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VALUES AND HEALTH-RELATED BEHAVIOUR
A Comparison of Youth in Hungary and Transylvania

A number of factors have been investigated as important determinants of adolescent health-related behaviour among which values occupy a special place. A growing number of studies of adolescents' health-related behaviours include cultural factors. The main goal of the present study was to investigate how a set of values preferred by youth influence their health-related behaviours using a cross-cultural study design of samples of youth from Szeged, Hungary ($N = 160$), and Târgu Mureş (Marosvásárhely), Transylvania, Rumania ($N = 124$). Data were collected using a self-administered questionnaire. The following values were investigated: filial piety, familism, machismo, collectivism and fatalism. In addition, four health-related behaviours were measured: smoking, alcohol use, marijuana use and sports activity. Irrespective of culture, female students tend to prefer filial piety, collectivism, whereas male students reported higher scores on machismo. Male students in Hungary tend to report higher levels of marijuana use, whereas males from the Transylvanian sample report a higher engagement in sports activity. Alcohol use is more common among males in both samples. Some important cultural differences in the relationship between values and health-related behaviours may also be detected. Among youth in Hungary, fatalism is related to higher levels of substance use. Machismo, on the other hand, plays a role in higher levels of sports activity in the Transylvanian sample. Finally, preferring social values, such as filial piety, familism and collectivism, may be associated with lower levels of substance use or higher levels of sports activity, that is, a more favourable health behaviour pattern in both samples.

Keywords: cross-cultural research, youth, substance use, health behaviours, values

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Werte und gesundheitsbezogenes Verhalten: Vergleichende Untersuchung von Jugendlichen in Ungarn und Siebenbürgen: Es wurden bereits zahlreiche das Gesundheitsverhalten während der Pubertät bestimmende Faktoren untersucht, wobei die Werte einen besonderen Stellenwert einnehmen. Immer mehr Untersuchungen über das Gesundheitsverhalten von Jugendlichen berücksichtigen auch kulturelle Faktoren. Das Hauptziel der vorliegenden Studie war es, zu untersuchen, wie bestimmte Werte das Gesundheitsverhalten der Jugendlichen beeinflussen. Die Erhebung der Daten – einschließlich einer interkulturellen Untersuchung – erfolgte mittels eines selbst auszufüllenden Fragebogens bei einer Stichprobe von Studenten in Szeged (Ungarn, *N* = 160) und Neumarkt am Mieresch (Târgu Mureş/Marosvásárhely, Siebenbürgen, Rumänien, *N* = 124). Folgende Werte wurden in der Untersuchung berücksichtigt: Verpflichtung gegenüber den Eltern, Familienzentriertheit, patriarchische Einstellung, Kollektivismus und Fatalismus. Daneben spielten vier Variablen des Gesundheitsverhaltens eine Rolle: Rauchen, Alkohol- und Marihuanakonsum, sportliche Aktivität. Unabhängig von der Kultur präferierten die Studentinnen eher die Verpflichtung gegenüber den Eltern und den Kollektivismus, die Studenten eher den Wert „patriarchische Einstellung". In der Stichprobe in Ungarn gaben die Männer häufiger Drogenkonsum an, in der Siebenbürgener Stichprobe häufiger sportliche Aktivitäten. Alkoholkonsum war in beiden Stichproben bei den Männern häufiger. Es konnten auch einige kulturelle Unterschiede bezüglich der Werte und des Gesundheitsverhaltens festgestellt werden. In der Stichprobe in Ungarn ging Fatalismus einher mit erhöhtem Konsum von Suchtmitteln, während in der Siebenbürgener Stichprobe die patriarchische Einstellung einherging mit häufigerer sportlicher Aktivität. Zudem ist in beiden Stichproben nachzuweisen, dass die Bevorzugung sozialer Werte – Verpflichtung gegenüber den Eltern, Familienzentriertheit und Kollektivismus – mit geringerem Konsum von Suchtmitteln und höherer sportlicher Aktivität, also einem besseren Gesundheitsverhalten einherging.

Schlüsselbegriffe: interkulturelle Studie, Jugendliche, Konsum von Suchtmitteln, Gesundheitsverhalten, Werte

1. Introduction

Health-related behaviours as part of a general way of living is crucial in morbidity and mortality rates (Wardle & Steptoe 2003). Most health behaviour patterns develop during adolescence and postadolescence which contribute to health later in adulthood (Gibbons & Gerrard 1995). As a consequence, more and more research studies concentrate on mapping the background of youth's health-related behaviours.

