

Differences in the knowledge and attitudes between students of technical and nursing studies towards alcohol and alcoholism

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Abstract - Alcoholism is the most common type of addictive behavior. Every year the age limit is pushed and more and more young people reach for alcohol. The problem of excessive drinking and alcoholism in Croatia is one of the leading problems in public health. The research conducted at Technical College in Bjelovar, on the sample of 141 students in nursing and mechatronics, about their habits, knowledge and attitude towards alcohol led to the results that show notable difference between those two study programs. Students filled out an anonymous online survey that included 39 questions related to the socioeconomic status of the individual, drinking habits, knowledge about alcohol and students' attitudes towards alcohol and alcoholism. The given results showed more positive attitude towards alcohol and higher tendency of irresponsible behavior by students of Mechatronics. It is noticed that students have negative attitude towards alcohol only if they consume it under the influence of society. Alcohol consumption under the peer influence leads to more negative attitude towards alcoholics among nursing students, while mechatronics students have a positive attitude. All in all, nursing students have positive attitude towards those suffering from alcoholism and they are willing to work with them whereas it is not the case among mechatronics students. The negative attitude towards alcoholics, tendency to consumption and little knowledge of consequences of consuming alcohol can be justified by high tolerance of our society towards consumption of alcohol, absence of effective program of addiction prevention and quality education of all study programs.

Key words: nursing, alcoholism, alcohol addicts, students

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Introduction

Alcoholism is the most common type of addictive behaviour. In many parts of the world, consumption of alcoholic beverages is

a common feature of social gatherings. However, consumption of alcoholic beverages carries with it the risk of adverse health and social consequences associated with the toxic effects of alcohol intoxication and dependence, which it can cause. [1] As the previous sentence suggests, alcohol consumption in today's world is considered quite normal, moreover, a part of the tradition. But tradition has long been out of control and created

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one of important problems of today – excessive alcohol consumption, which affects not only the elderly, but also the young population. Every year, the age limit is pushed lower and ever more young people reach for alcohol. The problem of excessive drinking and alcoholism in Croatia is one of the leading problems in public health. It is considered that the main generator of drinking in our society is family – with all its customs that are generationally transmitted and society with high tolerance towards drinking – socially acceptable alcohol consumption. Drinking starts very early, at the age of 14-16 years and the number of alcoholics in the population of women is increased. Data of the Republic registry of alcoholics in Croatia indicates that 3.5-4% of the population suffers from alcoholism. [2]

The definition of adolescence suggests that this is a vulnerable period in life of every person, during which the individual assumes the role of an adult. Due to the efforts, fears, pressures of the environment, high expectations and crises, that are characteristic phenomena of adolescent years – a tendency toward alcohol consumption occurs, as a form of escape from life's realities. [3] Consumption of alcohol in adolescence is considered an attempt of creating the individual's identity. European research (ESPAD) on the use of drugs, cigarettes and alcohol from 2011 places Croatia above European average in consumption of alcohol among adolescents, especially in excessive drinking (the way of alcohol consumption in which alcohol is used - as a large number of drinks during a single occasion). Results indicate a higher amount of alcohol consumption in the range of 30 days, as well as a higher amount consumed on the most common day of drinking. The proportion of students who reported that they

had engaged in excessive drinking in the past 30 days is also above average. [4] the young drink from the puberty and some of them even before that. Although they drink less often than the adults, they almost always drink with the tendency to get drunk. They do it to identify with their peers, especially those in whose families alcohol consumption is excessive and frequent, and those who come from backgrounds where there is no good education. [5] However, the main problem associated with alcohol consumption among younger age groups is not alcohol addiction, but rather the consequences of its misuse that are manifested in individual behavior, behavior in traffic, poor school achievement, delinquent behavior, aggression, frequent abuse of other addictive substances and traffic accidents. [6] Alcohol abuse leads to unwanted, often violent behavior, injuries, fights, trouble with the law, setbacks in school, study or work, conflicts with family and health consequences. It is not just a consumer that is damaged, but its surroundings as well.

