

VILNIUS UNIVERSITY

Antanas Kairys

**TIME PERSPECTIVE: ITS LINK TO PERSONALITY TRAITS, AGE,
AND GENDER**

Summary of the Doctoral Dissertation
Social Sciences, Psychology (06S)

Vilnius, 2010

The dissertation was prepared from 2006 to 2010 at Vilnius University

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The dissertation will be defended at a public meeting of the Council for Research in Psychology on September 24th, 2010 at 2 p.m. Location: room 304, Faculty of Philosophy.

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The summary of the doctoral dissertation sent out on August 24th, 2010. Full-text version is available at Vilnius University Library (Address: Universiteto 3, LT-01122, Vilnius, Lithuania).

VILNIAUS UNIVERSITETAS

Antanas Kairys

**LAIKO PERSPEKTYVA: SAŠAJOS SU ASMENYBĖS BRUOŽAIS,
AMŽIUMI IR LYTIMI**

Daktaro disertacijos santrauka
Socialiniai mokslai, Psichologija (06S)

Vilnius, 2010

Disertacija rengta 2006 – 2010 metais Vilniaus universitete

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Disertacija bus ginama viešame Psichologijos mokslo krypties tarybos posėdyje 2010 m. rugsėjo mėn. 24 d. 14 val. Filosofijos fakulteto 304 auditorijoje.

Adresas: Universiteto g. 9/1, LT-01513, Vilnius, Lietuva

Disertacijos santrauka išsiuntinėta 2010 m. rugpjūčio mėn. 24 d.

Disertaciją galima peržiūrėti Vilniaus universiteto bibliotekoje. Adresas: Universiteto g. 3, LT-01122, Vilnius, Lietuva

INTRODUCTION

Relevance of the topic. One of the most distinct characteristics of this newly begun 21st century is rapid and hardly predictable shift in many functional areas of the society. As proposed by M. Casstells (2005), T.H. Eriksen (2004), Z. Bauman (2007) and other modern sociologists, personal experience of time is one those areas where transformations are especially rapid. Individual's experience of psychological time attains novel and often unrecognizable characteristics, such as absence of slow, consistent, linear time; these characteristics being replaced by fast, non-directional, fragmentary, and unpredictable present time. It is widely agreed that all the above mentioned transformations in experiencing time affect human lives, and that more comprehensive research in this field is absolutely necessary. Nevertheless, as I. Boniwell and P. Zimbardo (2004) point out, the phenomenon of personal, psychological time still attracts very little attention in nowadays psychology and in other social sciences.

After conducting careful analysis of psychological time studies, it can be stated that this area of research has not been widely explored. Both previous and current research is mostly focused on the exploration of distinct parameters necessary for human functioning, such as reaction time (Spievak and Murtagh, 2009; Линяускайте, 1989), time perception (Avni–Babad and Ritov, 2003; Naatanen et al., 2004; Багдонас, 1985 et al.), time management and planning (Adams and Jex, 1999; Hellsten and Rogers, 2009), subjective (Bakševičius, 2000; Hale, 1993) or emotional (Parker, 2003) time experience, etc. Nevertheless, in recent decades, psychological time perspective (hereafter, TP) research has emerged. This topic became especially noticeable after the 90's when P. Zimbardo, considered as one of the most influential nowadays psychologists, and his colleagues started their research on TP.

Although attempts to understand this phenomenon can be dated back even to the beginning and middle of the 20th century (Lewin, 1936; Maurine, 1953, etc.), in Lithuania as well as in other countries, psychological TP studies are still making their first steps. Currently, no theoretical paradigm is extensive enough to serve well as a basis for further fundamental and applied research in this field. Today we have more questions than valid answers: starting from discussions about the conception of TP, the possible number of perspectives, TP's place among other psychological phenomena, to an attempt to predict and change human behaviour with the help of modifications in TP (Hall and

Fong, 2003; Zimbardo and Boyd, 2008). Hopefully, findings of this study will add some new data to TP research, thus contributing to the clarification of the conception of this underexplored phenomenon.

Back in 1986, in their analysis of TP research studies J. E. McGrath and J. R. Kelly mentioned over 200 definitions of TP (McGrath & Kelly, 1986, cit. pagal Boniwell and Zimbardo, 2004). Both from the above mentioned paper and from the analysis of subsequent research, two TP conceptions seem to emerge, each of them distinctively defining TP structure, development, and other characteristics. Researchers representing the first conception (e.g., Lennings and Burns, 1998; Seijts, 1998; Vazquez and Rapetti, 2006, etc.), understand TP as future time perspective, future orientation, future plans, or future goals. From this point of view, TP is usually seen as a cognitive or motivational construct, prone to change. Recently, the focus on merely future TP has been criticized as being too narrow (Zimbardo and Boyd, 1999). The main argument is the multidimensionality of the phenomenon. Therefore, the second conception of TP as a multidimensional construct is being developed (usually on a basis of Zimbardo 5 TP model). Researchers supporting this conception define TP as a state of mind and as a process “by which individuals automatically partition the flow of their personal experiences into psychological time frames of future, present, and past” (Harber et al., 2003, p. 256). As noted by P. Zimbardo and J. Boyd (1999; 2008), there is enough data to make an assumption about individual differences in TP, i.e., each individual can be characterized by all 5 TP’s, only manifesting differently; moreover, people tend to focus on one or another time perspective (past, present, future) and these tendencies seem to be relatively stable. As a construct, TP is often defined as an attitude (Zimbardo and Boyd, 2008), though some authors argue that TP is a „dispositional characteristic which influences individual choices, actions and decisions” (Luyckx et al., 2010, p. 240), thus, a personality trait (Gorman and Wessman, 1977, as cited in Boniwell and Zimbardo, 2004). The findings of our present study also provide some support and clarification of the latter TP conception.

Another underexplored topic concerns TP development in human life course. Again, the existing research is quite fragmentary, usually focused on a certain age group, e.g. adolescents (Vazquez and Rapetti, 2006; Worrell and Mello, 2007, etc.), college students (Harber et al., 2003; Zimbardo and Boyd, 1999, etc.), or adults (Brown and

Segal, 1996; Kahana et al., 2005, etc.). Research on TP encompassing several age groups is rather scarce – only a few studies report findings from cross-sectional comparisons (Cate and John, 2007; Fingerman and Perlamutter, 1993; Holman and Silver, 2005; Hultsch and Bortner, 1974; Nurmi, 1989 et al.) or from longitudinal research data (Cate and John, 2007; Holman and Silver, 2005; Luyckx et al., 2010; Nurmi, 1989). Even in this case, most attention is given to future time perspective, thus leaving other TP's unexplored. This study is an attempt to employ a wider perspective by composing our sample of both males and females representing 3 age groups. By doing so, we expect to contribute to the better understanding of this psychological phenomenon and certain its aspects, such as change in TP, change promoting factors, individual differences, etc.

Despite the wide consensus that TP is a fundamental phenomenon, reflecting in human behaviour, regulating it during the whole lifetime, and affected by social, family, cultural, and other factors (Boniwell and Zimbardo, 2004; Luyckx et al., 2010), research on the relationship between the above mentioned factors and TP is still lacking. In Lithuania no research studies at all have investigated it, whereas elsewhere it is also a rare topic. It should be noted that due to rapid changes in nowadays society, understanding the relationship between TP and certain social factors (such as, religiousness, alcohol consumption, smoking), family factors (number of marriages, number of children), or educational factors (academic achievement, school drop-out) becomes especially important.

Scientific novelty. In Lithuania it is the first attempt to conduct a comprehensive study on TP. Up to date only several studies aimed to measure certain separate aspects of TP, for example research studies conducted by A. Liniauskaitė (Liniauskaitė, 2007, 2005), Sondaitė's (2001, 2002) work on adolescent future orientation, cross-cultural research by T. Shirai and D. Beresnevičienė (2005), or dissertation by L. Bakševičius (2000), where subjective time experience (a topic very close to TP) is explored. It can be stated that in Lithuania this research area is not well developed yet, a certain share of research is aimed either at the development of Lithuanian versions of questionnaires (Liniauskaitė, 2007) or at the adaptation of foreign measurement instruments (Liniauskaitė and Kairys, 2009; partly, Shirai and Beresnevičienė, 2005). In this dissertation, an extensive analysis of TP is conducted, including the historical development of TP, change of TP models and conceptions, and an overview of the main

works on TP by researchers both from Lithuania and from other countries. The findings of our study reveal the peculiarities of TP in 3 adult age groups (young, mature, aged), consisted both of males and females, as well as links between TP, Big Five personality traits, and various socio-demographic characteristics.

Since we haven't found any empirical study attempting to justify the classification of TP as a particular mental phenomenon (e.g. as cognitive-motivational process, as an attitude, as a personality trait), in this dissertation, by the means of SEM, we aimed to develop a model that would enable us to examine the possibility to classify TP as a personality trait – at the theoretical level this possibility is discussed by several authors (Gorman and Wessman, 1977, as cited in Boniwell and Zimbardo, 2004; Luyckx et al., 2010, etc.). Our research findings support the above mentioned theoretical assumptions, i.e. TP seems to have its place in the structure of Five Factor model of personality traits. Thereby, these findings could serve as a basis for further fundamental TP (and partly, Five Factor model) research.

