

## Health Risk Behaviour In University Students: Prevalence And Reciprocal Nature Of Risk Behaviours

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### Özet

Üniversite yılları bireyin hayatında önemli değişimlerin yaşandığı bir dönemdir. Bu dönemde gençlerin çoğu ilk kez ailelerinden uzakta, daha bağımsız bir deneyime adım atar. Yaşam alışkanlıklarını yeniden biçimlendirmeleri gereken bu dönemde gençler bir yandan da artan akademik talepler ve yeni sosyal ilişkilere uyum sağlamaya çalışırlar. Bu değişikliklere bazı gençler sağlıklı bir biçimde uyum sağlarken, bazıları fiziksel ve bilişsel sağlıkları açısından riskli davranışlarda bulunabilirler. Alanyazında gençler ve genç yetişkinlerde sağlık açısından riskli davranışlar temel olarak altı grupta değerlendirilmektedir. Bunlar tütün kullanımı, alkol ve diğer maddelerin kullanımı, riskli cinsel davranışlar, sağlıksız beslenme davranışları, fiziksel hareketsizlik ile istemsiz ve istemli yaralanmalara neden olan davranışlardır. Bu davranışların genç yetişkinlerin o sıradaki ve gelecekteki sağlık durumlarına büyük etkisi bulunmaktadır. Dolayısıyla, bu derleme çalışmasında sağlık açısından riskli davranışların yaygınlığını ve birbirleriyle ilişkilerini değerlendirerek alan yazına katkı sağlamak amaçlanmıştır.

**Anahtar Kelimeler:** Sağlık Açısından Riskli Davranışlar, Tütün Kullanımı, Alkol Ve Madde Kullanımı, Riskli Cinsel Davranışlar, Sağlıksız Beslenme Davranışları

### Abstract

The years of higher education is a period during which youth experience a number of important changes. In this period, students experience greater autonomy for the first time, being away from their families. During this period of time in which young individuals have to reshape their lifestyle habits, they also try to adapt increasing academic challenges and new social relations. While some of them adapt to these changes in a healthy way, others may engage in risk behaviours in terms of physical or mental health. In the related literature, health risk behaviours among youth and young adults are primarily grouped in six categories. These are tobacco use, alcohol and other drug use, risky sexual behaviours, unhealthy dietary behaviours, physical inactivity, and behaviours that contribute to unintentional and intentional injuries. These health risk behaviours have an enormous impact on current and future health status of young adults. Therefore, the aim of this review is to contribute to efforts of assessing prevalence of the health risk behaviours among university students and reciprocal relationships among these behaviours.

**Keywords:** Health Risk Behaviours, Tobacco Use, Alcohol And Drug Use, Risky Sexual Behaviours, Unhealthy Dietary Behaviours

## Introduction

Transition from high school to university on its own has been identified as a major life stressor for many young people (Bray and Kwan, 2006; Hicks and Heastie, 2008). During this period, many students live away from their home for the first time, which may result in a great decreasing of contact and support from family and friends (Tajallia, Sobhi and Ganbaripanah, 2010). In addition, in this period students have to deal with greater autonomy, enhanced-academic demands and new social relationships. During the process of dealing with university life challenges, students may engage in behaviours that might promote health or increase the prevalence of risk behaviours that cause poor health both physically and mentally (Jackson, Tucker and Herman, 2007).

Among these behaviours those which negatively affect the health called health risk behaviours and defined as “activities that increase one’s chance of loss of health status” (Keeler and Kaiser, 2010, p. 126). These behaviours among youth and young adults have been primarily characterized in six categories including tobacco use, alcohol and other drug use, risky sexual behaviours, unhealthy dietary behaviours, physical inactivity, and behaviours that contribute to unintentional and intentional injuries (Douglas et al., 1997). These health risk behaviours have an enormous impact on current and future health status of young adults. In order to develop more successful intervention programs targeting university students’ health, it is important to achieve a better understanding of health risk behaviours among them. Therefore, the aim of this review is firstly to assess prevalence of the health risk behaviours e.g. tobacco use, alcohol and other drug use, risky sexual behaviours, unhealthy dietary behaviours, physical inactivity among university students. Secondly, reciprocal relationships between these behaviours will be evaluated.