Aims of the research conducted on a sample of students of the Technical college in Bjelovar were to explore drinking habits, knowledge and attitudes towards alcohol and alcoholism and to investigate possible differences between the health students and students of the technical field of science.

Subject and methods

During February and March 2014, 141 (N = 141) students of the Technical college in Bjelovar in Croatia had been examined. 65 of them were mechatronics students and 76 of them were nursing students from all three years of professional study. Study of mechatronics is a technical field, enables students to work independently in a number of oc-

cupations, that requires the knowledge of mechanical engineering, electrical engineering and IT technologies, while the study of nursing is a health-related field, enables students to work independently and conduct the health care procedures. Students filled out an anonymous online survey [7-10] in the form of multiple choice and Likert scale that included 39 questions related to the socio-economic status of the individual (9 questions), drinking habits (10 questions), knowledge about alcohol (10 questions) and students' attitudes towards alcohol and alcoholism.

The data were presented using tables. For statistical data processing, standard methods of descriptive statistics (measures of central tendency: arithmetic mean, standard deviation, medians with corresponding interquartile range) have been used and in accordance with the results, appropriate parametric or non-parametric tests have been applied. For the difference in the mean values of the two groups, we have applied the independent t-test. Logistic regression has been used to assess the features of some of the identified variables. All P values less than 0.05 were considered significant.

Research results

The results of regression analyzes are shown. We found a statistically significant difference between students of nursing and mechatronics in attitudes towards alcohol, alcoholics, irresponsible behavior regarding alcohol and interest in the use of alcohol that was tested by means of t-test (Table 3.). When asked whether alcohol is in common use in their families, 30% of nursing students answered positively, 68.4% believed that alcohol use is not common in their family, while 1.3% abstained. Mechatronics stu-

dents responded affirmatively in 36.9% of cases, 61,5% answered negatively, while 1.5% did not know the answer to this question. On the issue of alcohol abuse among members of the immediate family, 10% of nursing students answered 'yes', 87% answered that they do not have a recovering alcoholic in their family, while 3% did not know the answer to this question. Mechatronics students in 8% responded affirmatively to this question, negatively in 89% and 3% of the students did not know the answer to this question.

It is evident from Table 1. and Table 2. that nursing students showed significantly more agreement with the statements that indicate the harmful effects of alcohol on physical and mental well-being of individuals, than students of mechatronics. Although they found that alcohol causes quarrels, they have continued to have positive attitudes towards alcohol addicts, such as willing to work with them, which is not the case with mechatronics students. It should be noted that of all demographic variables, obvious difference is in the proportion of the sexes, where the study of nursing is dominated by women and the study of mechatronics by men. Clear differences in knowledge and attitudes towards alcohol are not visible from individual questions which is why it was desirable to group questions into factors (knowledge about the effects of alcohol, attitude towards alcohol, the attitude towards alcoholics, alcohol as a "drug", drinking alcohol due to peer pressure, irresponsible behavior related to alcohol, not interested in alcohol).

T-test analysis revealed a significant difference between the nursing students and the students of mechatronics in attitudes towards alcohol, alcoholics, irresponsible alcohol-related behaviors, and interest in the use of alcohol, which has been shown in Table 3.

Table 1. The differences in all factors and demographic variables between students of nursing and mechatronics