In this dissertation most attention is paid to the exploration of TP in adult age. We explored the peculiarities of TP in the following age groups: 18-23, 30-50, >60. As it has already been mentioned before, most of TP research is conducted in high-school or college student sample, whereas only several research studies have employed participants representing different age groups (Fingerman and Perlamutter, 1993; Hultsch and Bortner, 1974; Cate and John, 2007; Holman and Silver, 2005; Nurmi, 1989 ir kt.). And even in the latter case, the findings are quite fragmentary, as most of the studies focus on future TP only.

Practical implications. Although this dissertation is not directly practice-oriented, its findings have several sound practical implications, such as:

- If it was proven that TP can be placed in the structure of Five Factor model (our findings seem to support this assumption) the explanation of the role of TP in human behaviour would be substantially extended. The findings of this dissertation show that time perspective may be as much important as personality traits in predicting, for instance, alcohol consumption. Thus, professionals working with various prevention programmes should consider the peculiarities of their clients' TP. Moreover, taking into account that TP is relatively stable during

human life course, certain preventive, intervention-directed or training programmes could be revisited.

- Time perspective is closely intertwined with the organisation of human activities and scheduling them in time. Time perspective links human retrospective, present, and prospective life experiences. Learning to become aware of one's TP and to understand it is beneficial as it may help a person to organize his activities more efficiently, and to avoid situations defined as "lost time", "a waste of time" or alike.
- Finally, this study disconfirms popular myths about a TP "typical" to certain age group. For instance, it is often thought that young people are mostly oriented towards future, whereas our findings show that their dominant TP is the Present Hedonistic. Moreover, according to our study, orientation to the future tends to increase with age – contrary to the traditional view that it is a characteristic of young people. These findings have an important implication as they deny the stereotypes that are widespread in our society, and to certain extent, may help reduce stigmatization of the aged people.

Goal of the study: to explore the link between time perspective and personality traits in different gender and age groups.

Objectives:

1. To explore the relationship between time perspective and Five Factor model personality traits.
2. By the means of different statistical methods, to model a possible classification of time perspective as a personality trait in Five Factor model.
3. To evaluate the peculiarities of time perspective in different age groups.
4. To determine the peculiarities of relationship between time perspective and personality traits in different age groups.
5. To evaluate the peculiarities of time perspective in both gender groups.
6. To explore the link between time perspective and socio-demographic variables (work-, family-related, etc.).

7. To analyse the link between time perspective, personality traits, and behavioural variables (alcohol use, religiousness, subjective health rating).

Defended Statements:

1. Time perspective can be classified as a personality trait that is closely related to personality traits in Five Factor model.
2. Although time perspective mean scores in different age groups differ, the analysis of the relationship between time perspective and personality traits has shown that position in the distribution is unlikely to change, i.e., time perspective tends to stay relatively stable during the life course.
3. Personality traits can predict individual's behaviour in many areas. Time perspective has similar characteristics as personality traits; it is related to important behavioural variables (alcohol use, subjective health rating, religiousness).

METHOD

Two independent studies were carried out in order to accomplish the research goal and objectives stated above.

In **Study 1** (N = 636) the following research instruments were used: Zimbardo Time Perspective Inventory (ZTPI), Life Events Scale, Line Division Task, NEO Five Factor Inventory (NEO FFI), and socio-demographic questionnaire.

In **Study 2** (N = 153), in addition to ZTPI, NEO Personality Inventory-Revised (NEO PI-R) was used, measuring not only the five broad higher-order personality traits, but also the more narrow lower-order traits (facets) that stand lower in personality hierarchy. This instrument allowed for a more detailed analysis of the relationship between time perspective and personality traits. The respondents in this study did not participate in Study 1.

Respondents

The sample in Study 1 consisted of 636 respondents representing 3 age groups:

1. 18-22 age group (mean age 20.2, 56.5% female);
2. 30-50 age group (mean age 37.3, 65.3% female);
3. >60 age group (mean age 67.8, 60.1% female).

The sample in Study 2 consisted of 153 respondents 19-59 years of age (mean age 28.1, 79% female).

Measures

Zimbardo Time Perspective Inventory (ZTPI; Zimbardo and Boyd, 1999). The measure consists of 56 items divided into 5 scales: Past Negative (10 items), Present Hedonistic (15 items), Future (13 items), Past Positive (9 items), Present Fatalistic (9 items). Items are rated on a 5-point Likert-type scale.

Life Events Scale. A modified version was used, which is reported to register quantitative information better than other similar scales (Bakševičius, 2000; Shroots and Assink, 2005; Valickas, 1990; Кроник и Ахмеров, 2003). Respondents were presented with a grid, years marked on a horizontal axis, and emotional ratings of a life event (in a scale ranging from -10 to 10) marked on a vertical axis. Each respondent was asked to indicate 10 life events that he or she considered to be the most important, and to rate their emotional value. The following variables were distinguished: the number of past life events, the number of present life events, the number of future life events, the coverage of time perspective (in years), the mean value of future life events, the mean value of present life events, the mean value of past life events.

Line Division Task (Bakševičius, 2000) measures a subjective relative duration of past, present, and future time orientations. It supplements information collected with Life Events Scale described above. The respondents were asked to divide (drawing two bars) a 152 mm length line into 3 parts, reflecting correspondingly one's past, present, and future. The scores were counted by measuring the length (in mm) of each part of the line.

NEO Personality Inventory-Revised (NEO PI-R) (Costa and McCrae, 1992). This instrument was used in Study 2 in order to collect information about lower-order personality traits. Inventory consists of 240 items, divided into 5 scales. These scales measure the following 5 domains or higher-order factors: Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness. Each domain (scale) consists of 6 lower-order personality trait subscales, each consisting of 8 items. Items are rated on a 5-point Likert-type scale.

NEO Five Factor Inventory (NEO FFI). This instrument was used in Study 1. NEO-FFI is considered to be an instrument “that that provides a brief, comprehensive

measure of the five domains of personality) (Costa and McCrae, 1992, p. 11). It is an abbreviated 60-item version of NEO PI-R. The items are distributed into 5 scales (12 items each), measuring five major personality traits. Items are rated on a 5-point Likert-type scale.

Socio-demographic questionnaire. The questionnaire consisted of 21 items collecting socio-demographic information (such as respondent age, gender, job status, marital status, etc.)

Data analysis

Data was analysed using SPSS and Mplus statistical software. SPSS was used: to calculate descriptive statistics, to run intergroup comparisons (using Student t-test and ANOVA, including calculation of effect size), to run correlation analysis (by calculating Pearson and Spearman correlation coefficients), and to conduct exploratory factor analysis (method used: Principal Component Analysis, factor rotation: Varimax).

Mplus was used to test structural equation models: to conduct confirmatory factor analysis, and to explore the relationship between time perspective, personality traits, and other variables.

RESULTS

Validity of time perspective measures. Validity of the following time perspective measurement instruments was tested: Life Events Scale, Line Division Task (convergent validity), ZTPI (construct validity). From all the above mentioned instruments, only ZTPI had been previously tested for validity in a Lithuanian sample (Liniauskaitė and Kairys, 2009). Life Events Scale and Line Division Task correlations with ZTPI and socio-demographic variables (self-reported school success, smoking, alcohol use, subjective health rating) did not match theoretical assumptions. Therefore, these instruments (i.e. Life Events Scale and Line Division Task) were considered to be not valid enough and were excluded from the study.

ZTPI factor structure. The exploratory factor analysis revealed five clear factors. After conducting confirmatory factor analysis, several fit indices appeared to be below the acceptable level (CFI and TLI indices values <0.64). On the other hand, poor fit indices are reported to be a case in many ZTPI adaptations in different countries. Therefore, in our opinion, ZTPI structure still could be improved in the future.

Relationship between time perspective and personality traits. In order to accomplish this research goal and objectives, the relationship between time perspective and personality traits was explored. According to the results, a number of significant correlations between time perspective and personality traits exist (see Table 1).

Table 1. Correlations between time perspective and higher-order personality traits

	Study	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
Future time perspective	I	-0.145***	0.05	-0.121**	0.189***	0.659***
	II	-0.046	-0.053	-0.153	-0.009	0.671***
Past Positive time perspective	I	0.03	0.218***	0.048	0.244***	0.195***
	II	-0.011	0.163*	0.2*	0.163*	-0.03
Present Fatalistic time perspective	I	0.324***	-0.062	-0.114**	0.088*	-0.137**
	II	0.437***	-0.215**	-0.125	0.255**	-0.466***
Present Hedonistic time perspective	I	0.075	0.379***	0.342***	-0.134**	-0.192***
	II	0.061	0.534***	0.433***	-0.129	-0.261**
Past Negative time perspective	I	0.460***	-0.189***	-0.053	-0.108**	-0.162***
	II	0.606***	-0.319***	-0.182*	0.105	-0.288***

Note. *** Correlation statistically significant, $p < 0.001$; ** Correlation statistically significant, $p < 0.01$; * Correlation statistically significant, $p < 0.05$. NEO FFI and ZTPI were used in Study 1, NEO PI-R and ZTPI were used in Study 2.

Both research studies report positive correlations between Future TP and Conscientiousness ($r=0.671$; $p < 0.001$); Past Positive TP is positively correlated with Extraversion and Agreeableness; Present Fatalistic TP is positively correlated with Neuroticism and Agreeableness and negatively correlated with Conscientiousness. Increased score in Present Hedonistic TP relates to the increased scores in Extraversion and Openness to Experience, and to the decreased score in Conscientiousness. Past Negative TP is positively correlated with Neuroticism and negatively correlated with Extraversion and Conscientiousness.

