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University students' risky behaviors and the progression rate

Abstract: The aim of this research is to determine the correlation between university students' risky behaviors and their progression rate. The sample of examinees was comprised of 119 students belonging to the Faculty of Educational Sciences at Juraj Dobrila University of Pula, Croatia. The purpose of this research is linked to planning adequate activities for university students in their first years of study. The American questionnaire National College Health Risk Behavior Survey, created by Centers for Disease Control and Prevention, was implemented for this study. Some of those risky behaviors represent a predictive group of fragments for which the criterion is students' progression rate. The basic statistical values of the observed items have been calculated through data processing, while the regression analysis has been used as the multivariate method of data processing for which the prognostic value of the predictive variables set was determined. The results indicate that there is a connection between a lower progression rate into the next academic year and students' use of alcohol and marijuana. The applicative value of the obtained results is manifested through the identification of guidelines for individual and group counseling as well as the organization of thematically aimed working groups and tribunes serving as support for overcoming various difficulties while attending a university.

Keywords: university students, risky behaviors, progression rate, Juraj Dobrila University of Pula, Croatia

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Introduction

Risky behavior is a very important health issue, in the widest sense, especially regarding the abuse of addictive substances; however, there are additional risky behaviors leading the young and their environment toward danger. “Risky” is assigned to any behaviors that potentially expose young people to harm or to significant risks of harm that may prevent them from reaching their potential with learning and advancement in general. These are behaviors that will increase the possibility of serious difficulties in many young people’s processes of socialization. Recently, the existence of various risky behaviors has been evident, and they have been manifested in a sort of continuum. This is a phenomenon that is not possible to define in an unambiguous way and is strongly influenced by social changes. The risk factors are never isolated, but are presented in a larger number in multiple environments available to young people. In this context, they act as predictors for other behaviors or circumstances. The correlation between risk factors and the progression rate has been proven through a number of studies (Nagin et al. 2003, p. 357; Agnew 2005, p. 115; McGrath 2006, p. 39), although the lack of progression itself represents a risk factor.

University students’ risky behavior

Kamall et al. (2010, p. 50) stated that risky behaviors linked to a young person’s health often reflect the values and norms of a particular culture as well as health education and care specific to that culture. The authors singled out the following risky behaviors: eating-related and physical activity-related behaviors as well as failing to wear a seatbelt, driving after drinking alcohol, carrying a weapon, engaging in physical fights, seriously considering attempting suicide, smoking, and using other drugs.

The results of the research conducted on a sample of 210 students aged eighteen to 24 years old (de Oliveira Faria et al. 2014, p. 502) indicate that students expressed the following risky behaviors: alcohol consumption, use of motorcycles

as a means of transportation, suicide attempts, being overweight, and unhealthy eating habits. Alcohol consumption was the most prevalent risky behavior in this population.

The World Health Organization (2010, p. 1) has named tobacco products, alcohol, and drugs as the top risk factors regarding health. Risky behaviors may show progress during one's studies, yet also diminish, since a person's maturity increases the awareness of their own health importance. Thus, the results of the Italian project "Sportello Salute Giovani" (Poscia et al. 2015, p. 113) indicate that 24% of students smoke cigarettes and 24% drink alcoholic beverages. About 40% of students have smoked marijuana and 2% have used other drugs.

At the University of Bari Aldo Moro in Italy (Da Molin and Sabella 2017, p. 96), in a very similar environment to Pula, Croatia (port and university city of the Adriatic Sea, moderately risky city regarding the abuse of narcotics and criminal activities), a study was conducted that involved all students ($N = 10\,550$) between the ages of eighteen and 34 years who were currently enrolled. The results indicate that 24.3% of students smoke cigarettes, 40.9% of students drink occasionally, and 19.9% drink every weekend.

Regarding the population of Egyptian private universities' students aged sixteen to 26 years, the prevalence of physical altercation behavior is 4.9%, smoking prevalence is 16.3%, and the prevalence of driving after drinking alcohol was found to be significantly related to gender—being higher among males—and prevalent in students belonging to practical types of study and students living away from their families (Kamall et al. 2010, p. 52).

Studies have also been conducted in Croatia, whose purpose was to recognize the intensity and breadth of risky behaviors that have been linked to the abuse of addictive substances and to plan adequate preventive interventions (Radetić-Paić and Medaković 2011, p. 325). The results of the research conducted on a sample of 49 students of lower primary education and 59 students of higher primary education at the Juraj Dobrila University of Pula regarding the availability, abuse, harm, and reasons for using addictive substances on campus indicate that students in the earlier years of higher education consider alcohol neither harmful nor useful, that alcohol is easily obtainable in the city in which they study, that addictive substances are abused due to the desire for experimentation or the affliction of boredom, and that their peers frequently consume marijuana (which is also considered neither harmful nor useful).