## Prevalence of the Health Risk Behaviours

In spite of many efforts for health promotion and illness prevention, many university and college students around the world still continue to engage in a variety of health risk behaviours that may place them at risk of serious health problems. Among these health behaviours, alcohol drinking was reported to be major health risk behaviour among university students (Douglas et al., 1997, Da Franca and Colares, 2008). Research across the world showed that 34.5% of students reported heavy drinking during the past month in the United States (Douglas et al., 1997); 56% of students reported engaging in binge drinking at least once in a week in the United Kingdom (Dodd, Al-Nakeeb, Nevill and Forshaw, 2010) and 62% of the university students reported binge drinking in Germany (Keller, Maddock, Hannover, Thyrian and Basler, 2008). In Turkey, alcohol use among students varies according to the region in which the university is. For instance, at a university in Ankara, the percentage of students drinking five or more standard alcoholic beverages in a single day on at least once in the last year was between 70.5% and 81.8% from the preparatory year to last year (Oksuz and Malhan, 2005). The rate of the students reported using alcohol occasionally was 10.6% at a university in a small city in Turkey (Simsek, Koruk and Altındag, 2007).

Another common health risk behaviour among university students is tobacco use, known as a major risk factor which contributes to cardiovascular disease and cancer (Lenz, 2003). Smoking is also known to be the most persistent drug used over time, compared to alcohol and marijuana (Lenz, 2003). Research found that proportion of current smoker among university students was 29% in United States (Douglas et al., 1997) and 31% in Germany (Keller, et al., 2008). In Turkey, percentage of current smoker was 25.4% for students in a small city university (Simsek et al., 2007) and percentage of smokers at least once a day over the past six months was between 39.2% and 65.2% from the preparatory year to last year at a university in Ankara (Oksuz and Malhan, 2005). In Turkey, Bulbul, Sanli, Fidan, Agar and Ceyhun (2008) also showed that tobacco usage was 35.1% among students at a medium-sized university. Among these countries, United Kingdom has lowest rate of the regular smokers among students; 15.4% for males and 9.8% for females (Dodd et al., 2010).

Substance use is reported to be a risk factor for mental and physical health (World Health Organization [WHO], 2008). Webb, Ashton, Kelly and Kamali (1996) found that in UK 20% of the university students reported using cannabis regularly. In the United States, 11.6% of students were the current marijuana user (Douglas et al., 1997). In Turkey, rate of the substance use was 2.5% for the small city university (Simsek, Koruk and Altındag, 2007), and percentage of students who used substance at least once in the last year was 11% in female and 14% in male students at a university in Ankara (Oksuz and Malhan, 2005).

University students also fail to protect themselves from exposure to sexual activities which may bring about consequences of unplanned pregnancy and sexually transmitted diseases such as AIDS or syphilis (WHO, 2008). Despite its adverse health effects, many students are involved in unprotected sexual intercourse. In the United States, only 29.6% of students used condom and 34.5% of students used birth control pills during the past three months (Douglas et al., 1997). In Canada, 46% of students reported using a condom in their last sexual intercourse (Taylor, McCarthy, Herbert and Smith, 2009). In Turkey, protected intercourse among sexually active students was reported to be only 53.9% (Bulbul et al., 2008). Also, Simsek et al. (2007) found that 2,5% of female students and 19,3% of male students reported that they experienced a sexual intercourse, but they have “no idea regarding the necessity of condom use in order to prevent sexually transmitted diseases” (p. 19).

Unhealthy dietary behaviours are other common risk behaviour among university students. In the United States, 73.7% of students had eaten less than five or more servings of vegetables and fruits, 21.8% of students had eaten three or more high fat foods on the day before the survey (Douglas et al., 1997). In Canada, 43% of students consumed more than two servings of food including fat and sugar the day prior to survey (Taylor, McCarthy, Herbert and Smith, 2009). Also, Dodd et al. (2010) showed that 66% of students living in UK did not meet the recommended portion of vegetables and fruit per day. Based on the Body Mass Index (BMI), 35% of the university students were overweight or obese in Canada (Taylor et al., 2009); 20.5% of students were overweight in the United States (Douglas et al., 1997); and 5.8% of students were overweight and 11% was obese in Turkey (Simsek et al., 2007).

