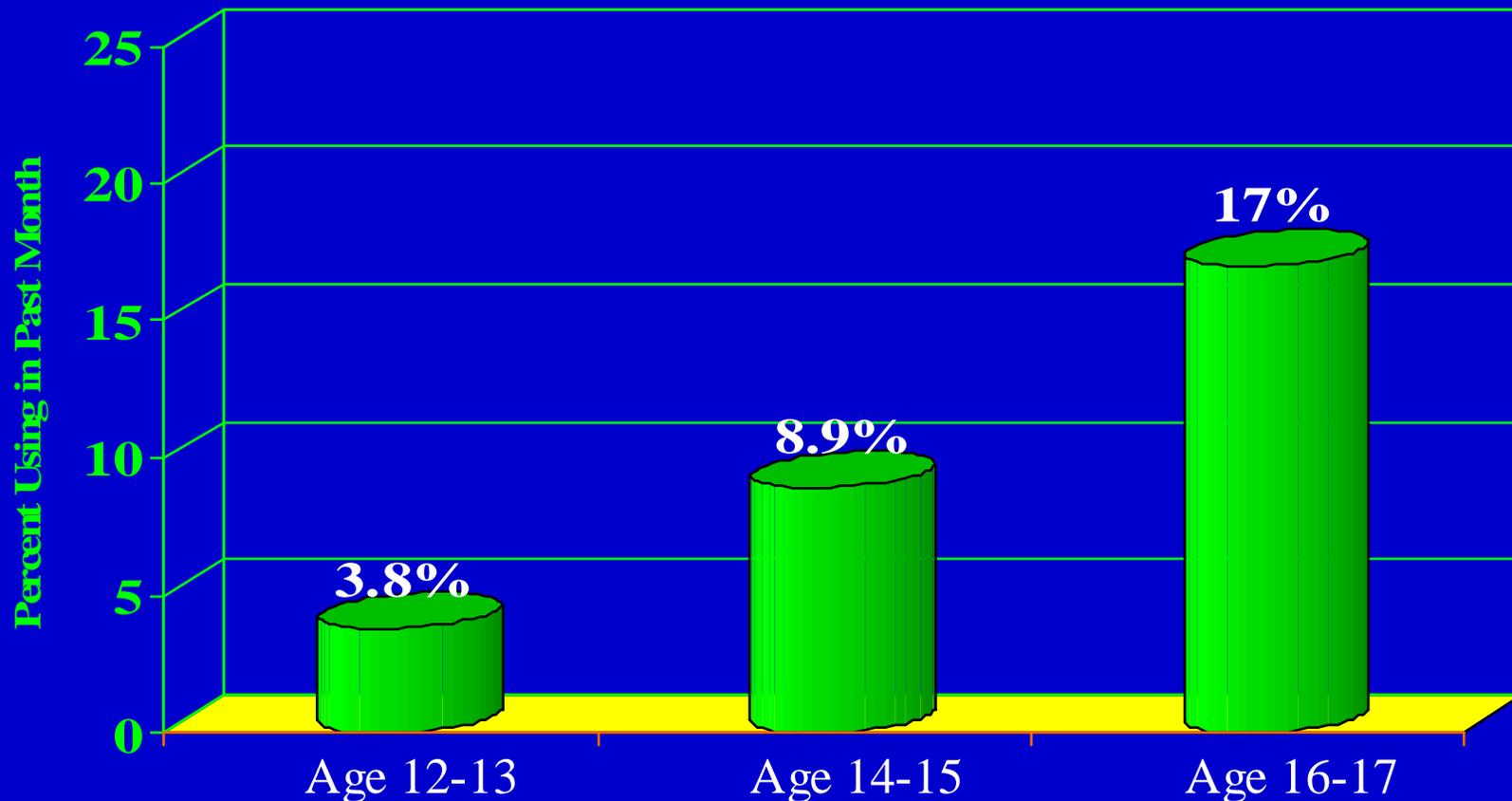Among youths 12-17, the rate of current marijuana use has steadily declined between 2002 and 2005.

In 2005, highest usage rates among youth aged 12-17 was marijuana.

Rate of current illicit drug use among youths 12-17
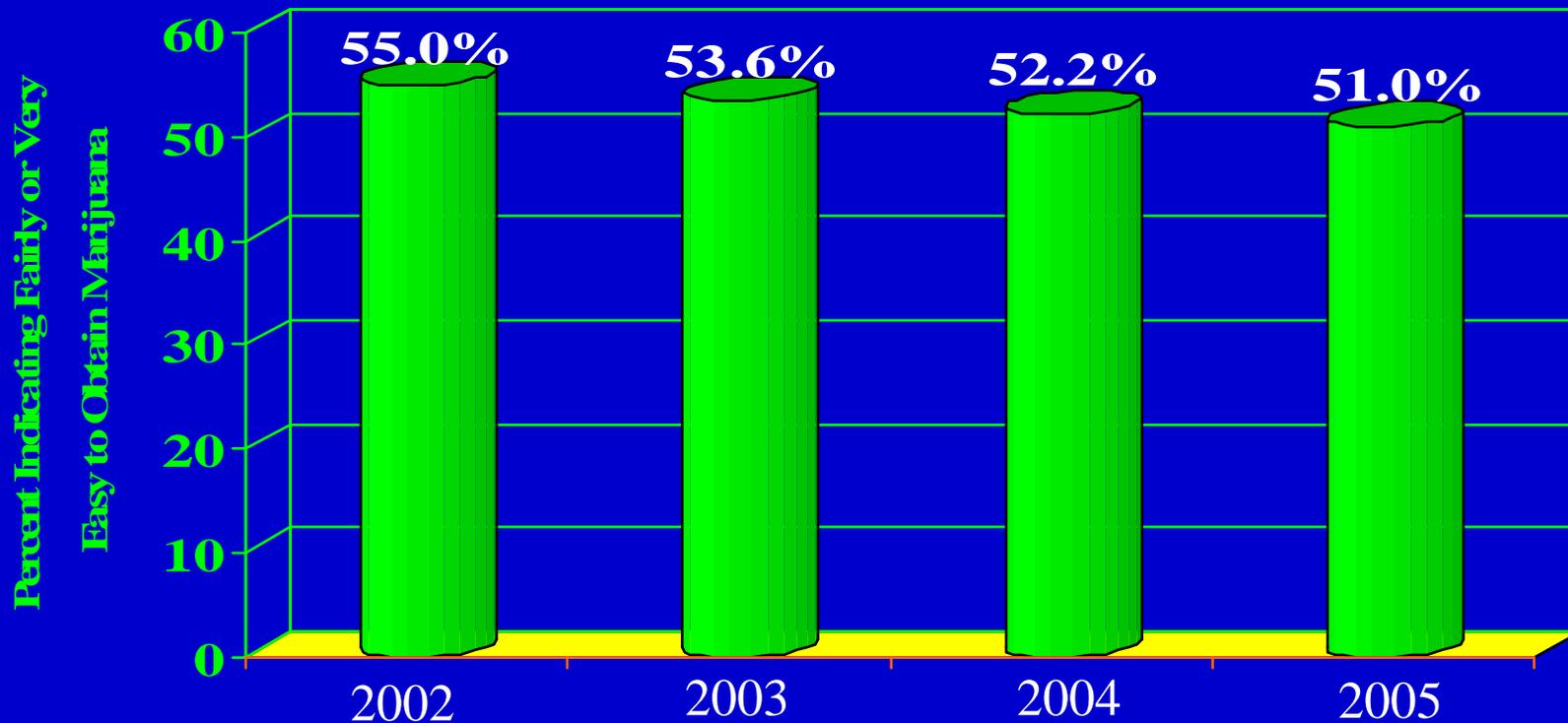
Percent Using in Past Month