Concerning the frequency of alcohol and cannabinoids consumption, Jerković (2015, p.122) conducted a study on a quota sample of 438 students during their first and second years who were assigned accommodations on campus at the University of Zagreb. Extraversion and conscientiousness proved to be significant—although weak—predictors of the frequency of alcohol consumption; however, the interaction effect of self-determination and extraversion on the frequency of cannabis consumption was determined. For students with an average or high self-determination, the increase in extraversion was followed by an increase in cannabis consumption, which was more conspicuous in students with higher self-determination. It was

also interestingly confirmed that students who apparently functioned well needed support to deal with life challenges.

In regard to the historical context, some authors (Spigarelli and Heyman 2008, p. 270) have indicated that decades of longitudinal survey research support the following general conclusions: drug use is common among young people, drugs are mostly abused by individuals between the ages of twenty and thirty, declining rates of perceived harm precede the increasing rates of use, and association with users increases the likelihood of use.

On the other hand, according to the latest results obtained in various pedagogical, sociological, and public health studies and according to official data given by health, social, and educational institutions, as well as the police (Zloković and Vrcelj 2010, p. 198), the spectrum of young people's risky behaviors may spread to some "new" ones, including: polytoxicomania (the combination of different psychoactive substances and alcohol), binge drinking, hook-up culture (sexual intercourse with as many partners as possible), hazardous night races and risky motorbike rides, and jumping in and out of speeding cars.

Progression

When looking at statistics for failure to progress further in higher education, the results of a long longitudinal study (McGrath 2006, p. 44) have shown that students who do not move on to the next study year show a greater number of risky behaviors compared to students who possess some problems but have successfully completed their study year anyway. The experience of repeating a year of study (Nagin et al. 2003, p. 358) increases aggression and misbehavior in male students, namely those who were already showing early signs of anti-social behavior. Agnew (2005, p. 115) has also come to the conclusion that the frustration, disappointment, and anger engendered by this kind of visible education failure contributes to students following criminal and antisocial pathways.

Regarding students leaving or dropping out of the system due to peer influence, authors Vitaro et al. (2001, p. 412) emphasized, along with other variables, the experience of hanging out with peers exhibiting a socially unacceptable behavior outside the educational institution. According to the typology done by Janosz et al. in 2000 on a somewhat younger student population (according to Ferić et al. 2010, p. 637), a subtype of students who give up their education are the so-called "maladjusted dropouts". These students can be recognized for their serious disciplinary problems, aggressive behaviors, and frequent absences combined with poor educational achievements and a typically negative attitude toward learning.

In the Position Statement on Student Grade Retention and Social Promotion of the United States' National Association of School Psychologists (2003, p. 3), the data covering the overall effects of nineteen empirical studies conducted during the 1990s were analyzed. Outcomes were compared to students who were retained and matched comparison students who were promoted. The results indicate that grade retention has a negative impact on all areas of achievement, with special

importance on socio-emotional adjustment, such as peer relationships, self-esteem issues, problem behaviors, and attendance issues.

Generally, it can be concluded that concerns regarding grade progression relate to two main dimensions: the effects on students' academic achievements and the effects on students' socio-emotional development.

Research aim and research methodology

Research aim, purpose, and hypothesis

The research aim was to determine the connection between the progression rate and the students' risky behaviors and their predictive value. The sample of students was taken from the Faculty of Educational Sciences of the Juraj Dobrila University of Pula. The research purpose was linked to planning adequate activities for students in earlier years who manifested risky behaviors.

The following hypothesis was then tested:

H1: There is a statistically significant connection between the progression rate and students' risky behaviors.

The hypothesis was based on the assumption that there are statistically significant connections between the progression rate and university students' risky behaviors.

Sample

The appropriate sample of examinees was comprised of 119 second- and third-year students of the Faculty of Educational Sciences.

According to the study program, the students were divided in the following ways: 29 students from the integrated undergraduate and graduate university teacher study, 44 students from the undergraduate study of preschool education, and 46 students from the part-time undergraduate study of preschool education.

Students were divided into two groups regarding progression:

- Regular students, N = 78
- Students who had not yet progressed to a higher year of study, N = 41.

