

Chapter 7

GENDER, NORMATIVE BELIEFS AND ALCOHOL CONSUMPTION AMONG UNIVERSITY STUDENTS

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ABSTRACT

Studies exploring students' alcohol consumption (AC) show the need to provide gender specific feedback intervention based on the gender differences in AC. No study has clearly described gender differences in descriptive normative beliefs (DNB) or in the individual-normative differences (IND) of AC (the differences between AC and DNB). The aim of the study was to explore the relationships between DNB and AC among students, to describe the gender differences in AC, DNB, and IND. 1938 university students (79.2% females; $M=21.7$; $SD=2.164$) participated and were asked about AC and DNB. Spearman correlation coefficients, U-tests in SPSS 20.0 were used for data analysis. The positive correlation between DNB and AC was confirmed. Statistically significant gender differences in AC, DNB and IND were found. Males had a higher level of AC and DNB. They perceived the AC of others more similarly to their own AC than females. The research findings confirmed and added to further studies concerning AC and DNB. Further research should be focused on research with a longitudinal design among university students.

Keywords: descriptive normative beliefs, alcohol consumption, university students, gender differences.

1. INTRODUCTION

This study focuses on the widespread problem of alcohol consumption among university students (Stone, Becker, Huber, & Catalano, 2012). The prevalence of alcohol consumption among university students is high across different countries. In the USA, 44% of university students are reported to have been binge drinking (Wechsler, Lee, Kuo, & Lee 2000), while in Canada it is 35% of students (Kuo et al., 2002), about 40% of students in the UK (Dantzer, Wardle, Fuller, Pampalano, & Steptoe, 2006), 21% in Germany (Pischke et al., 2012) and 66% in Slovakia (Sebena, Mikolajczyk, & Orosová, 2009). Alcohol consumption among university students is associated with many factors (Ham & Hope, 2003). This study has focused on descriptive normative beliefs, which can be described as the perception of the prevalence of alcohol consumption in the population or reference groups (Cialdini, 2007). Furthermore, it has focused on the gender differences in both constructs – alcohol consumption and descriptive normative beliefs, where on one hand (within alcohol consumption) there are clear findings and on the other hand (within descriptive normative beliefs) there are contradictory findings. The aim of this study is to fill this gap and to prepare systematic findings in this area of research mainly in the sample of Slovak university students.

2. BACKGROUND

2.1. Alcohol consumption among university students

Alcohol consumption reaches its highest prevalence among university students (e.g. Stone et al., 2012; Menagi, Harrell, & June 2008). The lifestyle of university students is associated with independence, lower social control and living without parents which can lead to an increase in alcohol consumption (e.g. Stone et al., 2012; Menagi et al., 2008). University students' alcohol consumption is characterised by certain gender differences, which has been confirmed by a huge number of studies (e.g. Guha, Bass, & Bruce, 2007; Dantzer et al., 2006).

By this, males drink more frequently, have more alcoholic drinks at a single occasion, are more likely to experience negative consequences from alcohol and are more likely to be alcohol dependent than females (e.g. Guha et al., 2007; Dantzer et al., 2006; Baumgartner, 2000).

Alcohol consumption is associated with many factors which can be described as risk or protective, as fixed (e.g. gender) or variable (attitude), as intrapersonal (e.g. normative beliefs), interpersonal (e.g. attachment to peers with risk behaviour) or environmental (e.g. society) (Orosová, Janovská, Kopuničová, & Vaňová, 2012; Ham & Hope, 2003). All of these factors can contribute to the persistence of alcohol consumption among university students (Stone et al., 2012; Orosová et al., 2012). In the current research, the focus will be specifically on normative beliefs, which are defined as self-regulation beliefs regarding the relevance of one's social behaviour (Huesmann & Guerra, 1997).