Additionally, in Study 2 the relationship between TP and lower-order personality traits were explored.

As can be seen in Table 2, all time perspectives are related to personality traits, a number of correlations having at least average effect size ($r=0.243$), based on recommendations provided by J. Cohen (as cited in Volker, 2006). Some of the correlations are unusual high, its coefficients approaching or exceeding the value of 0.5. For instance, the correlation between Future TP and: Dutifulness ($r=0.481$), Achievement Striving ($r=0.642$), Self-Discipline ($r=0.599$), Deliberation ($r=0.507$); the correlation between Present Fatalistic TP and: Vulnerability ($r=0.471$), Competence ($r=-$

0.504), and Achievement Striving ($r=-0.488$); the correlation between Present Hedonistic TP and: Excitement-Seeking ($r=0.559$); the correlation between Past Negative TP and: Anxiety ($r=0.482$), Depression ($r=0.628$), Self-Consciousness ($r=0.491$), Vulnerability ($r=0.519$). Such correlation coefficients are usually found between very close phenomena only, such as between similar personality traits.

Table 2. Correlations between time perspective and lower-order personality traits

	Future TP (N=148)	Past Positive TP (N=151)	Present Fatalistic TP (N=151)	Present Hedonistic TP (N=147)	Past Negative TP (N=148)
N1 Anxiety	0.01	0.035	0.380***	-0.065	0.482***
N2 Angry Hostility	0.076	-0.003	0.238**	0.236**	0.352***
N3 Depression	-0.07	-0.095	0.384***	-0.08	0.628***
N4 Self-Consciousness	0.113	0.004	0.323***	-0.16	0.491***
N5 Impulsiveness	-0.190*	0.014	0.098	0.413***	0.137
N6 Vulnerability	-0.167*	0.004	0.471***	0.019	0.519***
E1 Warmth	-0.032	0.365***	0.046	0.392***	-0.01
E2 Gregariousness	-0.177*	0.072	-0.09	0.394***	-0.165*
E3 Assertiveness	0.053	0.003	-0.352***	0.288***	-0.295***
E4 Activity	0.132	0.032	-0.239**	0.351***	-0.282**
E5 Excitement-Seeking	-0.164*	0.131	-0.148	0.559***	-0.199*
E6 Positive Emotions	-0.027	0.168*	-0.260**	0.319***	-0.397***
O1 Fantasy	-0.390***	0.126	0.048	0.307***	-0.047
O2 Aesthetics	-0.071	0.204*	0.103	0.235**	0.042
O3 Feelings	-0.009	0.124	-0.051	0.3148**	-0.042
O4 Actions	-0.098	0.126	-0.172*	0.449***	-0.280**
O5 Ideas	0.179*	0.089	-0.338***	0.097	-0.193*
A1 Trust	0.087	0.221**	-0.011	0.118	-0.115
A2 Straightforwardness	0.017	0.016	0.114	-0.231**	0.011
A3 Altruism	-0.081	0.286***	0.242**	0.109	0.092
A4 Compliance	-0.044	-0.022	0.139	-0.326***	0.06
A5 Modesty	-0.014	-0.038	0.211**	-0.283**	0.199*
A6 Tender-Mindedness	-0.013	0.191*	0.305***	0.214**	0.178*
C1 Competence	0.314***	0.037	-0.504***	-0.068	-0.387***
C2 Order	0.420***	-0.022	-0.299***	-0.193*	-0.246***
C3 Dutifulness	0.481***	0.022	-0.169*	-0.096	-0.044
C4 Achievement Striving	0.642***	0.02	-0.488***	-0.099	-0.240**
C5 Self-Discipline	0.599***	-0.059	-0.410***	-0.215**	-0.276**
C6 Deliberation	0.507***	-0.111	-0.240**	-0.445***	-0.11

Note. *** Correlation statistically significant, $p<0.001$; ** Correlation statistically significant, $p<0.01$; * Correlation statistically significant, $p<0.05$.

Moreover, correlation coefficients obtained in this study confirm P. Zimbardo (Zimbardo and Boyd, 1999) assumptions about the peculiarities of different TP: Future TP is mostly related to lower-order traits in Conscientiousness domain, Past Positive TP relates to positive traits (Warmth and Altruism), both negative TP's (Present Fatalistic

TP and Past Negative TP) are related to negative traits (Depression, Anxiety, etc.), and Present Hedonistic TP is mostly related to the lower-order traits of Extraversion and Openness to Experience.

As it is pointed out in the introduction part, researchers' views on time perspective differ – different authors tend to classify it differently. For instance, time perspective can be understood as a cognitive-motivational process (Seijts, 1998; Gjesme, 1983; Lens and Moreas, 1994), as an attitude (Zimbardo and Boyd, 1999, 2008), or as a personality trait (Lens and Moreas, 1994; Gjesme, 1983; Zalecky, 1994). Two of these conceptions (time perspective as a personality trait, and as an attitude) were tested using SEM. The third possibility (time perspective as a cognitive-motivational process) was not tested because of lack of validity of the measures, based on this conception.

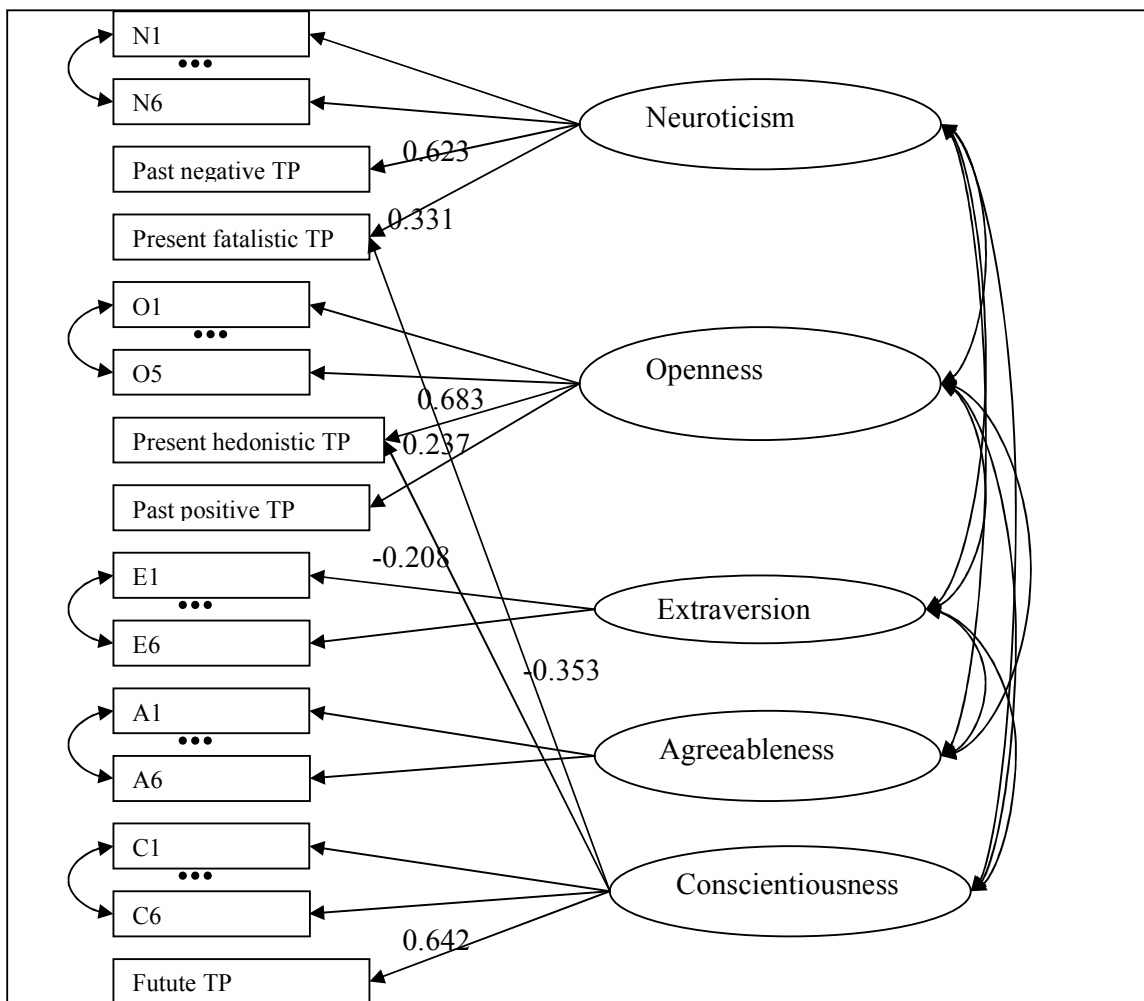


Figure 1. Model where time perspective is tested as a lower-order personality trait

Note. Considering the modification indices, correlations between certain lower-order traits were included in the model. In Figure 1 these correlations are presented only schematically.

