



Targeting Sleep Behaviors to Prevent Youth Substance Use, Suicide & Violence

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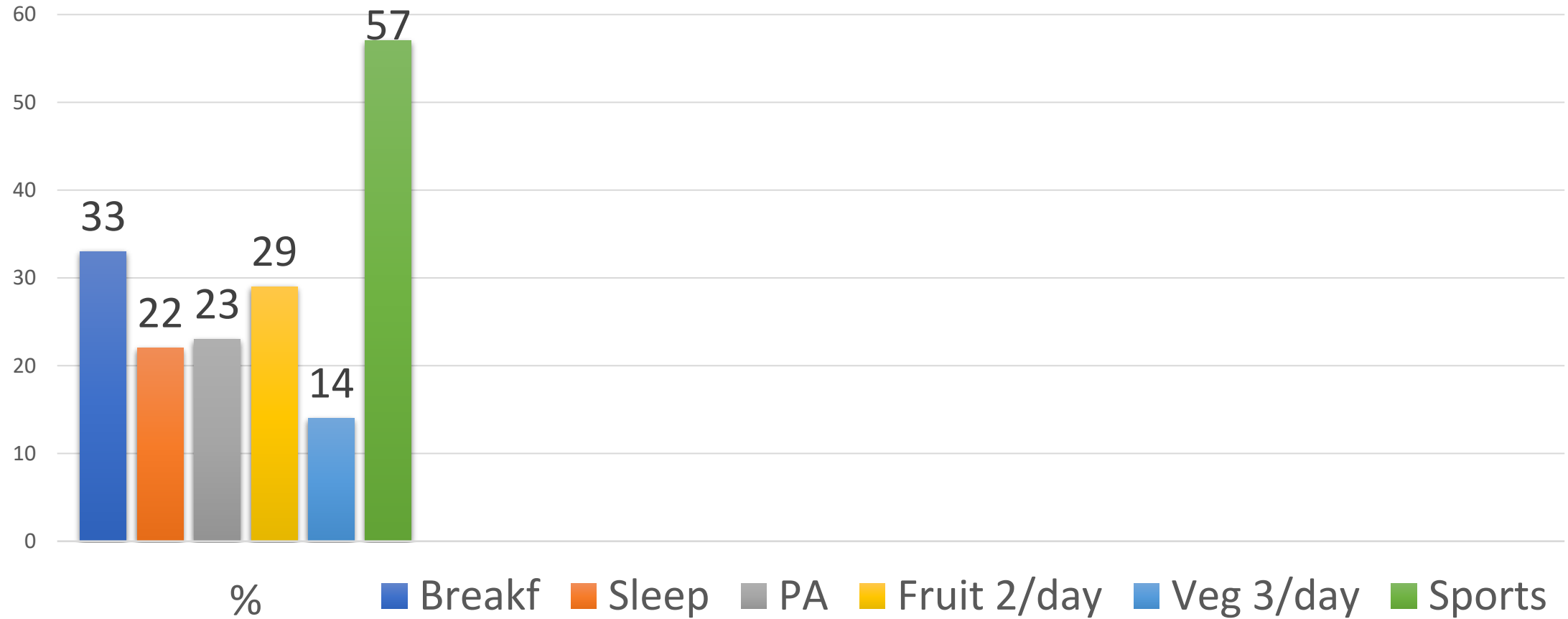
Session Objectives

1. Explore associations between sleep and substance use, suicide and violence among US adolescents.
2. Examine the benefits, challenges and tips for improving the quantity and quality of sleep among youth.
3. Review recent research examining the relationships among sleep and substance use, suicide and violence among youth.
4. Discuss practice implications for prevention and mental health professionals and parents.

Healthy Lifestyle Behavior Prevalence



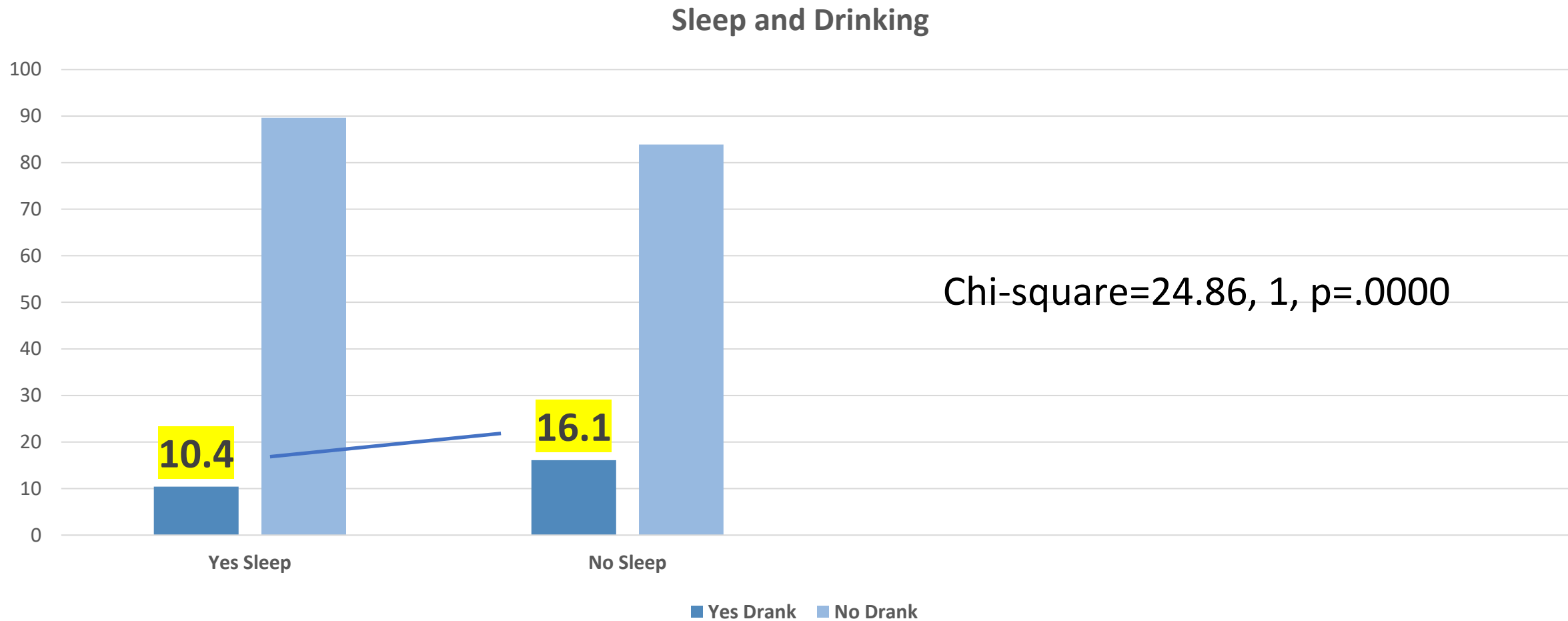
Percentage of US High School Adolescents Practicing Healthy Behaviors (YRBS, 2019)



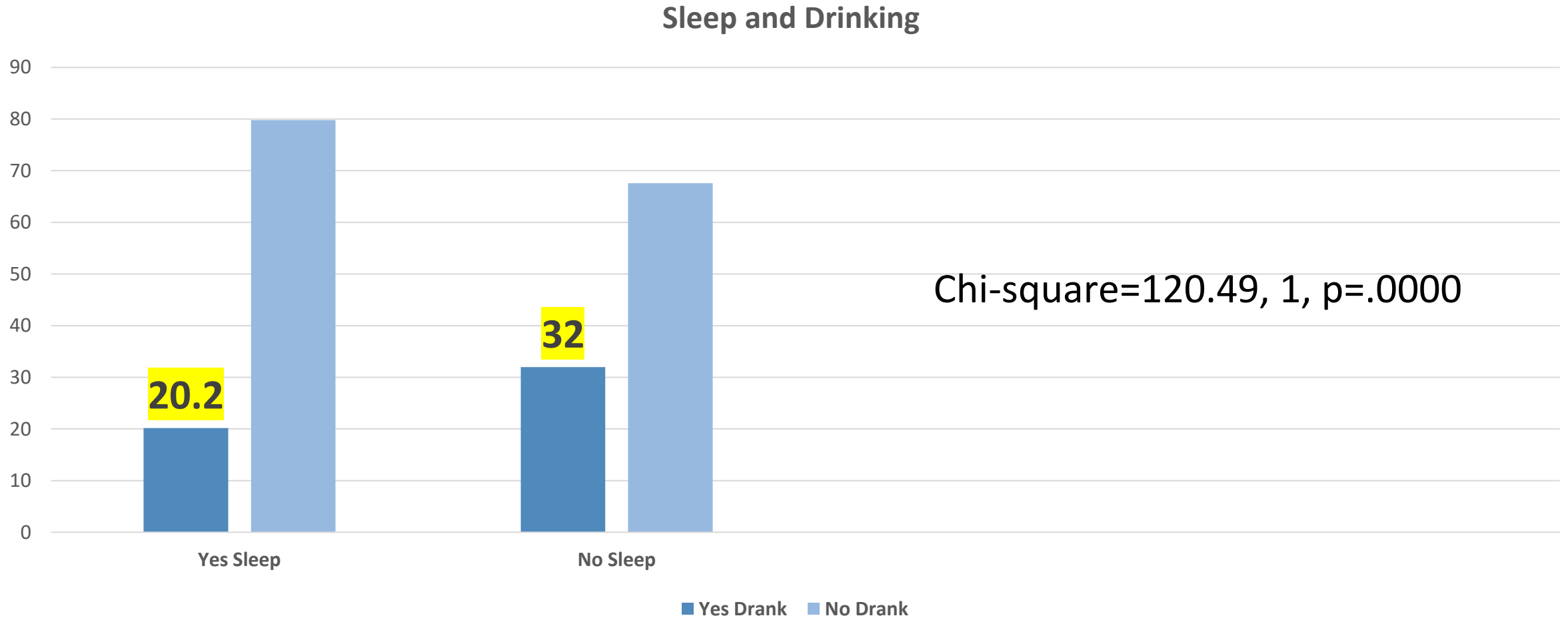
Associations Between Sleep & Substance Use, Suicide & Violence Among US Adolescents

Substance Use

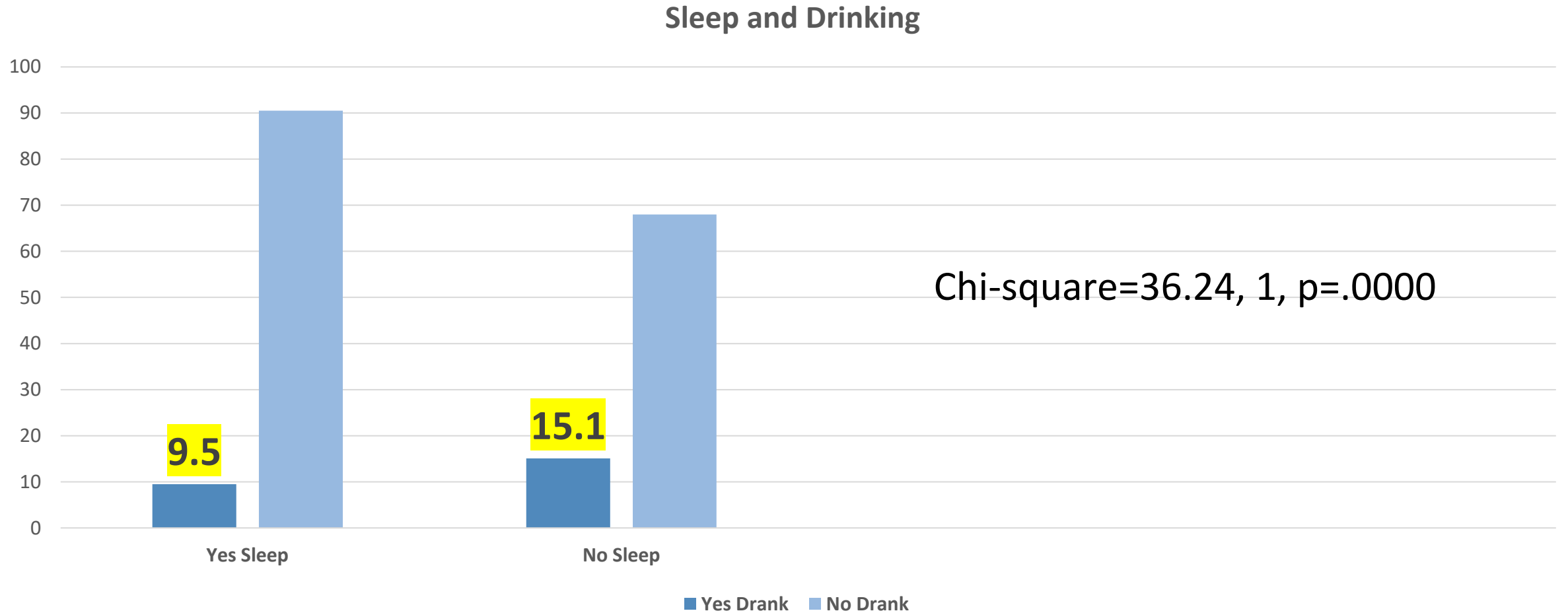
Slept 8 or More Hours/Night by First Drink Before Age 13