	<i>T</i>	<i>DF</i>	<i>P</i> value
Age	0.709	139	0.480
Gender	18.896	139	0.000
Household incomes	-0.461	139	0.646
Personal income	-0.375	139	0.708
Number of persons in the household	0.742	139	0.459
Parents' educational level	1.946	139	0.054
Common use of alcohol in the family	0.765	139	0.446
A family member recovering alcoholic	-0.565	139	0.573
I don't consume alcohol	2.305	139	0.023
My parents don't consume alcohol	0.775	139	0.440
I consumed alcohol for the first time in high school	1.045	139	0.298
I drink alcohol because of peer pressure and to fit into society	-1.444	139	0.151
Alcohol improves my mood	-0.712	139	0.478
I have not had more than 4 drinks in the last month	1.708	139	0.090
I mostly consume hard liquor	-1.791	139	0.075
Often, due to excessive alcohol consumption I cannot remember what happened during the night out	-1.242	139	0.216
I drive a car after drinking alcohol	-0.809	139	0.420
I usually drink alcohol when I'm alone	-0.053	139	0.958
Alcohol reduces cognitive functions	4.693	139	0.000
Alcohol decreases the blood pressure	2.547	139	0.012
Alcohol causes mental and physical illness	3.447	139	0.001
Alcohol does not contain calories	-1.467	139	0.145
Genetics has a role in the onset of addiction	1.935	139	0.055
Alcohol stimulates the appetite	0.682	139	0.496
Alcoholic coma occurs after 3.5-5 g / L	0.303	139	0.763
Less than 150,000 people in Croatia has problems with alcohol	-0.920	139	0.359
Alcohol produces usable energy	0.644	139	0.521
ADHD is a result of alcohol consumption during pregnancy	4.755	139	0.000

Table 1. (Continued from previous page)

	<i>T</i>	<i>DF</i>	<i>P</i> value
Alcohol is always harmful and addictive, regardless of the amount and frequency of use	2.179	139	0.031
Alcohol causes quarrels and conflicts	3.309	139	0.001
If there is not for the pressure of environment, I would never consume alcohol	0.487	139	0.627
I think it is okay that people my age consume alcohol	-3.065	139	0.003
I think that the amount of alcohol I consume cannot develop an addiction	-0.288	139	0.774
Alcohol abusers are clearly recognizable	1.075	139	0.284
Alcoholics disgust me	-0.163	139	0.871
I would always help a drunk man	0.925	139	0.357
Alcoholics cannot be successfully rehabilitated	1.069	139	0.287
I would work with alcohol addicts	5.362	139	0.000

As seen in Table 4., the attitude towards alcohol is more positive among the students of mechatronics and attitude towards alcoholics among the students of nursing. Mechatronics students are more likely to behave irresponsibly while drinking alcohol, while lower interest in alcohol is present among nursing students. Regression analysis showed that the factors in Table 4. explain 16% of variance of attitudes toward alcoholics among students of nursing. Such model is of marginal statistical significance ($F_{6,67}=2.18, p=0.056$). With the students of mechatronics listed factors explain 12% of the variance attitude towards alcoholics, but the significance of this behavior model is insignificant ($F_{6,56}=1.2, p>0.05$).

If we look at Table 5., individual factors, it is evident that a major role in attitude-forming among students of nursing is played by alcohol use with the goal of social acceptance and the presence of alcohol in the family. Among the students of mechatronics, only drinking alcohol due to peer pressure plays a significant role in predicting that paragraph. Nursing students, who consume alcohol because of peer pressure and have alcohol present in the family, have a negative attitude towards alcoholics. Mechatronics students who consume alcohol because of peer pressure have a more positive attitude towards alcoholics. Regression analysis in order to predict the attitude towards alcohol explained 24% of variance, which has a high statistical significance ($F_{6, 67}=3.58, p<0.01$). Among the