2.2. Normative beliefs

Normative beliefs relate to the norms from an individual's perspective and are created on the basis of subjective social experience (Lovaš, 1998a; Lovaš, 1998b). The present study is based on the Focus Theory of Normative Conduct, which addresses the process of internalization of norms and claims that each behaviour is influenced by an activated norm. Norms can be either injunctive or descriptive. Injunctive normative beliefs include the perception of the acceptability of a specific behaviour, while descriptive normative beliefs include the perception about the prevalence of behaviour in the population (Cialdini, 2007). Studies focusing on different types of normative beliefs tend to show inconsistent or contradictory findings. Some authors have shown that: (1) descriptive normative beliefs are the most effective predictors of alcohol consumption and focus on them in their research (Elek, Miller-Day, & Hecht, 2006; Dams-O' Connor, 2007) and interventions (Lojewski, Rotunda, & Arruda, 2010; Corbin, Iwamoto, & Fromme, 2011); (2) other authors have shown that injunctive normative beliefs are the most effective predictors of alcohol consumption (Berkowitz, 2004; Larimer et al., 1997, as cited in Dams-O' Connor, 2007); (3) and finally the third group of authors have shown that both, descriptive and injunctive normative beliefs are strong predictors of alcohol consumption (Crawford & Novak, 2010). Overall, there does not seem to be compelling evidence of differential effects of injunctive and descriptive normative beliefs on alcohol consumption (Elek et al., 2006). Although, while we are aware of the importance of injunctive normative beliefs, we have decided to focus on the descriptive normative beliefs. This is due to the nature of our sample which consists of university students. University students are likely to be influenced by the behaviour of their friends and peers (O'Hara, Harker, Raciti, & Harker 2008; Ruiselová, 2000). Within this study we are mainly interested in the impact of the perception of peers' alcohol consumption on the actual alcohol consumption of individuals which has further relevance for intervention programs.

Within descriptive normative beliefs, it is important to determine whether they differ from the actual norms and actual behaviour. The gap between the behaviour and descriptive normative beliefs (what people think is true about others' behaviours) is called "misperception". Misperception occurs when there is an overestimation or an underestimation of the prevalence of behaviours, which influences subsequent actions. With regard to alcohol consumption, numerous studies have shown that university students typically overestimate the alcohol consumption of their peers (Lojewski et al., 2010; Abar & Maggs, 2010). This can increase their personal alcohol consumption in an attempt to adapt to their descriptive normative beliefs (Borsari & Carey, 2003; Berkowitz, 2004; Guha et al., 2007).

The relationship between descriptive normative beliefs and behaviour could be understood as a tendency to approximate one's behaviour according to perceived norm. It can be labelled as social perception, empathy, or social sensitivity (Baumgartner, 1997; James, 1955). Studies have shown that behaviour can be predicted by one's perceptions of others (James, 1955). It has been confirmed that the mere perception of others' behaviour automatically increases the likelihood of engaging in that behaviour oneself (Chartrand & Bargh, 1999).

Regarding alcohol consumption, gender differences have been clearly described by a large number of studies (e.g. Dantzer et al., 2006; Guha et al., 2007). Yet, with regards to descriptive normative beliefs, only a few studies have analysed gender differences and showed

contradictory findings. While some studies did not find gender differences (Steffian, 1999; Ráczová, 2002), other studies showed that (a) females misperceive more than males (Berkowitz, 2004) or (b) males misperceive more than females (Lewis & Neighbors, 2006; Lojewski et al., 2010). While such studies expected gender differences in descriptive normative beliefs, they didn't always analyse it. Furthermore, they did not explore the relationships between descriptive normative beliefs and alcohol consumption according the gender, which is the aim of this study.

3. DESIGN

A cross-sectional design was used.

4. OBJECTIVES

The aim of this study is to explore the relationships between descriptive normative beliefs and alcohol consumption among Slovak university students and to describe the gender differences in alcohol consumption, descriptive normative beliefs, and in the individual-normative differences of alcohol consumption (the differences between individual alcohol consumption and descriptive normative beliefs about the alcohol consumption of majority of university students).

