PERSONAL AND SITUATIONAL FACTORS AS THE PREDICTORS OF RISK-TAKING PROPENSITY IN THE SAMPLE OF LITHUANIAN STUDENTS

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Abstract. Background, purpose. The current study is based on the combination of situational and individual approaches to risk propensity through consideration of individual responses to different risk domains. The main goal of the investigation is to find out the interaction between several personality and situation factors as the predictors of students’ risk-taking propensity, measured as a complex phenomenon – dispositional and behavioural. Material and methods. In order to investigate the relationship between gender, extraversion, emotional stability, social desirability, rigidity, and risk-taking propensity we sampled 253 students from two Lithuanian universities. Each participant was asked to complete a questionnaire, which consisted of socio-demographic information, Eysenck’s personality questionnaire, two risk-taking propensity measures (dispositional and behavioural) – Kogan and Wallach’s Choice Dilemma Questionnaire and behavioural risk-taking scale. Results. Results revealed that dispositional risk-taking propensity was higher among the students with higher extraversion and higher rigidity, but neuroticism, as well as social desirability, was not associated with dispositional risk-taking propensity. Students with higher levels of extraversion and rigidity and with lower levels of social desirability were more prone to behavioural risk-taking. Gender differences as well as the differences in health, monetary, ethical and social risk areas were discussed. Conclusions. Personal factors (personality traits and gender) add to the prediction of risk-taking propensity in different domains (physical, monetary, ethical and social), still the explanatory value of the prediction is not robust and measurement approach to risk-taking propensity (behavioural or dispositional) might moderate the results. Key words: dispositional and behavioral risk-taking propensity, personality traits, risk type.

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In industrialized societies, adolescence and young adulthood, including a lengthy interval of education, career training, and adult role acquisition, may extend into the third decade of life. Increasing independence from parents during this interval provides adolescents and young adults with increasing opportunities to explore behaviours, roles, attitudes, and values (Bingham, Shope, 2004). This exploratory behaviour often involves risk-taking, including high-risk sexual, substance use, driving behaviours (Arnett, 2000), and results in rates of risk behaviour are higher during adolescence and young adulthood than in any other developmental period (Bingham, Shope, 2004). Zwane et al. (2004) point out that people between the ages of 10 and 24 years is a group that is increasingly vulnerable to health risks (Zwane et al., 2004).

That is why over the past three decades there has been a renewed interest in the study of adolescence and young adulthood (Benthin, Slovic & Severson, 1993). Young adults as well as adolescents who abuse alcohol, who participate in violent crime, who have unprotected sexual intercourse with multiple partners, and who engage in dangerous driving habits imperil their own health and wellbeing and the health of others. Some authors call such behaviour risk-taking (Irwin, Millstein, 1991; Caspi et al., 1997; Cooper, 2010), others – “problem” behaviour, “maladjustment” (Žukauskienė, Šimulionienė, 1999; Jessor, Turbin, Costa, 1997). In adolescents’ and young adults’ risk literature various behaviour patterns are investigated – having unprotected sexual activity with multiple partners; drinking alcohol and driving; drug use; taking physical risks; engaging in dangerous behaviours (argue with strangers; seek entertainment in high-crime areas); lying, breaking rules and norms, etc. Although focusing on important social goals like becoming more popular, being more successful, finding satisfying personal relationships, becoming more self-sufficient, and gaining more self-confidence, young people make choices involving risky behaviour (Jessor, Turbin & Costa, 1997). Egocentrism and the concept of the personal fable lead to risk-taking and experimentation (WHO, 1993).