Cultural psychology may contribute to a better understanding of health-related behaviours through identifying how cultural traditions and social practices influence the individual (Shweder 1990). Culture is the shared symbolic and learned aspects of behaviour, patterns of thought and perception, belief systems, values, ideologies, myths, language (Marshall 1998). A number of factors have been investigated as important determinants of adolescent health behaviour among which values occupy a special place. Schwartz (1996, 2) defined value as 'desirable, transsituational goals, varying in importance, that serve as guiding principles in people's lives'. A growing number of studies of adolescents' health-related behaviours include cultural factors (Grunbaum et al. 2000; Moore et al. 1996). Values play an important role in guiding

behaviour through motivational processes (BARDI & SCHWARTZ 2003). Values may influence youth's well-being, future plans and identity (SAGIV & SCHWARTZ 2000). For example, collectivistic values are more important in eastern cultures, whereas individualistic values are more preferred in western cultures (OISHI et al. 1998). The role of the individual is more independent in an individualistic society, whereas the interdependent role is more common in a collectivistic society that influences socialisation and social behaviours (MARKUS & KITAYAMA 2003). The value of collectivism also has an impact on social relationships within a family that helps develop familism and filial piety (HO 1994). In addition to these social values, learning certain basic values is also part of socialisation, for example, internal versus external control (fatalism), or machismo versus egalitarianism (CUELLAR et al. 1995).

Culture through its value system shapes youth's health concepts and attitudes (CHRISTOPHER et al. 2000). For example, the preference of social values, such as collectivism and familism may be associated with youth's lower tendency to smoke, drink alcohol or use marijuana (PIKÓ 2005). It has also been argued that adolescents engaged in sports activity tend to prefer intrinsic values, such as community feeling and health, instead of extrinsic values, such as financial success or attractive appearance (PIKÓ & KERESZTES 2006).

Mapping the cultural background of youth's health-related behaviours is often in the focus of cross-cultural research. A number of studies report on ethnic differences in these behaviours, for example, the relatively higher prevalence of smoking and alcohol use among White and Hispanic adolescents than among African-Americans and Asian-Americans (CHEN & UNGER 1999). Studies also reveal the role of these values in differences in health-related behaviours. UNGER et al. (2004) suggest that cross-cultural studies may include the following values for comparison purposes: filial piety, familism, machismo, collectivism, and fatalism. These values embrace social values (collectivism, familism, filial piety), internal/external control (e.g. fatalism), and egalitarianism or the lack of it in gender roles (e.g. machismo). In relation to substance use, filial piety, familism and collectivism, values evident in many Latin-American and Asian countries, help adolescents avoid substance use (CUELLAR et al. 1995; HO 1994). Adolescents high in fatalism, on the other hand, may be more engaged in substance use since this value is characterised by external control (UNGER et al. 2002). Machismo, a traditional male dominance as a gender role may elevate levels of drinking and smoking among male adolescents (CUELLAR et al. 1995).

Eastern European youth and adolescents have recently received considerable attention. The radical change from socialism to capitalism has brought about changes at a variety of levels which may influence youth' well-being and health-related behaviours. A consumerist lifestyle, the current socioeconomic stress and the deterioration of traditional values may increase levels of substance use (PIKÓ & PICZIL 2004). There is a need for more research into the cultural background of health-related behaviours among Eastern European youth.

To our best knowledge, no previous studies have investigated the relationship between values and health-related behaviour in Eastern European university student populations. On the other hand, some studies report on cross-cultural comparisons of

certain values including Hungarian youth. For example, FLANAGAN et al. (1998) investigated the relationship of voluntary work, school climate and family values among adolescents (aged between 12–18 years) in seven countries (Australia, USA, Sweden, Hungary, Czech Republic, Bulgaria, and Russia). Among Hungarian adolescents, levels of preferring family values or collective values were much lower as compared to western societies. Another cross-cultural study, including nine Eastern European countries, reports a medium level of egalitarianism and conservativism among Hungarian university students. However, the level of egalitarianism was lower, the level of conservativism was higher as compared to levels of Western European university students (SCHWARTZ & BARDI 1997). Further research is needed to investigate the role of values in students' lifestyle and health since this is part of their adaptation to cultural and societal changes.