Table 2. Mean values and hash values for questions in the questionnaire

	Course	N	Arithmetic mean	Standard deviation
Age	Nursing	76	21.9079	3.47247
	Mechatronics	65	21.4462	4.26113
Gender	Nursing	76	1.8816	0.32525
	Mechatronics	65	1.0308	0.17404
Household incomes	Nursing	76	2.4868	0.68300
	Mechatronics	65	2.5385	0.63926
Personal incomes	Nursing	76	1.8158	0.55882
	Mechatronics	65	1.8462	0.36361
Number of persons in the household	Nursing	76	1.9605	0.57598
	Mechatronics	65	1.8923	0.50383
Parents' educational level	Nursing	76	1.9079	0.54596
	Mechatronics	65	1.7385	0.47687
Common use of alcohol in the family	Nursing	76	1.7105	0.48486
	Mechatronics	65	1.6462	0.51329
A family member recovering alcoholic	Nursing	76	1.9211	0.35640
	Mechatronics	65	1.9538	0.32743
I don't consume alcohol	Nursing	76	2.9342	1.20372
	Mechatronics	65	2.4615	1.22573
My parents don't consume alcohol	Nursing	76	3.2763	1.38177
	Mechatronics	65	3.0923	1.43312
I consumed alcohol for the first time in high school	Nursing	76	3.0921	1.71408
	Mechatronics	65	2.7846	1.77211
I drink alcohol because of peer pressure and to fit into society	Nursing	76	1.5658	1.08733
	Mechatronics	65	1.8615	1.34486
Alcohol improves my mood	Nursing	76	2.7237	1.42921
	Mechatronics	65	2.8923	1.37071
I have not had more than 4 drinks in the last month	Nursing	76	3.2237	1.70175
	Mechatronics	65	2.7231	1.77225

Table 2. (Continued from previous page)

	Course	N	Arithmetic mean	Standard deviation
I mostly consume hard liquor	Nursing	76	2.1316	1.33008
	Mechatronics	65	2.5538	1.46874
Often, due to excessive alcohol consumption I cannot remember what happened during the night out	Nursing	76	1.6842	1.19120
	Mechatronics	65	1.9385	1.23588
I drive a car after drinking alcohol	Nursing	76	1.4342	1.08733
	Mechatronics	65	1.5846	1.11653
I usually drink alcohol when I'm alone	Nursing	76	1.5132	1.16038
	Mechatronics	65	1.5231	1.03241
Alcohol reduces cognitive functions	Nursing	76	4.2895	1.11733
	Mechatronics	65	3.3846	1.16850
Alcohol decreases the blood pressure	Nursing	76	3.3026	1.36645
	Mechatronics	65	2.7692	1.07193
Alcohol causes mental and physical illness	Nursing	76	3.9342	1.39843
	Mechatronics	65	3.1231	1.38640
Alcohol does not contain calories	Nursing	76	1.9211	1.30398
	Mechatronics	65	2.2308	1.18281
Genetics has a role in the onset of addiction	Nursing	76	3.1184	1.17720
	Mechatronics	65	2.7077	1.34307
Alcohol stimulates the appetite	Nursing	76	3.1053	1.38158
	Mechatronics	65	2.9538	1.23023
Alcoholic coma occurs after 3.5-5 g / L	Nursing	76	3.4737	1.07671
	Mechatronics	65	3.4154	1.21053
Less than 150,000 people in Croatia has problems with alcohol	Nursing	76	2.5000	1.23828
	Mechatronics	65	2.6923	1.23647
Alcohol produces usable energy	Nursing	76	2.2895	1.31469
	Mechatronics	65	2.1538	1.16231
ADHD is a result of alcohol consumption during pregnancy	Nursing	76	3.3289	1.30013
	Mechatronics	65	2.3385	1.14941

Table 2. (Continued from previous page)

	Course	N	Arithmetic mean	Standard deviation
Alcohol is always harmful and addictive, regardless of the amount and frequency of use	Nursing	76	2.8816	1.54891
	Mechatronics	65	2.3385	1.38380
Alcohol causes quarrels and conflicts	Nursing	76	3.6447	1.16280
	Mechatronics	65	2.9538	1.31614
If there is not for the pressure of environment, I would never consume alcohol	Nursing	76	2.0526	1.18766
	Mechatronics	65	1.9538	1.21746
I think it is okay that people my age consume alcohol	Nursing	76	2.9605	1.18255
	Mechatronics	65	3.6154	1.35430
I think that the amount of alcohol I consume cannot develop an addiction	Nursing	76	4.1842	1.32374
	Mechatronics	65	4.2462	1.21232
Alcohol abusers are clearly recognizable	Nursing	76	4.1053	0.98764
	Mechatronics	65	3.9077	1.19534
Alcoholics disgust me	Nursing	76	3.5658	1.21475
	Mechatronics	65	3.6000	1.27230
I would always help a drunk man	Nursing	76	3.4605	1.19377
	Mechatronics	65	3.2769	1.15255
Alcoholics cannot be successfully rehabilitated	Nursing	76	2.5921	1.32843
	Mechatronics	65	2.3692	1.11200
I would work with alcohol addicts	Nursing	76	3.2368	1.24224
	Mechatronics	65	2.1077	1.25154

students of mechatronics these factors explain 35% of the variance of attitude towards alcohol ($F_{6,56}=5.10$, $p<0.001$).