In this case, if time perspective were a lower-order personality trait, it should fall into Five factor model factor structure (Figure 1). Based on both theoretical assumptions (Zimbardo and Boyd, 1999, 2008) and our findings on the relationship between time perspective and personality traits, Past Negative TP falls into Neuroticism factor, and Future TP – into Conscientiousness factor. Moreover, Present Hedonistic TP and Present Fatalistic TP were classified into two factors, correspondingly, Present Hedonistic TP – into Openness to Experience and Conscientiousness factors, and Present Fatalistic – into Neuroticism and Conscientiousness factors. Past Positive TP was classified into the Openness to Experience domain, referring the modification indices. Based on modification indices, correlations of residual errors were also added.

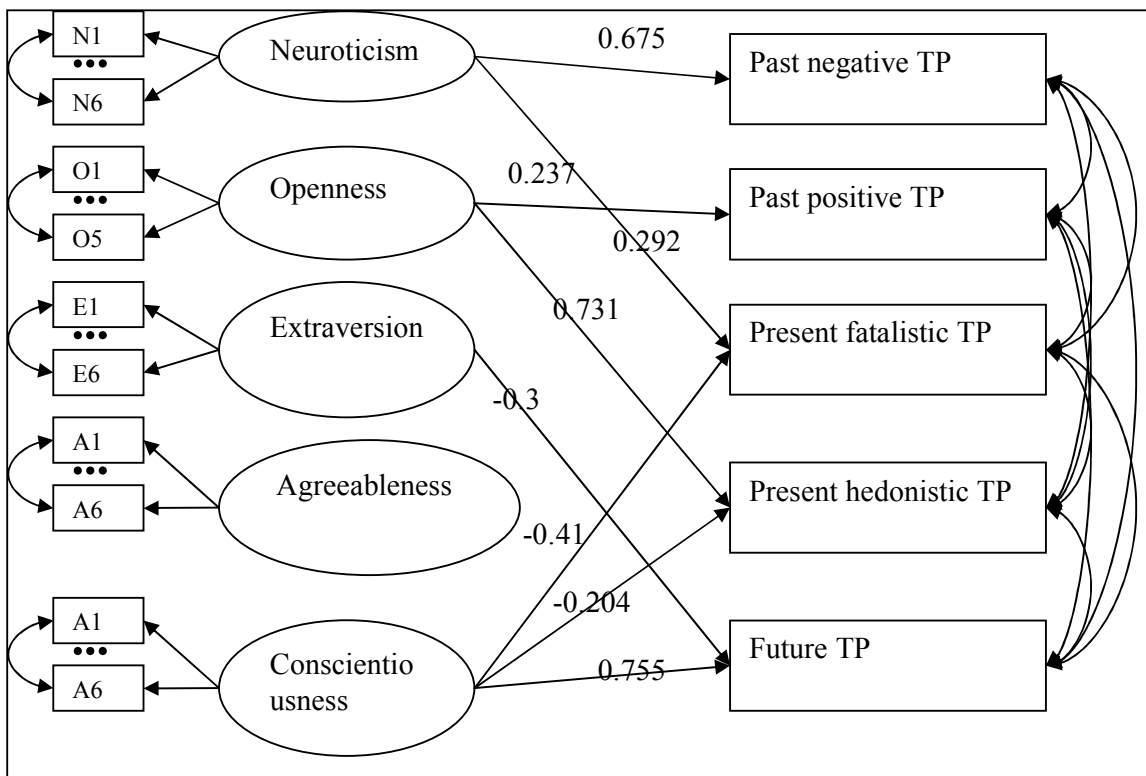


Figure 2. Model, where time perspective is tested as a characteristic adaptation (attitude).

Note. Considering the modification indices, correlations between certain lower-order traits were included in the model. In Figure 2 these correlations are presented only schematically.

In the latter case, if time perspective was treated as an attitude, referring Five factor theory (McCrae, 2005), it should belong to the level of characteristic adaptations, and respectively should be affected by personality traits.

Both models have satisfactory fit indices: although χ^2 is statistically significant, $\chi^2/df < 2$, RMSEA < 0.08 , and both CFI and TLI values approach 0.9. χ^2 difference test has shown that two models differ significantly ($\Delta\chi^2 = 41.45$; $\Delta df = 1$; $p < 0,001$). The first model, where time perspective was tested as a lower-order personality trait (see Figure 1) has better fit indices than the second model (see Figure 2) where time perspective was tested as an attitude.

The link between time perspective, age, and gender. According to our findings, all time perspectives are significantly correlated ($p < 0.05$) with respondent's age, but strength and direction of these correlations differ. Scores in Future TP, Past Positive TP, Present Fatalistic TP, and Past Negative TP tend to increase with age, whereas a score in Present Hedonistic TP tends to decrease in the older age group (Table 3).

Table 3. Correlations between time perspective and age

	Future TP		Past Positive TP		Present Fatalistic TP		Present Hedonistic TP		Past Negative TP	
	r	N	r	N	r	N	r	N	r	N
Age	0.280***	613	0.089*	616	0.304***	615	-0.306***	609	0.212***	619

Note. *** Correlation statistically significant, $p < 0,001$; * Correlation statistically significant, $p < 0,05$.

Time perspective score mean differences between males and females are provided in Table 4.

According to the results, gender differences exist in all time perspectives, with the exception of Past Negative TP. In all cases, female respondents score higher in TP. Based on these findings, it can be stated that gender is an important factor in time perspective.

Table 4. Time perspective score mean differences between male and female respondents

	Gender	N	M	SD	t	df	p
Future TP	Male	242	3.53	0.62	-4.34	611	0.000
	Female	371	3.74	0.58			
Past Positive TP	Male	243	3.43	0.56	-5.74	614	0.000
	Female	373	3.70	0.58			
Present Fatalistic TP	Male	239	2.69	0.59	-6.08	613	0.000
	Female	376	2.99	0.61			
Present Hedonistic TP	Male	241	3.13	0.55	-2.39	607	0.017
	Female	368	3.24	0.57			
Past Negative TP	Male	242	2.93	0.61	0.162	617	0.871
	Female	377	2.92	0.67			

Stability of the relationship between time perspective and personality traits in different age groups. A structural equation modelling was conducted for 3 age groups in order to determine whether the relationship between time perspective and personality traits is consistent at different age (for details, see Objective 4). It can be assumed that if correlations between TP and personality traits retain similar strength and direction in all 3 age groups, time perspective (similarly to personality traits) can be considered as a disposition that stays relatively stable during the life course.

In order to test the above mentioned assumption, a structural equation modelling was conducted in subsamples representing 3 age groups. A correlation matrix (provided in Table 1) was transformed into a path model. Furthermore, the following modifications were executed: 1) regression coefficients were used instead of correlation paths; 2) internal correlations of both time perspective and personality trait scales were additionally included in the model; 3) after testing the full model (with the above mentioned internal scale correlations included), several paths turned out to be statistically insignificant and were excluded from the model; 4) based on modification indices, new paths were included in the model.

At first, the model was tested in the full sample then analysis was conducted in 3 age groups separately (with all paths either free or fixed). The results are provided in Table 5.

Table 5. Model fit indices, testing for the relationship between time perspective and personality traits in different age groups

Model	χ^2	df	p	CFI	TLI	RMSEA	$\Delta\chi^2$	Δdf
Full sample	15.412	9	0.0802	0.994	0.977	0.033	-	-
Sample subdivided into 3 age groups, all parameters free	46.079	27	0.0125	0.982	0.931	0.058	-	-
Sample subdivided into 3 age groups, all parameters fixed	88.276	59	0.0081	0.973	0.952	0.048	42.197	32

Correlation-based and modified model tested in full sample has excellent fit indices. After testing the model in separate groups, χ^2 became statistically significant, RMSEA value exceeding 0.05, but still remaining acceptable (<0.08). Thus, this model fits our data well.

Furthermore, a χ^2 difference test was performed in order to check whether the model with fixed parameters differs significantly from the free parameter model. The critical value of χ^2 , $p < 0.05$ is 46.19 (df=32). After conducting the test $\Delta\chi^2=42.197$ ($\Delta df=32$), therefore, the fixed-parameter model does not differ significantly from the free-parameter model. In other words, it could be stated that the determined links between time perspective and personality traits are stable in different age groups.

To generalize, several arguments for placing time perspective among personality traits can be derived: 1) correlations between time perspective and Five factor model personality traits seem to be relatively high; 2) these correlations stay stable in different age groups; 3) finally, the model testing time perspective as a lower-order personality trait was significantly better than the model testing time perspective as an attitude. Regarding the above mentioned arguments, only those models where time perspective is set as a personality trait will be analysed further in the study.

The relationship between time perspective and behavioural variables. Time perspective was tested for the relationship with the following behavioural variables: subjective health rating, alcohol use and smoking frequency ratings, religiousness.

Subjective health rating was related to all time perspectives. Higher health ratings were associated with lower scores in Future TP ($r_s=0.085$; $p < 0.05$), Past Positive TP ($r_s=0.094$; $p < 0.05$), Present Fatalistic TP ($r_s=0.311$; $p < 0.001$), Past Negative TP ($r_s=0.351$; $p < 0.001$), and higher score in Present Hedonistic TP ($r_s=-0.159$; $p < 0.001$). It has to be noted though that some correlations are very low and could be incidental or

occurring due to correlations between the above tested and the other variables (such as the remaining socio-demographic variables or personality traits).

