

Age of Becoming a Regular Smoker & Physical Activity in Adolescence.

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INTRODUCTION & LITERATURE REVIEW

It is commonplace thought that adolescents have engaged in risky behaviors and have an indestructible mentality, often taking dangerous actions or experimenting with dangerous substances. Most adults might regret some behaviors or risks they took when in their adolescence that they would not dare to attempt when they reach adulthood. In order to reign-in these behaviors, there must be counter-actions parents and quardians can take to curb these risk-taking tendencies.

There are a few factors that play a major role in decreasing risky behaviors in teenagers. When researching this topic, we discovered that socioeconomic status has very little impact on adolescents engaging and experimenting with such behaviors. What does have an impact is parental involvement, family structure i.e. the lack of successful male role-models or single-parent homes, and school climates such as expectations and mental health support (Harris et al., 2003). All of these factors play an important role in whether or not an adolescent will engage in risky behaviors. In defined as early sexual activity, drug dealing, or weapon-use.

Another study (Ellis et al., 2011) suggests that risky behavior (defined as aggression, illegal activities, drug use, or promisculty) causes harm to the person engaging in such behaviors or disrupts society in a meaningful way. This study suggests that evolution plays a role in addrescents engaging in such behaviors. That the drive for physical, reproductive, and social status are natural behaviors in adolescents and that mediations to simply stop such behaviors are likely to be unsuccessful. This study suggests refocusing these impulses towards a healther outlet is more likely to be successful. However, what this study does not discuss is how to curb those natural impulses.

A third study that was pivotal to our research was that sedentary behaviors are linked with other unhealthy habits (Pate et al., 1996). These habits include a poor diet, smoking, and drinking. This study also found that it is also linked to a lack of ambition toward academic achievements. While the study suggests that there is a correlation between these variables, it suggests that future studies should test if increasing physical activities would reduce negative health and risk-taking behaviors.

What is not as well known for this topic is if increasing physical activities decreasing the likelihood that adolescents will engage in risky behaviors and actions. Many teens are involved in some sort of physical activity whether it is extracurricular or simply a physical education class. (Nelson & Gordon-Larsen, 2006)

When discussing our topic for this research project we wondered if physical activity played a part in decreasing the likelihood that adolescents would engage in risky behaviors? The idea behind this is that when participating in a physical activity teenagers are often surrounded by role-models such as coaches. An adult that is not a parent or guardian that will likely have a significant influence on their behavior and development. Also, we thought that physical activities provide an outlet for teenagers to exert themselves in a healthy way. That physical activities provide a replacement for any sort of unhealthy or dangerous thrill-seeking behavior that teens might seek out. Lastly, that motivation to participate in such physical activities may lead adolescents to prioritize their health and physical well-being.

Our hypothesis is that lack of physical activity in adolescents leads to other unhealthy, risky, or delinquent behaviors. For our research, we will focus on physical activity and smoking because of the high prevalence of tobacco in adolescence.

METHODS

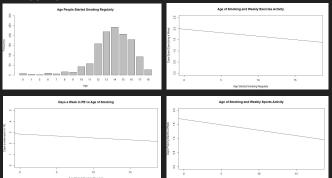
Our data comes from an in-home self-performed interview given to young adults between the ages of 11 and 19 years old. These subjects were chosen through working with different high schools and junior high schools in 41 different states in the year 1995. More specifically, the data set we used to test our hypothesis is the, "Wave II in-home Interview Data". The data consisted of over 2,000 different variables with almost 15,000 observations.

With our hypothesis being focused on health and general information about those who answered the questions, all of our statistical data came from two sections of the interview, "General Health", and "Daily Activities". All of the questions asked ranged from a simple, "yes/no" answer to specific answers describing the age some event hannened

While sifting through the data we found many survey questions with both categorical and quantitative properties. Due to the answers being mainly categorical and quantitative, we used chi-square tests.

Data was analyzed using the R program through Chi-Square Tests for Independence.

RESULTS



Graph PE and smoking age cor is -0.03799601

After running the Chi-Square Tests for independence, these were the results.

PE and Smoking Age: n=390, p= -0.03799601

Sports and Smoking Age: n=1279, p= -0.07389

Exercise and Smoking Age: n=1279, p= -0.03032

RESULTS CONT.

When looking at the data and the graphs we generated, we can see that the data supports our initial assumptions.

When comparing the Frequency to the Age That People Started Smoking Regularly, 310 of our participants started before age 12. By age 16, 1157 participants had started smoking regularly.

Comparing Age of Smoking and Weekly Exercise Activity, those who started smoking regularly earlier in life were more prone to having a reduced amount of days that they spent exercising each week. For anybody who started at the age of 12, they on average would exercise on about 1.75 days of a week. If someone started at age 15, they were down to exercising 1.5 days a week on average.

Age of Starting to Smoke Regularly and Days Playing Sports a Week tells a similar story. Anybody who started smoking at age 10 would spend exercise through sports 1.5 days out of the week. If you started at age 15, that drops to playing sports on about 1.15 days out of the week.

CONCLUSIONS

The amount of weekly exercise that is had by adolescents is related to the age at which they start smoking regularly (i.e. 1 cigarette per day for 30 days). The amount of physical activity had by the students in the survey was correlated negatively to them becoming regular smokers with respect to age. Higher amounts of physical activity increased the age at which participants started to smoke: whether it came from a physical education class, participating in sports, or other forms of exercise. This suggests that there are other potential health benefits to encouraging kids to stay active even when they get older besides just staying physically fit.

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