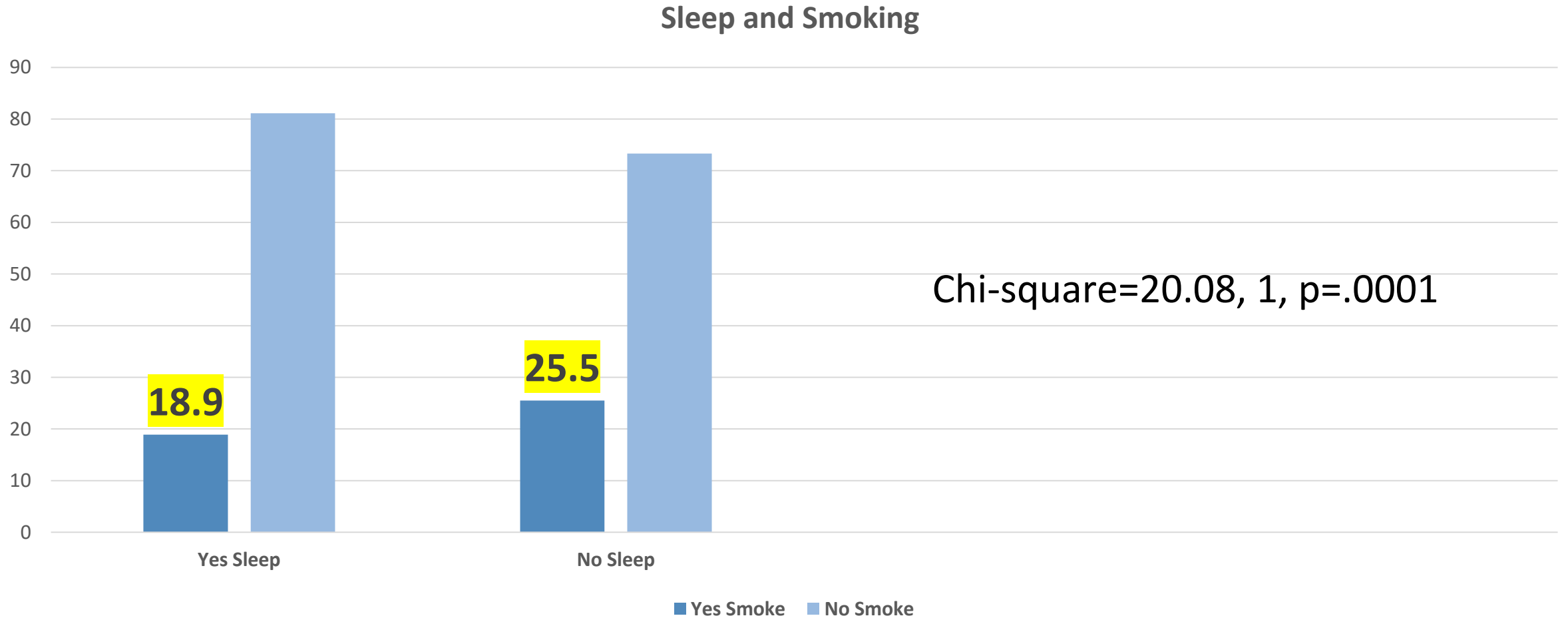
Slept 8 or More Hours/Night by Current Alcohol Use



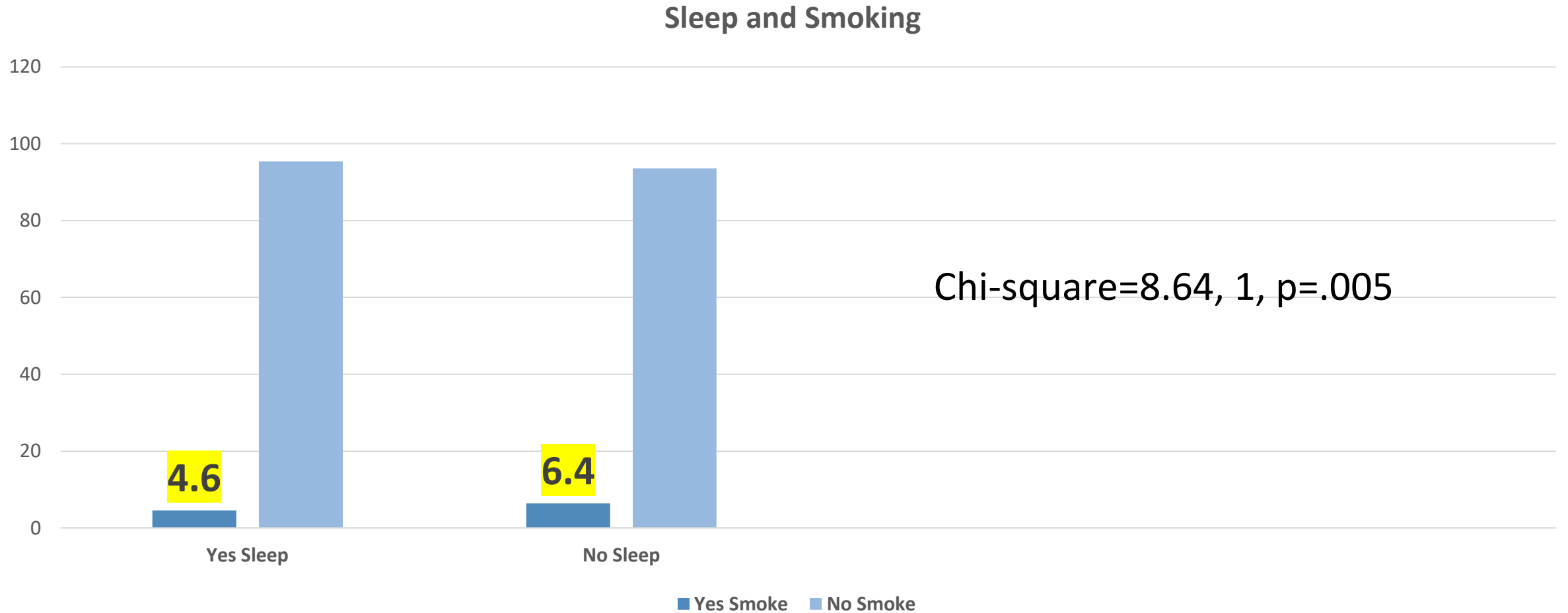
Slept 8 or More Hours/Night by Current Binge Drinking



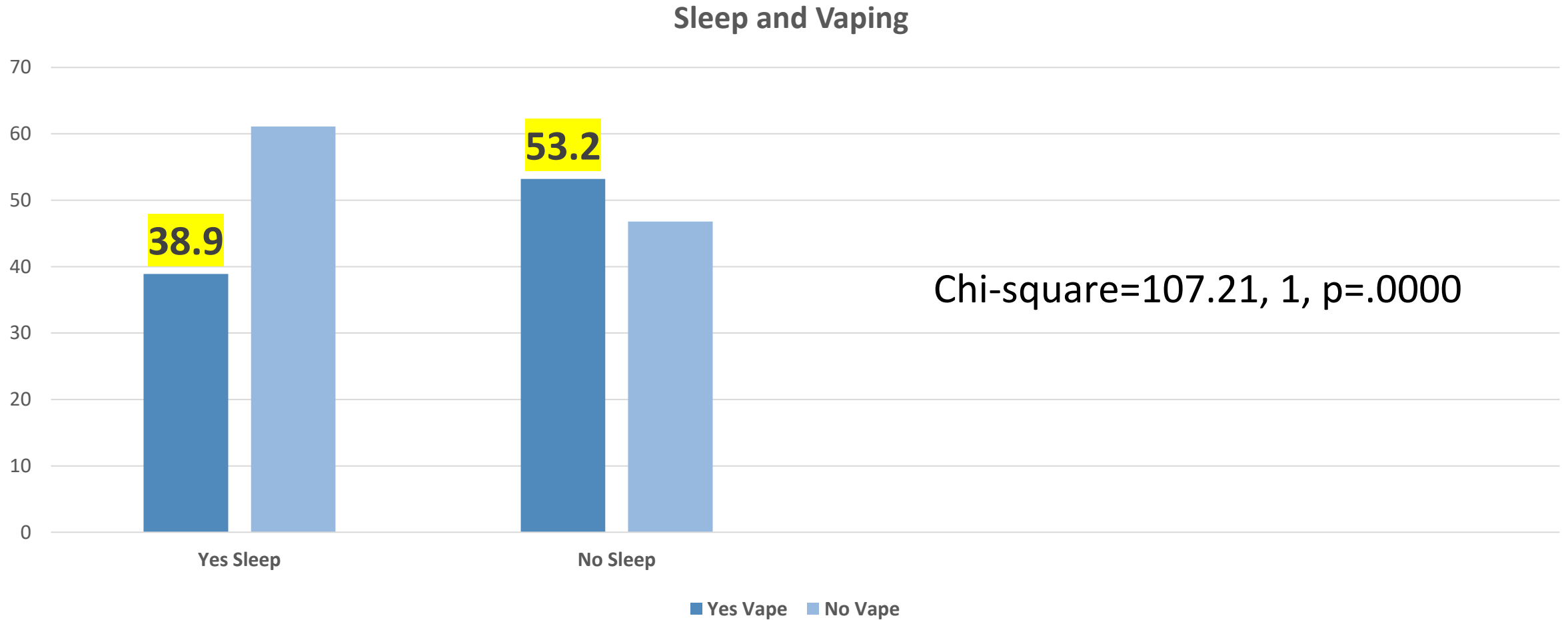
Slept 8 or More Hours/Night by Ever Smoked Cigarettes



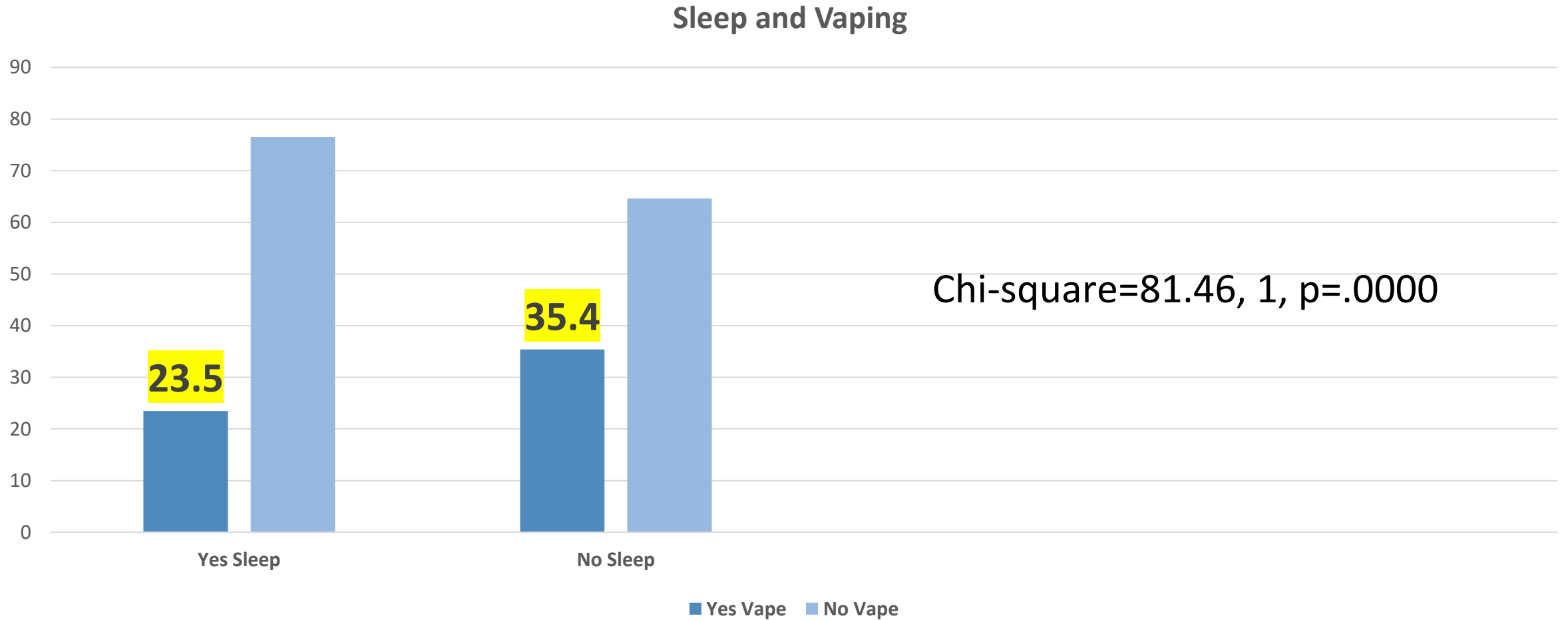
Slept 8 or More Hours/Night by Currently Smoked Cigarettes