Alcohol use and smoking frequency ratings are related to the same time perspectives: higher scores in alcohol use and smoking are associated with lower score in Future TP ($r_s=-0.138$; $p<0.01$ for smoking; $r_s=-0.16$; $p<0.00$ for alcohol use), Past Positive TP ($r_s=-0.09$; $p<0.05$ for smoking; $r_s=-0.099$; $p<0.05$ for alcohol use), and higher score in Present Hedonistic TP ($r_s=0.172$; $p<0.001$ for smoking; $r_s=0.22$; $p<0.001$ for alcohol use).

Apparently, Future TP and Past Positive TP are related to more adaptive behaviour (lower scores in smoking and alcohol use), whereas the relationship between the above mentioned behavioural variables and Present Hedonistic TP are contrary.

The analysis of the relationship between time perspective and religiousness has revealed that scores in all time perspectives (with the exception of Past Negative TP) differ when groups of religious and non-religious respondents are compared. Religious respondents score higher on Future TP ($t=4.47$; $p<0.001$), Past Positive TP ($t=5.66$; $p<0.001$), Present Fatalistic TP ($t=3.98$; $p<0.001$), and score lower on Present Hedonistic TP ($t=-2.07$; $p<0.05$).

The relationship between time perspective, personality traits, and behavioural variables. In order to validate the assumption about close link between time perspective and personality traits, an additional analysis was conducted. By the means of structural equation modelling, the relationship between time perspective, personality traits, and behavioural variables (alcohol use, religiousness, subjective health rating) was tested. The above mentioned variables were chosen for two reasons: firstly, they are considered to be closely related to adaptive human functioning (that is, they are important per se); secondly, according to our previous analysis, these variables are correlated with time perspectives. Due to space limit, only one model (the relationship between TP, personality traits, and alcohol use, see Figure 3) is provided in this summary.

In the model provided in Figure 3 personality traits and time perspective are set as the same level inter-correlated variables all together affecting the frequency of alcohol use. In the model two personality traits and two time perspectives are associated to the frequency of alcohol use: Present Hedonistic TP (path coefficient 0.184) and

Extraversion (path coefficient 0.112) are associated to higher frequency of alcohol use, whereas Past Positive TP (path coefficient -0.14) and Conscientiousness (path coefficient -0.116) are associated to lower frequency of alcohol use.

The final model has excellent fit indices: $\chi^2=15.118$; $p>0.05$; $\chi^2/df<2$, CFI=0.997, TLI=0.988, RMSEA=0.02. Model fit indices in the remaining models (where subjective health ratings and religiousness were analysed) were also acceptable.

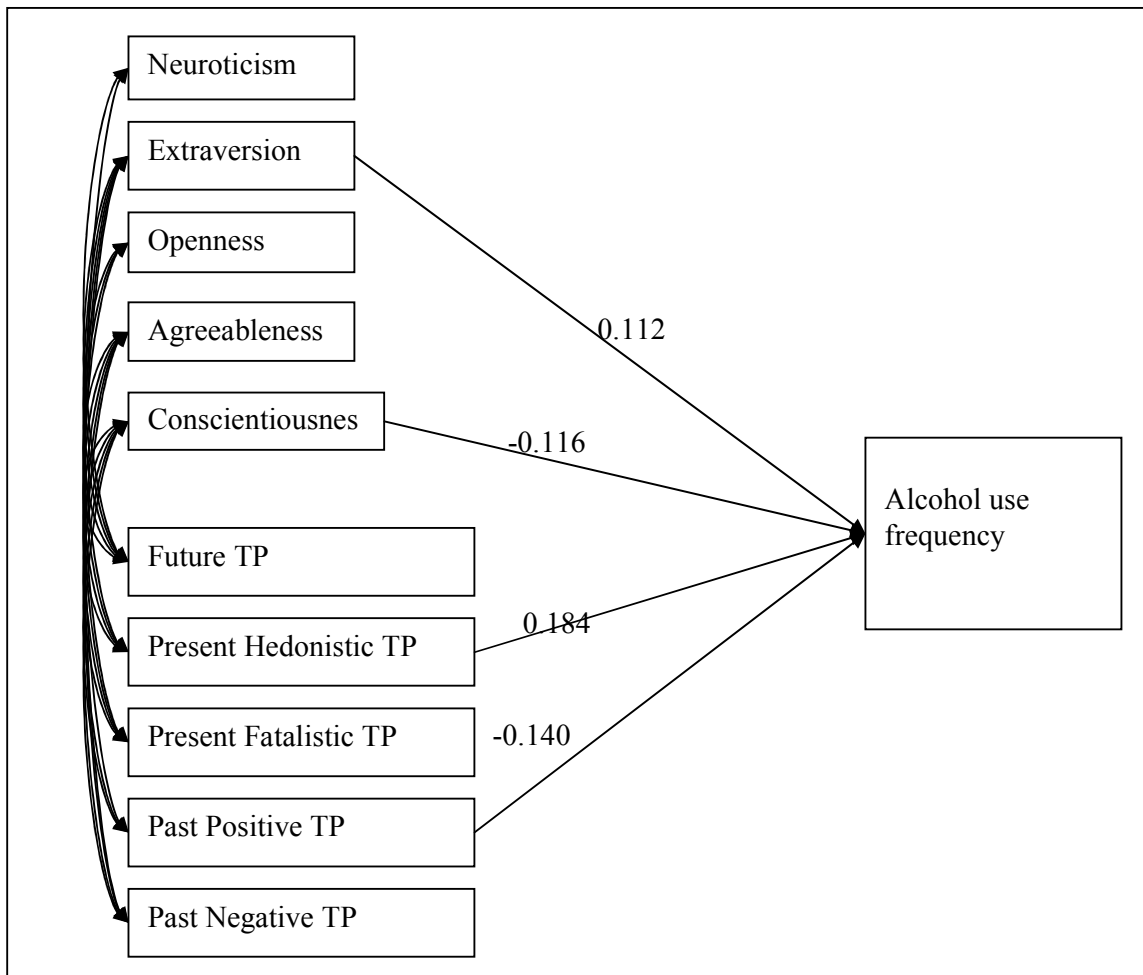


Figure 3. Model testing for the relationship between time perspective, personality traits, and alcohol use frequency when time perspective and personality traits are set as the same level variables

Note: the intercorrelations between time perspectives and personality traits are not provided

According to our findings, the models where time perspective and Five factor personality traits are set as the same level variables have acceptable fit indices. Therefore, it is not necessary to set time perspective as a characteristic adaptation level

variable and to test it as an attitude. The findings of our study support the assumption that time perspective is one of personality traits. Moreover, even when personality variables (which, as stated by McCrae (2005), are very broad and can predict human functioning in many areas) are included in the model, statistically significant relationship between time perspective and behavioural variables is retained. Apparently, time perspective provides additional information for prediction of human behaviour.

DISCUSSION

The main goal of our study was to explore the link between time perspective and personality traits in different gender and age groups. Findings of this study are beneficial in several ways: they serve for better understanding of time perspective as an underexplored phenomenon, for revealing its further research perspectives, and for the empirical support of a possibility to classify time perspective as a personality trait.

Based on the findings, substantial arguments for classification of time perspective as a personality trait can be derived:

- Time perspective and personality traits in Five Factor model are highly correlated; such correlations are found when correlating similar personality traits between themselves;
- Our data supports the assumption about individual differences in time perspective;
- It is plausible, that time perspective score is rather stable (i.e. rank order stability can be observed) during the human life course;
- Differences in time perspective occur between gender groups both in the full sample and in subsamples representing 3 adult age groups;
- Time perspective is related to important behavioural variables;
- Findings of this study add some data for the cross-cultural testing of P. Zimbardo's time perspective model.

TP satisfies the requirements that are set for personality traits. Definitely, additional research elaborating on this conception is necessary.

If proven that time perspective can be classified as a personality trait, a question arises – what is the place of time perspective in the Five Factor model of personality

traits? Time perspective may constitute a set of lower-order personality traits or may be treated as narrow personality traits (single trait or a group of traits). The findings of this study cannot provide an answer yet; in order to solve this dilemma, a further detailed research in this field is necessary. According to our data, the model testing for time perspective as a set of lower-order personality traits has rather acceptable fit indices. Nevertheless, it is more plausible that time perspective is a narrow personality trait, existing at the parallel level with the other personality traits in Five Factor model. When time perspective is placed among lower-order personality traits (as in the first case) different time perspectives fall into different personality domains and “disappear” there. Contrary to this conception, research data, obtained both in our study and in studies conducted by other authors, reveal that different time perspectives interact with human behaviour and, in most cases, it is not a single time perspective but the whole set of them that play a significant role (Zimbardo and Boyd, 2008). Therefore, it is reasonable to treat time perspective as a unitary construct.

Further on, the most important findings of this study will be discussed.

Relationship between time perspective and personality traits. Many research studies report high inter-correlations between similar personality traits (McCrae and Costa, 1999; McCrae, 2005), their coefficients reaching even the value of 0.77 (Costa and McCrae, 1992). Whereas correlations between personality factors and attitudes, values, identity-related variables and similar factors (which, according to Five Factor theory, belong to the level of characteristic adaptations in personality structure) are reported to be considerably lower. Their coefficients usually do not exceed 0.3 and only exclusively reach the value of 0.5 (Aluja et al., 2007; Fernandez and Castro, 2003; Lounsbury et al., 2007; Saroglou and Munoz – Garcia, 2008). In our study, several correlations between the five higher-order personality traits and time perspective reach even the value of 0.671. Therefore, it is plausible (as at least some correlations between TP and personality traits are very high) that these correlations reveal a relationship between two personality traits, and not a relationship between a personality trait and a characteristic adaptation (attitude) or a process which is even more distinct in nature from personality traits.