25
20 — 17%
15
10 — 8.9%
5 — 3.8%
0

Age 12-13   Age 14-15   Age 16-17

Among this age group, rates of current illicit drug use increased with age.

Perceived availability of marijuana among youths aged 12 to 17: 2002-2005

Percent Indicating Fairly or Very Easy to Obtain Marijuana

55.0%   53.6%   52.2%   51.0%

2002   2003   2004   2005

Perceived availability of marijuana declined between 2002 and 2005, yet more than half of the youth at each time reported it was fairly or very easy to obtain.

Source: NSDUH 2005

Data and Methods

➢ The 2005 National Survey on Drug Use and Health (NSDUH) utilized multi-staged random probability sampling design.

➢ The NSDUH 2005 collected information from residents of households and non-institutional group quarters and from civilians living on military bases (excluding homeless persons who do not use shelters, military personnel on active duty, and people in jails and hospitals).

Data and Methods

➢ Face to face in-home interviews utilizing computer-based instrumentation.

➢ A total of 55,905 interviews were completed aged 12 or older.

➢ The current analysis consisted of 15,618 youths aged 12-17.

Variables

Independent variables:

- Perceived availability - marijuana
- Parental involvement - past 12 months
- Gender
- Age
- Race
- Total family income
- Social activities - past 12 months
- Youth's feelings about peer using marijuana monthly
- Youth's thinking about friends feeling about youths using marijuana monthly

Dependent variable:

- Past year marijuana use

Data Analysis

➤ Used factor analysis for constructing parental involvement scores and youths' social activities involvement scores.

➤ Since, 'past year marijuana use' is a dichotomous variable (coded as 0 for no and 1 for yes), several logistic regression models are estimated:

Data Analysis *continued*

➤ Model 1 is estimated for assessing the relationship between perceived availability and past year use of Marijuana by the youths.

➤ Model 2 is estimated for assessing the mediation effect of past year parental involvement in the relationship between perceived availability and past year use of marijuana by the youths.

➤ Model 3 is an extension of Model 2 where socio-demographic and other factors are controlled for in assessing the mediation effect of past year parental involvement on past year marijuana use by the youths.

Data Analysis *continued*

❖ Sampling weights are used in all univariate, bi-variate and logistic regression analyses.

❖ Jackknife variance estimations for survey data are also used in estimating logistic regression models.
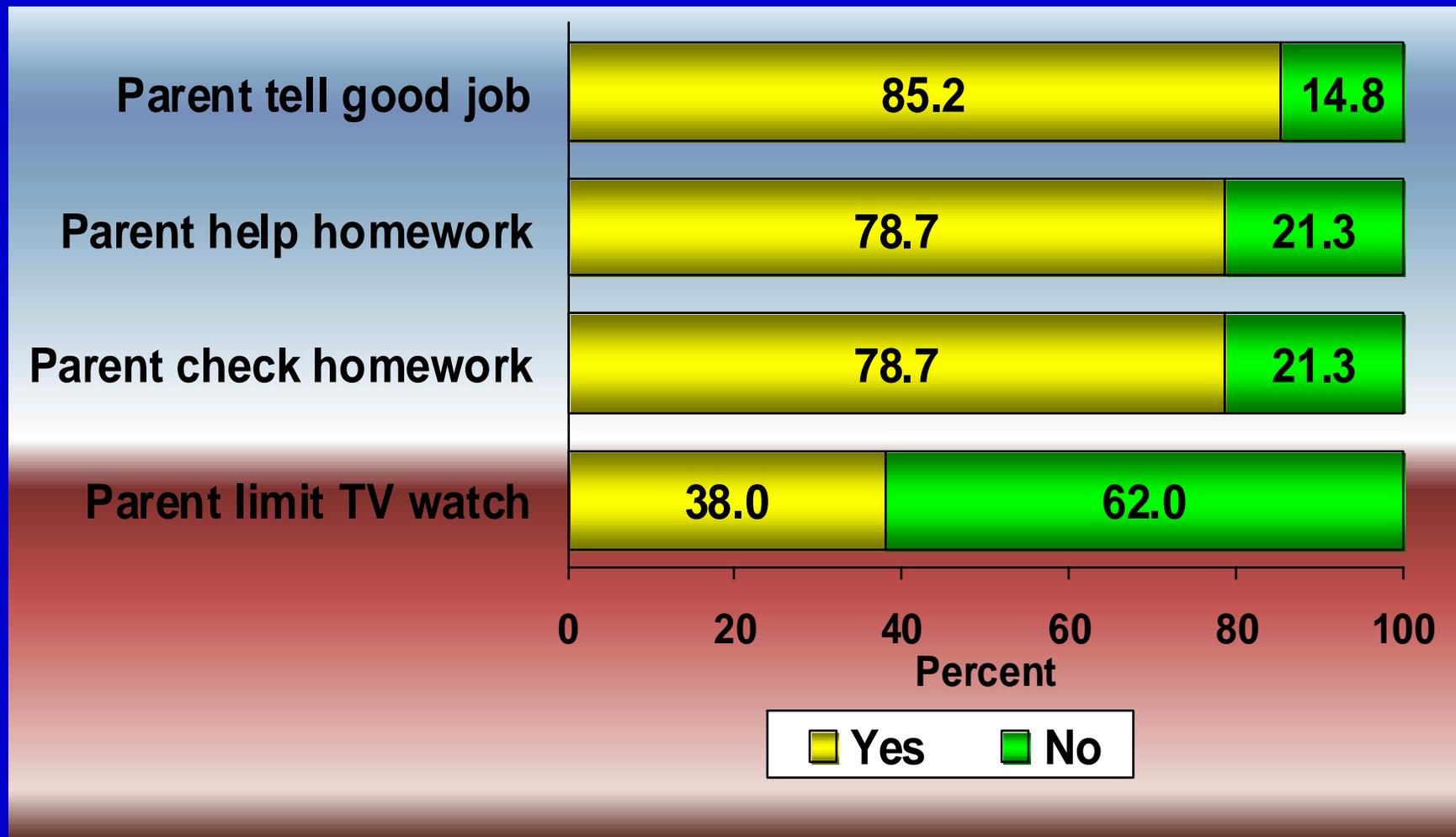
Research Question