In order to find out what psychological qualities differentiate those who engage in health and other risk behaviours from those who do not, psychological research emphasized the concept of risk-taking propensity. This concept “has an important implication for the theoretical modelling of risk behaviour and for practical insight into the motives
underlying individual-level choices about engaging in risky behaviour” (Nicholson, Soane, Fenton-O’Creevy, Willman, 2005: 157). Pablo (1997) with colleagues define risk propensity as “the tendency of a decision maker either to take or to avoid risks” (ibid:12). One line of psychological research in this field has focused on decision-making and information processing variables that are implicated in the “choice” to engage in risky behaviours. The most common theory from this stream is prospect theory stating that individual level risk-taking is relatively inconsistent across situations – a person will take risk in some circumstances, and avoid risk in other circumstances (Kuhberger, 1998; Kahneman Tversky, 1979; Nicholson, 2005). Another line of psychological research has focused on individual differences in temperament and personality traits (Caspi et al., 1997). Some authors suggest that risk-taking is predispositional rather than situational (Stewart Jr., Roth, 2001; Frankenberger, 2004; Zuckerman, Kuhlman, 2000; Rawlings, Rohrman, 2003). There could be found only few attempts to integrate knowledge about “risky” personality profile with research from decision theory perspective, to better understand how decision making processes may mediate the links between personality dispositions and later risk behaviours (Gibbons et al., 2004). One attempt to fulfil this shortage is the combination of situational and individual approaches to risk propensity through consideration of individual responses to different risk domains (Nicholson et al., 2005). We base our investigation upon this third stream of risk literature and agree that individuals can be seen as likely to take risks in some situations, but not in others (Nicholson et al., 2005; Cooper, 2010). Moreover, there could be gender differences in situational nature of risk-taking (Finucane et al., 2000; Nicholson et al., 2005; VanZile-Tamsen, Testa, Harlow, Livingston, 2006). Cooper (2010) points out that the majority of past studies have examined only one or few factors in isolation, so the main goal of our investigation is to find out the interaction between several personality and situation factors as the predictors of risk-taking propensity, measured as a complex phenomenon (dispositional and behavioural). In previous research some scientists have found that occasionally personal dispositions in risk area might differ from real behaviour, i.e., people say that they would behave in certain way or are risk prone, whereas never take risks in reality (Finucane, Slovic, Mertz, Flynn, Satterfield, 2000; Sjöberg, 2000; Weber, Hsee, Sokolowska, 1998). That is why we have chosen two
perspectives (behavioural and dispositional) concerning risk-taking propensity.

Many authors investigated risky behaviours in young and middle adolescence. The research about late adolescence and young adulthood is still lacking. In our investigation we examined risk-taking propensity of students for some reasons emphasized by Cyders, Smith, Spillane, Anus, Fischer, Peterson (2007). When adolescents leave home, the rates of at least some forms of risky behaviour tend to increase beyond their already high adolescent levels. Thus students’ samples may reasonably reflect the rates of risky behaviour characterizing late adolescents in general. Irwin and Millstein (1991) also call this period late adolescence. In some sense this period might be treated as the “transition from adolescence to adulthood”. Because the rates of risky behaviours are quite high among students, risk related phenomena can be studied and are of clinical interest in this population (Cyders et al., 2007). Students are almost adults, they have already the ability in abstract, hypothetical reasoning, future time perspective and experience, they are not so heavily apt to the pressure of peers, and they have more independence from their parents. Personality characteristics may be more important predictors of risk-taking at this age. Risk-taking in late adolescence (16–19 years) serves to fulfil developmental needs related to autonomy as well as needs for mastery and individuation, the main important need is identity. These needs are frequently met by experimentation, which often involves testing limits and taking risks (Irwin, Millstein, 1991). The knowledge and skills in risky decision-making can be particularly helpful for young adults because they often must consider personal values and trade-offs in a practical and responsible manner (Clemen, Gregory, 1996).

There has been extensive research on the relationship of personality traits such as impulsivity, sensation seeking, aggression (Frankenberger, 2004; Caspi et al., 1997; Bornovalova, Daughters, Hernandez, Richards, 2005), novelty seeking (Byrnes, Miller, Schafer, 1999; Robbins, Bryan, 2004; Gupta, Derevensky, Ellenbogen, 2006) with involvement in risky behaviours (for example, gambling, use of drugs, risky sexual behaviour, etc.) as well as in risky decision-making (Pablo, 1997). Research results provide data that higher levels of sensation seeking, impulsivity and negative affect predispose individuals to engage in more frequent risky behaviours (VaZile-Tamsen et al., 2006; Cooper, 2010). Nevertheless, there
are also contradictory results. VanZile-Tamsen et al. (2006) have found that impulsivity and anxiety were unrelated to sexual health risk domains, individuals low in conscientiousness and agreeableness engage in higher levels of risky sexual behaviours, whereas findings for other personality dimensions are weak or inconsistent (Cooper, 2010). Cooper (2010) found that approximately half of all trait – risky behaviour associations were moderated by situational or relational context (ibid: 335). Nicholson et al. (2005) have found that high extraversion and openness, low neuroticism, agreeableness and conscientiousness is related to higher overall risk propensity. But Rawlings and Rohrmann (2003) contradict that no single personality factor is associated with all types of risk propensity (e.g., no one personality variable was related to financial risk propensity), but specific personality dimensions are correlated with particular domains (e.g., extraversion with social risk propensity). So the list of personality dispositions that might be related to risky behaviour is not completed, and controversy in literature concerning risky decision-making and its gender or personality correlates is great as well (Pablo, 1997). Research on other than health-risk behaviour areas is lacking, research in Lithuania in this field is especially scarce.