113 female students and six male students participated in the study. According to their age, the sample consisted of:

- 18 to 21 years of age: 73
- 22 to 25 years of age: 24
- 26 to 29 years of age: 7
- 30 years of age and older: 15

Research instrument

The study utilized part of the standardized American questionnaire, National College Health Risk Behavior Survey for the assessment and prevention of diseases (according to Centers for Disease Control and Prevention, 1995, p. 2; de Oliveira Faria et al. 2014, p. 500) regarding students' risky behaviors. Part of the health-risk behaviors were omitted from the original questionnaire. The original questionnaire was developed in collaboration with representatives from colleges and universities, relevant national organizations, and other federal agencies. The questionnaire, designed for self-administration, consists of a booklet that may be scanned by a computer; the booklet contains 96 multiple choice questions, for which both English and Spanish versions are available (Centers for Disease Control and Prevention, 1995).

The questionnaire is also standardized for application with Brazilian college students and has shown good measuring characteristics (Franca and Colares 2010, p. 1212). Risky behaviors, or the eleven observed predictor items, were divided into three groups with the following appertaining variables:

1. *Traffic:*
 - Passenger did not make use of a seatbelt
 - Driver did not make use of a seatbelt
 - Use of motorcycle
 - Use of motorcycle without the protection of a helmet

2. *Self-aggression or aggression against others:*
 - Bearing of weapons
 - Involvement in fights
 - Suicide attempts

3. *Consumption of substances:*
 - Habitual consumption of cigarettes
 - Consumption of marijuana
 - Risky consumption of alcohol
 - Consumption of inhalants

The predictor items were evaluated on a five-level Likert-type scale (1: never, 2: rarely, 3: sometimes, 4: often, and 5: very often). The criterion is the progression item (I have enrolled for a higher study year or I have not yet enrolled for a higher study year).

Data collection and data processing methods

The research was conducted in 2017 at the Faculty of Educational Sciences of the Juraj Dobrila University of Pula, where students completed the questionnaire alone.

Before students started to fill out the questionnaire, the researcher provided instructions on how it was to be completed. She guaranteed anonymity and explained that the collected data would be used only for scientific purposes. The participation in the questionnaire was voluntary and students were told they could withdraw at any moment prior to its completion.

Basic statistical value and the regression analysis as the multivariate method of data processing determining the prognostic validity of the predictor items set were used for data processing (according to Kovačević et al. 1998, p. 185). Data were analyzed using the SPSS Statistics 24.0 Standard Campus Edition (SPSS ID: 729357 od 20.05.2016.).

Research results and discussion

Basic statistical value and the regression analysis were completed on the predictor set of eleven items indicating students' risky behaviors and the criterion item of progression. Table 1 illustrates the basic statistical values of the observed items. It may be noted that the average values of the observed items are relatively low (never; rarely) with a deviation in the negative sense for habitual consumption of cigarettes and involvement in fights.

	Mean	Minimum	Maximum	Std. Dev.
Progression rate	1.34	1.00	2.00	0.65
Passenger did not make use of a seatbelt	1.19	1.00	5.00	0.61
Driver did not make use of a seatbelt	1.46	1.00	5.00	0.56
Use of motorcycle	1.01	1.00	5.00	0.46
Use of motorcycle without the protection of a helmet (answers only for the previous question)	1.74	1.00	5.00	1.10
Bearing of weapons	1.00	1.00	2.00	0.00
Involvement in fights	2.04	1.00	5.00	1.06
Suicide attempts	1.19	1.00	5.00	0.61
Habitual consumption of cigarettes	2.07	1.00	5.00	1.07
Consumption of marijuana	1.13	1.00	5.00	0.75
Risky consumption of alcohol	1.17	1.00	5.00	0.62
Consumption of inhalants	1.00	1.00	5.00	0.00

Table 1: Basic statistical value of observed items

The obtained results of the multiple regression analysis (Table 2) show that there is a statistically significant connection between predictor items and the criterion item “progression”. The predictor set of items has explained 49% of the common variance. In other words, by knowing the predictor set of items, it is possible to anticipate the progression of students in the analyzed sample.

	Value
Multiple R	0.490
Multiple R2	0.240
Adjusted R2	0.134
F(11, 119)	3.274
p	0.000
Std. Err. of Estimate	0.520

Table 2: Coefficient of the multiple regression of the predictor set of items and the criterion of progression