5. METHODS

5.1. Sample

In the study, 1938 university students (79.2% females; $M_{\text{age}} = 21.7$; $SD = 2.16$; response rate = approximately 50%) from 4 different universities in the Eastern part of Slovakia (PJ Šafárik University in Košice - 39.01%; Technical university in Košice - 18.63%; The University of Veterinary Medicine and Pharmacy in Košice - 10.68%; University of Prešov - 31.58%) participated. Students were invited in seminars or via email to participate and subsequently register their email on the project website. Following this, the link on the online questionnaire was sent to their email addresses where they subsequently completed online questionnaires. The data were collected from November 2011 until March 2012. Further details of the study are available in the published protocol (Pischke et al., 2012).

5.2. Measures

The online questionnaire consisted of three parts:

- firstly, students were asked question on gender;
- the second part measured individual alcohol consumption by 4 items concerning: (a) frequency of alcohol consumption over the last 2 months with possible answers ranging from 1 (never) to 10 (daily or nearly daily); (b) quantity of alcoholic drinks typically consumed when drinking with the possibility of entering a number of drinks ranging from 0 to 50; (c) maximum quantity of alcoholic drinks at one sitting over the last 2 months, with the possibility of entering a number from 0 to 50; (d) frequency of drunkenness over the last 2 months on a scale with 10 verbal choices from “never in life” to “daily or nearly daily”;
- the third part measured descriptive normative beliefs concerning the alcohol consumption (frequency of alcohol consumption, typical quantity of alcoholic drinks, maximum quantity of alcoholic drinks, frequency of drunkenness) of the majority (at least 51%) universities students (males or females – according to the gender of participant) by adjusting the 4 items used to measure alcohol consumption to measure descriptive normative beliefs. It means that when an item measuring an individual's alcohol consumption was: “How often have you consumed alcohol over the last 2 months?”, the item concerning descriptive normative beliefs was “How often do you think the majority (at least 51%) of students (males / females) from your university have consumed alcohol over the last 2 months?”. Items were answered on the same scale as alcohol consumption.

5.3. Statistical analyses

Spearman correlation coefficients, U-tests were used for data analysis in the statistical program SPSS 20. Non-parametric statistics were used in cases where the data were an ordinal scale or weren't normally distributed. A new variable was computed which represented the difference between students' descriptive normative beliefs about alcohol consumption of the majority of university students and individual alcohol consumption. Higher values meant a higher difference between the perception of oneself and other's alcohol consumption.

6. RESULTS

This study found statistically significant positive correlations between descriptive normative beliefs and alcohol consumption for both genders. Spearman correlation coefficients for males were: (1) $r = .19$ ($p_{\alpha} < .001$) between the frequency of alcohol consumption and descriptive normative beliefs; (2) $r = .46$ ($p_{\alpha} < .001$) between the typical quantity of alcoholic drinks and descriptive normative beliefs; (3) $r = .39$ ($p_{\alpha} < .001$) between the maximum quantity of alcoholic drinks and descriptive normative beliefs; (4) $r = .097$ ($p_{\alpha} = .007$) between the frequency of drunkenness and descriptive normative beliefs. Spearman correlation coefficients for females were: (1) $r = .19$ ($p_{\alpha} < .001$) between the frequency of alcohol consumption and descriptive normative beliefs; (2) $r = .42$ ($p_{\alpha} < .001$) between the quantity of alcoholic drinks and descriptive normative beliefs; (3) $r = .36$ ($p_{\alpha} < .001$) between the maximum number of drinks per occasion and descriptive normative beliefs; (4) $r = .18$ ($p_{\alpha} < .001$) between the frequency of drunkenness and descriptive normative beliefs. Generally, a higher level of descriptive normative beliefs regarding the alcohol consumption of the majority of university students (they think that the majority of males / females drink alcohol frequently, in large quantities and are frequently drunk) was associated with a higher level of individual alcohol consumption.