According to the results of the investigations presented in literature, we have chosen four personality traits (extraversion, emotional stability, rigidity and social desirability) as personal predictors of risk propensity and expected that overall risk propensity (either dispositional or behavioural) is higher among the subjects with higher extraversion, lower emotional stability, lower social desirability and higher rigidity (Caspi et al., 1997; Hampson et al., 2001; Williams, Narendran, 1999; Hart, 1998). The presumption was based on the definitions of these personality traits as they were defined by Eysenck (1975). According to Eysenck, extraversion is related to activity, seeking of social stimulation, talkativeness, openness, tendency to dominate; low emotional stability is related to emotion and mood swings, higher anxiety, tension; social desirability is the desire to look more attractive and acceptable to others, to be more popular; rigidity is the opposite side of superego strength and related to impulsive and cold communication, egocentricity, aggressiveness, disinterest in other people (Hjelle, Ziegler, 1999). Of course, another personal predictor of risk propensity in our investigation is gender. We expected that males are more prone to risk-taking as it was found in previous
research (Finucane et al., 2000; Nicholson et al., 2005). However, based on the interactionist perspective supported by research results (Cooper, 2010; Nicholson et al., 2005; De Raad et al., 2008) we also expected situational differences in risk propensity of subjects. The situational factor in our investigation was risk domain or risk type – physical (accidents, illnesses, risk to health), monetary (risk to financial welfare), ethical (risk-taking with societal rules, norms and values) and social (risk to social relations and status among significant others) (Jackson, Hourany, Vidmar, 1972). We hypothesized that extraversion and social desirability is more predictive to social risk-taking propensity and behaviour, while neuroticism is more predictive to health and financial risk domain. As we could not find data about ethical risk in literature (according to Jackson, Hourany, Vidmar (1972)), we did not posed any hypothesis and looked only for exploratory results.

**METHOD**

**Sample**

The participants in this study were 253 students from two Lithuanian universities (age 18–23, mean = 19.16, SD = 1.24; 70 males, 183 females). They were invited to participate in the research and received the credit in Psychology course for participation. The major of students was very different – psychology, sociology, social welfare, information technology, economics and management, philology, biology, etc.

**Procedures and Materials**

Each participant was asked to complete a questionnaire, which consisted of sociodemographic information, Eysenck’s personality questionnaire, two risk-taking propensity measures (dispositional and behavioural) – Kogan and Wallach’s Choice Dilemma Questionnaire and behavioural risk-taking scale.

*Eysenck’s Personality Questionnaire* was chosen in order to separate out subjects according to four personality measures: extraversion, social desirability, emotional stability and rigidity. The questionnaire is adopted and standardized for Lithuanian population (Aizenk, Pakula, Goštautas, 1991). The total sample was divided into subgroups scoring high vs
low on particular personality trait according to the mean score of the total sample. In this study we used the means of the trait scales in the analysis (Cronbach alpha of the scales were 0.75–0.85).

_Kogan and Wallach’s Choice Dilemma Questionnaire_ is a 12-item instrument (see Appendix), in which each item represents a choice dilemma between a risky and a safe course of action (three situations in physical / health risk area; three situations in monetary risk area; three situations in social risk area and three situations in ethical risk area). In each scenario the respondent is asked to advise the person in the scenario by indicating what probability of success (1, 3, 5, 7, or 9 in 10) would be sufficient to warrant the choice of the risky alternative. The procedure is of a semiprojective nature, it is assumed that the subject’s advice to others reflected his own attitude towards the desirability of success relative to the disutility of failure (Kogan, Wallach, 1964). In the analysis of the results we used the mean of the chosen chances in all 12 decision situations for overall risk propensity (Cronbach alpha 0.74) and the mean of the different types of decision situations (physical (Cronbach alpha 0.50), monetary (Cronbach alpha 0.52), social (Cronbach alpha 0.56), ethical risk (Cronbach alpha 0.60)). The instrument was organized in such a way, that higher mean showed higher risk aversion, lower mean showed higher risk propensity. CDQ was used as a dispositional measure of risk-taking propensity (Kamalanabhan, Sunder, Vasanthi, 2000; Stewart Jr., Roth, 2001).