With regard to exercise, students who did exercise sufficiently had higher level of psychological well-being and were twice less likely to visit doctor concerning an illness compared to students who did not exercise at recommended level (Bray and Kwan, 2006). Despite these health consequences, studies show that a large amount of university students do not exercise sufficiently. In the United States, engaging in physical activity at recommended level was 37.6% for vigorous level and 19.5% for moderate level among the university students (Douglas et al., 1997). The percentage of the students who exercised less than recommended amount was 60% in Germany (Keller, et al., 2008); 70% in UK (Dodd et al., 2010). Of the students, 63.6% reported that they didn't do physical exercise in Turkey (Simsek et al., 2007).

In terms of behaviours that contribute to unintentional and intentional injuries, in the United States, 9.2% of students rarely or never used a safety belt when driving a car. 34.0% of students who drove motorcycle rarely or never wore motorcycle helmets. More than one fourth of all students (27.4%) reported that they had drunk alcohol and driven a car or other vehicle at least once during the 30 days preceding the survey. Also 30.5% of students reported that they had drunk alcohol while boating or swimming (Douglas et al., 1997). In Turkey, rate of the driving under the influence of alcohol at least one occasion in the last year was 2.4% for female students, while it was 18.5% for male students at a university in Ankara. In addition, the rate of students reported physical fighting was 5.5%; carrying a gun or sharp weapon was 5.78%; riding a motorcycle without a helmet was 19.7% and driving without a safety belt was 48.4% at least one occasion in the last year. The rate of attempted suicide at least one occasion in the last year was 1.6% (Oksuz and Malhan, 2005). Also, Simsek et al. (2007) found that 57.1% of students reported that they rarely or never used a safety belt when driving a car and %69,4 of them reported exceeding the speed limit while driving in Turkey (Simsek et al., 2007).

## **Gender and Health Risk Behaviours**

Gender is one of the important factors that is associated with health risk behaviours. It seems that men are at risk more than women in terms of health behaviours. For example, research clearly reported that compared with women, men were more likely to report alcohol consumption and binge drinking (Von Bothmer and Fridlund, 2005, Dodd et al., 2010, Keller et al., 2008, Oksuz and Malhan, 2005, Piane and Safer, 2008, Steptoe and Wardle, 2001, Simsek et al., 2007). Although men rated the alcohol as the most important health issue for themselves, many of them thought using alcohol was important in building social confidence, attracting women, coping with stress, anger and loss (Davies et al., 2000). It was also found that male students to have the opinion that drinking is a part of student life and that use of alcohol makes it easier to socialize (Von Bothmer and Fridlund, 2005). It was also reported that use of marijuana was mores common among male students than female students (Steptoe and Wardle, 2001, Bulbul et al. 2008, Oksuz and Malhan, 2005). Moreover Simsek et al. (2007) revealed that students who reported using marijuana was all male. Besides male students were more likely than female students to report rarely or never wearing safety belts when driving a car, drinking alcohol while boating or swimming, carrying weapons or guns and participating in physical fighting (Douglas et al., 1997, Oksuz and Malhan, 2005). However, results related to smoking according to gender seems to be inconsistent. For example, Douglas et al. (1997) and (Dodd et al., 2010) showed that smoking did not vary by gender, while Simsek et al. (2007) and Keller et al. (2008) revealed that men were more likely than the women to smoke cigarette. On the other hand Oksuz and Malhan (2005) found that smoking was more prevalent among female students.

In addition, men were also more likely than women having six or more sexual partners during their lifetimes, while female students were more likely than male students to report ever being forced to have sexual intercourse against their will, having ever had sexual intercourse, failing to use a condom at last sexual intercourse, and inconsistent condom use (Douglas et al., 1997). However, in a recent study, Taylor et al. (2009) found that male students were more likely than female students having six or more sex partners during their lifetimes, but male and female students did not differ in terms of condom and contraceptive use in last sex and consistent condom use. In a study conducted by Oksuz and Malhan (2005), female students did not respond the question related to unprotected sex, while 13% of male students reported that they are involved in unprotected sexual relationships. Despite the fact that this study was conducted in a big city university in Turkey, female students did not respond this question. The lack of openness in terms of sexual topics among young adults may be related to barriers stemming from religious or cultural values that are internalized by these young adults throughout their socialization process as they grow up.