Does past year parental involvement have any mediation effect or moderation effect on the relationship between perceived availability and past year marijuana use by youths aged 12-17?
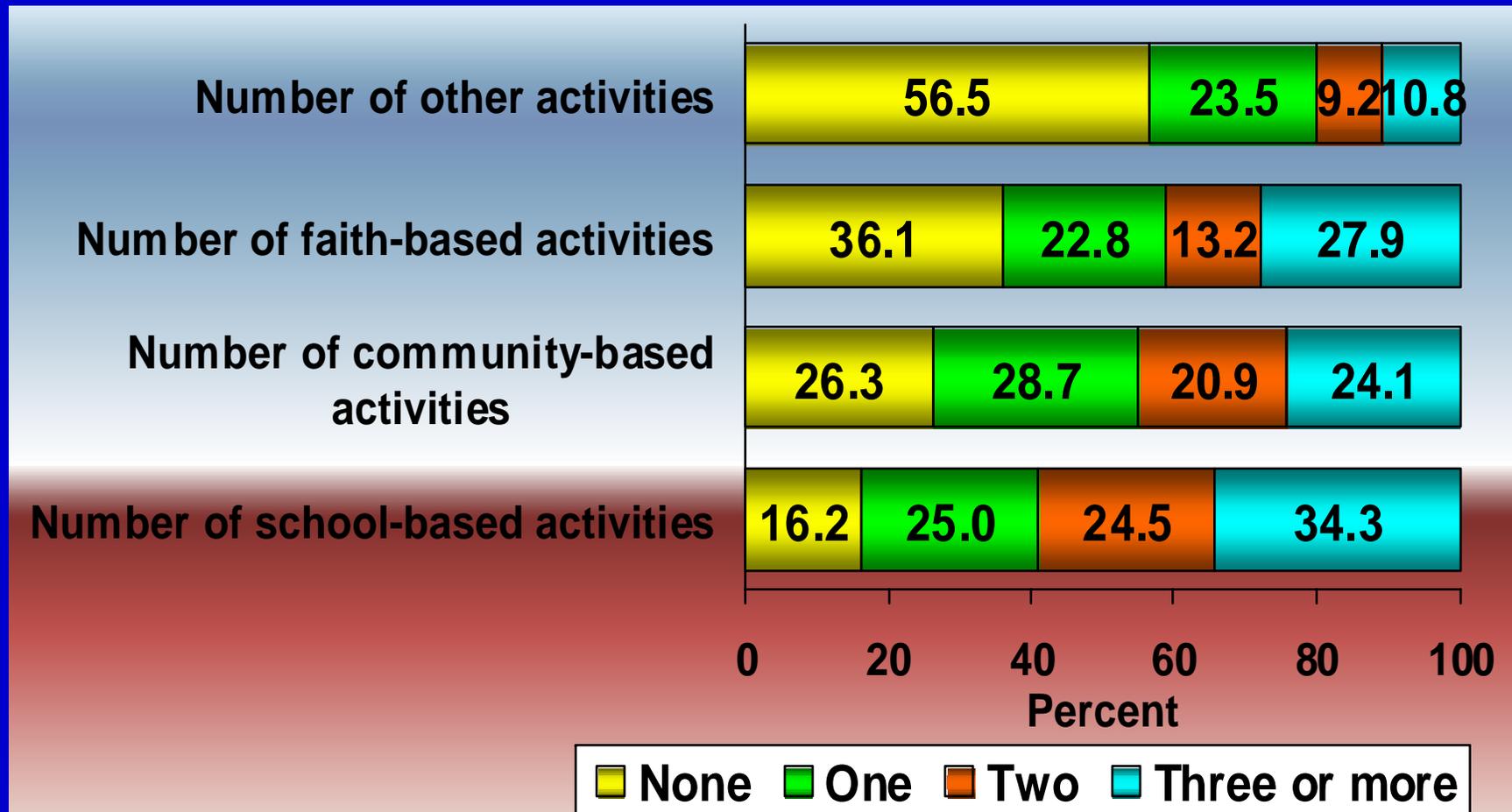
Factor Analysis

Past year parental involvement indicators
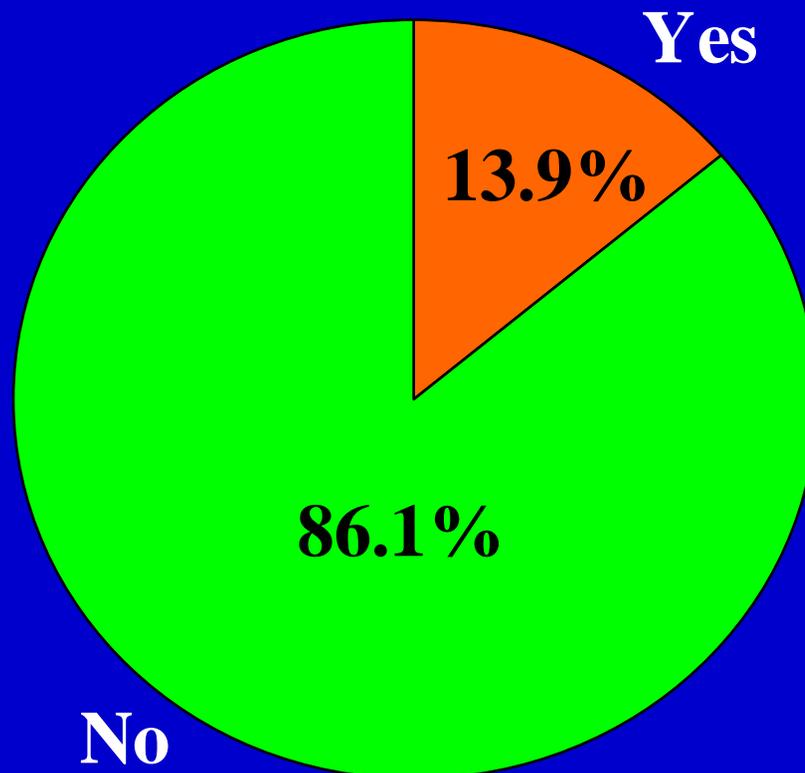## *Cronbach's Alpha (an index of reliability)=0.63*

Indicator	Yes	No
Parent tell good job	85.2	14.8
Parent help homework	78.7	21.3
Parent check homework	78.7	21.3
Parent limit TV watch	38.0	62.0

Percent

☐ Yes ☐ No

Past year youths social activities involvement indicators
Cronbach's Alpha (an index of reliability)=0.68

Activity	None	One	Two	Three or more
Number of other activities	56.5	23.5	9.2	10.8
Number of faith-based activities	36.1	22.8	13.2	27.9
Number of community-based activities	26.3	28.7	20.9	24.1
Number of school-based activities	16.2	25.0	24.5	34.3