Behavioural measure of risk-taking was devised by authors for doctoral dissertation research following the procedure used in Caspi et al. (1997), Hampson et al. (2001), Jackson, Hourany, Vidmar (1972). It consisted of 18 “yes/no” items classified into four domains as in CDQ: physical, monetary, social, and ethical risk-taking. The subjects were asked to describe their real behaviour in the past (for example, “How many times in the last six months have you driven a car after drinking alcohol?”, “How many times in the last six months have you made something that is forbidden?”). In the analysis we used the mean sum evaluation of all facets of risk-taking behaviour (the higher the evaluation, the higher the propensity to risk-taking behaviour, Cronbach alpha 0.76) and the means of separate scales (physical risk, monetary risk, social risk and ethical risk; Cronbach alpha 0.50–0.69). The highest score in behavioural propensity was 17, the lowest score was 1.
For the analysis we used descriptive statistics, analysis of variance, correlation analysis and linear regression analysis.

RESULTS

Dispositional and behavioural risk-taking propensity among students – the role of risk type

The results revealed that people of the investigated age were not extremely prone to risk (the mean number of selected chances (dispositional risk propensity) was 6.2, SD=1.5, the mean number of behavioural risk propensity was 8.09, SD=2.92).

Dispositional risk propensity of the subjects differed slightly in four decision areas. Results in Figure 1 show that young people are the most prone to take risks in social area (the mean number of chances is 5.9, SD=1.0); then in the sequence stands physical risk (M=6.0, SD=1.1); monetary risk (M=6.3, SD=1.1) and the least risky area is ethical risk (M=6.7, SD=1.2). General linear model analysis with repeated measures showed that the risk type had the main effect (F(3,756)=16.24, p<0.01) upon the dispositional risk propensity.

Behavioural measure of risk propensity provided slightly different results. Results in Figure 1 show that students are the most prone to take risks in ethical risk area (mean score is 3.61, SD=0.10); then in the sequence stands social risk (M=2.85, SD=0.08); monetary risk (M=2.32, SD=0.07) and the least risky area is physical risk (M=1.09, SD=0.07). General linear model analysis with repeated measures showed that the risk type had the main effect (F(3,756)=247.38, p<0.001) upon the behavioural risk propensity.

Paired comparisons of the means according to Bonferroni criterion revealed that the difference of the selected success chances in four risk areas were statistically significant only in four cases: subjects made more risky decisions in physical risk area than in ethical risk area (p<0.01); they made more risky decisions in monetary risk area than in ethical risk area (p<0.01); they made more risky decisions in social risk area than in monetary risk area (p<0.05); also, they made more risky decisions in social risk area than in ethical risk area (p<0.01) (see Figure 1). Other differences between decision areas were not statistically significant. Paired
comparisons of the behavioural risk propensity means according to Bonferroni criterion revealed that the difference of scores in four risk areas were statistically significant in all domains (p<0.001).

![Bar chart](image)

**Figure 1.** Behavioural and dispositional risk-taking propensity in different risk domains.

Gender differences in risk-taking propensity were tested with the help of analysis of variance. One-way ANOVA has shown the main effect of gender to dispositional risk propensity (F(1,252)=10.59, p<0.01; M of males 5.7, SD=1.7, M of females 6.4, SD=1.3) and to behavioural risk propensity (F(1,252)=7.07, p<0.01; M of males 8.87, SD=3.18, M of females 7.79, SD=2.77). Further analysis revealed that situational factor (the domain of risk) is important for significance of gender differences. Young men were more prone to dispositional risk only in monetary (F(1.252)=9.89, p<0.001) and ethical risk domains (F(1,252)=12.26,
p<0.01), whereas gender differences were not significant for behavioural risk propensity in different risk domains.