Women were also more likely than men to use vomiting or taking laxatives to lose weight or to keep from gaining weight, taking diet pills to lose weight or to keep from gaining weight, and not participating in vigorous physical activity (Douglas et al., 1997). Similarly, Taylor et al. (2009) found that female students more likely than males to report having dieted to lose or lose or keep from gaining weight. A more recent study showed that female students were trying to control their weight with more healthy choices like changing their dietary habits, levels of physical activity and practicing relaxation (Von Bothmer and Fridlund, 2005). This can be related to the common expectation from females to attain a look close to the idealised frame of female body, which forces them to control their eating habits more than males do. This argument is backed by the findings that male students showed a high level of overweight and obesity compared with women and were less interested in nutrition advice and health enhancing activities ((Davies et al., 2000, Von Bothmer and Fridlund, 2005) and eating more than two servings of foods typically high in fat content (Douglas et al., 1997).

## **Reciprocal Relationships among Health Risk Behaviours**

It is also well documented that there is a co-occurrence among health risk behaviours. In other words, young adults who experience one of the health risk behaviours are more likely to experience another one (Jessor and Jessor, 1997). The term of covariation was used to refer to complex reciprocal

relationships between health risk behaviours (Irva and Irwin, 1996). A study in Germany (Keller, et al., 2008) revealed that 18.2% of students exhibited all four health risk behaviours (smoking, binge drink, insufficient exercise and insufficient fruits and vegetables consumption) whereas 34.8% of students exhibited any three of these risk behaviours. Similarly, 22% of the students living in Canada reported five risk behaviours while 88% of students reported two or more risk behaviours. When considering adverse effects of these behaviours on individual's current and later health status, these multiple health risk behaviours among students seem to be alarming. Among health risk behaviours, especially smoking and alcohol and other drug use tend to be in the same cluster. For example, Lenz (2003) has demonstrated that users of marijuana and alcohol were twice more likely to smoke. Also, Strote, Lee and Wechsler (2002) revealed that ecstasy users were more likely to have multiple sexual partners as well as using marijuana and binge drinking.

On the other hand, studies indicated that recent trends in health behaviour among university students were not promising. Even if students are aware of their health needs, they have low level of motivation of taking action toward change their unhealthy behaviours (Davies et al., 2000). Steptoe et al. (2002) have repeated a survey which examined trends in major health behaviours and associated beliefs among university students from 21 European countries between 1989 and 1991. They indicated that "the differences in health behaviours, beliefs, and risk awareness between the two surveys were disappointing in this educated sector of young adult Europeans" (p. 97). Their result revealed that there was increase in smoking and decrease in fruit consumption whereas fat intake and physical exercise remained more stable from 1990 to 2000. Also, Webb et al. (1996) reported that the use of alcohol and other drugs are common and has increased among university students in UK. Moreover, in UK students perceived alcohol and drugs as a normal part of life and they reported taking them mainly for pleasure (Webb et al., 1996). In addition, Keller, et al., (2008) showed that only 6.5% of students were ready to change their all health risk behaviours whereas one in third reported readiness for behavioural change for only *one* of their risk behaviours. Unfortunately, these findings indicate that there does not seem to be a trend toward improvement.

The reciprocal relationship among health risk behaviours of university students also has strong impact on their academic performances. Some studies conducted on university students (Singleton, 2007, Singleton and Wolfson, 2009, Trockel, Barnes and Egget, 2000) highlight the importance of the relations between alcohol consumption and sleepiness and their impact on academic performance. The studies show that the more frequent alcohol consumption, the more sleepiness is felt throughout the day. In turn, sleepiness and poor sleeping patterns due to alcohol consumption was found to be strongly related with lower academic success showed by GPA scores of the students. Moreover, co-occurrence of health risk behaviours like physical inactivity, smoking and having poor sleep behaviours were also found to be detrimental on academic success (Abolfotouh, Bassiouni, Mounir and Fayyad, 2007).