Next, the study focused on the gender differences in alcohol consumption and descriptive normative beliefs. Regarding alcohol consumption, statistically significant gender differences were found in all items concerning alcohol consumption (Table 1). Males were found to drink more frequently, typically consume more alcoholic drinks at a single occasion and be drunk more frequently than females.

Table 1. Gender differences in alcohol consumption.

		U	z	p_{α}	mean rank
frequency of alcohol consumption	Males	448231.00	-10.321	<.001	1357.12
	females				1058.15
typically quantity of alcoholic drinks	Males	408732.00	-12.827	<.001	1404.80
	females				1032.32
maximum quantity of alcoholic drinks	Males	370638.00	-15.142	<.001	1448.95
	females				1006.72
frequency of drunkenness	Males	431261.00	-11.644	<.001	1377.42
	females				1048.95

Regarding descriptive normative beliefs, the study found statistically significant gender differences in all items concerning descriptive normative beliefs about the alcohol consumption of the majority of university students (Table 2). Females generally showed a lower level of descriptive normative beliefs regarding the frequency and typical/ maximum number of consumed alcoholic drinks and the frequency of drunkenness in the majority of university students than males.

Table 2. Gender differences in descriptive normative beliefs (DNB).

		U	z	P _α	mean rank
DNB about the frequency of alcohol consumption	Males	524500.00	-5.521	<.001	1269.25
	females				1109.69
DNB about typically quantity of alcoholic drinks	Males	410565.00	-12.947	<.001	1413.11
	females				1035.47
DNB about maximum quantity of alcoholic drinks	Males	359642.00	-16.246	<.001	1477.41
	females				1002.29
DNB about frequency of drunkenness	Males	525442.00	-5.417	<.001	1268.06
	females				1110.31

Finally, the study focused on the gender differences in the individual-normative differences of alcohol consumption. The findings are shown in Table 3. Gender differences in the individual-normative differences of alcohol consumption were found. Males had a lower difference in the individual-normative differences, except the maximum quantity of alcoholic drinks at one occasion. Males perceived the frequency of alcohol consumption, the typical quantity of alcoholic drinks and the frequency of drunkenness in the majority of university students more accurately to their individual alcohol consumption than females perceived it.

Table 3. Gender differences in individual-normative differences of alcohol consumption.

		U	z	P _α	mean rank
IND of the frequency of alcohol consumption	Males	528503.00	-4.98	<.001	1064.49
	females				1209.35
IND of typically quantity of alcoholic drinks	Males	562031.00	-2.665	.008	1107.74
	females				1185.42
IND of the maximum quantity of alcoholic drinks	Males	581981.00	-1.195	.232	1133.93
	females				1168.87
IND of the frequency of drunkenness	Males	570039.00	-2.093	.036	1119.59
	females				1180.64

Note: IND = the individual – normative difference of alcohol consumption

7. DISCUSSION

The main contribution of our study is in the findings regarding the association between alcohol consumption and descriptive normative beliefs in the sample of Slovak university students. Most of the existing findings are from the USA context. Much less research on alcohol consumption has been conducted among European university students when compared to USA. This study was based on a large sample of Slovak university students and showed similar results when compared with the cited studies showing that alcohol plays an important part in university life.

The research findings are consistent with other studies (Berkowitz, 2004; Lewis, 2008; Stone et al., 2012), which confirmed a positive correlation between descriptive normative beliefs and alcohol consumption (frequency of alcohol consumption and quantity of alcoholic drinks). In addition, these findings were confirmed by the frequency of drunkenness. It has highlighted that students who perceive the majority of university students to drink alcohol

frequently, in larger quantities and are frequently drunk have a higher level of individual alcohol consumption.