In Table 6., it is evident that, among students of nursing, the attitude towards alcohol can be explained by knowledge about the consequences of alcohol and the level of

interest in alcohol. Among the students of mechatronics, the attitude towards alcohol can be explained by irresponsible behavior associated with alcohol, the interest in alcohol and the presence of alcohol in the family. Nursing students, who have greater knowledge about the consequences of alcohol, and

Table 3. The significance of differences in relation to alcohol among students of nursing and of mechatronics

	t-test	DF	P value
Knowledge about the consequences of alcohol	1.226	139, 134	0.222
Attitude towards alcohol	-3.309	139, 132	0.001
Attitude towards alcoholics	2.202	139, 138	0.029
Alcohol as a “drug”	-0.548	139, 138	0.585
Drinking alcohol due to peer pressure	-1.084	139, 131	0.280
Irresponsible behavior related to alcohol	-2.155	139, 134	0.033
Not interested in alcohol	2.561	139, 136	0.012

Table 4. Mean values and values of variability in a group of students of nursing and mechatronics

	Course	N	Arithmetic mean	Standard deviation
Knowledge about the consequences of alcohol	Nursing	76	38.0395	4.20616
	Mechatronics	65	37.1538	4.35255
Attitude towards alcohol	Nursing	76	13.4474	2.60458
	Mechatronics	65	14.9538	2.79749
Attitude towards alcoholics	Nursing	76	12.5395	3.16414
	Mechatronics	65	11.4154	2.84436
Alcohol as a “drug”	Nursing	76	4.2368	1.99244
	Mechatronics	65	4.4154	1.85314
Drinking alcohol due to peer pressure	Nursing	76	5.8026	2.49810
	Mechatronics	65	6.2769	2.69553
Irresponsible behavior related to alcohol	Nursing	76	6.8158	3.04942
	Mechatronics	65	7.9385	3.12188
Not interested in alcohol	Nursing	76	9.2500	3.00278
	Mechatronics	65	7.9692	2.90995

Table 5. Which factors predict the attitude towards alcoholics (coefficients of the regression analysis)

Course		Standardized coefficient	t-test	Significance
Nursing	Constant		2.886	0.005
	Attitude towards alcohol	-0.045	-0.347	0.729
	Knowledge about the consequences of alcohol	0.198	1.536	0.129
	Drinking alcohol due to peer pressure	-0.353	-2.416	0.018
	Irresponsible behavior related to alcohol	0.199	1.530	0.131
	Not interested in alcohol	-0.297	-1.790	0.078
	Alcohol presence in the family	-0.281	-2.288	0.025
Mechatronics	Constant		2.140	0.037
	Attitude towards alcohol	-0.041	-0.262	0.794
	Knowledge about the consequences of alcohol	0.099	0.742	0.461
	Drinking alcohol due to peer pressure	0.365	2.190	0.033
	Irresponsible behavior related to alcohol	-0.205	-1.165	0.249
	Not interested in alcohol	-0.076	-0.517	0.607
	Alcohol presence in the family	0.116	0.841	0.404

are more interested in alcohol consumption, have a more positive attitude towards alcohol. Mechatronics students who are prone to irresponsible behavior while drinking alcohol have a more negative attitude towards alcohol, while more positive attitude have those who are more interested in alcohol and the alcohol is present in their families. Regression analysis, in order to predict the lack of interest for alcohol consumption, explains 57% of variance, which has a high statistical significance ($F_{6, 67}=14.61$, $p<0.01$). These factors explain 28% of the variance of disinterest

in alcohol among students of mechatronics ($F_{6,56}=3.66$, $p<0.01$).