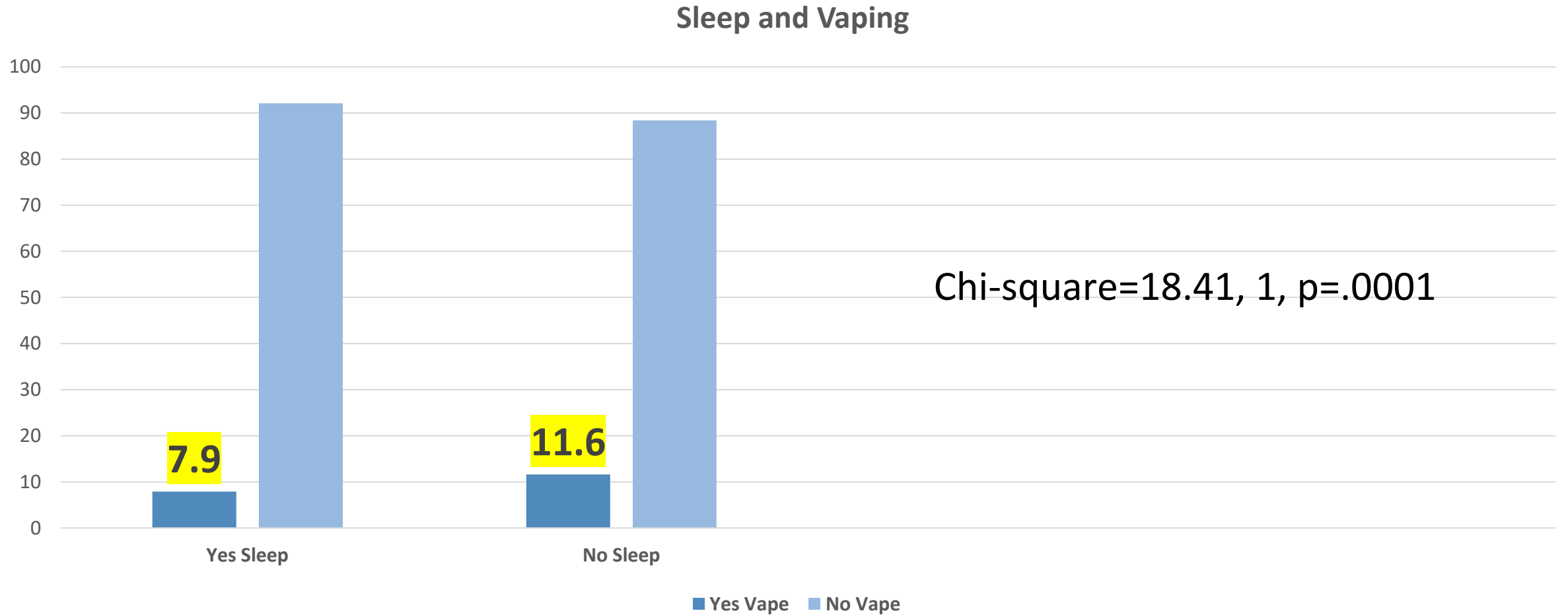
Slept 8 or More Hours/Night by Ever Vaped E-Cigarettes



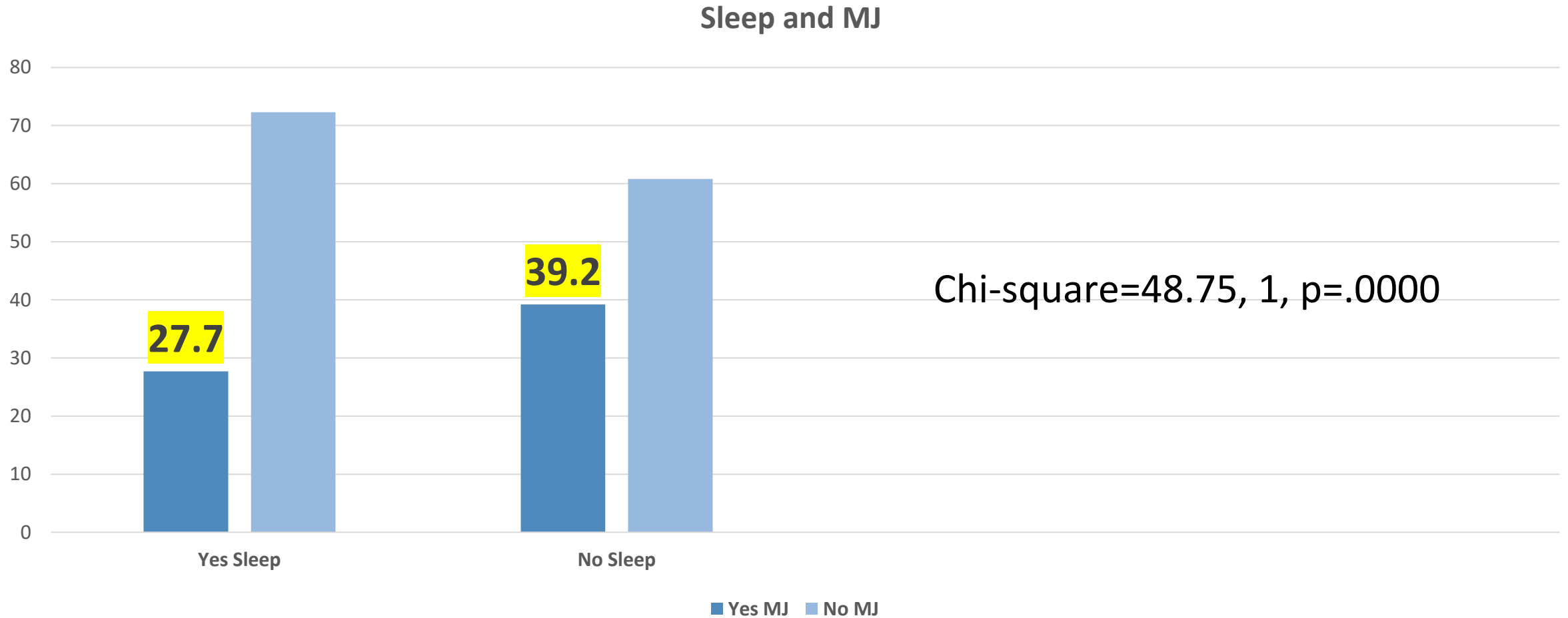
Slept 8 or More Hours/Night by Currently Vaped E-Cigarettes



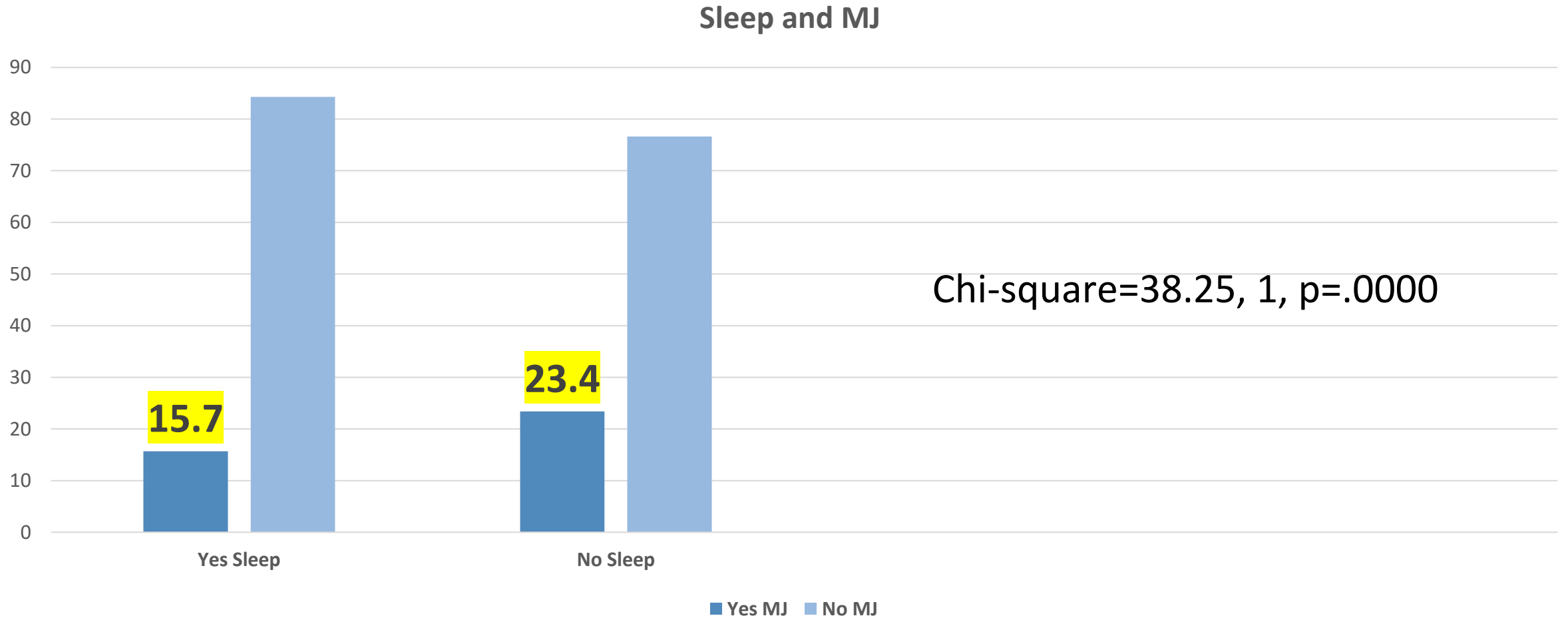
Slept 8 or More Hours/Night by Frequently Vaped E-Cigarettes



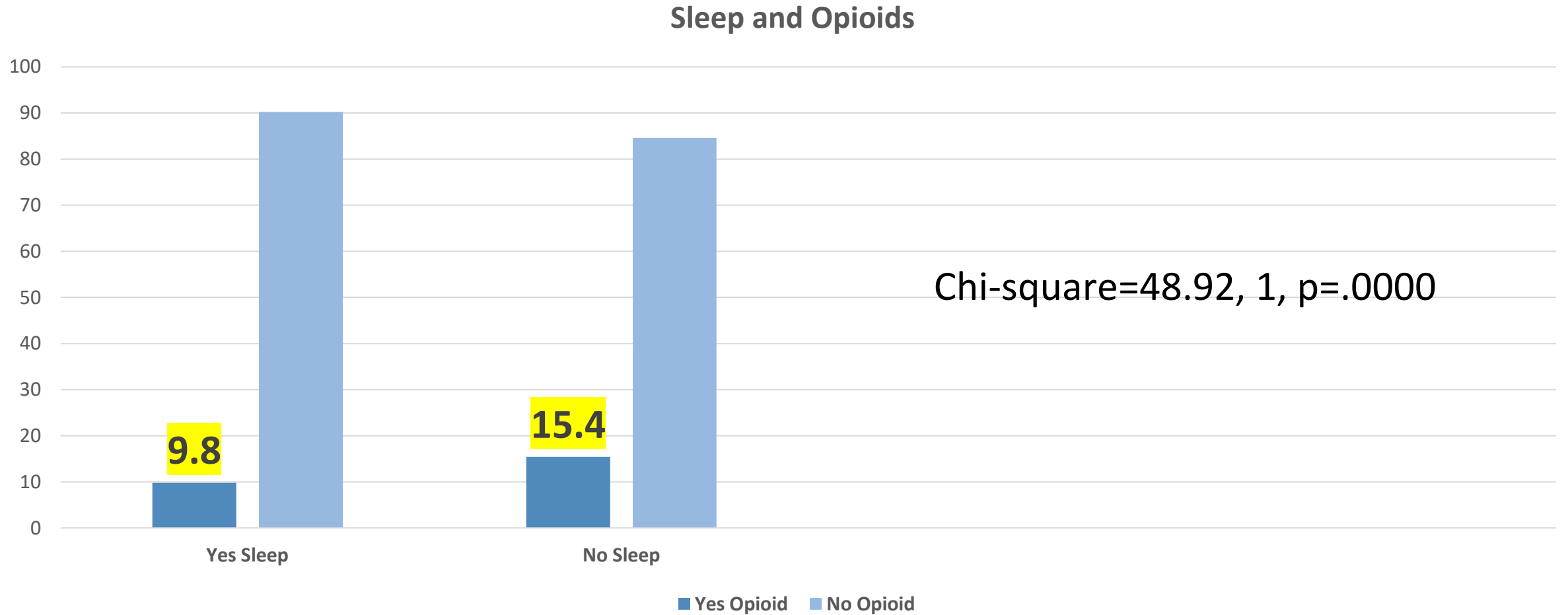
Slept 8 or More Hours/Night by Ever Used Marijuana



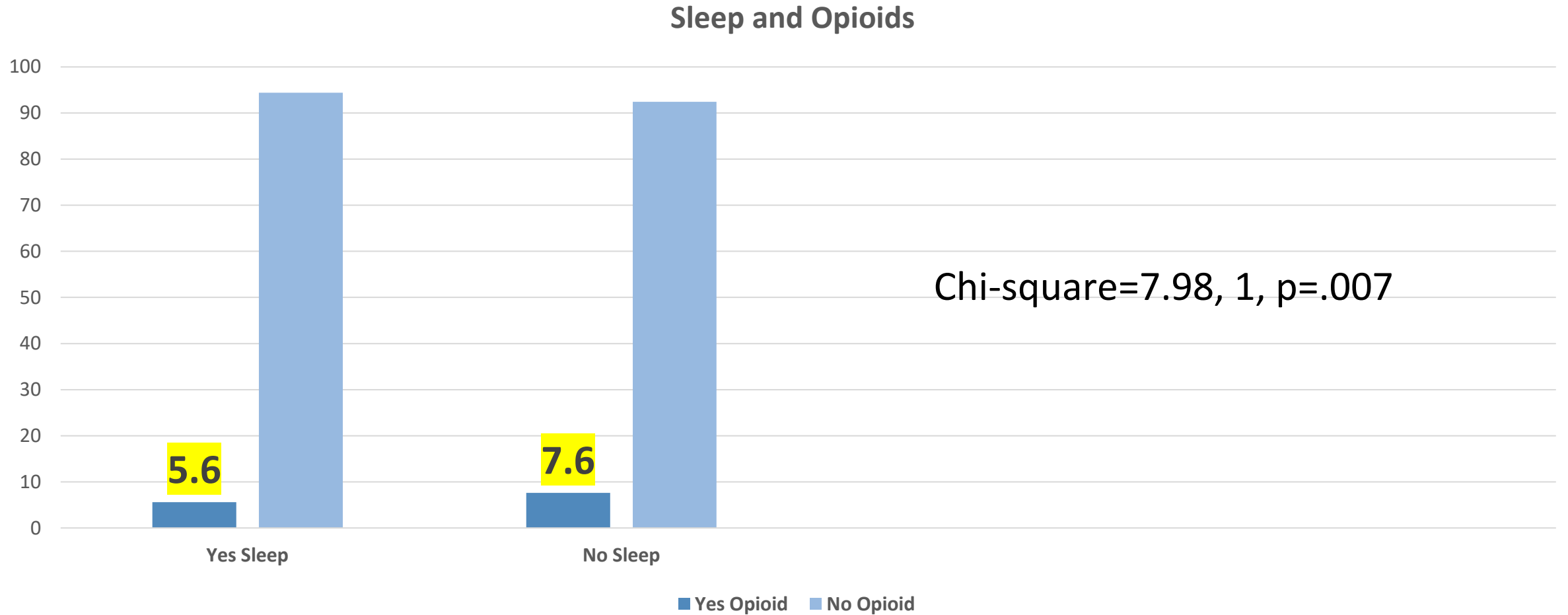
Slept 8 or More Hours/Night by Currently Used Marijuana



