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An Investigation of the Relationship between MBTI Personality Types and Decision-Making Competence

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Abstract

Myers-Briggs Type Indicator (MBTI) belongs to the most widely used personality measures, but its associations with decision-making were rarely explicitly studied. Relationships between MBTI personality types and decision-making competencies were the object of interest in present study. 121 high school (age 15-16) and university students (age 19-25) completed MBTI test and Adult Decision-Making Competence to assess their personality and decision-making competence. Correlation analysis and analysis of variance were used to investigate the relationship between personality and decision-making competence. Correlation analysis revealed that only five of 48 relationships between eight personality dimensions on the one hand and six decision-making competencies on the other hand were significant. Similar results were found by the relationship between decision-making competencies and new variables created as the differences between two opposite dimensions. No differences in decision-making competencies were significant by the comparison of four basic MBTI types. MBTI personality types do not associate with decision-making styles. This result points out that good decision-making outcomes are not exclusive for certain personalities and can be achieved by various ways.

Keywords: decision-making competence; MBTI; university students;

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1. Introduction

People differ in a way of decision-making as well as in its outcomes. While Myers-Briggs Type Indicator (MBTI) is used mainly to assess personality structure, it can be also viewed as a measure of different ways of processing information. The main aim of the present paper is to investigate a relationship between cognitive functions on one hand and the ability to make proper decision (decision-making competencies) on the other hand. While it is not possible to prioritize one of the cognitive functions, their relationships to decision-making outcomes can aim the attention to certain functions with higher expected role in We are not looking on the results of these processes now, but it seems appropriate to expect better decision-making outcomes in people with higher level of decision-making skills.

1.1. Decision-making competence

While the descriptive approach in decision-making just describes process and outcomes of decision-making, normative approach tries to set rules for proper decision-making and to assess them according to the principles of logic or statistics. Comparing performance with norms, Kim, Karlawish, and Caine (2002) distinguish “decision-making capacity”, “decision-making competence”, and “decision-making abilities”. While “capacity” and “competence” refer to a categorical status (the person in particular situation is or is not competent to make a decision), “decisional abilities” describe the functional elements of decision-making (varying and measurable degrees). As a best example of this approach Kim, Karlawish, and Caine (2002) present Grisso and Appelbaum’s (1998) “four abilities model” including the abilities to understand, appreciate, reason and express a choice, and suggest that even people with impaired decisional abilities can have decisional competence. Miller and Byrnes (2001) define decision-making competence (henceforth: DMC) broadly as the ability or capacity to form flexible and effective plans for managing different situations in the midst of pursuing one’s goals. Beyth-Maron, Austin, Fischhoff, Palgren & Quadrel (1993) state five elements of competent decision-making in normative models and articulated into following steps: a) identification of possible decision options, b) identification of the possible risks and benefits associated with each option, c) evaluation of the desirability of each consequence, d) assessment of the likelihood of each consequence, e) combination of the above information using some decision rules and identifying the best option.

We adopt a classification of Parker and Fischhoff (2005) who use accuracy and consistency as basic standards of evaluating judgments and decisions. Authors of Adult Decision Making Competence (henceforth: A-DMC) distinguish four fundamental decision-making skills that are currently identified by six subscales of the A-DMC. They include belief assessment, value assessment, integration and metacognition. Performance in these skills can be evaluated as accuracy or as consistency.

Belief assessment involves judging the probabilities of events and is identified in two tasks. Consistency in Risk Perception consists of 20 events that create a basis for evaluation on the basis of comparing probabilities a) in one and five years, b) of subset and superset events and c) of complementary events. The second task, Recognizing Social Norms, identifies an agreement between estimated proportion of people engaged in different kinds of negative behaviour and the actual proportion in the sample.

Value assessment is operationalized in two tasks, too. Resistance to Framing detects the vulnerability to be effected by the description of decision situation. Resistance to sunk costs identifies to tendency to continue in action where prior investments were made (normatively bad option).

Integration beliefs and values are identified by Applying Decision Rules. The task requires subjects to decide according to single or multiple criteria. Metacognition is measured by the Over/under confidence component comparing percentage of correct knowledge answers and mean confidence.

Some ways of decision-making (decision-making styles) are associated with decision-making competencies (more frequent use of the rational style, but the lower level of the spontaneous, avoidant and intuitive style is related to the higher decision-making competencies, Bavoľar & Orosova, 2015). Decision-making competencies are related to the real-world decision outcomes (Bruine de Bruin, Parker, Fischhoff, 2007) and can be considered as possible predictors of proper decisions in future situations.

1.2. MBTI cognitive functions

Personality characteristics influence a process and outcomes of decision-making. One of the most recognized models of personality assessment is Myers Briggs Type Indicator. The instrument is based on a work of Carl Gustav Jung (1971) who distinguished people according to the way in which they approach the world. MBTI consists of eight traits classified into four dichotomous types: Extrovert (E) vs Introvert (I), Sensing (S) vs Intuitive (I), Thinking (T) vs. Feeling (F) and Judging (J) vs. Perceiving (P). People can be classified according to the membership in each of these types into 16 personality categories. The first dimension describes the focus of attention. While persons with prevailing Extraversion focus more on the outside world, Introversion pole is focused on the inner world. The second dimension describes the way of decision-making, where Thinking dimension is characterized by the use of logic, Feeling dimension by the emphasis on expected feelings of others and the self. Seeking information is the core of the third dimension with Sensing as relying on facts and reality and Intuitive as using intuition and imagination. The fourth dimension describes a relationship with the world – orientation on outcomes and regulation by Judging and orientation on process and flexibility by Perceiving.