In Table 7., it is evident that, among the nursing students, the lack of interest for alcohol can be explained by their knowledge about the consequences of alcohol, attitude towards alcohol, the presence of alcohol in their families and drinking alcohol due to peer pressure. Among the students of mechatronics, the lack of interest for alcohol can be explained by their knowledge about the consequences of alcohol. Drinking alcohol due to peer pressure, positive attitude to-

Table 6. Which factors predict the attitude towards alcohol (coefficients of regression analysis)

Course		Standardized coefficient	t-test	Significance
Nursing	Constant		4.179	0.000
	Knowledge about the consequences of alcohol	0.237	1.955	0.055
	Drinking alcohol due to peer pressure	-0.047	-0.324	0.747
	Irresponsible behavior related to alcohol	0.001	0.009	0.993
	Not interested in alcohol	-0.592	-4.102	0.000
	Alcohol presence in the family	-0.185	-1.548	0.126
	Attitude towards alcoholics	-0.040	-0.347	0.729
Mechatronics	Constant		6.108	0.000
	Knowledge about the consequences of alcohol	0.051	0.444	0.659
	Drinking alcohol due to peer pressure	0.063	0.426	0.672
	Irresponsible behavior related to alcohol	-0.459	-3.299	0.002
	Not interested in alcohol	-0.365	-3.115	0.003
	Alcohol presence in the family	0.245	2.136	0.037
	Attitude towards alcoholics	-0.030	-0.262	0.794

wards alcohol, and the presence of alcohol in their families explain the greater interest in alcohol consumption, while knowledge about the consequences of alcohol lowers the interest for alcohol consumption among nursing students. Mechatronics students are more interested in alcohol consumption if they have a more positive attitude towards alcohol and less knowledge about the consequences.

Regression analysis showed that the factors in Table 8., explain 29% of the variance of the irresponsible behavior due to alcohol consumption among students of nursing.

Such model has a high statistical significance ($F_{6,67}=4.52$, $p<0.001$). Among the mechatronics students, listed factors explain 50% of the variance of irresponsible behavior while intoxicated and the significance of this behavior model is high ($F_{6,56}=9.36$, $p<0.001$). In Table 8., it is evident that, among the nursing students, irresponsible behavior can be explained by knowledge about the consequences of alcohol and drinking alcohol due to peer pressure. Among the mechatronics students, irresponsible behavior related to alcohol is envisaged by their attitude towards

Table 7. Which factors predict the indifference to alcohol consumption (coefficients of regression analysis)

Course		Standardized coefficient	t	Significance
Nursing	Constant		4.468	0.000
	Attitude towards alcohol	-0.339	-4.102	0.000
	Attitude towards alcoholics	-0.154	-1.790	0.078
	Knowledge about the consequences of alcohol	0.279	3.173	0.002
	Alcohol presence in the family	-0.295	-3.497	0.001
	Drinking alcohol due to peer pressure	-0.422	-4.364	0.000
	Irresponsible behavior related to alcohol	0.066	0.698	0.487
Mechatronics	Constant		2.879	0.006
	Attitude towards alcohol	-0.405	-3.115	0.003
	Attitude towards alcoholics	-0.062	-0.517	0.607
	Knowledge about the consequences of alcohol	0.243	2.079	0.042
	Alcohol presence in the family	-0.094	-0.753	0.455
	Drinking alcohol due to peer pressure	-0.036	-0.233	0.817
	Irresponsible behavior related to alcohol	-0.225	-1.427	0.159

alcohol and consuming alcohol due to peer pressure. For the nursing students, drinking alcohol due to peer pressure leads to higher levels of irresponsible behavior under the influence of alcohol, and knowledge about the consequences leads to the lower levels of such behavior. Mechatronics students will behave more irresponsibly due to alcohol consumption if they prefer consuming alcohol due to peer pressure, but they will be more

careful, if they have more positive attitude towards alcohol.

Discussion

The objectives of the study were to investigate drinking habits, knowledge and attitudes towards alcohol and alcoholism and possible differences between the health students and students of the technical field of science.