It is important to note that the two models where: 1) time perspective is set as a lower-order personality trait, and 2) time perspective is set as a characteristic adaptation

(attitude), are statistically significantly different. Model comparison supports better the idea that time perspective is a lower-order personality trait.

Stability of time perspective. If it were a personality trait, time perspective should be relatively stable. Is it true for time perspective? In this study we explored the differences in time perspective across three age groups. According to our findings, Future TP, Present Fatalistic TP, and Past Negative TP tend to increase with age, whereas Present Hedonistic tends to decrease. In all cases, substantial differences exist.

Similar results are obtained in many studies where data is collected using ZTPI. For instance, it is found that Present Hedonistic TP tends to decrease with age (D'Alessio et al., 2003; Zimbardo and Boyd, 1999; Сырцова и др., 2007) and, on the contrary, Future TP and Present Fatalistic TP tend to increase as a person gets older (D'Alessio et al., 2003; Diaz-Moralez, 2006; Zimbardo and Boyd, 1999; Сырцова и др., 2007). Finding similar age differences in TP across cultures would allow for a hypothesis that time perspective might be affected by universal socio-cultural or genetic factors. Genetic predisposition is emphasized when discussing the nature or personality traits (McCrae and Costa, 1995; McCrae, 2005). Increasing number of TP research studies should confirm or reject this idea quite soon.

Findings about the remaining time perspectives seem to be rather contradictory. For instance, no differences in Past Negative TP between different age groups are usually reported (Zimbardo and Boyd, 1999; Сырцова и др., 2007), whereas our findings revealed such differences between young and aged adults. Similar differences were found in another Lithuanian study conducted by A. Liniauskaitė and A. Kairys (2009). Since Past Negative TP reflects negative experiences in the past, our results might possibly be explained by complicated Lithuanian history and consequences of long-time traumas. Other possible explanations might be related to certain characteristics of the respondents (both in this study and the one conducted by A. Liniauskaitė and A. Kairys), which might have affected the occurrence of the above mentioned differences.

Thus, the stability of TP might seem questionable when differences in TP across different adult age groups are analysed. On the other hand, even in the case of personality traits, the so-called mean level variation is found when conducting cross-sectional comparisons. It is to note that stability of personality traits is usually reported in longitudinal research studies, and in this case, rank order stability is pointed out.

Equally as in the case of personality traits, the so-called mean level variation in TP is found. Does it mean that respondent's position in the distribution changes when compared to other peers (in other words, doesn't rank order stability occur in TP)?

In our opinion, stability of TP was, at least partly, explored in our analysis of the relationship between TP and personality traits in different age groups. If correlations between TP and personality traits didn't differ between 3 age groups, the assumption that TP (similarly to personality traits) is a relatively stable construct would be supported. Moreover, there is a possibility that TP variations across age groups are parallel as those of personality traits: if one of the components (personality traits) is stable, and the relationship between TP and personality is similar across all age groups, then it can be assumed that the other component (time perspective) is also rather stable. This assumption was supported in our study – no differences in the relationship between TP and personality traits were found across 3 age groups. Therefore, it can be concluded that TP is a rather stable construct or, at least, it has variations similar to those of personality traits. Nevertheless, in order to find a more sound empirical support for the above discussed results, longitudinal research should be conducted.

The link between TP and gender. According to our findings, gender differences exist in Future TP, Past Positive TP, Present Fatalistic TP, and Present Hedonistic TP. In all cases women show higher scores in TP. Past Negative TP is the single exception where no gender differences were found. Based on these results, it can be stated that gender is an important factor in TP. The results of our study differ from those obtained in other countries (Milfont et al., 2008; Zimbardo and Boyd, 1999) but they are consistent with the data obtained in ZTPI adaptation for Lithuania (Liniauskaitė and Kairys, 2009). These results could be explained by socio-cultural factors – it is plausible that gender differences in TP might be affected by certain socio-cultural variables, such as social roles, traditions, etc. In different subcultures different behavioural standards for males and females may exist and, in turn, it may affect TP (Сырцова и др., 2007).

The relationship between TP and behavioural variables. Our findings revealed the existing relationship between TP and the subsequent behavioural variables: subjective health rating, religiousness, alcohol use and smoking frequency (self-reported), etc. Our findings on the relationship between religiousness, alcohol use frequency, and smoking frequency are consistent with the results reported in other

studies (Apostolidis et al., 2006; Zimbardo and Boyd, 1999, 2008 ir kt.), whereas findings on the relationship between TP and subjective health rating differ from those reported by other authors (Brown and Segal, 1996; Zimbardo and Boyd, 1999, 2008 ir kt.). This difference might have occurred due to the methodology, as our respondents had to give a general rating of their health (i.e. it was measured by a single item).

The existing relationship between variables (between TP and alcohol use, subjective health rating, and religiousness) were additionally tested by structural equation modelling. This analysis had the following rationale: if the relationship between TP and behavioural variables stays significant even after including personality traits (which are considered to be very broad and “powerful” variables) in the model, then it could be stated that TP has substantial prognostic value in providing information about human behaviour which cannot be explained by Five Factor model personality traits. Our findings seem to support this argument.

To generalize the results of structural equation modelling, two conclusions can be drawn. Firstly, our findings suggest that, compared to personality traits, time perspective is a nonetheless important prognostic variable. Secondly, after testing the above discussed statistical models, additional support for time perspective as an equal personality trait is found: it can be the same level variable as personality traits and simultaneously be related to behavioural variables.

CONCLUSIONS

1. Time perspective is related to personality traits:
 - 1.1. Future TP is positively correlated with Conscientiousness.
 - 1.2. Higher scores in Present Hedonistic TP relate to higher scores in Openness to Experience, Extraversion, and lower scores in Conscientiousness.
 - 1.3. Present Fatalistic TP is positively correlated with Neuroticism and Agreeableness, and is negatively correlated with Conscientiousness.
 - 1.4. Higher scores in Past Positive TP relate to higher scores in Extraversion and Agreeableness.
 - 1.5. Past Negative TP is positively correlated with Neuroticism and is negatively correlated with Extraversion and Conscientiousness.

- 1.6. Statistically significant relationship between time perspective and lower-order personality traits support the theoretical assumptions about peculiarities of TP.
2. After comparison of two models where time perspective is set either as a lower-order personality trait or as a characteristic adaptation (an attitude), statistically significant difference was obtained. According to the model comparison results, a conception of TP as a lower-order trait received more support.
3. When comparing mean scores in TP across three age groups, scores in Future TP, Present Fatalistic TP, and Past Negative TP increase with age, whereas score in Present Hedonistic TP decreases.
4. No differences were found in the relationship between TP and personality traits across different age groups. Although in the course of time some individual variations in TP might occur, respondents keep the same relative position in the distribution. Otherwise, TP is relatively stable, having a stable rank order.
5. Gender differences in the subsequent time perspectives were found: Future TP, Past Positive TP, Present Fatalistic TP, and Present Hedonistic TP. In all cases women score higher in TP. No gender differences were found in Past Negative TP.
6. Time perspective is significantly related to the following behavioural variables:
 - 6.1. Positive health rating is related to lower score in Future TP, Past Positive TP, Present Fatalistic TP, Past Negative TP, and higher score in Present Hedonistic TP;
 - 6.2. The same TP's are related to alcohol use and smoking frequency: higher alcohol use and smoking frequency is related to lower score in Future TP, Past Positive TP, and higher score in Present Hedonistic TP.
 - 6.3. Differences between religious and non-religious respondents were found in all TP's, with the exception of Past Negative TP. Religious respondents score higher in Future TP, Past Positive TP, Present Fatalistic TP, and score lower in Present Hedonistic TP.
7. The results of structural equation modelling suggest that, compared to personality traits, time perspective is a nonetheless important prognostic variable. In addition,

time perspective could be classified as the same level variable as personality traits – it should belong to the domain of personality traits.

8. Findings of this study (based on structural equation modelling, analysis of the relationship between TP and personality traits, consistency of this relationship across different age groups) suggest that time perspective might be a personality trait.

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REZIUMĖ

Darbo aktualumas. Vienas ryškiausių neseniai prasidėjusio XXI amžiaus skiriamųjų bruožų – sparti ir sunkiai prognozuojama įvairių visuomenės funkcionavimo sričių kaita. Viena sparčiausiai kintančių – asmens išgyvenamas laikas, jis įgauna naujas, dažnai neatpažįstamas charakteristikas: dingsta lėtas, nuoseklus, linijinis laikas, jį keičia greitas, bekryptis, fragmentuotas, neprognozuojamas dabarties laikas. Visi šie laiko pokyčiai veikia žmonių gyvenimus ir veiklą, o jų pažinimui būtini išsamūs asmeninio, psichologinio laiko moksliniai tyrimai. Tačiau psichologijoje ir kituose socialiniuose moksluose šiai svarbiai reiškinii sričiai tenka minimalus dėmesys.