Interesting results were found analyzing the relationship between two measures of risk-taking propensity. The Pearson’s bivariate correlation between dispositional measure of risk-taking propensity and measure of risk-taking behaviour was minor, although statistically significant (Pearson’s r=0.198, p<0.05). It seems that domain specificity also had different effect for those results. As it was discussed earlier, the most prevalent risk-taking as predisposition was found in social risk domain, whereas the most prevalent risk-taking in behaviour was found in ethical risk domain (see Figure 1).

In sum, we can state that gender may predict risk-taking propensity differences in the sample of students, but situational factors may be more important and mediate the results. Also the attention must be paid to the assessment methods that are used to tap the risk propensity of respondents, as the results might be challenging and showing that personality not always influence behaviour (Stewart Jr., Roth, 2001).

PERSONALITY DIFFERENCES IN RISK-TAKING PROPENSITY

Looking for the differences in risk-taking propensity among the groups of subjects with various personality traits, correlation analysis was conducted. The results are presented in Table 1.

<table>
<thead>
<tr>
<th>Personality trait</th>
<th>Dispositional risk-taking propensity</th>
<th>Behavioural risk-taking propensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>-0.124*</td>
<td>0.208**</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.091</td>
<td>0.064</td>
</tr>
<tr>
<td>Social desirability</td>
<td>-0.012</td>
<td>-0.293**</td>
</tr>
<tr>
<td>Rigidity</td>
<td>-0.165**</td>
<td>0.357**</td>
</tr>
</tbody>
</table>

* p<.05; ** p<.01.

As it was hypothesized dispositional risk-taking propensity was higher (i.e. risk aversion was lower) among the subjects with higher
extraversion and higher rigidity, although the correlations were small. Contrary to expectations neuroticism (or emotional stability), as well as social desirability, were not associated with dispositional risk-taking propensity. Slightly different results were found in the case of behavioural risk-taking propensity. Students with higher levels of extraversion and rigidity and with lower levels of social desirability were more prone to behavioural risk-taking. Correlation coefficients were higher (although moderate) than in the case of dispositional risk-taking. Contrary to expectations neuroticism was not related to risk-taking propensity (see Table 1).

When gender is taken into account, the significant correlations among personality traits and dispositional risk-taking become non-significant (only statistical tendencies remain, p<0.10) in both females and males groups, perhaps due to smaller sample size. But correlations among personality traits and behavioural risk-taking propensity remained the same in the group of females (Pearson’s r=0.241** for extraversion, -0.238** for social desirability, and 0.246** for rigidity). Correlation between extraversion and behavioural risk-taking propensity became non-significant (Pearson’s r=0.194, p<0.10) in the group of males, other results remain the same (Pearson’s r=-0.374** for social desirability, and 0.446** for rigidity).

**Personal predictors of risk-taking propensity in different risk domains**

In order to find out what is the importance of interaction between personality traits, gender and risk domain in prediction of risk-taking propensity, linear regression analyses were conducted. The results in Table 2 provide different regression models for dispositional and behavioural risk-taking propensity separately.

As it was expected different personality traits had differentiated predictive value for risk-taking propensity in different risk domains, although the importance of personal factors might be questionable (the explanatory value of all regression models is quite low – R square was from 0.03 until 0.14). The best model was found for the prediction of behavioural risk-taking propensity in social risk domain. Nevertheless, extraversion was predictive for social risk-taking propensity (in line with
Table 2. The linear regression models predicting dispositional and behavioural risk-taking propensity in different risk domains from personal factors (gender and personality traits)