Table 8. Which factors predict the lack of interest in alcohol consumption (coefficients of regression analysis)

Course		Standardized coefficient	t	Significance
Nursing	Constant		1.695	0.095
	Attitude towards alcohol	0.001	0.009	0.993
	Attitude towards alcoholics	0.170	1.530	0.131
	Knowledge about the consequences of alcohol	-0.274	-2.363	0.021
	Alcohol presence in the family	0.087	0.739	0.462
	Drinking alcohol due to peer pressure	0.459	3.562	0.001
	Irresponsible behavior related to alcohol	0.109	0.698	0.487
Mechatronics	Constant		2.393	0.020
	Attitude towards alcohol	-0.354	-3.299	0.002
	Attitude towards alcoholics	-0.116	-1.165	0.249
	Knowledge about the consequences of alcohol	0.135	1.354	0.181
	Alcohol presence in the family	0.081	0.782	0.437
	Drinking alcohol due to peer pressure	0.577	5.479	0.000
	Irresponsible behavior related to alcohol	-0.156	-1.427	0.159

The research was conducted using an anonymous online survey during February and March 2014, on a sample of 141 (N=141) students of different age groups. The study included 51% of females and 49% of males, or 76 nursing students and 65 mechatronics students. The average age of the respondents was 21.67 years. The survey consisted of 39 questions about socio-economic status, drinking habits, knowledge and

attitudes towards alcohol. As there were no visible differences in knowledge and attitudes in the individual questions, we found a statistically significant difference between students of nursing and mechatronics but only after grouping questions in factors according to attitudes towards alcohol, alcoholics, irresponsible behavior regarding alcohol, and interest for the use of alcohol, which has been tested by t-test (Table 3).

According to the survey, there was no statistically significant difference between nursing students and mechatronics students regarding of alcohol consumption in their families. Likewise, Brook and Tepper [10] in their study, conducted in 2000 in the Israeli academic and vocational school, published the results in which the consumption of alcohol in the families of both directions of high school was the same. Nursing students, who have alcoholism present in their families, have a negative attitude towards alcohol while among students of mechatronics that kind of presence show a positive attitude towards alcohol (Tables 5. and 6.). Negative attitudes of nursing students can be justified by their knowledge about the consequences of alcohol while positive attitudes of students of mechatronics can be justified by their lesser knowledge about the consequences and greater tendency to alcohol (Table 3.). The fact that the liberal attitudes of parents towards alcohol are related to alcohol consumption of their children, had been proved by a research conducted among 5400 Dutch families [11] in which it was concluded that the adolescents whose parents have a liberal and a positive attitude towards alcohol, are inclined to alcohol consumption and excessive drinking. The alienation and non-communication in the family also has an influence in creating a positive attitude towards alcohol among adolescents. [12]

The influence of the environment and society is considered a major reason for the beginning of alcohol consumption among adolescents. Alcohol gives them a sense of security and helps them to feel more mature, makes it easier to make friends among peers and acquaintances with the opposite sex. [10] Consumption of alcohol due to peer pressure and the desire to fit into society has

a major role in the attitude of students of nursing. Nursing students who are prone to social alcohol consumption have high levels of irresponsible behavior under the influence of alcohol. However, their knowledge about the consequences of alcohol consumption leads to more responsible behavior. Likewise, mechatronics students will behave more irresponsible as a result of alcohol consumption if they show a tendency to consume alcohol just because of the peer pressure. Excessive alcohol consumption caused by peer pressure may be one way of proving to their peers. The greater the incidence of alcohol intoxication, the higher is the level of irresponsible behavior that leads to a certain positive status among peers and to their approval. Otherwise, if the mechatronics students have a positive attitude towards alcohol and consume it voluntarily and not under the influence of the peers, they will be cautious and less prone to irresponsible behavior while intoxicated. So, people who consume alcohol on their own free will and not under the pressure of society, have less need to prove their alcohol intoxication with reckless actions and reckless behavior.