Percent

Legend: None, One, Two, Three or more

Descriptive Analysis of the Study Sample

Past year marijuana use among youths aged 12-17, NSDUH 2005

Yes

13.9%

86.1%

No

Perceived availability of marijuana among youths aged 12-17, NSDUH 2005

Impossible to get

18.5%

Very/fairly easy to get

53.6%

27.9%

Very/fairly difficult to get
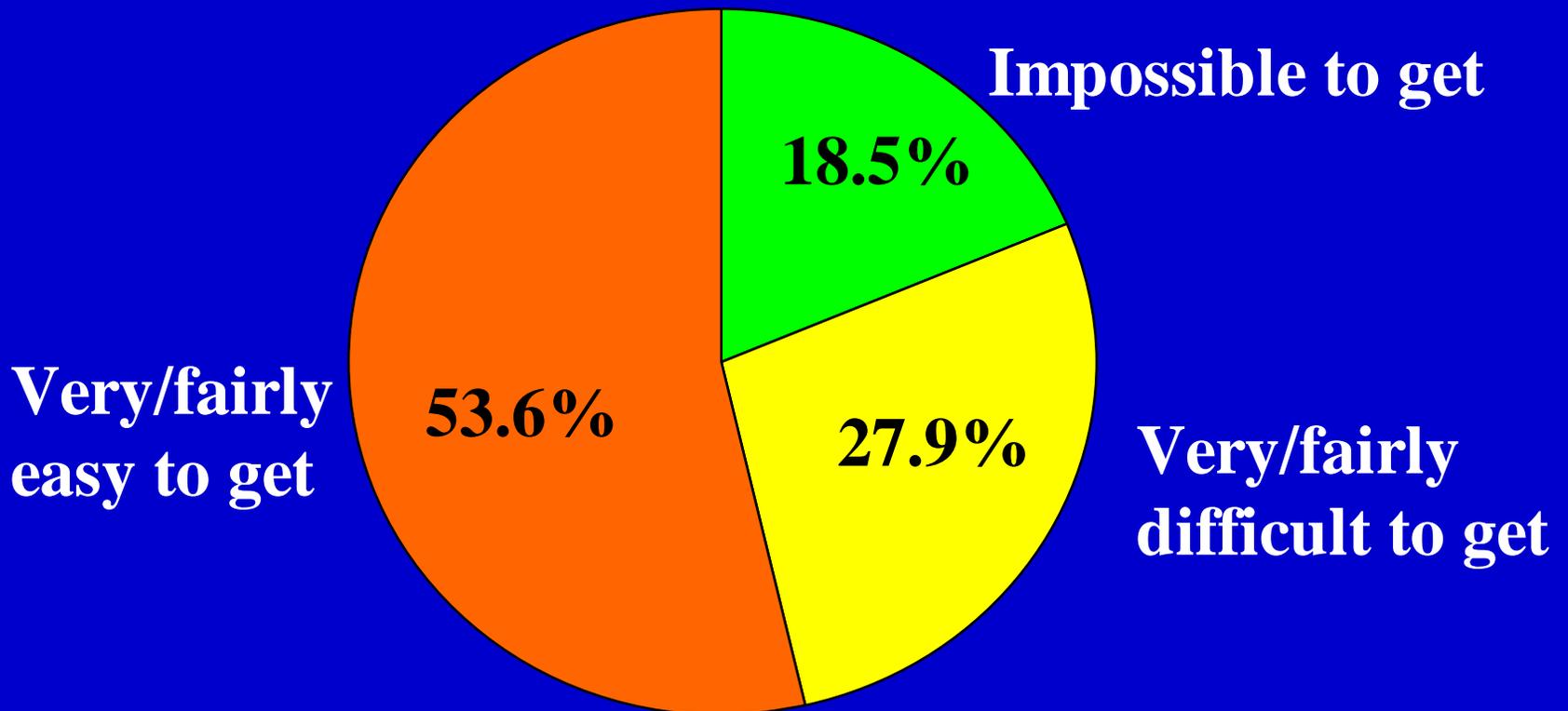
Distribution of gender, youths aged 12-17, NSDUH 2005

Male 50.6% 49.4% Female
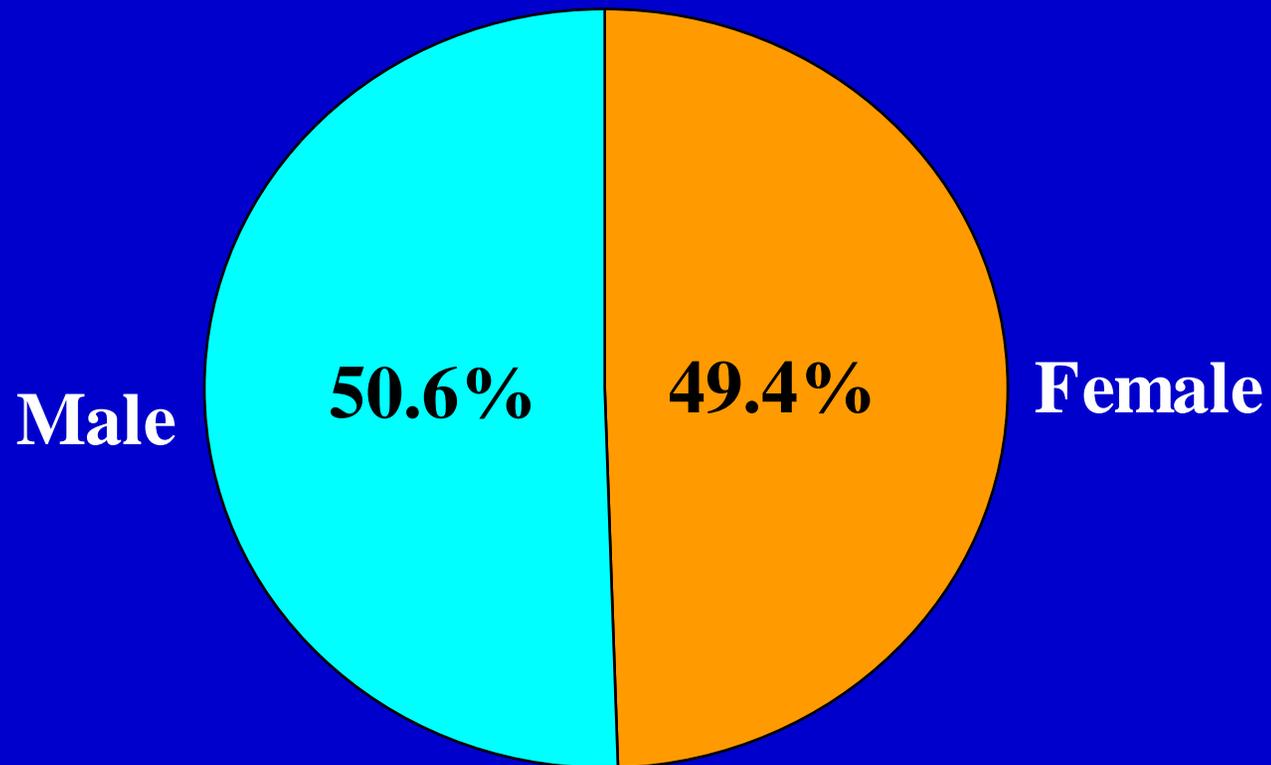
Age distribution of youths aged 12-17, NSDUH 2005