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Risk-taking propensity in Physical risk domain</th>
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</thead>
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<tr>
<td></td>
<td>Standardized Beta</td>
<td>t</td>
<td>Sig.</td>
<td>df</td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Dispositional (Constant)</td>
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<td>0.00</td>
<td>5,252</td>
<td>1.54</td>
<td>0.18</td>
<td>0.03</td>
</tr>
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<td>1.28</td>
<td>0.20</td>
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</tr>
<tr>
<td>Extraversion</td>
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<td>-0.74</td>
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<tr>
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<tr>
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<td>-2.10</td>
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<td>Rigidity</td>
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<td>-0.25</td>
<td>0.81</td>
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<td>Behavioural (Constant)</td>
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<td>0.83</td>
<td>5,252</td>
<td>4.65</td>
<td>0.01</td>
<td>0.09</td>
</tr>
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<td>2.83</td>
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<tr>
<td>Neuroticism</td>
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<td>1.37</td>
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<tr>
<td>Social desirability</td>
<td>0.01</td>
<td>0.04</td>
<td>0.97</td>
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</tr>
<tr>
<td>Rigidity</td>
<td>0.22</td>
<td>3.09</td>
<td>0.01</td>
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<table>
<thead>
<tr>
<th>Dependent</th>
<th>Risk-taking propensity in Monetary risk domain</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Standardized Beta</td>
<td>t</td>
<td>Sig.</td>
<td>df</td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Dispositional (Constant)</td>
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<td>5,252</td>
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<tr>
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<tr>
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<td>0.80</td>
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<tr>
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<td>-1.20</td>
<td>0.23</td>
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<tr>
<td>Behavioural (Constant)</td>
<td>4.66</td>
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<td>5,252</td>
<td>7.32</td>
<td>0.01</td>
<td>0.13</td>
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<td>Gender</td>
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<tr>
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the hypothesis) and for behavioural physical risk-taking propensity. Social desirability was predictive for dispositional physical risk propensity and behavioural monetary and social risk propensity. Unexpectedly, neuroticism was not linked to any type of risk-taking propensity. Psychoticism was related to the behavioural risk-taking propensity in all types of risk domain, and dispositional ethical risk-taking propensity.
Stated differently, higher levels of physical risk-taking propensity might be expected if the person is described by higher extraversion, higher rigidity and lower social desirability. More risk-taking in financial domain might be expected if the person is described by higher rigidity and lower social desirability. More frequent ethical risk-taking might be expected from persons with higher levels of rigidity. Finally, more frequent social risk is related to higher levels of extraversion and rigidity. Gender was predictive only for dispositional risk-taking propensity in monetary and ethical risk domains (see Table 2).

In sum, individual factors (personality traits and gender) add to the prediction of risk-taking propensity in different domains (physical, monetary, ethical and social), still the explanatory value of the prediction is not robust. Future research is encouraged in the field of personality traits and situation interaction looking for greater variety of personality traits as well as more expanded view of situational factors.

Discussion

This research is a follow-up of those studies, which investigate if risk-taking propensity depends not only upon situational context, but upon individual factors as well. The main goal of our investigation was to find out the interaction between several personal (personality traits and gender) and situational (risk domain) factors as the predictors of students’ risk-taking propensity, measured as a complex phenomenon (dispositional and behavioural). In conclusion it may be said, that findings reported in this study extended the previous research on relationships between individual differences in personality and risk-taking propensity (e.g., Caspi et al., 1997; Pablo, 1997; Cooper, 2010; Nicholson et al., 2005; Rawling, Rohman, 2003). We have found that personality traits are of greater importance for behavioural risk-taking propensity than for dispositional risk-taking propensity in the investigated sample. And of course we supported the ideas of other authors that risk-taking in one domain might be generally associated with risk-taking in others, yet individuals often incline to be situational risk takers, i.e. to take more risks in one domain that in another (Nicholson et al., 2005; Rawling, Rohrman, 2003).

Observations show that people choose the optimal risk level quite rarely. Adolescents often take risks with their health; adults take risks
with their money, reputation or other things as well. The awareness of the psychological characteristics that motivate youth to engage in risk behaviours may help public health and other officials choose more effective campaigns that would motivate risk takers to minimize harm (Caspi et al., 1997: 1061).

Therefore, findings of this investigation allowed us to draw four main conclusions. First, situational factors (the type of risk) are important in observing students’ risk-taking propensity, and this the support to Kahneman and Tversky (1979); Williams, Wong Wee Voon (1999); Rawling and Rohrman (2003) results. The most surprising differences in situational risk-taking propensity were found between dispositional and behavioural treatment of risk-taking propensity. We found that the dispositional risk propensity was highest in the field of social risk, the lowest – in the field of ethical risk. Behavioural risk-taking propensity, on the other hand, was highest in ethical risk and lowest in physical risk area. The contradiction of the results might be possibly explained by the fact that this research encountered the same problem as previous research did: revealed thinking and decision making tendencies of people sometimes cannot reflect their actual behaviour. People do not always actually behave according to their thought processes (Jackson et al., 1972; Kühberger, 1998). That is why the results received by two different approaches (dispositional and behavioural) were correlated only slightly. Another explanation of this difference in results by different measurement approaches might be based by French, Marteau, Sutton and Kinmonth (2004) results, who found that even superficially similar rating scales can yield different conclusions about how people combine information about risks (ibid: 388). Also risk type contradictions might be related to the specific subjects’ age. At the end of adolescence young people are still very oriented to social relationships, not resilient to peer influence, they want to get their status among new friends at the university, so they do want to take social risks. Young people at this age (although „the identity stage“ is ending) might be still very concerned about „philosophy of life“ (Erikson, 1950; Jessor et al., 1997). They reason and make decisions about morality being eager to be moral and fair in their dispositions, but also they like to experiment in perceived safe way, so maybe ethical risks in behaviour (breaking various rules or norms) are the easiest ones to tolerate. Risk aversion in behavioural physical risk is
also surprising and needs future investigations, as it contradicts to many published and discussed in literature results that students engage in many health risks (Cyders et al., 2007; Lithuanian Department of Statistics, 2009; VanZile-Tamsen et al., 2006).