Therefore, the main goal of the present study has been to investigate how a set of values preferred by university students influence their health-related behaviours. In addition, a cross-cultural study design has been used to compare samples of youth from Szeged, Hungary, and Târgu Mureş (Marosvásárhely), Transylvania, Rumania. A previous study of adolescent smoking has revealed that even within the region of Eastern Europe, there may be differences in the patterns of health-related behaviours due to cultural differences (PIKÓ et al. 2005). This study aims at mapping the structure of youth's values (such as filial piety, familism, machismo, collectivism and fatalism) and their role in health-related behaviours.

2. Subjects and method

Data collection was carried out among university students in Szeged ($N = 160$) and Târgu Mureş (Marosvásárhely) ($N = 124$) in the year of 2005. 66.3% of the sample of Szeged students and 70.2% of the sample of Târgu Mureş students were female. The mean age of the respondents was 21.2 years of age (SD: 2.1 years), whereas in the Transylvanian sample, it was 21.3 years of age (SD: 2.2 years). Although the samples are not representative of youth in general, they well represent university students (from faculties of arts and science) in both places.

Data were collected by means of self-administered questionnaires which contained items on a set of values and health-related behaviours. All surveys were anonymous and voluntary. Trained data collectors distributed the surveys to the students outside the classrooms. Randomly selected classes were used to collect data.

Questionnaire items for values were adapted from a scale developed by UNGER and colleagues (2002). The scale measured five values, namely, Filial Piety (e.g., 'Even if I don't like the way my parents are acting, I must always respect them'); Familism ('No matter what the cost, dealing with my relatives' problems comes first'); Machismo ('There are jobs that women simply should not have'); Collectivism ('When I make an important decision, I think about how my decision will affect my friends'); and Fatalism ('We must live for the present – who knows what the future may bring'). The respondents had to evaluate each statement using a 4-point scale

(1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). In the Szeged sample, internal consistency reliabilities (Cronbach alphas) for the cultural values were 0.56 for Filial Piety, 0.82 for Familism, 0.68 for Machismo, 0.53 for Collectivism, and 0.52 for Fatalism. In the Târgu Mureş sample, alphas for cultural values were 0.50 for Filial Piety, 0.67 for Familism, 0.43 for Machismo, 0.53 for Collectivism, and 0.62 for Fatalism. Thus scale reliability was good to acceptable in both samples, except for somewhat lower reliability for Machismo in the Târgu Mureş sample.

Health-related behaviours included three items of substance use (smoking, drinking and marijuana use) and one item of sports activity. Substance use items were derived from the CDC Youth Risk Behaviour Surveillance Survey (KANN 2001). We skipped items of other illicit drugs (e.g., amphetamin) due to their low frequency of consumption in each sample. Questions were related to substance use and sports activity during the past three months. The following questions were asked: 'How many times in the past 3 months did you smoke/drink alcohol/use marijuana?' and 'How many times in the past 3 months did you exercise (e.g. played a sport, "worked out", etc.) for at least a half hour?'

Responses regarding smoking were the following: none (0); less than 1/day (1); 1/day (2); 2–5/day (3); 6–10/day (4); 11–20/day (5); more than 20/day (6). Responses regarding alcohol and marijuana use were the following: none (0); 1 or 2 times (1); 3 to 9 times (2); 10 to 19 times (3); 20 to 39 times (4); 40 or more times (5). Regarding sports activity, the responses were the following: never (0); once or twice a month (1); two or three times a month (2); once or twice a week (3); three or more times a week (4).

SPSS for MS Windows Release 11.0 program was used in the calculations with a significance level of 0.05. The analyses begin with descriptive statistics by gender and nationality including Student's t-tests and Chi-square tests. These analyses were followed by calculating Spearman correlational coefficients. Partial correlation analysis was used when gender was controlled for.

3. Results

Table 1 displays descriptive statistics (means, standard deviations) for the scales of values by gender in the samples of youth from Szeged and Târgu Mureş. In both samples, girls scored higher on filial piety and collectivism (collective feeling), whereas boys scored higher on machismo as a value. There were no signifiant gender differences in the mean scores of familism and fatalism, although girls tended to be slightly more fatalistic in both samples. Comparing data by samples, filial piety and familism as values show higher levels among youth from Szeged ($p < 0.001$), whereas there were no differences in the mean scores of machismo, collectivism and fatalism.