Knowledge about alcohol and its consequences among the students of nursing leads to negative attitudes and indifference towards its consumption. On the contrary, the assumption is that mechatronics students, due to lower awareness of consequences and harmful effects of alcohol are more interested in the consumption (Table 7.). Other conducted research on the knowledge about alcohol and its consumption also show a lower level of knowledge about alcohol and its harmful effects by students of technical sciences, which makes them more interested in its use. [10] Why is that so? Paton explained in his paper [13] that there are no effective

programs that work in order to prevent alcohol abuse and that adolescents are victims of media advertisements which are organized by alcohol industry showing alcohol as a means of entertainment. How many times have we seen a commercial in which alcoholic drink is associated with sporting events, and is presented as an imperative for good entertainment? Probably because of the strong media messages that promote alcohol, and lack of information about the negative effects of alcohol, the mechatronics students, unlike of nursing students, are not sufficiently informed during the educational process, thus the lack of organized programs for addiction prevention, make, them a group more susceptible to alcohol consumption.

As already stated, the attitude towards alcohol and alcoholism is conditioned by student's knowledge about alcohol and its consequences. Nursing students showed significantly more agreement with the statements that speak about physical and psychological harmful effects of alcohol, compared to mechatronics students. Although they agreed with the statement that alcohol is the cause of quarrels and conflicts, nursing students continue to have a positive attitude to-

wards alcoholics, their successful rehabilitation and they are willing to work with them, as opposed to mechatronics students. We can justify these differences with the fact that nursing students, during their training have an opportunity to gain knowledge and experience on the issue of alcohol and alcoholism. In the end, some of them are going to work with alcoholics some day. Practical lessons and firsthand impressions that nursing students have the opportunity to experience certainly contribute to a better understanding of alcoholism and the creation of positive attitudes towards people suffering from these addictions. Alcoholism is an important social issue and it is important to inform all educational courses, not just those of health, with the consequences of alcohol abuse, in order to prevent harmful health, social and family consequences that alcohol consumption can cause.

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Conflict of interest

None to declare

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Znanja i stavovi studenata o alkoholu i alkoholizmu

Sažetak - Alkoholizam je najučestalija vrsta ovisničkog ponašanja. Svake godine se sve više pomiče dobna granica te sve više mladih poseže za alkoholom. Problem prekomjernog pijenja i alkoholizma u RH jedan je od vodećih javnozdravstvenih problema. Istraživanje provedeno na Visokoj tehničkoj školi u Bjelovaru, na uzorku od 141 studenta mehatronike i sestrištva o njihovim navikama pijenja, znanju i stavovima o alkoholu dovelo je do rezultata koji pokazuju značajnu razliku između studenata ta dva smjera. Studenti su ispunili anonimnu online anketu koja je uključivala 39 pitanja vezana uz socioekonomski status pojedinca, navike pijenja, znanja o alkoholu i stavove studenata prema alkoholu i alkoholizmu. Dobiveni su rezultati pokazali pozitivniji stav prema alkoholu i veću sklonost neodgovornom ponašanju kod studenata mehatronike. Zamjećeno je da studenti imaju negativan stav prema alkoholu samo ukoliko ga piju pod utjecajem društva. Konzumacija alkohola zbog pritiska vršnjaka vodi do negativnijih stavova prema alkoholičarima kod studenata sestrištva, dok do pozitivnih vodi kod studenata mehatronike. Sveukupno gledajući, studenti sestrištva imaju pozitivne stavove prema osobama oboljelima od alkoholizma i spremni su raditi s njima, što kod studenata mehatronike nije slučaj. Negativan stav prema alkoholičarima, sklonost konzumaciji alkohola i manje znanje o posljedicama alkohola studenata mehatronike možda možemo opravdati visokom tolerancijom našeg društva na konzumaciju alkohola, nepostojanjem učinkovitog programa sprječavanja ovisnosti i kvalitetne edukacije svih obrazovnih smjerova.

Ključne riječi: sestrištvo, alkoholizam, ovisnici o alkoholu, studenti