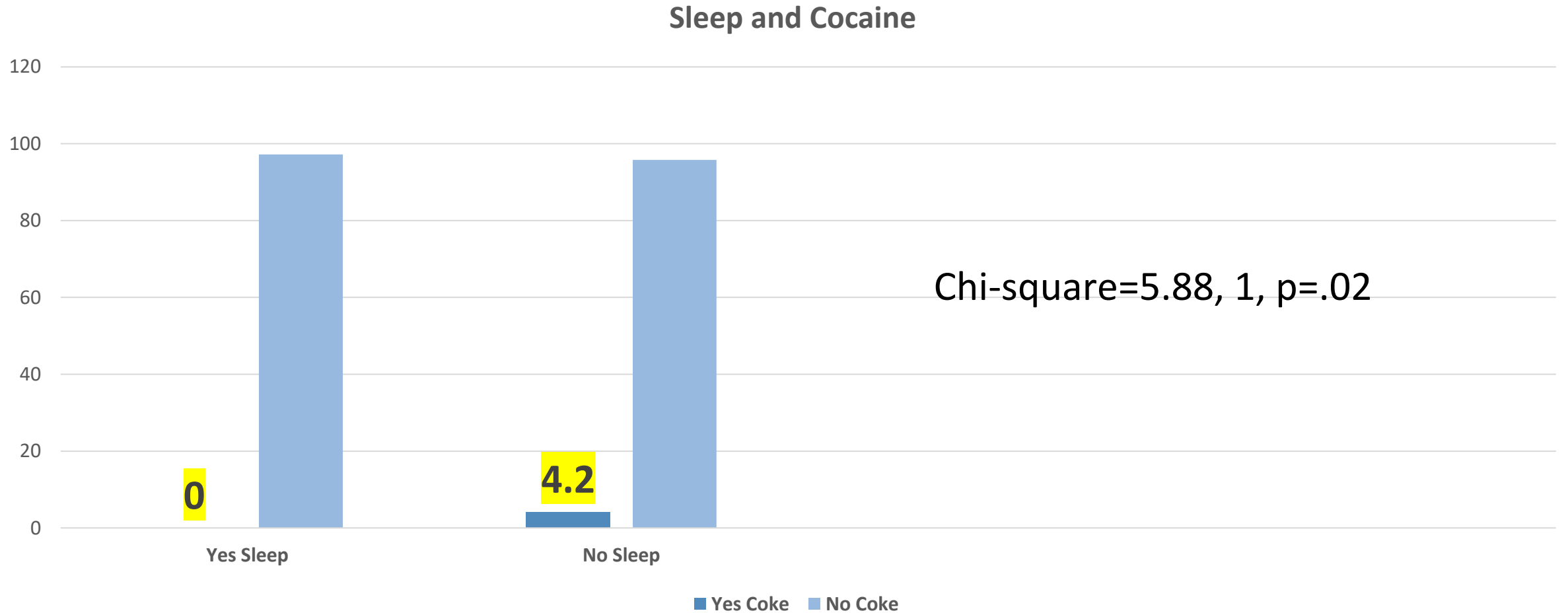
Slept 8 or More Hours/Night by Ever Used Non-Medical Opioids



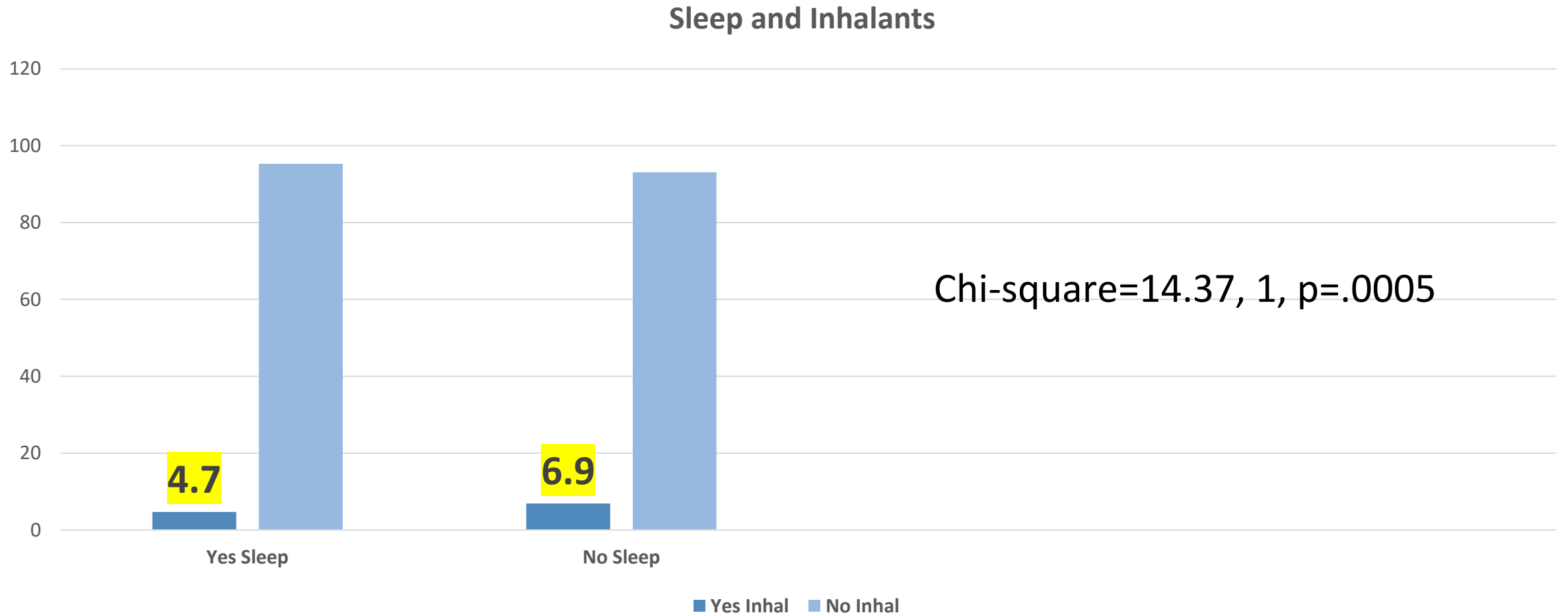
Slept 8 or More Hours/Night by Currently Used Non-Medical Opioids



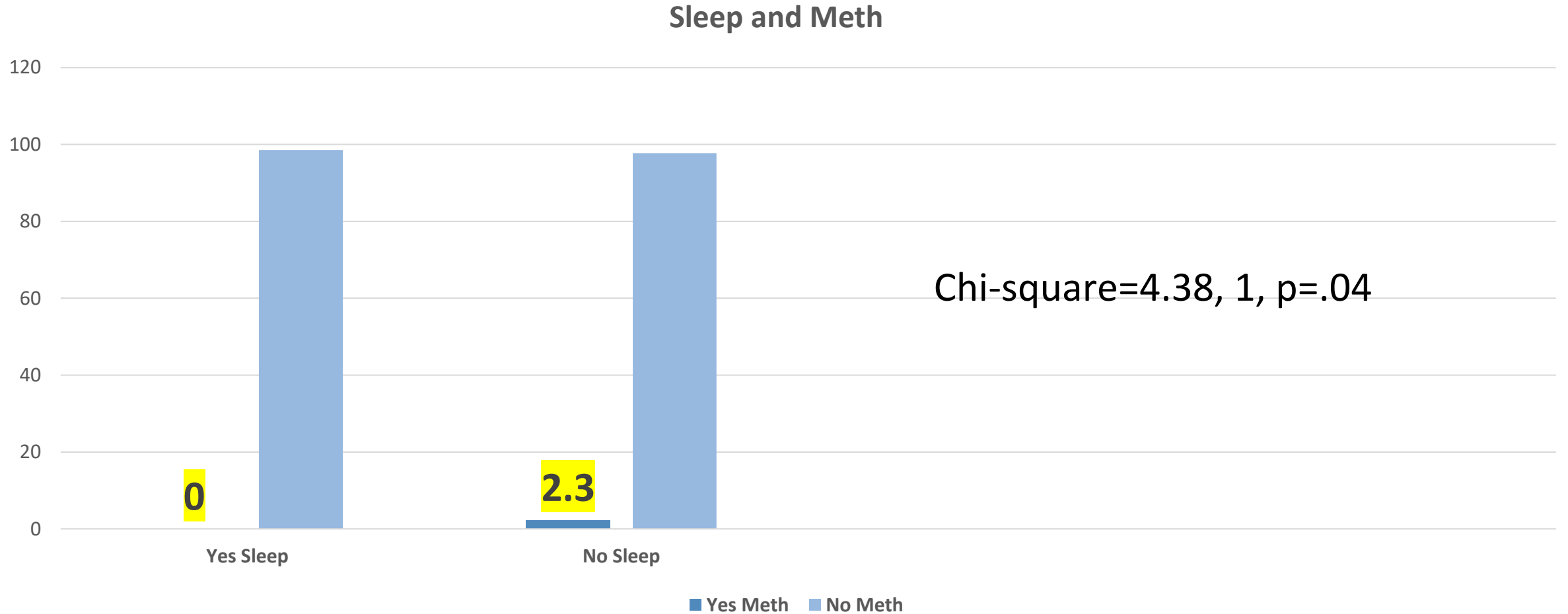
Slept 8 or More Hours/Night by Ever Used Cocaine



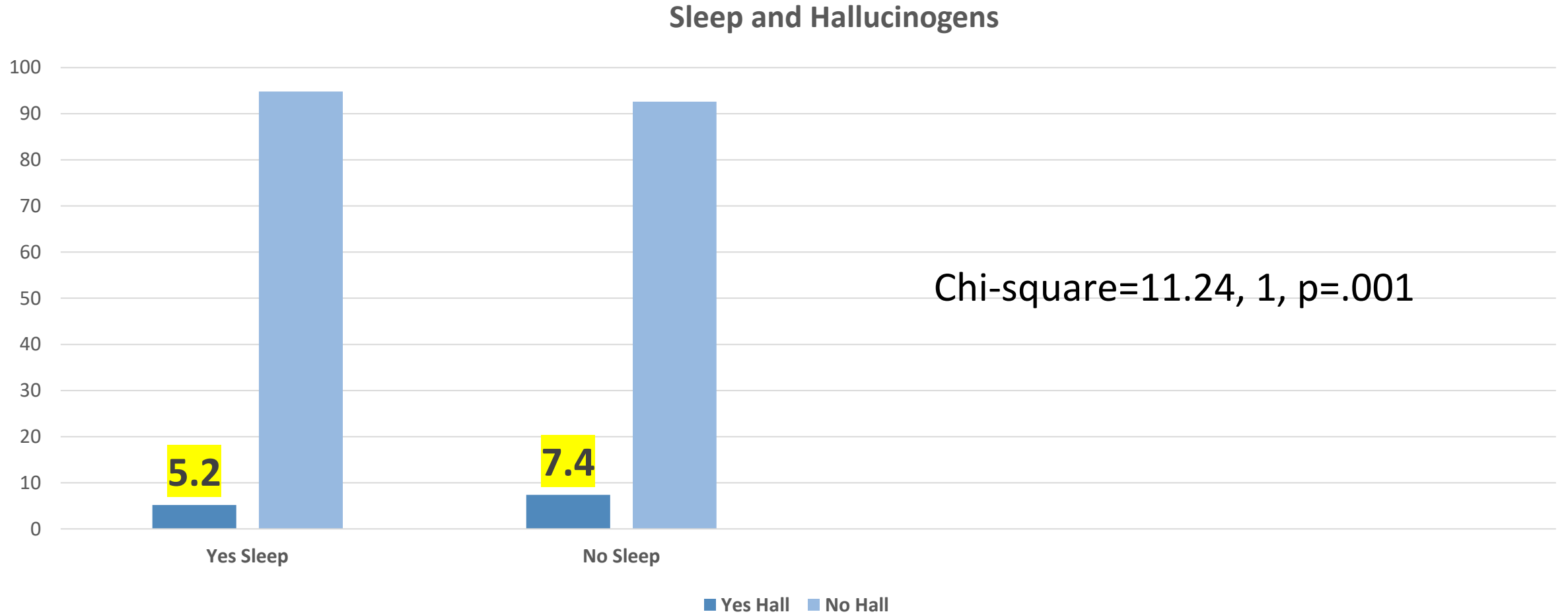
Slept 8 or More Hours/Night by Ever Used Inhalants