Atlikus išsamią psichologinio laiko tyrimų analizę, tenka konstatuoti, kad ši mokslinių tyrimų sritis nėra išplėtota. Ir anksčiau, ir dabar dažniausiai tyrinėjami atskiri žmogaus funkcionavimui reikšmingi laiko parametrai: reakcijos laikas, laiko suvokimas, laiko valdymas ir planavimas, subjektyvus ar emocinis laiko išgyvenimas ir kt. Kiek dažniau pastaraisiais dešimtmečiais imamasi psichologinių laiko perspektyvos (LP) tyrimų.

Tiek užsienyje, tiek Lietuvoje psichologiniai LP tyrimai tik prasideda, nors mėginimų ją suprasti būta jau XX a. pirmoje pusėje ir viduryje. Tačiau ir šiandien mes neradime nė vienos išbaigtos teorinės paradigmos, kuria remdamiesi šios problemos tyrėjai galėtų telktis fundamentaliems ir taikomiesiems tyrimams. Šiandien šioje tyrimų srityje – daugiau klausimų, nei pagrįstų atsakymų į juos: diskutuojama pradedant LP samprata, galimu perspektyvų skaičiumi, mėginimu rasti LP pagrįstą vietą tarp psichinių reiškinii, baigiant siekimais prognozuoti ir keisti žmogaus elgesį, pasitelkiant LP pertvarkymus. Todėl manome, kad mūsų tyrimo rezultatai papildo menką apie LP surinktų duomenų bazę, tuo pačiu prisideda prie mažai tyrinėto reiškinio sampratos konkretinimo.

Galime kalbėti apie dvi ryškėjančias LP koncepcijas, turinčias savo požiūrį į laiko perspektyvos struktūrą, raidą ir t. t. Pirmajai atstovaujantys autoriai LP supranta kaip ateities perspektyvą, orientaciją į ateitį, jie LP dažniausiai priskiria kognityvinės ar motyvacijos srities dariniams, kalba apie jos kintamumą. Tačiau pastaruoju metu vis dažniau pastebima, kad susitelkimas tik į ateities laiko perspektyvą – ribotas požiūris, todėl lygiagrečiai vystoma koncepcija apie LP kaip daugiakomponentį reiškinį

(dažniausiai naudojamos P. Zimbardo penkių LP modelių). Yra duomenų, leidžiančių kalbėti apie žmonių individualius skirtumus LP srityje: kiekvienam žmogui būdingos daugiau ar mažiau išreikštos visos penkios laiko perspektyvos; be to, kiekvienas linkęs susitelkti į vieną ar kitą laiko atkarpą (praeitį, dabartį ar ateitį), ir šis susitelkimas santykinai stabilus. LP dažniausiai priskiriama nuostatoms, tačiau kai kurie tyrėjai teigia, kad laiko perspektyva yra asmenybės bruožas. Mūsų tyrime taip pat rasta argumentų, kurie patvirtina ir patikslina šią LP konceptualizaciją.

Menkai ištyrinėta ir LP raidos žmogaus gyvenimo kelyje tema. Pasaulyje atliktos keli laiko perspektyvos tyrimai, kurių tyrimo dalyviai priklauso kelioms skirtingoms amžiaus grupėms, ar atlikti naudojant ilgalaikio tyrimo strategiją, tačiau jie yra fragmentiški, dažnai nagrinėja tik ateities laiko perspektyvą. Mūsų studija, apimanti abiejų lyčių trijų amžiaus tarpsnių asmenis, prisideda prie šio menkai tyrinėto psichinio reiškinių pažinimo.

Nors daugelis šios problemos tyrėjų akcentuoja, kad LP – tai fundamentalus, visame žmogaus gyvenime ir elgesyje atsispindintis ir jį reguliuojantis reiškinys, besiformuojantis socialinių, šeimos, kultūros ir kitų veiksnių įtakoje, pastarųjų sąsajos su laiko perspektyva ištirtos nepakankamai. Lietuvoje tai apskritai netyrinėta sritis, tuo tarpu užsienyje tokių tyrimų irgi reta. Manome, kad laiko perspektyvos sąsajų su kai kuriais socialiniais veiksniais nustatymas gali padėti geriau suprasti šią menkai tyrinėtą sritį.

Mokslinis naujumas. Lietuvoje tai pirmasis išsamus darbas LP srityje – iki šiol randama vienetai mokslinių tyrimų, kuriuose aptinkame vienokius ar kitokius laiko perspektyvos matavimus (galima paminėti A. Liniauskaitės, L. Bakševičiaus J. Sondaitės tyrimus). Šiame disertaciniame darbe pateikta išsami laiko perspektyvos problemos analizė: nuosekli istorinė raida, sampratų, modelių ir koncepcijų kaita, aptarti pagrindiniai šią problemą nagrinėjančių Lietuvos ir užsienio tyrėjų darbai. Nustatyti trijų amžiaus grupių suaugusiųjų (jaunų, vidutinio amžiaus ir senų) vyrų ir moterų laiko perspektyvos ypatumai, jų sąsajos su Didžiojo penketo asmenybės bruožais bei įvairiais sociodemografiniais kintamaisiais.

Kadangi iki šiol nepavyko rasti nė vieno empirinio tyrimo, kuriame būtų mėginama pagrįsti laiko perspektyvos priskyrimą konkrečiai psichinių reiškinių sričiai (kognityviniams – motyvaciniams procesams, nuostatoms, asmenybės bruožams),

disertacijoje struktūrinių lygčių modeliavimo pagalba patikrinta galimybė laiko perspektyvą laikyti asmenybės bruožu – apie tai teoriniame lygmenyje užsimena keletas šios srities tyrėjų. Mūsų tyrime gauti duomenys patvirtina šias teorines prielaidas, ir LP randa vietą Penkių asmenybės faktorių modelio struktūroje, todėl tai pagrindas tolesniems fundamentaliems laiko perspektyvos (dalinai ir Penkių faktorių modelio) tyrimams.

Disertacijoje daug dėmesio skirta laiko perspektyvos raidos suaugusiojo amžiuje ypatumams – jie išanalizuoti 18–23; 30–50 ir virš 60 metų amžiaus grupėse, tuo tarpu, daugelis iki šiol LP skirtų tyrimų atlikta su mokiniais ir studentais. Pasaulyje atlikti vos keli laiko perspektyvos tyrimai, kurių tyrimo dalyviai priklauso kelioms skirtingoms amžiaus grupėms.

Praktinė reikšmė. Nors ši disertacija nėra skirta tiesiogiai praktinių problemų sprendimui, ji turi ir akivaizdžią praktinę reikšmę.

Patvirtinus LP vietą asmenybės bruožų tarpe – disertacinio tyrimo metu gauti duomenys leidžia LP laikyti asmenybės bruožu – jo reikšmė asmens elgesio supratimui ir prognozei kinta. Disertacinio tyrimo duomenys rodo, kad laiko perspektyva turi ne mažesnę svarbą prognozuojant, pvz., alkoholio vartojimą nei asmenybės bruožai. Taigi, specialistams, dirbantiems prevencijos srityje, vertėtų atsižvelgti į tikslinės grupės asmenų laiko perspektyvos ypatumus, peržiūrėti dalį intervencinių, prevencinių ir tiesiog ugdymo programų, suvokiant santykinai didelį LP stabilumą žmogaus gyvenimo eigoje.

Laiko perspektyva glaudžiai susijusi su žmogaus veiklos organizavimu, jos planavimu laike. Laiko perspektyva – tai žmogaus retrospektyviojo, dabarties ir prospektyviojo gyvenimo jungtis. Mokymasis suvokti ir suprasti laiko perspektyvą gali padėti žmonėms geriau organizuoti savo veiklas ir išvengti situacijų, įvardijamų kaip „prarastas laikas“, „tuščiai sugaištas laikas“ ir pan.

Disertacijos duomenys griaua mitus apie tariamai jaunuoliams, suaugusiems ir seniems būdingas laiko perspektyvas: mūsų imtyje nustatyta, kad jauni žmonės labiau orientuoti į hedonistinę dabartį, o ne į ateitį, kaip dažnai teigiama; su amžiumi didėja orientacija į ateitį, kas tradiciškai laikoma jaunų žmonių ypatumu. Šie rezultatai gali prisidėti prie gajų visuomenės stereotipų griovimo ir vyresnio amžiaus žmonių stigmatizavimo mažinimo.

Tyrimo tikslas: nustatyti vyrų ir moterų laiko perspektyvos sąsajas su asmenybės bruožais skirtingais amžiaus tarpsniais.

Uždaviniai:

1. Išnagrinėti laiko perspektyvos sąsajas su Penkių faktorių modelio asmenybės bruožais.
2. Pasitelkus skirtingus statistinius metodus, modeliuoti galimą laiko perspektyvos priskyrimą asmenybės bruožams Penkių faktorių modelyje.
3. Įvertinti skirtingo suaugusiųjų amžiaus grupių asmenų laiko perspektyvos ypatumus.
4. Nustatyti laiko perspektyvos sąsajų su asmenybės bruožais ypatumus skirtingo amžiaus grupėse.
5. Įvertinti vyrų ir moterų laiko perspektyvos ypatumus.
6. Atskleisti laiko perspektyvos ryšius su kitais sociodemografiniais (darbo, šeimos ir kt.) kintamaisiais.
7. Išanalizuoti laiko perspektyvos ir asmenybės bruožų sąsajas su asmens elgesio kintamaisiais (alkoholio vartojimu, tikėjimu, sveikatos vertinimu).

Ginamieji teiginiai.