Moreover, the differences between risk domains (health, social, monetary, ethical), as well as the differences between dispositional and behavioural propensity to risk, could be possibly explained by the motivation issues that are also very actual at the investigated age. Motivation issue was not addressed in this study, nevertheless it raises some questions for future research. Some risk-taking seems to be purely sensation seeking (wanting the excitement of doing something that could have negative consequences (Boverie et al., 1995; Caspi et al., 1997)), whereas other risk-taking may reflect differences in people’s expectancies and inner cognitive processes (one might believe that a risky approach has potential to lead to a higher payoff (Pablo, 1997). This latter approach is suggested by Atkinson’s classic theory of achievement motivation, where he predicts that people’s choice of high – risk achievement behaviour (difficult tasks) is determined by expectancy for success, and value of success (Atkinson, 1964). Risky behaviour may be more likely to reflect personality dispositions (sensation seeking and excitement), but disposition could involve some cognitive balancing of expectancy and value. These ideas could be addressed in future investigations, because they may add to the attempts to integrate personality and cognitive psychology.

Second, our data provide support to Nicholson et al. (2005), Pablo (1997), Robbins, Bryan (2004), Sumer, Lajunen, Ozkan (2005), Gupta, De-revensky, Ellenbogen (2006) and others that overall risk-taking propensity is highly patterned at the individual level. We established that high extraversion and rigidity supply motivational force for general risk-taking propensity, whereas neuroticism (or emotional stability) do not relate to risk proneness. Associations with social desirability were significant only in the case of behavioural risk propensity. Students with higher social desirability were less prone to behavioural risk-taking. Salgado (2002) stated that high rigidity, low extraversion and low social desirability are related to low agreeableness, impulsiveness, sometimes to deviant behaviours and rule breaking, and this might be the explanation why these traits might be important in the case of risk-taking propensity. It is
In the context of risk-taking propensity among students, it is difficult to speculate why neuroticism was not statistically significant. We can hypothesize that opposing tendencies of emotional instability, hostility (as risk-promoting traits), and anxiety with depression (as risk-aversing traits) that describe neuroticism suspend persons from stable risk propensity patterns (Clarke, Robertson, 2005; Sumer, Lajunen, Ozkan, 2005).

We found two interesting differences between the cases of dispositional and behavioural approaches to risk-taking propensity. The first one is that more personality traits were related to behavioural risk proneness (the only exception of neuroticism), while the second one – correlations were stronger in the case of behavioural risk proneness than in the case of dispositional risk proneness. These results are partly in line with the statements presented in a wide range of articles on risky decision-making, where it is argued that risky decision making is the function of situational variables, not of personality (Kahneman, Tversky, 1979; Kühberger, 1998) and we mentioned this earlier hypothesizing that dispositional risk measure might be more cognitive and more related to decision making than to real risk behaviour (Kamalanabhan, Sunder, Vasanthi, 2000). It might be that more cognitive processing in decisions minimizes the influence of personality traits and these have more impact in case of behavioural risk proneness.