12-13 years

30.1%

16-17 years

34.9%

35.0%

14-15 years
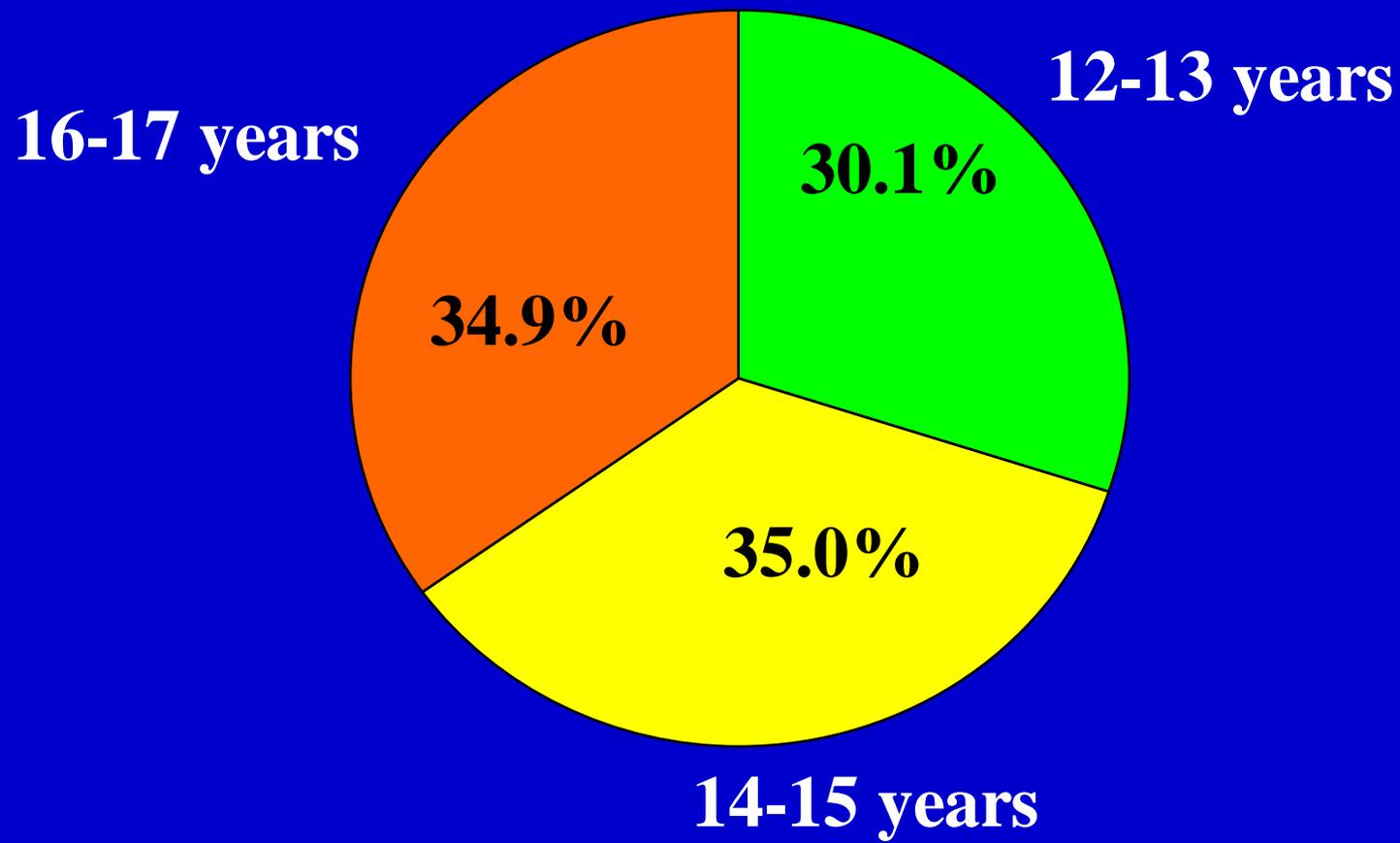
Distribution of race, youths aged 12-17, NSDUH 2005

Hispanics **16.2%**

Blacks **14.4%**

Others **6.2%**

63.2% Whites
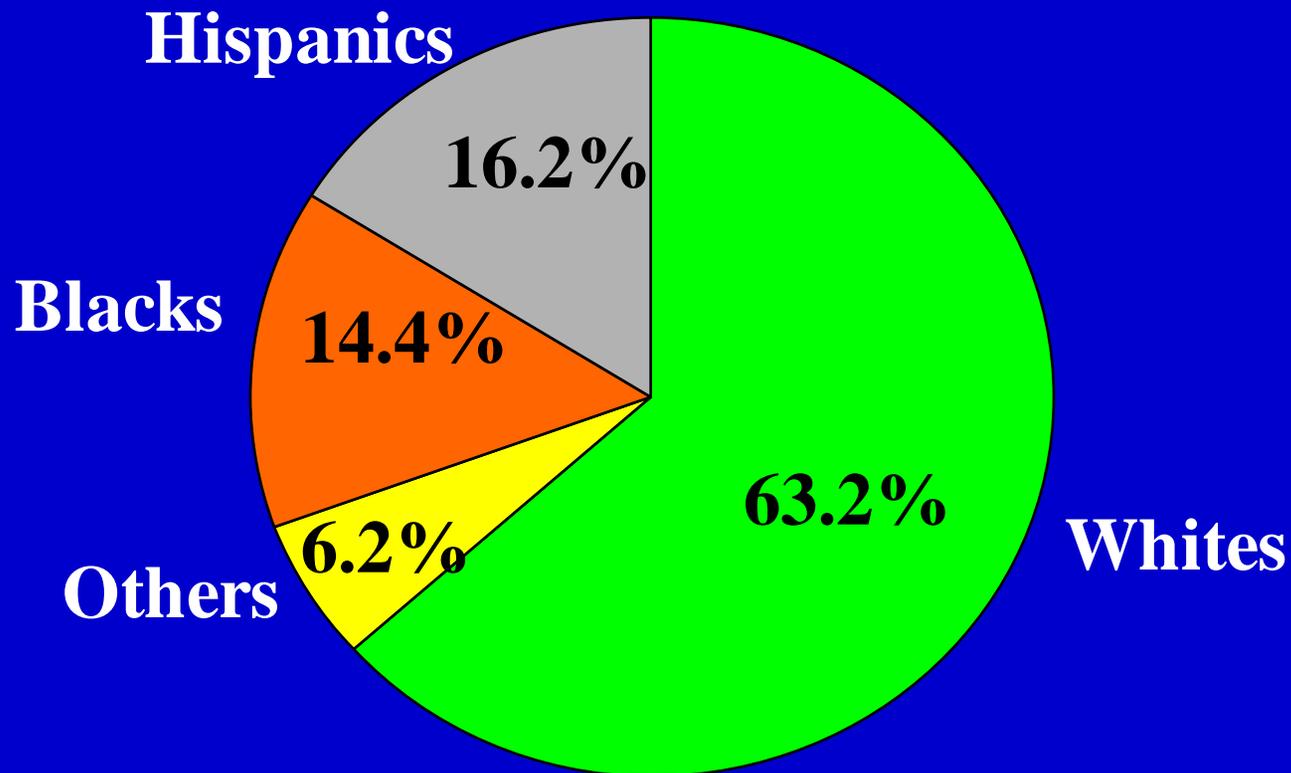
Past year parental involvement and youths' social activities involvement factor scores