Table 2 shows gender differences in the occurrence of health-related behaviours in both samples. Chi-square tests reveal some important gender differences. Males report higher levels of alcohol use in both samples, whereas gender differences in smoking are not significant ($p > 0.05$). In addition, there are some gender differences

Table 1

Values by gender in samples of youth from Szeged and Târgu Mureş

	Szeged sample (N = 160)			Târgu Mureş sample (N = 124)		
	Boys	Girls	Significance by t-test	Boys	Girls	Significance by t-test
Filial piety	13.8 (2.6)[a]	15.1 (2.2)	$p < 0.001$	12.5 (2.4)	13.9 (2.2)	$p < 0.01$
Familism	15.5 (3.7)	15.7 (3.5)	N.S.	14.7 (3.0)	14.0 (3.0)	N.S.
Machismo	11.1 (2.9)	9.2 (2.3)	$p < 0.001$	10.3 (2.4)	9.0 (2.0)	$p < 0.01$
Collectivism	8.3 (2.0)	9.1 (2.0)	$p < 0.05$	8.2 (2.1)	9.3 (2.0)	$p < 0.01$
Fatalism	7.9 (2.2)	8.0 (2.0)	N.S.	7.9 (1.8)	8.3 (2.1)	N.S.

[a]Mean and standard deviation based on summary scores of the scales.

which are influenced by culture. In terms of marijuana use, males report higher levels of use in the sample from Szeged. In the sample from Târgu Mureş, males report higher levels of sports activity. According to comparisons by sample, students from Szeged report higher frequencies of alcohol and marijuana use as well as sports activity ($p < 0.001$), whereas there were no differences in the occurrence of smoking.

Table 3 indicates the association between values and health-related behaviours. Using partial correlation analysis, Spearman correlational coefficients were calculated where gender, as a variable, was controlled.

Based on the correlation coefficients, some important differences in the cultural influences of health-related behaviours may be detected. In the Szeged sample, machismo did not play a role. Filial piety was associated with lower levels of alcohol use and higher engagement in sports activity. Familism correlated positively with sports activity and negatively with marijuana use. Likewise, collectivism (community feeling) was negatively related to marijuana use. Finally, fatalistic adolescents tended to report higher levels of smoking and marijuana use.

In the Târgu Mureş sample, filial piety as a value did not play a role. Familism was related to marijuana use and collectivism to smoking, the direction of the associations was negative in this sample. Finally, sports activity was associated with machismo as a value.

All in all, although the relationships are not strong, they are statistically significant and therefore represent some important cultural differences.

4. Discussion

In the present study, we aimed at investigating how youth's peference of values influences their health-related behaviour using a cross-cultural study design of samples of

Table 2
Frequencies of health-related behaviours by gender in samples of youth
from Szeged and Târgu Mureş

	Szeged sample (N = 160)			Târgu Mureş sample (N = 124)		
	Boys	Girls	Significance[b]	Boys	Girls	Significance[b]
Smoking						
None	63.0[a]	50.9	N.S.	62.2	62.1	N.S.
< 1/day	3.7	13.2		10.8	9.2	
1/day	5.6	3.8		–	4.6	
2–5/day	7.4	12.3		2.7	4.6	
6–10/day	5.6	10.4		10.8	12.6	
11–20/day	13.0	7.5		10.8	5.7	
> 20/day	1.9	1.9		2.7	1.1	
Alcohol use						
None	20.4	12.3	*p* < 0.01	10.8	23.0	*p* < 0.01
Once/twice	9.3	34.9		40.5	55.2	
3–9 times	40.7	32.1		35.1	18.4	
10–19 times	11.1	15.1		8.1	3.4	
20–39 times	11.1	4.7		5.4	–	
40 or more	7.4	0.9		–	–	
Marijuana						
None	74.1	92.5	*p* < 0.01	97.3	97.7	N.S.
Once/twice	9.3	5.7		–	2.3	
3–9 times	5.6	0.9		2.7	–	
10–19 times	–	–		–	–	
20–39 times	–	0.9		–	–	
40 or more	11.1	–		–	–	
Sports activity						
None	5.6	3.8	N.S.	2.7	1.1	*p* < 0.05
Once or twice	16.7	16.0		32.4	48.3	
2–3/month	9.3	15.1		18.9	17.2	
1–2/week	38.9	47.2		27.0	29.9	
≥ 3/week	29.6	17.9		18.9	3.4	

[a]Percentages (%) during the past three months, [b]Chi-square test.