As distribution of 16 MBTI types divides population into relatively small groups (half of them are not higher than 5%), attempts to join them were done. One of them is very useful in relation to our research plan – classification based on the ways of gathering information and making decisions. It includes four types with these possible combinations sensing-thinking (ST), sensing-feeling (SF), intuition-thinking (NT), intuition-feeling (NF) (Keirse, Bates, 1978). MBTI is often used in process of evaluation of work applicants and its associations with other cognitive processes have been studied very rarely.

2. Methods

2.1. Sample

The sample consisted of 121 high school and university students from two towns in the eastern Slovakia. 70 high school students (age 15-17, $x = 15.60 (+0.52)$; 68.6% females) and 51 university students (age 19-25, $x = 20.9+1.32$ (88.2% females). High school students completed both measures in one session, university students in two sessions.

2.2. Measures

Decision-making competencies were assessed by the A-DMC that was firstly published by Bruine de Bruin, Parker, and Fischhoff. (2007). The scale with six subscales is described above. It was used and validated in the USA, Italy (Del Missier, Mantyla & Bruine de Bruin, 2010; Del Missier, Mantyla & Bruine de Bruin, 2012), Sweden (Marklund, 2008; Mantyla et al., 2012) and Slovakia (Bavoľar, 2013).

MBTI belongs to the personality scales widely used mainly in education and work psychology. Version G of MBTI (Myers & Mc Caulley, 1985) was used to assess eight personality traits creating four bipolar scales described above.

3. Results

The first step in investigation of the relationship between cognitive functions and decision-making competencies was a correlation analysis. As we have no information about previous studies exploring these associations, we looked at them by different ways. Firstly, correlations between eight basic cognitive functions and six decision-making competencies are presented. Very weak relationships in most cases (significant only in five of 48 cases) led to the broader view, where four variables created as the differences of the opposite functions were used (extraversion – introversion, sensing – intuition, thinking – feeling, judging – perceiving).

Inspecting correlations between decision-making competencies and four cognitive functions produced very similar results where only two of 24 relationships were significant. As the view on the relationship between decision-making competencies and cognitive functions through correlations has not brought meaningful and interpretable results, our last attempt was to compare groups created according to scores in cognitive functions. They included following groups: sensing-thinking (ST, n = 54), sensing-feeling (SF, n = 17), intuition-thinking (NT, n = 31), intuition-feeling (NF, n = 19).

Table 1. Correlations between Decision-making Styles and Eight Basic Cognitive Functions

	Extraversion	Introversion	Sensing	Intuition	Thinking	Feeling	Judging	Perceiving
RtF	.05	-.04	-.19*	.13	-.20*	.08	-.08	.10
RSN	.13	-.12	-.06	.01	-.16	.08	-.02	-.01
UOC	-.03	.01	-.18*	.20*	.02	.07	-.08	.13
ADR	-.05	.04	-.14	.21*	-.09	.11	-.07	.10
CiRP	.05	-.05	-.03	.02	-.08	-.02	-.12	.08
RtSC	.09	-.07	.01	-.04	-.11	.03	-.01	-.04

Table 2. Correlations between Decision-making Styles and Four Basic Cognitive Functions

	EI	SN	TF	JP
RtF	.04	-.17	-.16	-.10
RSN	.12	-.04	-.14	.00
UOC	-.02	-.20*	-.01	-.11
ADR	-.04	-.18*	-.11	-.09
CiRP	.05	-.03	-.04	-.10
RtSC	.08	.02	-.08	.02

Table 3. Comparing Keirsey & Bates MBTI Types in Decision-making Competencies

Decision-making competence	Group	Mean	SD	F	p
RtF	ST	3.83	0.38	0.638	0.592
	SF	3.78	0.46		
	NT	3.85	0.51		

	NF	3.96	0.32		
RSN	ST	0.37	0.28	0.234	0.872
	SF	0.39	0.27		
	NT	0.42	0.33		
UOC	NF	0.41	0.20	2.348	0.076
	ST	0.72	0.18		
	SF	0.70	0.20		
	NT	0.78	0.18		
ADR	NF	0.83	0.18	2.365	0.075
	ST	0.31	0.26		
	SF	0.37	0.21		
	NT	0.38	0.24		
CiRP	NF	0.48	0.21	0.605	0.613
	ST	0.79	0.13		
	SF	0.76	0.16		
	NT	0.79	0.11		
RtSC	NF	0.82	0.11	1.262	0.291
	ST	3.99	0.70		
	SF	4.27	0.56		
	NT	3.91	0.66		
	NF	4.11	0.63		

One of the main limitations of present study lies in sample characteristics. Age range is quite narrow and results can be valid only for high school and university students. While males and females do not differ substantially in decision-making competencies (Bavolar, 2013) majority of females could affect the results. However, the article explores the role of information processing and personality factors in decision-making competencies and facilitates next research that should be aimed at more specific applications (decision-making of professionals (medicine, management, and politics), possible mediators or moderators (intelligence, social characteristics)).

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