	Low	Medium	High
Youths social activities involvement in scores	34.5	32.5	33.0
Parental involvement scores	34.8	37.0	28.2

Percent: 0 20 40 60 80 100

Legend: ▢ Low ▢ Medium ▢ High
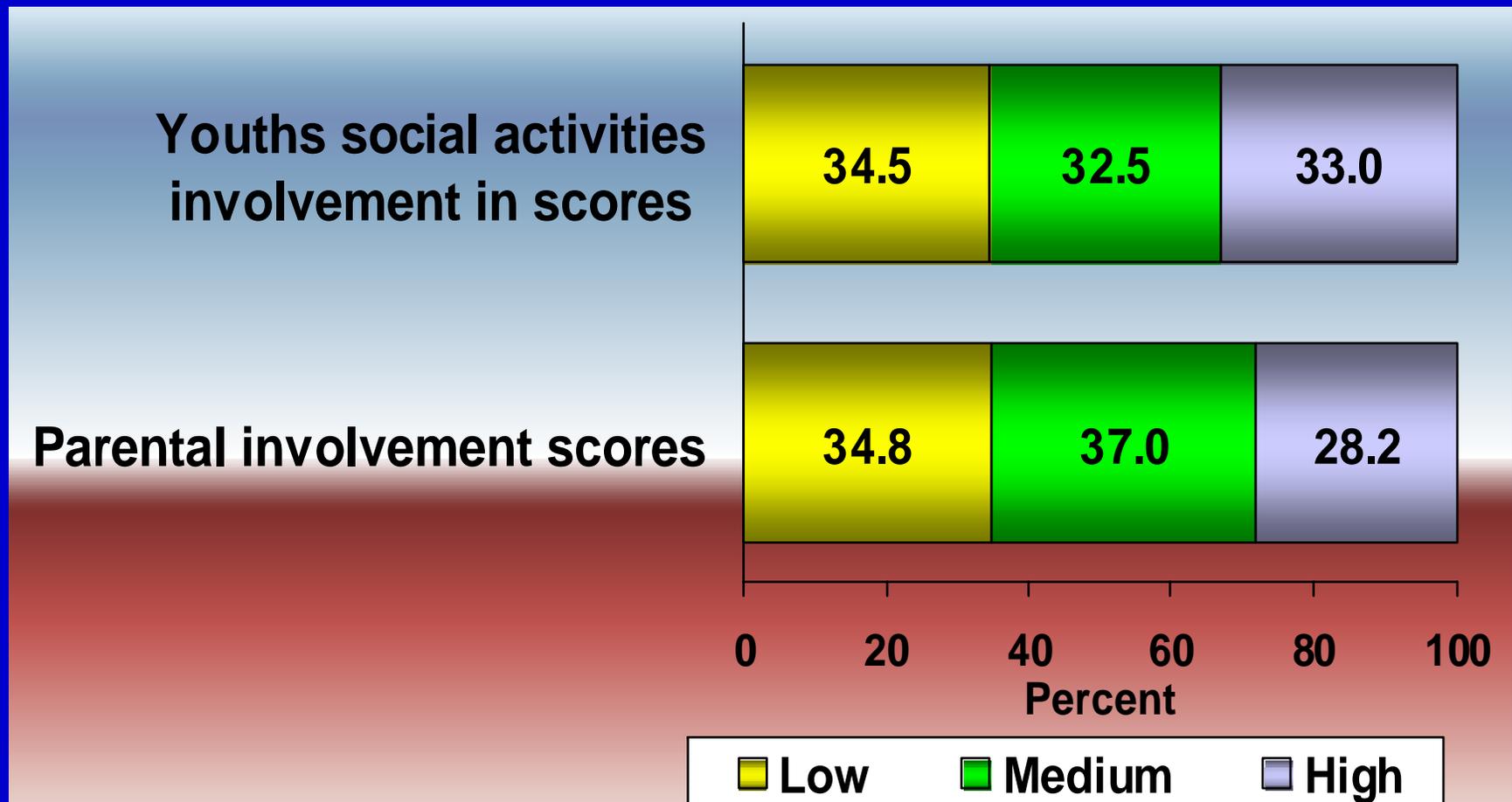
Youths' feeling about peers and youths thinking regarding friends felling about youths using marijuana monthly

Youths' thinking regarding friends feeling about youths using marijuana monthly

82.7 | 17.3

Youths feeling about peers using marijuana monthly

80.7 | 19.3

0   20   40   60   80   100

Percent
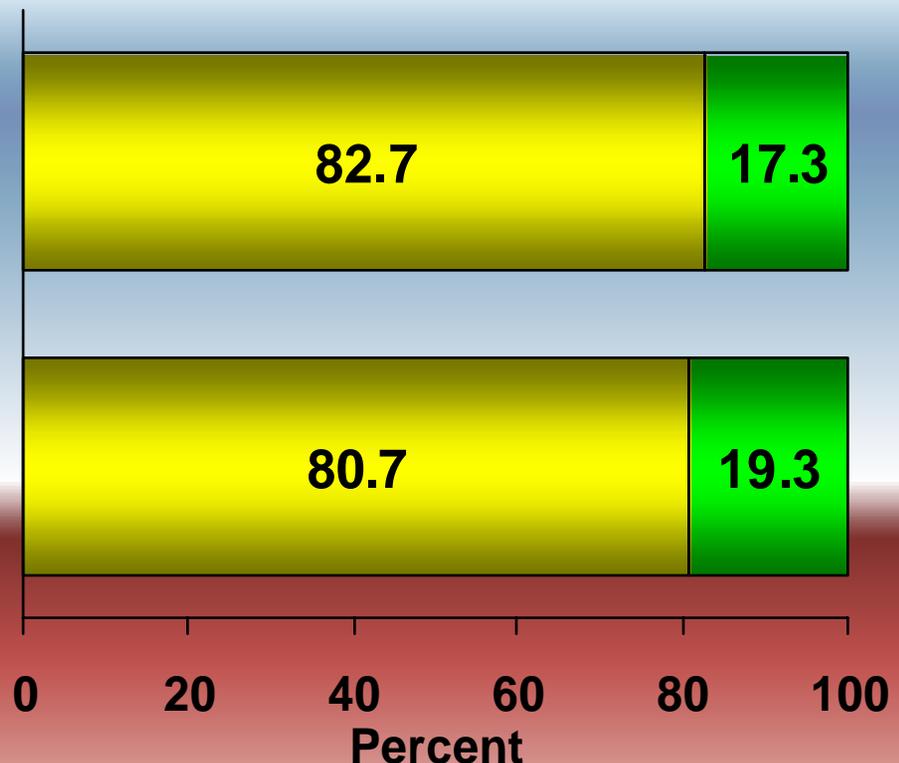
- ▢ Strongly/somewhat disapprove
- ▢ Neither approve nor disapprove