Table 3
Bivariate correlations between values and health-related behaviours among samples of youth
from Szeged and Târgu Mureş

	Filial piety	Familism	Machismo	Collectivism	Fatalism
Youth from Szeged (N = 160)					
Smoking	0.05[a]	0.06	–0.05	0.02	0.14*
Alcohol use	–0.14*	0.02	–0.03	–0.04	–0.02
Marijuana use	–0.06	–0.11*	–0.08	–0.15*	0.13*
Sports activity	0.13*	0.16*	0.03	–0.06	–0.03
Youth from Târgu Mureş (N = 124)					
Smoking	0.08[a]	0.12	–0.10	–0.14*	–0.07
Alcohol use	–0.01	–0.07	–0.02	0.01	0.01
Marijuana use	–0.01	–0.17*	0.05	0.09	–0.03
Sports activity	0.07	0.07	0.20**	–0.04	–0.02

[a]Partial correlations controlling for gender (Sperman correlation coefficients),
*$p < 0.05$, **$p < 0.01$

university students from Szeged, Hungary, and Târgu Mureş (Marosvásárhely), Transylvania, Rumania. Based on previous studies we might have expected some differences in the patterns of health-related behaviours due to cultural differences (GRUNBAUM et al. 2000; MOORE et al. 1996; PIKÓ et al. 2005). This study applied five values, such as filial piety, familism, machismo, collectivism and fatalism as possible influences of youth's health-related behaviours. In addition, some gender differences in the patterns of both values and behaviours might also be in the focus of research.

Regardless of culture, female students tend to prefer filial piety, collectivism, whereas male students reported higher scores on machismo. In addition, there are gender differences in the occurrence of health-related behaviours in both samples. Male students tend to report higher levels of marijuana use in the Szeged sample, whereas males from the Târgu Mureş sample report a higher engagement in sports activity. Alcohol use is more common among males in both samples. It is also noteworthy that alcohol and marijuana use are more common among youth from Szeged irrespective of gender. Smoking, on the other hand, is very common among youth in the Eastern European region both in males and females (PIKÓ et al. 2005).

Some important cultural differences in the relationship between values and health-related behaviours may be detected. First, among youth from Szeged, fatalism is related to higher levels of substance use, similar to previous studies (e.g. UNGER et al.

2002). This association could not be justified in the sample from Târgu Mureş, whereas machismo plays a role in higher levels of sports activity. This finding is not surprising since other studies on gender roles reveal a positive relationship between masculine identity (e.g. competitive drive to sport achievement) and sport (LANTZ & SCHROEDER 1999).

Furthermore, social values, such as filial piety, familism and collectivism, may be associated with lower levels of substance use or higher levels of sports activity, that is, a more favorable health behaviour pattern. Previous studies also argue for the protective role of these values (CUELLAR et al. 1995; HO 1994; UNGER et al. 2002). Whereas fatalistic youth tend to neglect the risky nature of substance use, social values help students develop healthy attitudes and normative beliefs. The positive nature of social values is present in both samples, however, there are some cultural differences in these associations. For example, in the sample from Szeged, filial piety seems to play a role, that is, it may contribute to an obedience to parental request regarding alcohol use. In the sample from Târgu Mureş, this may not be justified. On the other hand, in both samples, collectivism and familism (representing a community feeling) may contribute to lower levels of subtance use. A previous study of primary school children from Szeged, Hungary and Odorhein-Secuiesc (Székelyudvarhely), Rumania found that social comparison tendencies were even more important for children from Oderhein-Secuiesc as compared to children from Szeged (KERESZTES et al. 2004). Another study found that communal mastery, as a social skill, may help avoid substance use among adolescents (PIKÓ 2006). Thus, we may hypothesise that the role of community feeling among youth may help develop self-esteem to say no to substance use.

We should also mention here some limitations of the study. First, the samples do not represent youth of the countries in general but university students (from faculties of arts and science). In addition, the sample sizes are not large enough to make the results generalisable.

As a consequence, we may conclude that values may have an influence on university students' health-related behaviours. Culture indeed shapes not only our identity but also our health beliefs, attitudes and behaviours. However, whereas a certain value may be related to substance use in one cultural group, in another one, other values may act in the same way. In the sample from Szeged, fatalism may serve as a risk factor for smoking and marijuana use which is not determinant in the sample from Târgu Mureş. Similarly, filial piety may serve as a protection against alcohol use in the sample from Szeged. Furthermore, familism is negatively related to marijuana use in both samples, whereas collectivism is a protective factor against smoking in the sample from Târgu Mureş and marijuana use in the sample from Szeged. Social values may encourage sports activity among youth from Szeged, whereas machismo plays the same role in the sample from Târgu Mureş. Future research is needed to further clarify these interrelationships.

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