## **Conclusion**

Health risk behaviours including tobacco use, alcohol and other drug use, risky sexual behaviours, unhealthy dietary behaviours and physical inactivity are the major risk factors which lead to chronic illnesses such as cardiovascular disease, cancer and diabetes. Research from countries across the world indicates that university students are at risk of health behaviours that may adversely affect their current and later health status.

It seems that alcohol is particularly notable because of the large numbers of students affected. Considering the fact that students drink alcohol tended more toward driving under the influence of alcohol, alcohol consumption becomes an indicator for increased level of risk for them in terms of acute injuries. Besides, combinations of alcohol with smoking and other drugs like marijuana can cause long-term detrimental effect on the health of students. Tobacco use also is a known risk factor for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases. Despite these negative health effects, tobacco use seems to be quite common among young people. Because smokers were more likely to have multiple health risk behaviors like alcohol consumers, they seem to be at a high risk. They

eat fruits and vegetables and exercise less than non-smokers and drink alcohol and using cannabis more than non-smokers (Keller, et al., 2008).

Insufficient physical activity is associated with lower well-being and more visiting a physician regarding an illness compared with sufficient physical activity (Bray and Kwan, 2006). Both physical inactivity and unhealthy foods also cause increase in overweight and obesity. Weight gain and an increase in overweight and obesity in university students raise serious health concerns such as cancer, high blood cholesterol and high blood pressure and heart disease.

It seems that prevalence of sexual intercourse in Turkey is lower than Western countries in general, but protected intercourse among sexually active students was also lower. The lack of openness in terms of sexual relations among females in Turkey indicates some barriers as well. Because sexual issues may differ between cultures due to differences in norms, attitudes toward sex, and perception of sexual intercourse and sexual risk taking, it is important to investigate cultural issues about unsafe sexual relations.

In addition to direct consequences on the health of university students, it is important to highlight the effect of such behaviours on their academic performances. There are numerous findings suggesting that occurrence of one or more health risk behaviours have detrimental effects on academic performance of university students.

Although it is widely documented unhealthy behaviours have many negative consequences, many students continue to engage in high rates of unhealthy behaviours. Especially, male students are at risk in terms of almost all issues including alcohol consumption and binge drinking, marijuana usage, unsafe sexual relations, unwearing safety belts, carrying weapons or guns and participating in physical fighting. Also unhealthy nutritional habits, relative disinterest in nutritional advice and low level of physical activity gives rise to concerns about the future health for male students. Male students' tendency to take more health risks compared to females can be related to the common perception of appropriate male behaviour hegemonic masculinity dictates. All these categories of health risk behaviours are important to follow up with additional studies especially from the point of gender.

Despite the importance of follow up studies on health risk behaviours, most of such studies have been conducted in the United States, United Kingdom and other western countries. However, very little is known about multiple risk behaviours among university students in developing countries in particular. The fact that university students in Turkey, like western university students, are engaging in a series of health risk behaviours is especially considerable. Therefore, more research is needed to achieve a comprehensive understanding of health risk behaviours, especially in terms of multiple risk behaviours in Turkey. Particularly examination of barriers that limited students to take action toward their unhealthy lifestyle should be addressed in future research.

University years characterize a transition from adolescence period to adulthood and a time period during which life-long behaviours are established. When a particular behaviour establish during these years, it is likely to continue in later years. Therefore, it is crucial to intervene health risk behaviours in this early period in order to prevent them to be conveyed to the later stages of life. Universities should provide services supporting to the health-promotion behaviours for students, e.g. healthy foods, adequate and easy accessible sport facilities. Yet, these can only be preliminary precautions to alleviate the negative impact of health risk behaviours among university students. There is also a necessity for preventive intervention towards this problem. In terms of prevention, education and health promotion can be satisfactory strategies. Universities also have important institutions that facilitate health education to many young adults, and reduce health risk behaviours among them. To develop health education initiatives targeting students, it is important to have detailed knowledge about the health of students and their health related behaviours. Factors that influence these such as knowledge, attitudes, and personal resources, motivation for a healthy lifestyle, social support and gender should also be taken into consideration. Health education programs should also focus on creating awareness amongst the students in terms of the role of health risk behaviours in disease risks.

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