Furthermore, the study has confirmed the gender differences in alcohol consumption. Males consumed alcohol more frequently, a higher quantity of alcoholic drinks and were more frequently drunk than females. Others authors have found similar results (Guha et al., 2007; Stone et al., 2012). In addition, this study found statistically significant gender differences regarding descriptive normative beliefs. Males had a higher level of descriptive normative beliefs than females where males perceived the majority of males' university students as those who consume alcohol more frequently, a higher quantity of alcohol drinks and are more frequently drunk than females perceived it. Finally, gender differences in the individual-normative differences of alcohol consumption were found. Males were found to have a lower difference between individual alcohol consumption and descriptive normative beliefs about alcohol consumption in the majority of university students. It means that males perceived the frequency of alcohol consumption, the typical quantity of alcoholic drinks and the frequency of drunkenness of university students such more similarly to their individual alcohol consumption.

This study offers a view on gender differences in alcohol consumption, descriptive normative beliefs and in the individual-normative differences of alcohol consumption. It has shown that males not only had a higher level of alcohol consumption and higher level of descriptive normative beliefs, but adapted their individual alcohol consumption to their descriptive normative beliefs to a greater extent than females. Therefore, the study emphasizes the need to provide gender specific feedback intervention and points out the merit of using the correction of descriptive normative beliefs in prevention and intervention programmes.

Generally, these findings provide an overview of the problem of alcohol consumption and descriptive normative beliefs among Slovak university students. Concerning the cultural significance of alcohol consumption in Slovakia, alcohol is accepted as an important part at celebrations, parties and when meeting with friends. Alcohol is socially accepted in spite of its negative consequences. Similarly situation can be found at universities and among students making it a relevant topic for further research. This study has some limitations concerning the online data collection (the representativeness of the sample, the distribution of data), cross-sectional design of the study and a limited range of variables. Furthermore, some variables were measured only by single item instruments. Finally, the age of the respondents was not used as a potential predictor of alcohol consumption in our analyses, but the variation in age was low and it wasn't the aim of this study.

Further research should include a larger spectrum of variables, e.g. personal attitudes toward alcohol or injunctive normative beliefs. It would be also beneficial to employ more sophisticated statistical analyses such as e.g. structural modelling.

8. CONCLUSION

The research findings have confirmed that a relationship exists between descriptive normative beliefs and alcohol consumption. Furthermore, the findings have also confirmed gender differences in alcohol consumption, descriptive normative beliefs about alcohol consumption of the majority of university students and in the individual-normative differences of alcohol consumption. These findings extend the knowledge about alcohol consumption and the importance of descriptive normative beliefs in this context in the sample of Slovak university students. Further research should focus on research with a longitudinal design among university students and identifying reasons why females' descriptive normative beliefs differ from males' in order to construct more effective intervention programs, in the next steps focus on a larger spectrum of variables and use more sophisticated statistical analyses.

9. FUTURE RESEARCH DIRECTIONS

This study has confirmed and extended findings in the area of alcohol consumption and descriptive normative beliefs with the focus mainly on gender differences in the sample of

Slovak university students. The analyses provide a summary view on gender differences in general so further research should be focused on gender differences with more in-depth analyses in a longitudinal design. It is important to identify reasons why females' descriptive normative beliefs differ in order for more effective intervention programs to be applied. The identification of factors that are related to females' descriptive normative beliefs could also improve the understanding of males' descriptive normative beliefs and subsequently their alcohol consumption.

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ADDITIONAL READING

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KEY TERMS & DEFINITIONS

Alcohol consumption: is the widespread behaviour among university students, which is the part of the lifestyle of university students; it is associated with many factors (risk or protective, fixed or variable, intrapersonal, interpersonal or environmental).

Normative beliefs: relate to the norms from an individual's perspective; they are created on the basis of subjective social experience.

The Focus Theory of Normative Conduct: is based on the process of internalization of norms; it claims that each behaviour is influenced by the activated norm, which may be injunctive or descriptive.

Descriptive normative beliefs: include the perception about the prevalence of behaviour in the population.

Injunctive normative beliefs: include the perception of the acceptability of a specific behaviour.

Misperception: it is the gap between the behaviour and descriptive normative beliefs (what people think is true about others' behaviours); it occurs when there is an overestimation or an underestimation of the prevalence of behaviours.

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