Slept 8 or More Hours/Night by Ever Used Methamphetamines

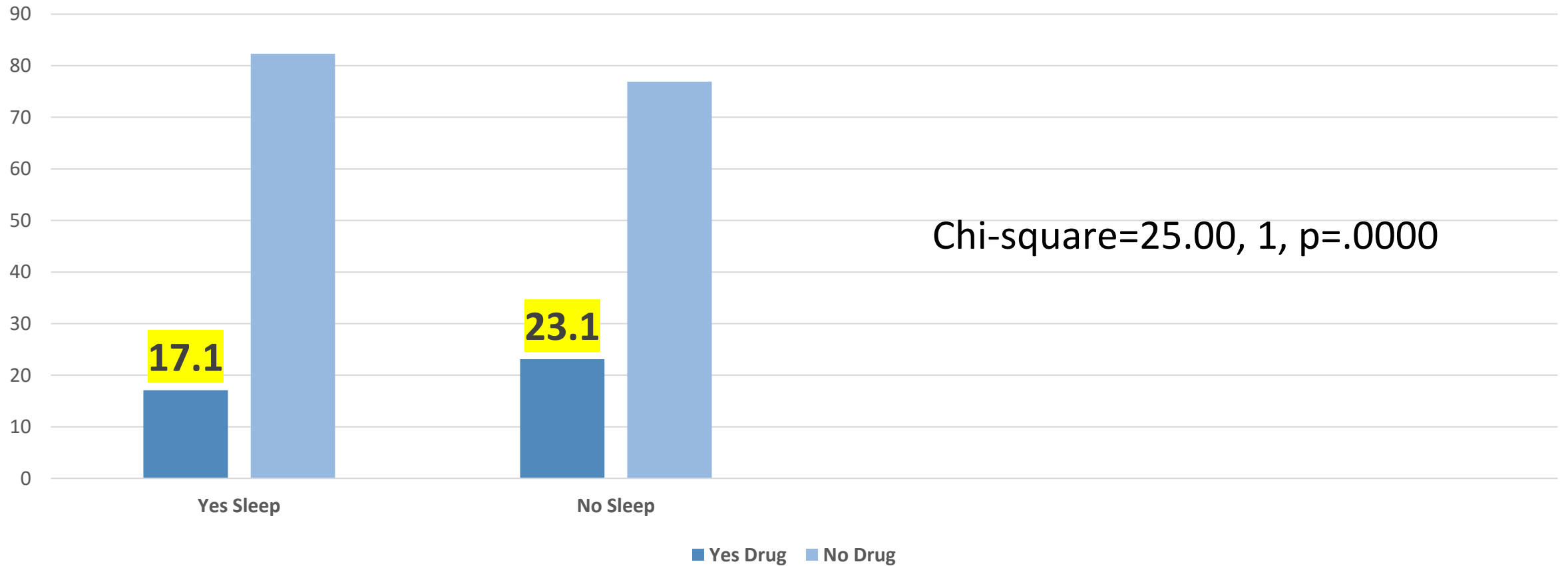


Slept 8 or More Hours/Night by Ever Used Hallucinogens



Slept 8 or More Hours/Night by Offered, Sold or Given Illegal Drugs at School

Sleep and Drugs



Conclusions & Implications

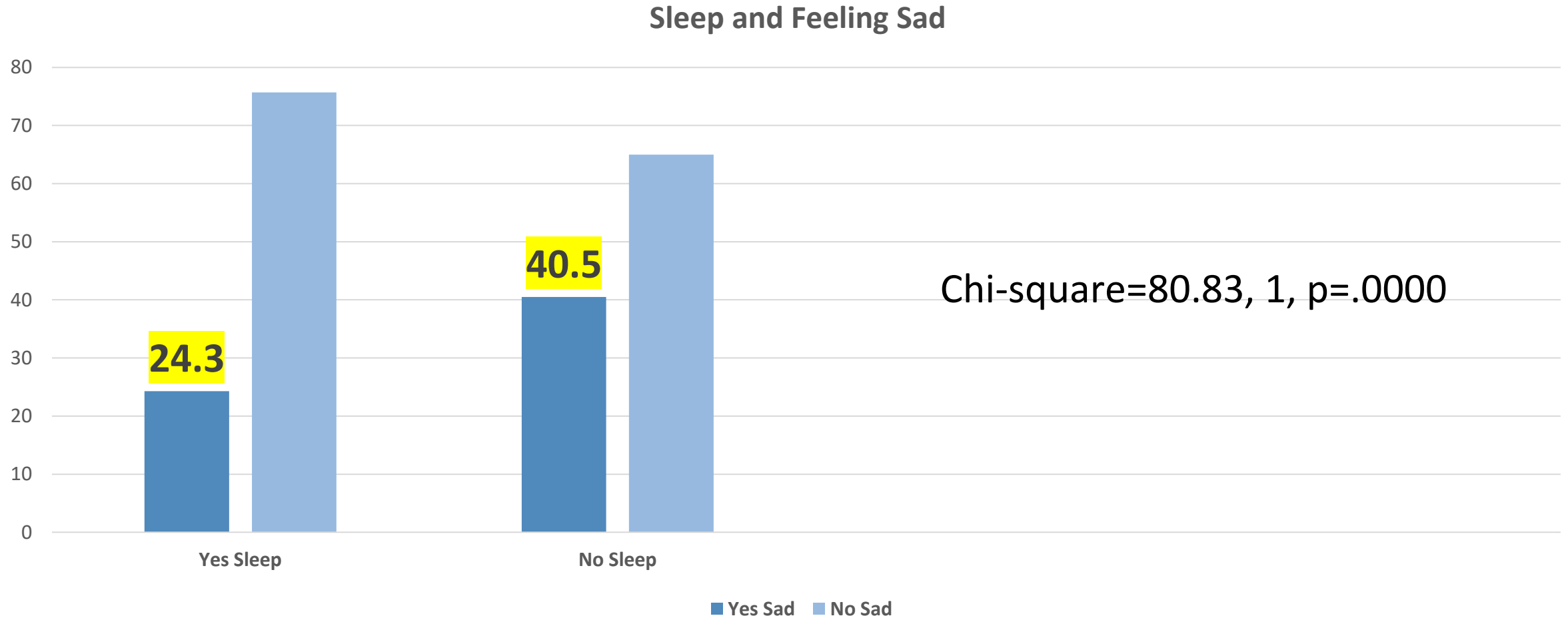
US adolescents getting less than 8 hours of sleep each night were more likely to try (initiate), currently use and use heavily/frequently a wide range of substances.

These substances included those more and less commonly used by adolescents, including drugs used or sold at school.

Sleep behaviors should be targeted by substance use prevention professionals and organizations, with the goal to get all adolescents at least 8 hours of sleep each night to reduce SU risk.