	Beta	Std. Err. of Beta	B	“.” of Beta	t	p-level
Passenger did not make use of a seatbelt	0.150	0.087	0.076	0.044	1.727	0.086
Driver did not make use of a seatbelt	-0.013	0.091	-0.010	0.066	-0.144	0.885
Use of motorcycle	0.134	0.111	0.069	0.057	1.209	0.228
Use of motorcycle without the protection of a helmet	0.018	0.087	0.009	0.046	0.204	0.838
Bearing of weapons	0.099	0.091	0.053	0.049	1.095	0.275
Involvement in fights	-0.034	0.073	-0.031	0.066	-0.468	0.640
Suicide attempts	-0.040	0.078	-0.039	0.076	-0.514	0.608
Habitual consumption of cigarettes	-0.088	0.077	-0.054	0.047	-1.145	0.253
Consumption of marijuana	0.170	0.075	0.144	0.069	1.609	0.040
Risky consumption of alcohol	0.195	0.080	0.173	0.071	2.421	0.016
Consumption of inhalants	0.012	0.078	0.008	0.055	0.153	0.879

Table 3: Multiple regression analysis for the criterion of progression

The standard regression coefficient is the highest and statistically significant for both “risky consumption of alcohol” and “consumption of marijuana”. The other predictor items also participate in defining the latent criterion, but are not statistically significant predictors of the criterion item. Thus, the items “risky consumption of alcohol” and “consumption of marijuana” mostly contribute to the criterion item of progression, while the other items do not significantly anticipate progression.

Similar data were also obtained during other studies (according to Wechsler and Nelson 2008, p. 484). Namely, studies indicate that the pressure exerted by academic demands, proving oneself in a group, the accessible price of alcoholic beverages, and obtainability of alcohol in the college environment were some of the causes related to the alcohol consumption patterns among university students.

Conclusion

The indicators lead to the conclusion that it is possible to anticipate university students' progression rate based on the risky behaviors of consuming alcohol and consuming marijuana.

The limitations created by a relatively small sample size may affect the outcome and are certainly worthy of this study. Moreover, the utilized American questionnaire does not necessarily reflect the significance of the factors of risky behaviors in Croatia (for instance, the possession of weapons) since it has not been standardized for the Republic of Croatia. The suitability of the questionnaire for the Croatian context, with items more applicable to the male population of students, may be significantly limiting.

When studying at universities, young people can manifest behaviors that do not necessarily represent a problem, although they can certainly adopt such problematic behaviors. It is generally considered that students who link positive emotions to their studies consume addictive substances more rarely than those who perceive their education negatively (Maddox and Prinz 2003, p.47).

Attention should also be directed toward protective factors regarding students' resistance in the faculty environment, such as developing a wide field of social skills, positive interactions with their peers, high levels of sociability and sensitivity, problem-solving skills, and many others. The aforementioned can be influenced by preventive activities in earlier years of study and may be implemented through various forms of peer support as well as through the University's Psychological Counseling Center, which should take over the main role of planning and conducting preventive activities.

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POVEZANOST TVEGANEGA VEDENJA ŠTUDENTOV Z NJIHOVO PREHODNOSTJO V ŠTUDIJSKEM PROGRAMU

Povzetek: Namen raziskave, ki jo predstavljamo v prispevku, je bil ugotoviti povezanost med deležem prehodnosti študentov v univerzitetnih študijskih programih ter njihovim tveganim vedenjem. V vzorec je bilo zajetih 119 študentov Pedagoške fakultete Univerze Juraja Dobrile v Puli, Hrvaška. Ugotovitve raziskave naj bi omogočila načrtovanje ustreznih dejavnosti, namenjenih univerzitetnim študentom, zlasti tistim v prvih letnikih študijskih programov. V raziskavi smo med drugim uporabili del vprašalnika iz »Nacionalne študije zdravstveno tveganega vedenja študentov« (National College Health Risk Behaviour Survey), ki jo izvaja ameriški Center za nadzor in preprečevanje bolezni (Centre for Disease Control and Prevention). Nekatere vrste tveganega vedenja študentov imajo večjo napovedno vrednost za njihovo prehodnost iz letnika v letnik. V prispevku prikazujemo izračune osnovnih statističnih parametrov opazovanih spremenljivk, regresijsko analizo pa smo kot multivariatno metodo obdelave podatkov uporabili za to, da smo določili prognozično vrednost niza napovednih spremenljivk. Rezultati kažejo, da obstaja povezanost med nižjo prehodnostjo študentov iz letnika v letnik ter uporabo alkohola in marihuane. Rezultati raziskave imajo uporabno vrednost zlasti za pripravo smernic, na podlagi katerih bi lahko potekalo skupinsko ali individualno svetovalno delo s študenti, pa tudi za organizacijo dogodkov kot so npr. tematske delovne skupine, ki bi lahko pripomogle študentom k premagovanju različnih težav, s katerimi se soočajo med študijem.

Ključne besede: univerzitetni študentje, tvegano vedenje, delež prehodnosti, Univerza Juraja Dobrile v Puli

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