Bivariate Analyses

Bivariate relationship between independent variables and past year use of marijuana, youths 12-17

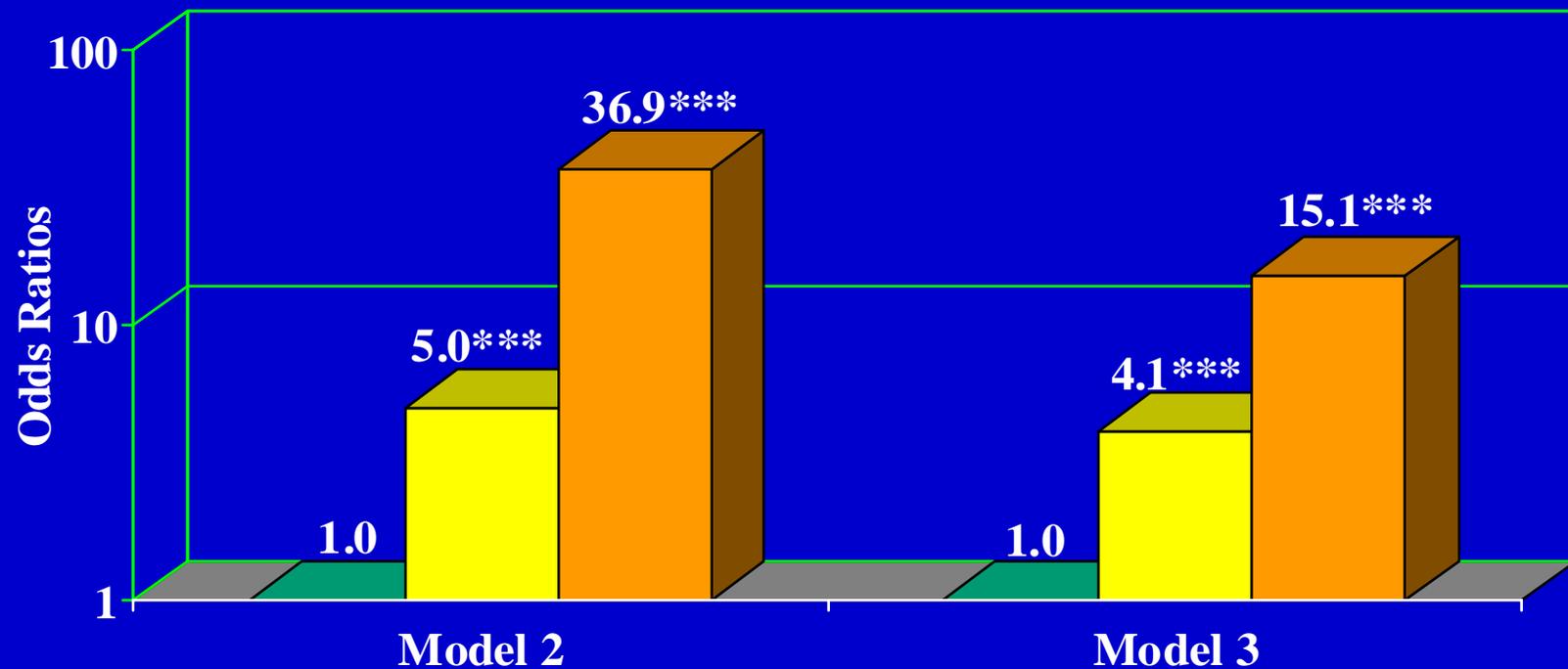| Variables	Chi-square	P-value
Perceived availability of marijuana	1139.40	<0.001
Gender	0.26	0.607
Age	692.20	<0.001
Race	21.60	<0.001
Family Income	4.73	0.193
Parental involvement score	302.47	<0.001
Youths social activities involvement score	117.59	<0.001
Youths' feeling about peers using marijuana monthly	795.71	<0.001
Youths' thinking regarding friends feeling about youths using marijuana monthly	689.59	<0.001

Logistic Regression Analyses

Odds Ratios for the relationship between perceived availability of marijuana and past year marijuana use, youths 12-17

Odds ratio for past year marijuana use (y-axis)