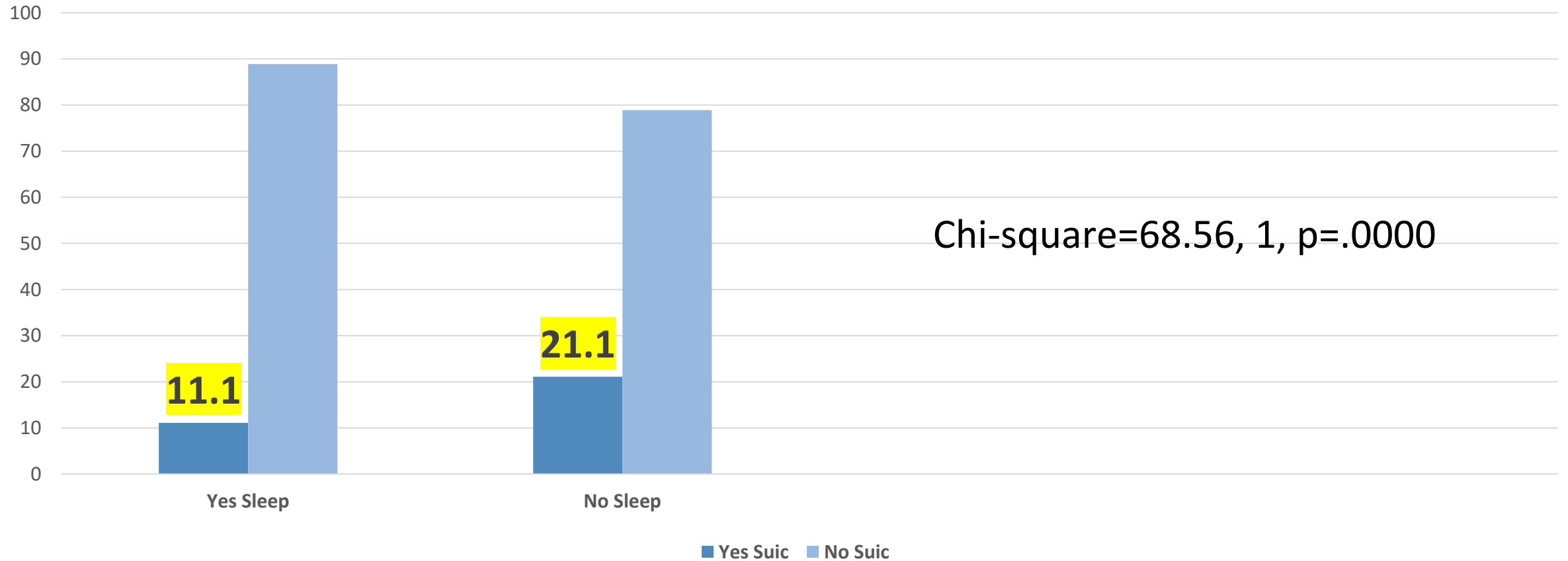
Suicide & Mental Health

Slept 8 or More Hours/Night by Feeling Sad or Hopeless

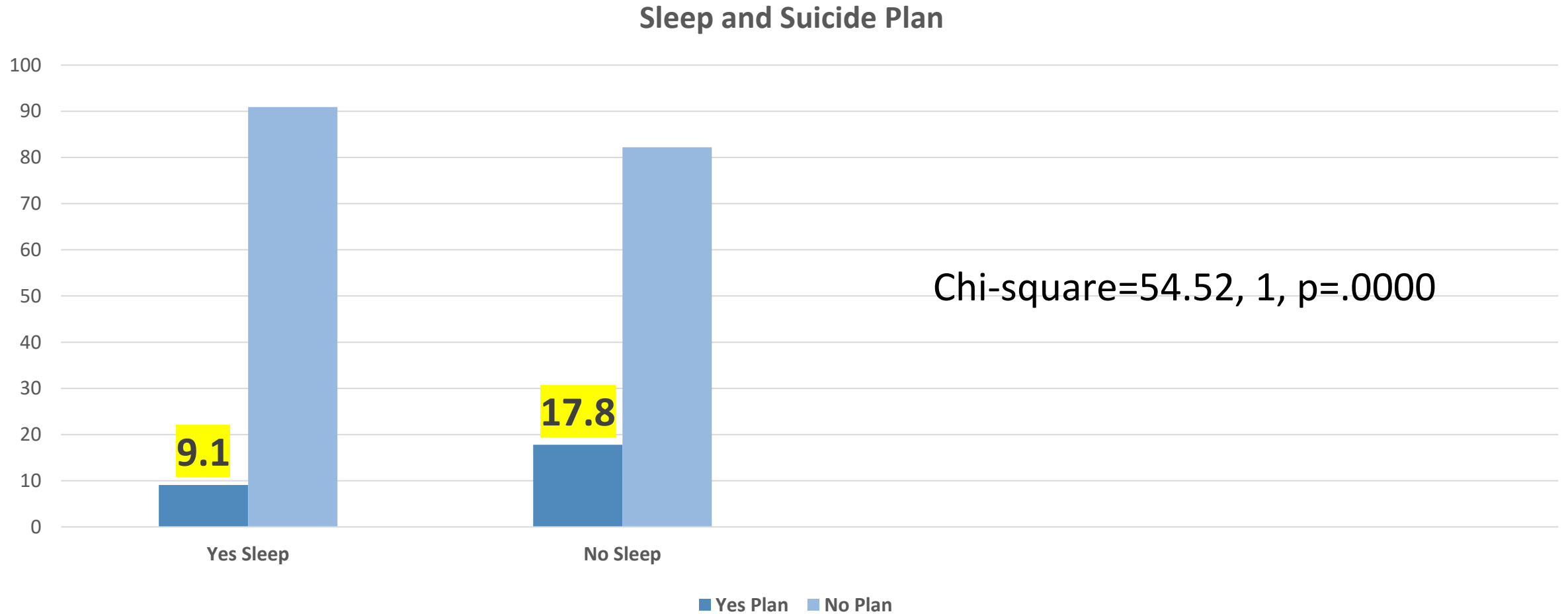


Slept 8 or More Hours/Night by Seriously Considered Suicide

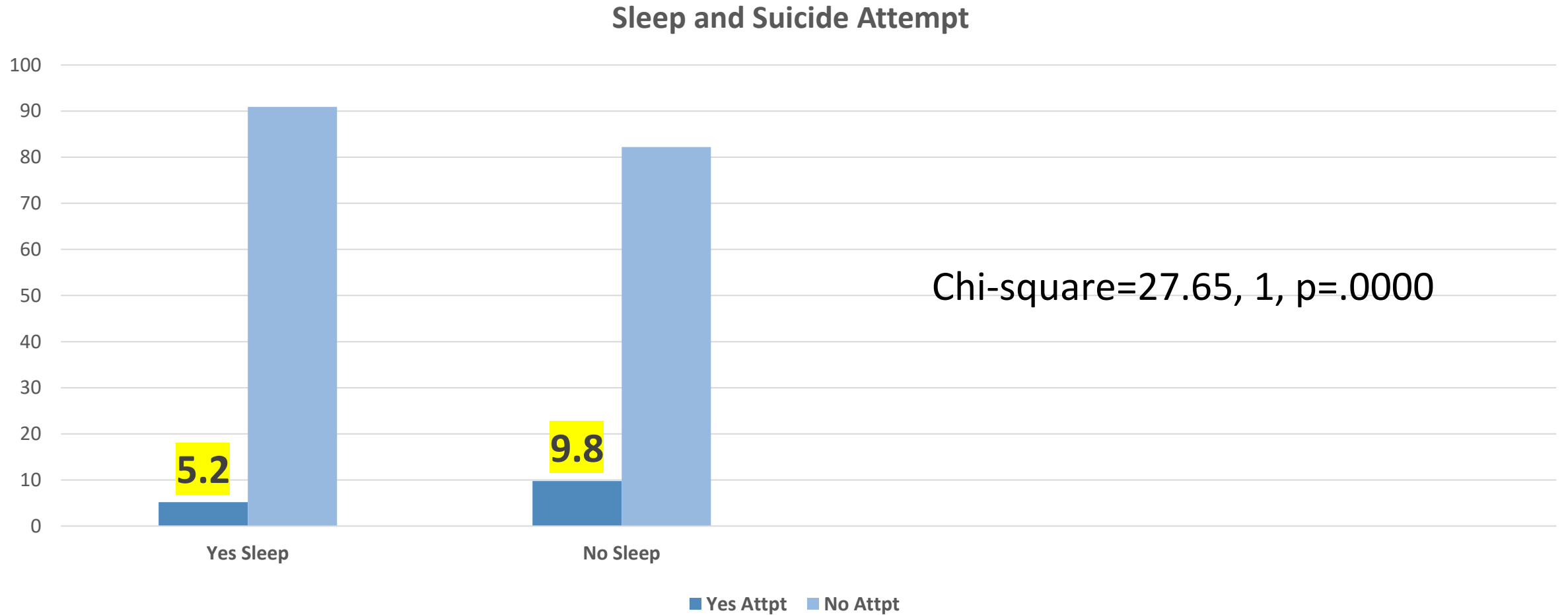
Sleep and Considered Suicide



Slept 8 or More Hours/Night by Made a Plan to Commit Suicide



Slept 8 or More Hours/Night by Attempted Suicide





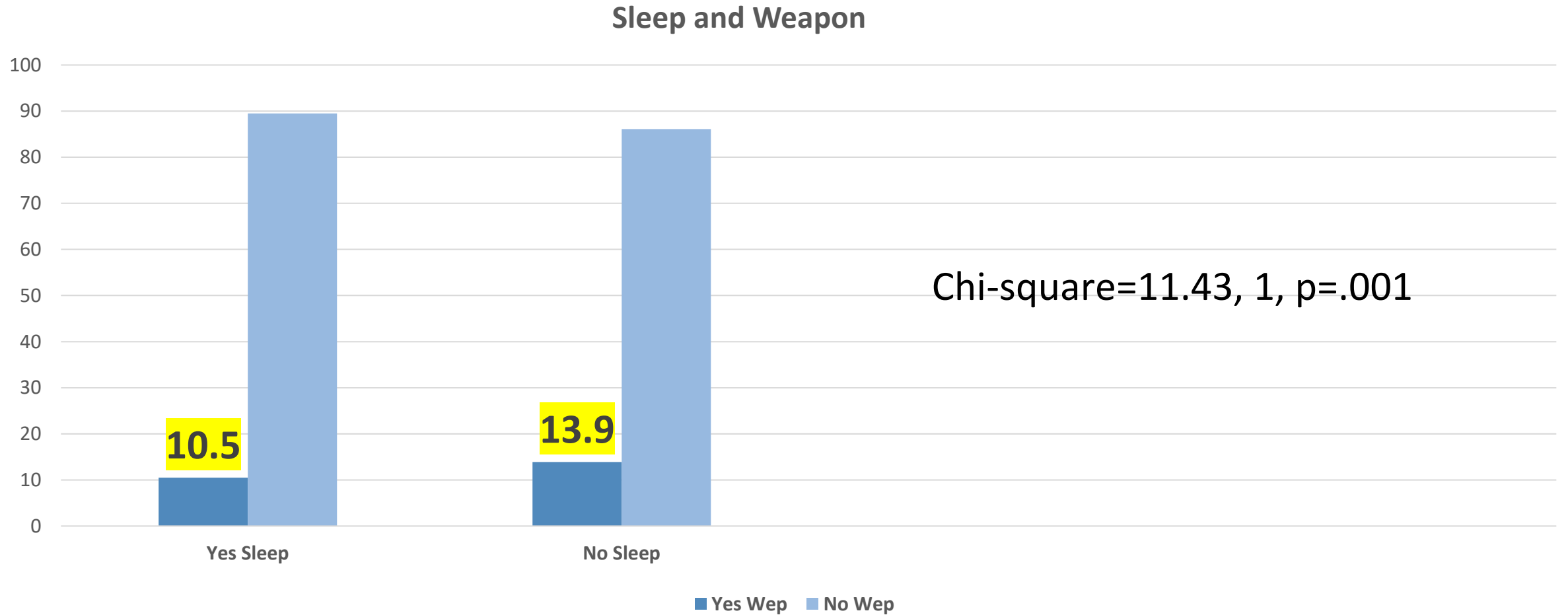
Conclusions & Implications

US adolescents not getting 8 or more hours of sleep each night were more likely to experience sadness and hopelessness, as well as seriously consider, plan and attempt suicide.

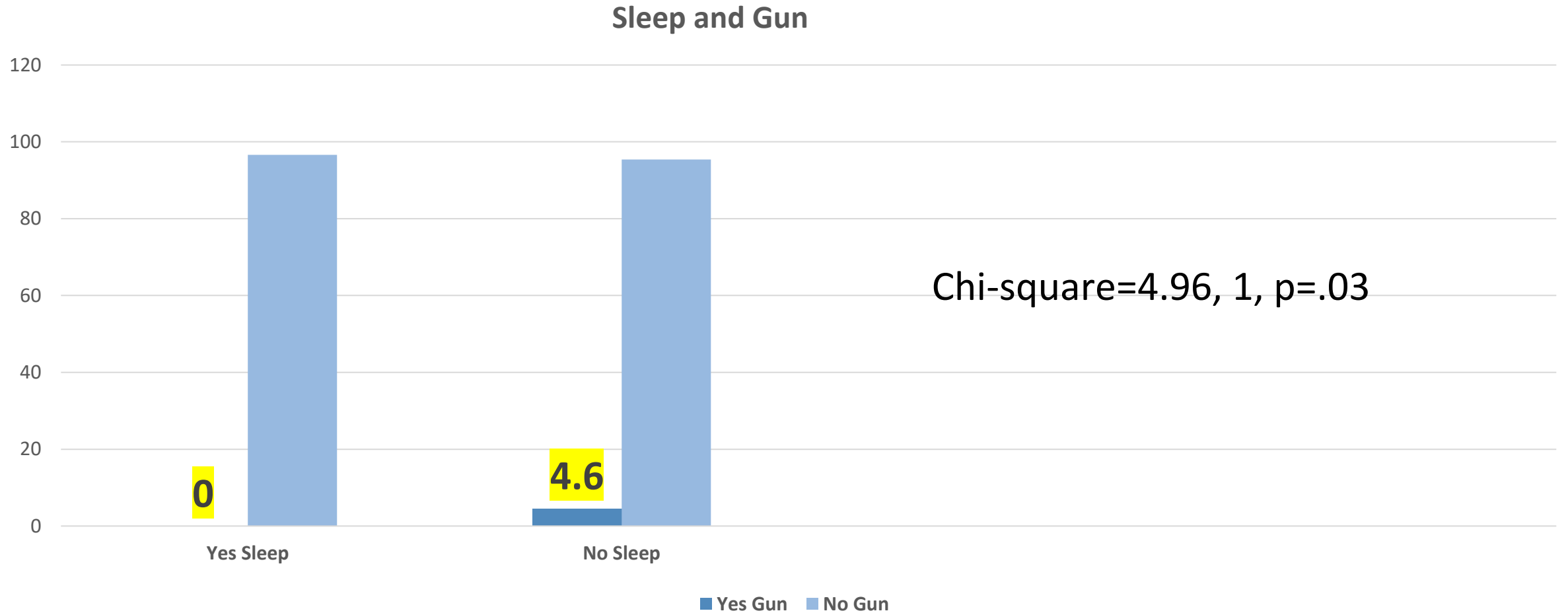
Prevention and mental health providers should include getting adequate and high-quality sleep a critical goal to prevent suicide and improve mental health among adolescents.

Violence

Slept 8 or More Hours/Night by Carried a Weapon

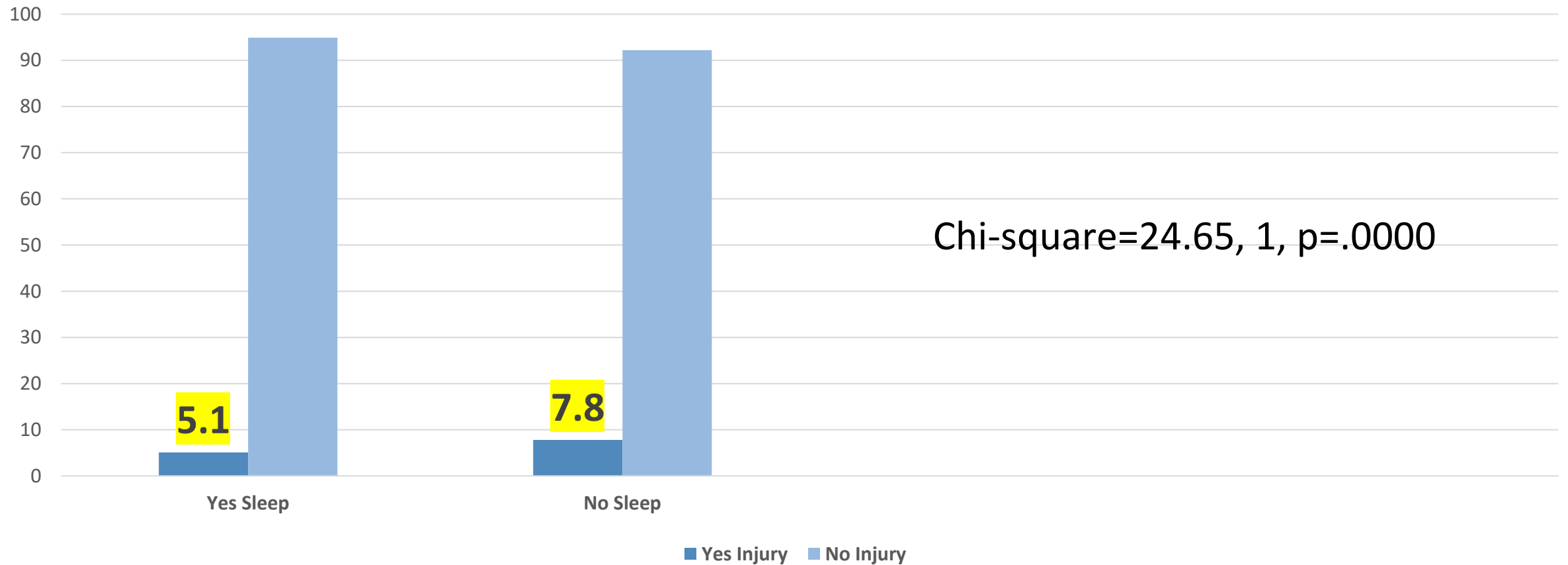


Slept 8 or More Hours/Night by Carried a Gun



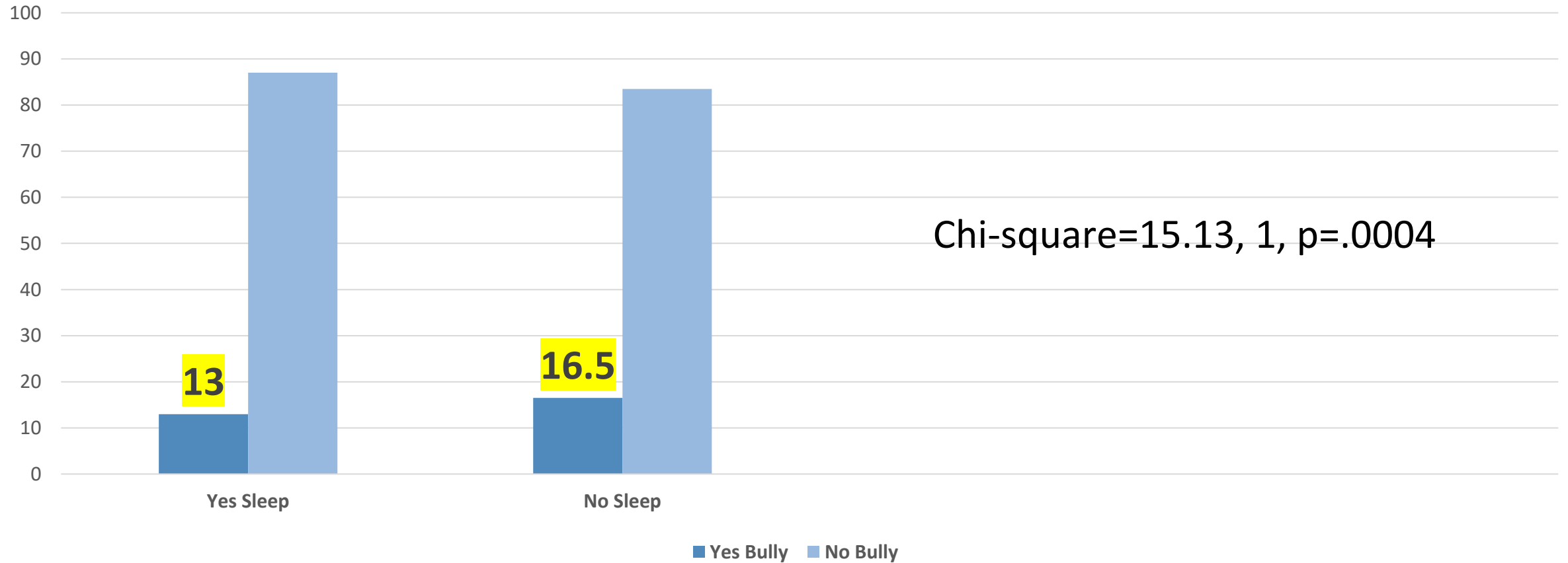
Slept 8 or More Hours/Night by Threatened or Injured by a Weapon at School