Third, the results of this investigation are partly consistent with the predictions of Pablo (1997), Kogan & Wallach (1964), Miller & Byrnes (1997), Nicholson et al. (2005), who argued that there are gender differences in the propensity to make risky decisions and to engage in risky behaviour. But we have found some contradictions also. We found that generally speaking young men have higher propensity to risk than young women, also gender mediates the effects of personality traits upon risk proneness. When gender is taken into account, associations between personality traits and dispositional risk propensity become non-significant. Also gender differences depended upon risk type – young men were more prone to dispositional risk in monetary and ethical risk domains, there were no gender differences in behavioural risk propensity according different situations. Several possible explanations to gender differences have been suggested in the literature. Some researchers argue that due to evolution processes males take more risk as it had helped them to adapt in different situations (Oltedal, Rundmo, 2006).
it was suggested (for example, in bio-psycho-social model of risk-taking of Irwin and Millstein (1991)), that men and women have different biological and psychological characteristics that are related to risk-taking in different way. However, the prediction of risk proneness with the help of gender might be questionable, because sometimes situational factors may be more important and mediate the results. Also unequal variance of females and males might have biased the results.

Finally, we confirmed the main hypothesis that situational factors interact with personal factors and give different predictions for risk-taking propensity among students. We agree with Nicholson et al. (2005) and Rawling and Rohrman (2003) that future research and practice needs to take account of the dual nature of risk-taking as both general and domain-specific. Our results show that either gender or personality traits have different significance in separate risk domains, also the approach to risk propensity might be important. Behavioural risk-taking propensity in monetary and social risk domains can be predicted from personal variables in Lithuanian students’ sample (the model explained 13 and 14 percent of data variance), but one should be cautious in prediction of risk proneness in physical and ethical risk domains, as the model had minor explanatory value. This result may be due to the covariance with more significant aspects or caused by a relatively small sample size.

In conclusion, we can say that only interaction of gender, personality and risk situation may help to predict risk-taking propensity at the student’s age. The findings support the view that no single personality factor is associated with all types of risk propensity, but specific personality dimensions are correlated with particular domains (Rawlings, Rohrman, 2003) and particular measurement strategy of risk proneness. Gender influence upon risk-taking propensity in different domains must be tested in future investigations, as we received contradictory findings.

However, the current study has limitations as well. Therefore, the results should be interpreted and generalized with caution. The first issue is related to measurement based on self-report. Self-report data is the major concern in most psychological studies due to possible reporting biases in answers. The second limitation is relatively small and not random sample size. Although researchers state that results of students resemble general population (Cyders et al., 2007), we encourage other scientists to replicate the similar procedure in larger and more differentiated samples. The
current study focused on four risk areas and only four personality traits, so future research will need to determine whether other personality traits predict involvement in risk-taking, whether the findings generalize to other risk domains. Third, the data are cross-sectional, and no conclusion can be drawn about causality. Although regression analysis let us predict some paths, the relationships may be reciprocal.

Nevertheless, the present study provides support for a person x situation interaction perspective on risk-taking propensity and may be used for practical implications. The study indicated that stable individual differences in personality play important role in shaping risk-taking propensity and perhaps risky behaviour, but the ways in which they do so differ, as a function of situation and measurement (Cooper, 2010). In future studies, knowledge of “risky” personality profile could be usefully integrated with other research from a decision-making and individual differences theory.

References


APPENDIX

Example from Kogan and Wallach’s Choice Dilemma Questionnaire

Mr. G, a competent chess player, is participating in a national chess tournament. In an early match he draws the top-favoured player in the tournament as his opponent. Mr. G has been given a relatively low ranking in view of his performance in previous tournaments. During the course of his play with the top-favoured man, Mr. G notes the possibility of a deceptive though risky manoeuvre which might bring him quick victory. At the same time, if the attempted manoeuvre should fail, Mr. G would be left in an exposed position and defeat would almost certainly follow.

Imagine that you are advising Mr. G. Listed below are several probabilities or odds that Mr. G deceptive play would succeed. Please check the lowest probability that would consider acceptable for the risky play in question to be attempted.

- The chances are 1 in 10 that the play would succeed.
- The chances are 3 in 10 that the play would succeed.
- The chances are 5 in 10 that the play would succeed.
- The chances are 7 in 10 that the play would succeed.
- The chances are 9 in 10 that the play would succeed.

Place a check here if you think Mr. G should not attempt the risky play, no matter what the probabilities.

POLINKį RIZIKUOTI LIETUVOS STUDENTŲ IMTYJE PROGNOZUOJANČIŲ ASMENINIŲ IR SITUACINIŲ VEIKSNIŲ SĄSAJOS

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Pagrindiniai žodžiai: polinkis rizikuoti, asmenybės bruožai, rizikos rūšis.

Received: 19-02-2010
Accepted: 14-03-2010