100

10

1

44.4***

5.4***

1.0

Model 1 (unadjusted)
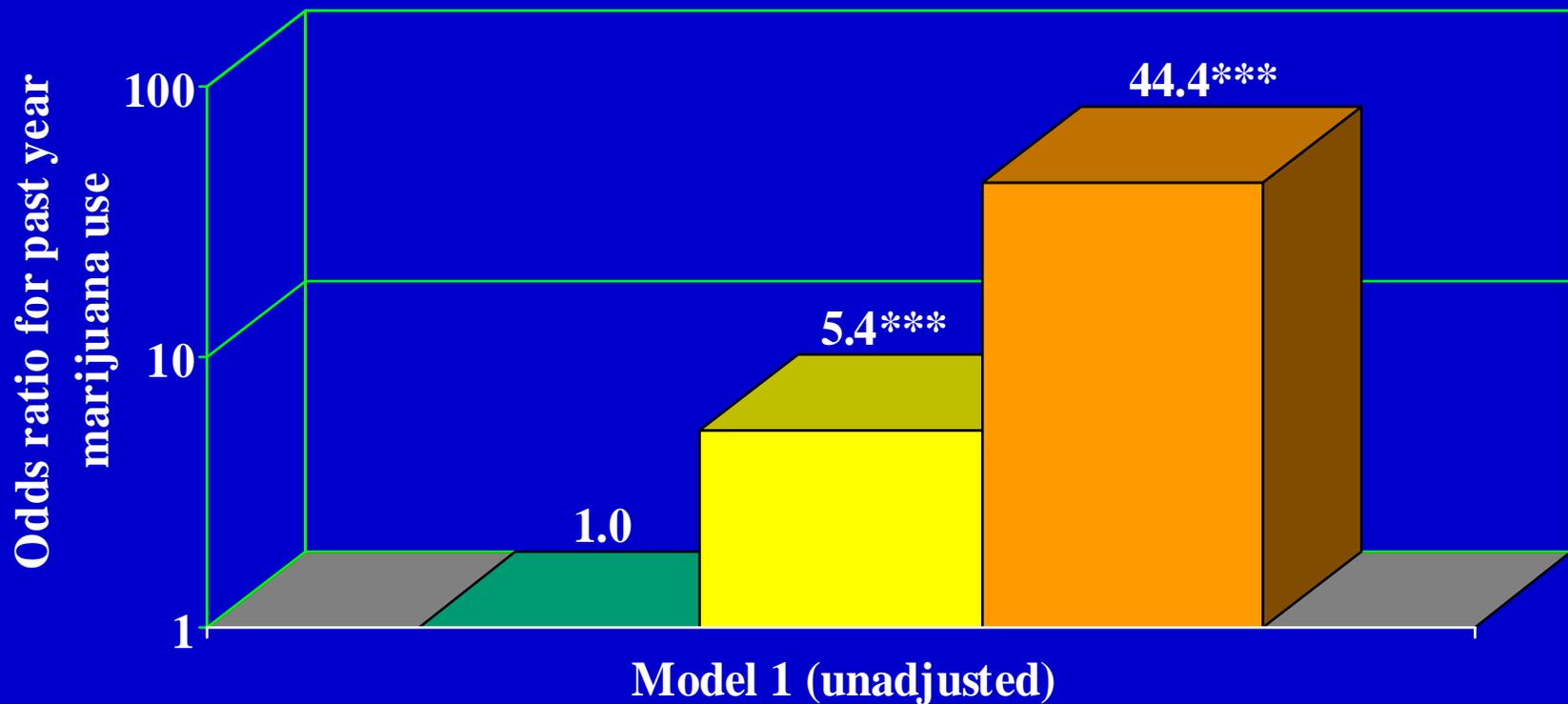
■ **Impossible to get**　■ **Very/fairly difficult to get**　■ **Very/fairly easy to get**

Significance: *** $p < 0.001$

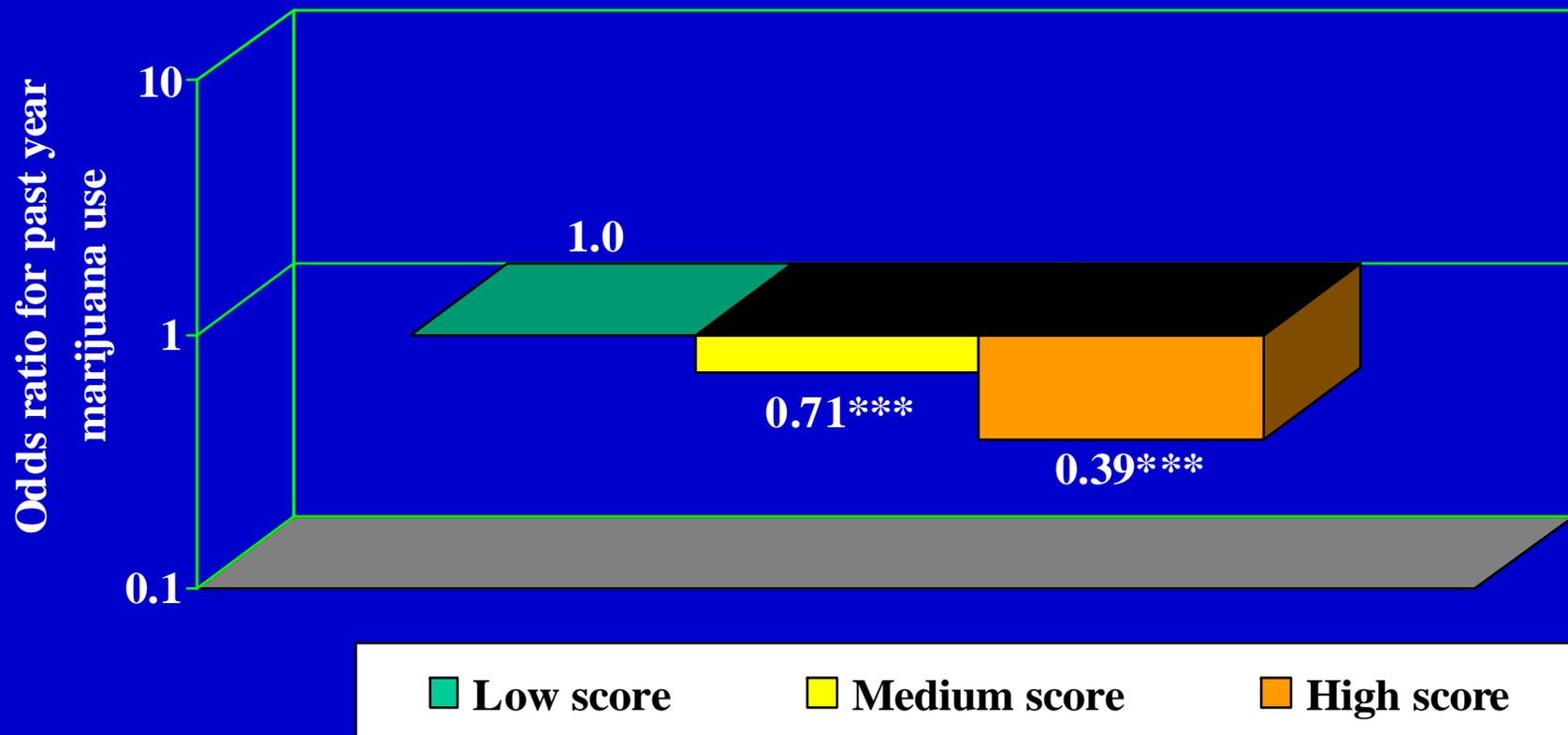# Adjusted odds ratios for the relationship between perceived availability of marijuana and past year marijuana use

Model 2: Adjusted for past years parental involvement scores

Model 3: Adjusted for past years parental involvement scores, socio-demographic, youths perceptions and behavioral indicators.

Significance: *** $p < 0.001$

Adjusted odds ratios for the relationship between past year parental involvement score and past year marijuana use adjusted for perceived availability of marijuana, youths 12-17

Odds ratio for past year marijuana use

10

1

0.1

1.0

0.71***

0.39***

■ Low score ■ Medium score ■ High score

Significance: * *p* < 0.001**

Summary and Conclusion

Moderation Effect

➢ None of the interactions between perceived availability of marijuana and past years' parental involvement scores were significant (results not presented).

➢ Concluded from this an absence of any moderation effect.

Summary and Conclusion

Mediation Effect

➢ The reduced odds ratio in Model 2 (with parental involvement) compared to Model 1, suggests that past year parental involvement has a *partially* mediating effect on the relationship between perceived availability and past year use of marijuana by the youths.

➢ Parental involvement in the day to day activities may reduce the likelihood of youths marijuana use.