Sleep and Injured



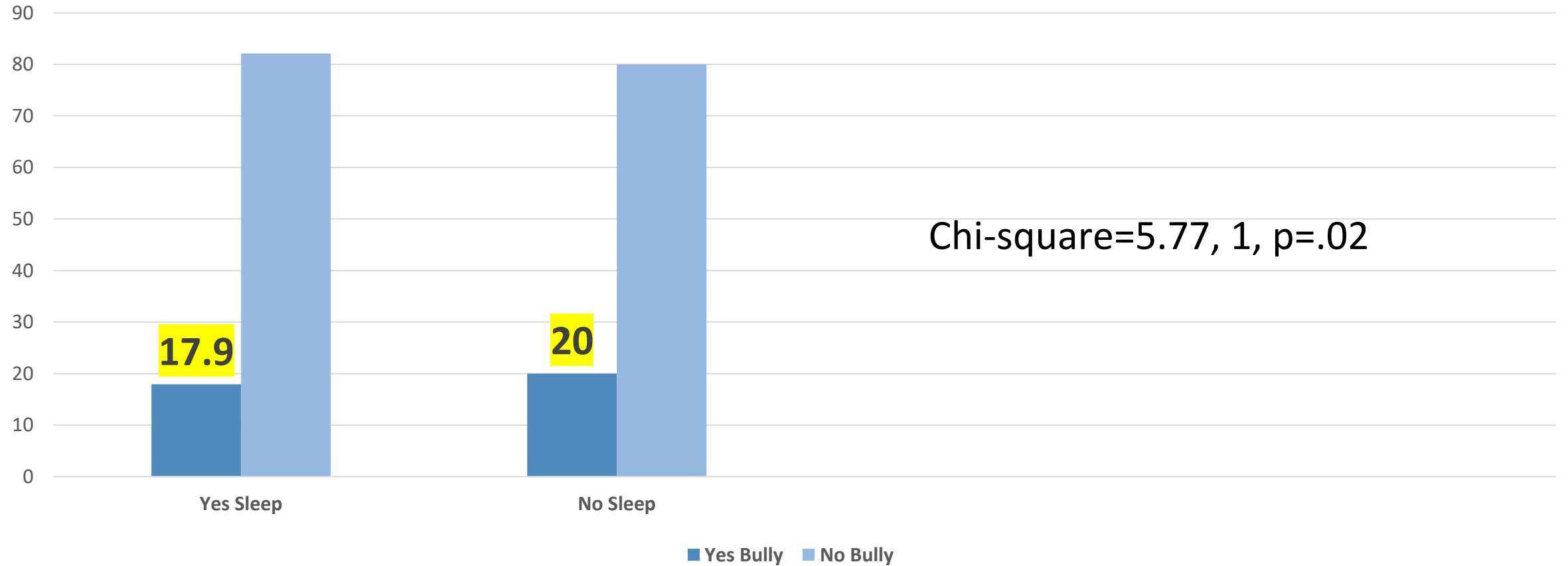
Slept 8 or More Hours/Night by Electronically Bullied

Sleep and E-Bullied



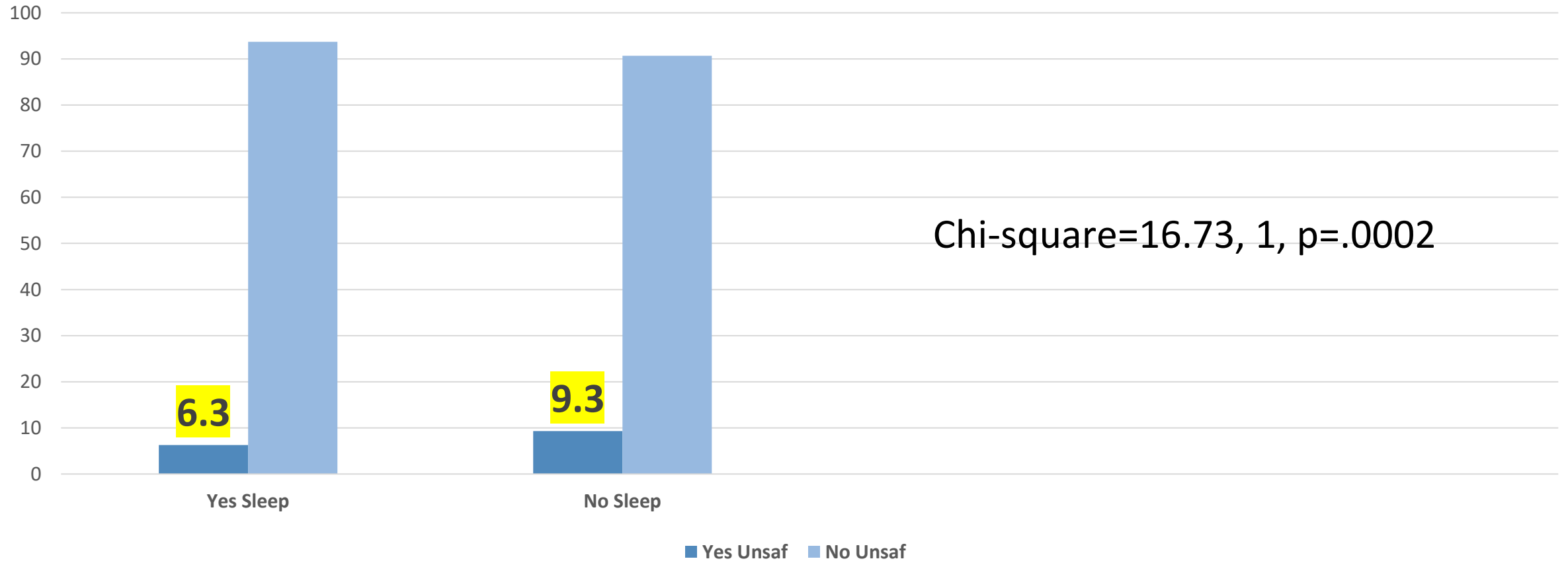
Slept 8 or More Hours/Night by Bullied at School

Sleep and Bullied



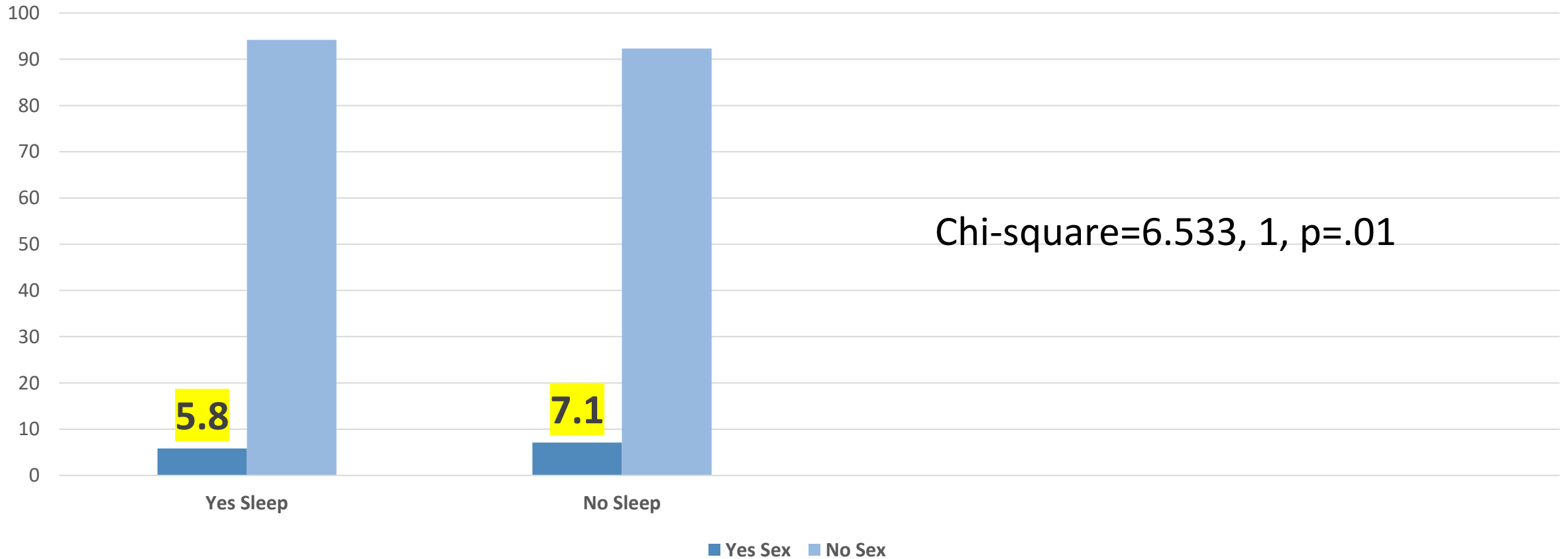
Slept 8 or More Hours/Night by Did Not Go to School Because Felt Unsafe

Sleep and Unsafe



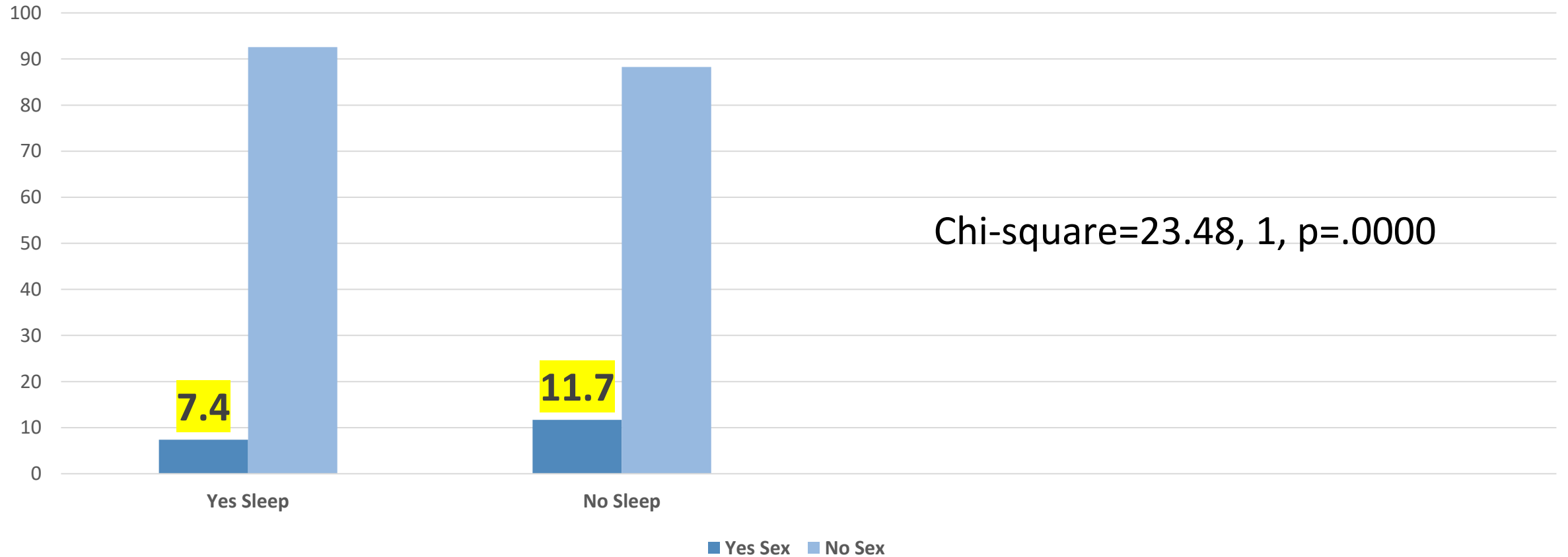
Slept 8 or More Hours/Night by Physically Forced to Have Sexual Intercourse

Sleep and Forced Sex



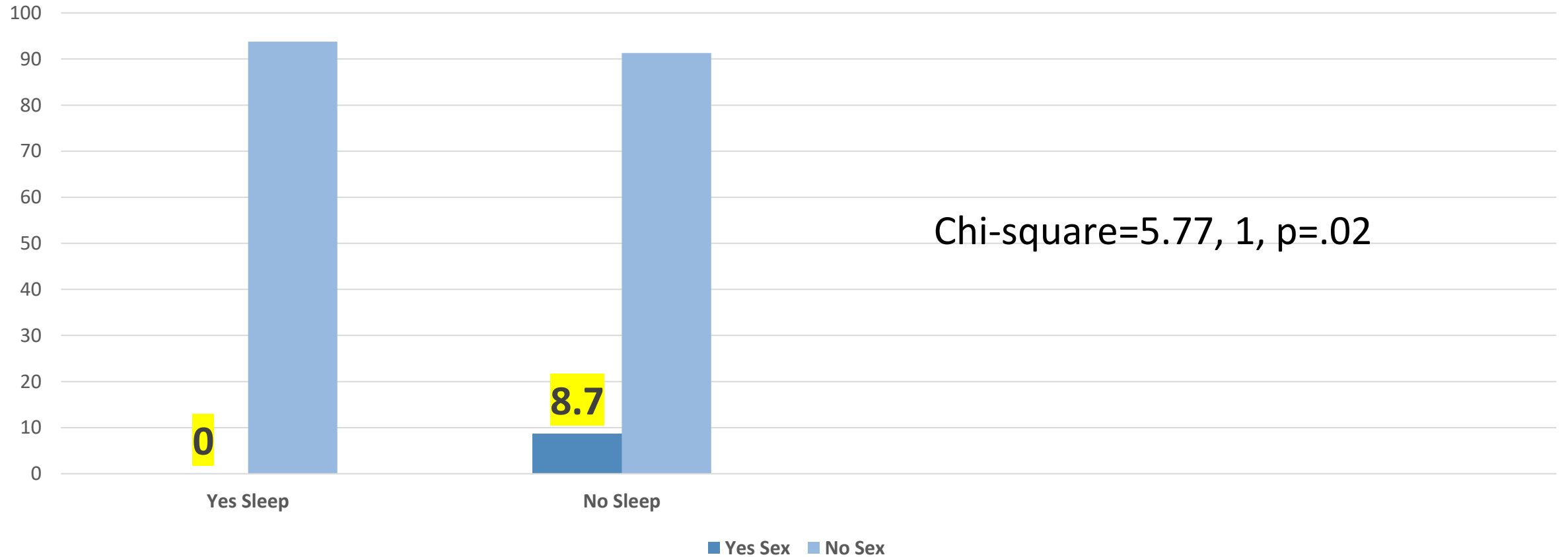
Slept 8 or More Hours/Night by Experienced Sexual Violence

Sleep and Sexual Violence



Slept 8 or More Hours/Night by Experienced Sexual Dating Violence

Sleep and Sexual Dating Violence



Conclusions & Implications

- US adolescents not getting 8 or more hours of sleep each night were more likely to carry a weapon and gun, be threatened or injured by a weapon at school, electronically bullied and bullied at school, did not go to school due to fear of it being unsafe and experience a range of sexual violence.
- Increasing sleep among adolescents may help prevent violence perpetration and victimization.

Benefits,
Challenges &
Tips to Improve
Youth Sleep



Teens and Sleep

(Sleep Foundation,
2022)

<https://www.sleepfoundation.org/teens-and-sleep>



Benefits of Sleep

- **Thinking and Academic Achievement:** Sleep benefits the brain and promotes attention, memory, and analytical thought.
- **Emotional Health:** Most people have experienced how sleep can affect mood, causing irritability and exaggerated emotional reactions.
- **Physical Health and Development:** Sleep contributes to the effective function of virtually every system of the body.
- **Decision-Making and Risky Behavior:** Sleep deprivation can affect the development of the frontal lobe, a part of the brain that is critical to control impulsive behavior.
- **Accidents and Injuries:** Insufficient sleep in teens can make them prone to accidental injury and even death.

Youth Challenges to Getting Sleep

Delayed Sleep Schedule and School Start Times

- Because of the biological delay in their sleep-wake cycle, many teens simply aren't able to fall asleep early enough to get eight or more hours of sleep and still arrive at school on time.
- With reduced sleep on weekdays, teens may try to catch up by sleeping in on the weekend, but this may exacerbate their delayed sleep schedule and inconsistent nightly rest.

Time Pressure

- School assignments, work obligations, household chores, social life, community activities, and sports are just some of the things that can require their time and attention.
- With so much to try to fit into each day, many teens don't allocate sufficient time for sleep.
- Pressure to succeed while managing these extensive commitments can be stressful, and excess stress has been known to contribute to sleeping problems and insomnia.

Youth Challenges to Getting Sleep

Use of Electronic Devices

- 89% or more of teens keep at least one device in their bedroom at night (2014 Sleep in America Poll).
- Using these devices can keep teens' brains wired, and incoming notifications can cause disrupted and fragmented sleep.
- Evidence also points to suppressed melatonin production from exposure to the light from cell phones.

Mental Health Problems

- Mental health conditions like anxiety and depression can be a challenge to quality sleep in teens as well as adults.
- Insufficient sleep can contribute to these conditions as well, creating a bidirectional relationship that can worsen both sleep and emotional wellness.

Youth Challenges to Getting Sleep

Neurodevelopmental Disorders

- Neurodevelopmental disorders, such as attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) can make it harder for teens to sleep well. Lack of sleep may also contribute to more pronounced symptoms of these conditions.

Sleep Disorders

- Some teens have poor sleep because of an underlying sleep disorder like obstructive sleep apnea (OSA) which causes repeated pauses in breathing during sleep.

Healthy Sleep Tips for Youth

1. Review your sleep hygiene, i.e., environment & habits.
2. Creating a consistent pre-bed routine to help with relaxation and falling asleep fast.
3. Avoiding caffeine and energy drinks, especially in the afternoon and evening.
4. Putting away electronic devices for at least a half-hour before bed and keeping them on silent mode to avoid checking them during the night.
5. Setting up your bed with a supportive mattress that's the best mattress for you. And don't forget to bring your best pillow.
6. Keeping your bedroom cool, dark, and quiet.
7. Consider seeing a doctor if you have persistent sleep problems.

How Parents Can Help

1. For many parents, a first step is asking their teenage children about their sleep since surveys indicate that many parents don't realize that their children are having sleeping problems.
2. Parents can encourage teens to make gradual sleep hygiene improvements.
3. Some research has found that teens whose parents set a firm bedtime get more sleep and have less daytime drowsiness.
4. Another avenue for parents is advocating for later start times with their local school district.
5. A number of districts have experimented with delayed starts and found benefits like improved attendance and academic performance.
6. Parents can also work with their teens to avoid overscheduling and commitments that can generate stress and trade off with adequate time for sleep.

Conclusions & Implications

1. Sleep has tremendous benefits for the mental and physical wellbeing of youth.
2. Challenges to getting adequate and high-quality sleep can be overcome and tips exist to help achieve this.
3. Parents play an important role in ensuring their youth get the sleep need to lead a healthy and happy life.

Youth Sleep Patterns & Substance Use Recent Research



Sleep Duration and Risk Taking in Adolescents: A Review

1. *Sleep Medicine Reviews*, 2018.
2. Pooled results indicated that insufficient sleep was associated with 1.43 times greater odds of risk-taking.
3. This relationship was witnessed across diverse categories of risk-taking, including **alcohol use, drug use, smoking, violent/delinquent behaviour**, transport risk-taking/road safety, sexual risk-taking and trait risk-taking.

<https://www.sciencedirect.com/science/article/abs/pii/S1087079217302071>

Sleep Duration and Alcohol and Cannabis Use

1. A study in *Addictive Behaviors* (2022) among young adults.
2. At the day-level, sleep duration was inversely associated with craving for both alcohol and cannabis: Stronger craving was reported on mornings and afternoons after relatively shorter sleep duration.
3. At the burst-level (14-days), sleep duration was inversely associated with morning and afternoon alcohol craving indicating stronger alcohol craving when young adults have accumulated shorter sleep duration.
4. The burst-level effect showed that participants engaged in greater alcohol use during two-week bursts with shorter sleep duration.
5. Shorter sleep duration may be a modifiable risk factor for substance use and cravings.

<https://www.sciencedirect.com/science/article/abs/pii/S0306460322001332>

Adolescent Sleep, Alcohol & Cannabis Use

1. A study in *Alcoholism Clinical & Experimental Research* (2022).
2. Results showed that greater eveningness, more daytime sleepiness, later weekend sleep timing, and shorter sleep duration (weekday/weekend) all predicted more severe alcohol binge drinking the following year.
3. Greater eveningness predicted a greater likelihood of any cannabis use the following year.
4. Middle/high school versus post-high school adolescents were more vulnerable to sleep-related risk for cannabis use.
5. Results underscore a need for greater attention to sleep/circadian characteristics as potential risk factors for substance use in youth.

<https://onlinelibrary.wiley.com/doi/abs/10.1111/acer.14808>

Adolescent Cannabis Use for Sleep Increases Substance Use Risk

1. A study in *Addictive Behaviors* (2022) examined high school students.
2. Students reporting lifetime cannabis sleep aid use (8%) endorsed greater depression and anxiety symptoms at year-one, as well as greater **cannabis, alcohol, and cigarette use** at year-one and year-two, compared to non-using peers.
3. Over one year, cannabis sleep aid use was associated with increased **cannabis dependence symptoms** among students using cannabis, **past-2-week binge drinking** among students using alcohol, and lifetime cigarette use.
4. Cannabis sleep aid use among high school students may be associated with exacerbated cannabis dependence symptoms and increased binge drinking and cigarette use over time, without the intended sleep benefit.

<https://www.sciencedirect.com/science/article/abs/pii/S030646032200193>

Conclusions & Implications

1. There is a need for including sleep behaviors in substance use prevention programs for vulnerable (all) adolescents.
2. Specifically, healthy sleep habits should be promoted and links between poor sleep patterns and substance use risk should be highlighted in prevention programs in schools and communities.
3. Substance use prevention programs should inform adolescents that using cannabis as a sleep aid (and perhaps other medical purposes) is not only ineffective (particularly long-term) but may increase their risk for future substance use problems.

Youth Sleep Patterns and Suicide/Mental Health Recent Research

Sleep Patterns & Mental Health in US Adolescents

1. A nationally representative sample of 10,123 US adolescents ages 13-18 years old were examined in the *Journal of Pediatrics* (2017).
2. The average weeknight bedtime was at 22:37 and sleep duration was 7.72 hours.
3. Later weeknight bedtime, shorter weeknight sleep duration, greater weekend bedtime delay, and both short and long periods of weekend oversleep were associated with increased odds of **mood, anxiety, substance use, and behavioral disorders**, as well as **suicidality, tobacco smoking, and poor perceived mental and physical health**.
4. Abnormal sleep patterns may serve as markers of untreated mental disorders among adolescents.

[https://www.jpeds.com/article/s0022-3476\(16\)31235-5/fulltext](https://www.jpeds.com/article/s0022-3476(16)31235-5/fulltext)

Sleep Difficulties and Suicidality in Youth: A Review

1. A paper in *Sleep and Health Disparities* (2022) among youth.
2. The data overwhelmingly support an association between suicidality and a range of sleep difficulties (e.g., insomnia, short/long sleep, weekend oversleep), above and beyond depressive symptoms.
3. The literature supports a clear association between sleep difficulties and youth suicidality.
4. Sleep is a critical factor to target in preventing youth suicide thoughts and actions among youth.

<https://link.springer.com/article/10.1007/s40675-022-00222-9>

1. A paper in *Archives of Suicide Research*, 2021, in adolescence.
2. Results demonstrated higher odds of endorsing SI (suicide ideation) as stress increased when sleep quality was poor compared to when sleep quality was high, suggesting that adequate sleep may act as a protective factor against suicide ideation.
3. Sleep quality may help identify at-risk adolescents prior to the initial experience of suicide ideation.

<https://www.tandfonline.com/doi/abs/10.1080/13811118.2021.1922106>

Stress, Sleep Quality & Suicide Ideation in
Adolescents

Sleep Problems & Suicide Risk in Youth: A Review

1. A paper in *General Hospital Psychiatry*, 2020, in youth.
2. Of 10 studies reviewed, seven found at least one type of sleep problem significantly predicted a STB (suicidal thoughts & behaviors) outcome.
3. Growing research suggests that sleep problems may be a unique risk factor for STBs in youth.
4. Sleep problems may be particularly important intervention target because they are easily assessed and amenable.

<https://www.sciencedirect.com/science/article/abs/pii/S0163834318300380>

Conclusions & Implications

Poor sleep patterns may serve as markers for untreated mental disorders, including suicidality.

Sleep is a critical protective factor to target in preventing youth suicide thoughts and actions.

Screening for lack of and poor sleep can help identify high-risk youth for suicide.

Youth Sleep Patterns and Violence

Recent Research

Sleep Quality Predicts Aggression in Youth

1. A study in the *Journal of Child Psychology and Psychiatry* (2022) using a sample of 1,216 justice-involved male youth ages 13 to 24.
2. Increases in sleep problems are associated with increases in offending, particularly aggressive/person-related offenses, for both adolescents and young adults.
3. Improving sleep quality, not just quantity, may be critical for reducing aggressive behavior in at-risk adolescents and young adults.

<https://acamh.onlinelibrary.wiley.com/doi/abs/10.1111/jcpp.13646>

1. A study published in *Sleep Health*, 2020.
2. Youth who reported sleeping four or fewer hours at night had 40% greater odds of general handgun carrying than youth who reported sleeping eight or more hours.
3. Youth who reported sleeping four or fewer hours at night had 85% greater odds of taking a handgun to school.
4. Severe deficits in sleep are associated with general handgun carrying as well as taking a handgun to school.

<https://www.sciencedirect.com/science/article/abs/pii/S2352721819302591>

Sleep Duration and Handgun Carrying at School

School Bullying, Depression & Sleep Problems in Adolescents

1. A study in the *Journal of Affective Disorders* (2022) examined adolescents.
2. Among girls, bullying victimization significantly predicted poor quality of sleep and severe depressive symptoms.
3. Among boys, sleep problems positively predicted bullying perpetration and victimization.
4. For both boys and girls, severe depressive symptoms significantly predicted more victimization and sleep problems, and sleep problems were positively associated with depressive symptoms.
5. School bullying, depression and sleep problems are interrelated across time and differ by gender.

<https://www.sciencedirect.com/science/article/abs/pii/S0165032721012581>

Cyberbullying and Short Sleep Duration Among Adolescents

1. A study in *Sleep Health* (2022) examined the associations among adolescents.
2. Cyberbullying victimization, perpetration, or both was associated with greater odds of short sleep duration.
3. Younger students who were not cyberbullied had a lower probability of short sleep duration.
4. Involvement in cyberbullying as either a victim, a perpetrator, or both is associated with short sleep duration among adolescents.

<https://www.sciencedirect.com/science/article/abs/pii/S2352721821002588>

Final Conclusions & Implications

Sleep duration and quality/problems predicts youth aggression and weapon carrying, as well as school and cyberbullying perpetration and victimization.

Prevention and health programs should aim to increase the quantity and quality of youth sleep to reduce violence and bullying.

Sleep is a critical factor associated with youth substance use, suicide and mental health, and violence.

Greater attention must be provided to youth sleep quality and quantity by prevention and health providers and parents to reduce risk for SU, suicide and violence.

For more information
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