1. Laiko perspektyva yra asmenybės bruožas, tampriai susijęs su Penkių faktorių modelio asmenybės bruožais.
2. Nors skirtingo amžiaus grupių laiko perspektyvos vidurkiai skiriasi, sąsajų su asmenybės bruožais analizė rodo, kad asmens vieta skirstinyje greičiausiai nesikeičia, tai yra asmens laiko perspektyva išlieka santykinai stabili gyvenimo eigoje.
3. Asmenybės bruožai yra pajėgūs paaiškinti ir prognozuoti asmens elgesį daugelyje sričių. Laiko perspektyva pasižymi panašiomis savybėmis, ji susijusi su svarbiais asmens elgesio kintamaisiais (alkoholio vartojimu, sveikatos vertinimu, tikėjimu).

METODIKA

Atlikti du atskiri tyrimai.

Pirmame tyrime dalyvavo 636 dalyviai. Jie rinkti iš trijų amžiaus grupių: 18–22 metų, 30–50 metų ir per 60 metų. Naudoti šie tyrimo instrumentai: Zimbardo laiko

perspektyvos klausimynas (ZTPI), Gyvenimo įvykių skalė, Linijos dalijimo užduotis, NEO penkių faktorių inventorių (NEO FFI) bei sociodemografinis klausimynas.

Antrajame tyrime, siekiant detaliau išnagrinėti laiko perspektyvos ir asmenybės bruožų ryšius, pasitelktas NEO asmenybės inventorių (NEO PI-R), kuris matuoja ne tik „stambiuosius“, bet ir žemesnio lygmens asmenybės bruožus. Taigi, buvo panaudotas ZTPI ir NEO PI-R. Tyrime dalyvavo 153 žmonės, nedalyvavę pirmajame.

REZULTATAI IR IŠVADOS

1. Laiko perspektyva siejasi su asmenybės bruožais. Gauta nemažai santykinai stiprių ($r=0,5-0,67$) koreliacijų, nustatomų tik tarp artimų savo prigimtimi psichinių reiškinių:

1.1. Ateities laiko perspektyva teigiamai koreliuoja su sąmoningumu.

Labiau išreikšta hedonistinės dabarties laiko perspektyva siejasi su didesniu atvirumu patirčiai, ekstravertiškumu, bei mažesniu sąmoningumu. Fatalistinės dabarties laiko perspektyva teigiamai koreliuoja su neurotizmu ir sutariamumu, o su sąmoningumu koreliuoja neigiamai. Aukštesni balai pozityvios praeities laiko perspektyvos skalėje siejasi su labiau išreikšta ekstraversija ir sutariamumu. Negatyvios praeities laiko perspektyva teigiamai koreliuoja su neurotizmu, o neigiamai – su ekstraversijos ir sąmoningumo bruožais.

1.2. Nustatytos statistiškai reikšmingos sąsajos tarp laiko perspektyvos ir žemesnio lygmens asmenybės bruožų patvirtina teorines prielaidas apie laiko perspektyvos ypatumus: ateities LP daugiausia siejasi su sąmoningumo žemesnio lygmens bruožais, pozityvios praeities LP – su pozityviais bruožais (šiluma, altruizmu), abi neigiamos LP – fatalistinės dabarties ir negatyvios praeities – su negatyviais bruožais (depresyvumu, nerimu ir pan.), o hedonistinės dabarties LP – daugiausia su ekstraversijos ir atvirumo patyrimui žemesnio lygmens bruožais.

2. Laiko perspektyvos galimas priskyrimas konkrečių psichinių reiškinių grupei (remiantis teorinėmis prielaidomis – asmenybės bruožams arba nuostatoms) tikrintas struktūrinių lygčių modeliavimo pagalba. Modeliuojant laiko perspektyvą kaip žemesnio lygmens asmenybės bruožą

bei lyginant tai su modeliu, kur laiko perspektyva priklauso būdingų adaptacijų lygmeniui (kitai sakant, yra nuostata), gautas statistiškai reikšmingas skirtumas. Modelių palyginimas rodo, jog laiko perspektyva greičiau yra žemesnio lygmens asmenybės bruožas nei nuostata.

3. Vidurkių lyginimas skirtingo amžiaus suaugusiųjų grupėse parodė, kad su amžiumi didėja ateities, fatalistinės dabarties, negatyvios praeities laiko perspektyvų raiška, bet mažėja hedonistinės dabarties laiko perspektyvos raiška. Panašios LP skirtumų tendencijos nustatomos ir kitų autorių. Skiriasi tik negatyvios praeities LP pokyčiai su amžiumi, šie skirtumai gali būti nulemti istorinių visuomenės gyvenimo veiksnių.
4. Nerasta laiko perspektyvos ir asmenybės bruožų (santykinai stabilaus reiškinių) ryšių skirtumų trijose amžiaus grupėse. Tai reiškia, kad laikui bėgant vienos ar kitos asmens laiko perspektyvos balai gali kisti, bet jo santykinė padėtis kitų žmonių atžvilgiu nesikeičia. Kitaip sakant, nors laiko perspektyvai būdingi vidurkio lygio skirtumai, ji greičiausiai pasižymi rangų eilės stabilumu, kaip ir asmenybės bruožai.
5. Skiriasi vyrų ir moterų ateities, pozityvios praeities, fatalistinės dabarties, hedonistinės dabarties laiko perspektyvų įverčiai. Visos šios laiko perspektyvos moterų imtyje išreikštos labiau. Negatyvios praeities laiko perspektyvos įverčių skirtumų tarp lyčių nerasta. Tyrimo rezultatai leidžia kelti prielaidą, kad lyčių skirtumai gali sietis su sociokultūriniais veiksniais – vyrų ir moterų vaidmenimis, tradicijomis ir kt.
6. Tyrime gauta statistiškai reikšmingų laiko perspektyvos sąsajų su elgesio kintamaisiais:
 - 6.1. Pozityvesnis savo sveikatos vertinimas siejasi su mažiau išreikšta ateities, pozityvios praeities, fatalistinės dabarties, negatyvios praeities laiko perspektyva bei labiau išreikšta hedonistinės dabarties laiko perspektyva.
 - 6.2. Su alkoholio vartojimo ir rūkymo dažnumu siejasi tos pačios laiko perspektyvos: dažniau rūkantys ir vartojantys alkoholį nurodė tie tyrimo dalyviai, kurie pasižymėjo silpniau išreikšta ateities, pozityvios praeities bei stipriau išreikšta hedonistinės dabarties laiko perspektyva.

- 6.3. Nustatyta, kad skiriasi tikinčių ir netikinčių žmonių grupių visų laiko perspektyvų vidutiniai įverčiai, išskyrus negatyvios praeities laiko perspektyvą. Tikintys žmonės pasižymi labiau išreikšta ateities, pozityvios praeities, fatalistinės dabarties bei silpniau išreikšta hedonistinės dabarties laiko perspektyva.
7. Struktūrinių lygčių modeliavimo metodais gauti rezultatai rodo, kad laiko perspektyva yra ne mažiau svarbus prognostinis kintamasis, nei asmenybės bruožai, be to, laiko perspektyva gali būti to paties lygio kintamasis, kaip ir asmenybės bruožai – kitaip sakant, ji turėtų priklausyti asmenybės bruožų sričiai.
 8. Taigi, remiantis šiais ir kitais tyrimo metu gautais rezultatais (struktūrinių lygčių modeliavimu, sąsajų su asmenybės bruožais ypatumais bei šių sąsajų vienodumu skirtingo amžiaus grupėse), galima daryti išvadą, kad laiko perspektyva, tikėtina, yra asmenybės bruožas.

DOCTORAL STUDENT RESUMÉ

Antanas Kairys has studied psychology since 2000. He earned his Bachelor's degree in Psychology in 2004 and Master's degree in Psychology in 2006 at Klaipėda University. From 2006 to 2010 Antanas Kairys was a doctoral student at Vilnius University Department of General Psychology.

From 2004 to 2006 Antanas Kairys was a laboratory assistant at Klaipėda University Department of Psychology. From 2006 he has an assistant lecturer position at the same department.

Since 2004 Antanas Kairys has also been working as a psychologist at Manager.lt. And from 2009 he works as a lecturer at Vilnius University, and is a research assistant at the Laboratory of Special Psychology.

During his doctoral studies, Antanas Kairys has prepared several scientific publications, has presented the findings of his doctoral research at both international and local scientific conferences and seminars, has published his findings in popular science magazine, and has participated in a radio broadcast.

Moreover, Antanas Kairys was a member and a chief of the organising committee of the Conference of Junior Researchers in Psychology. In 2009 he was in charge of the publication of Conference proceedings.

Research interests: time perspective, personality psychology, social psychology

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TRUMPA INFORMACIJA APIE DOKTORANTĄ

Antanas Kairys psichologiją studijavo nuo 2000 metų. Klaipėdos universitete 2004 metais jam suteiktas psichologijos bakalauro laipsnis, 2006 m. – psichologijos magistro laipsnis. Nuo 2006 m. – VU Bendrosios psichologijos katedros doktorantas.

2004 – 2006 m. dirbo Klaipėdos universiteto psichologijos katedroje laborantu, nuo 2006 m. ten pat – asistentu. Nuo 2004 m. dirbo kompanijoje Manager.LT psichologu. Nuo 2009 m. dėsto Vilniaus universitete, dirba Specialiosios psichologijos laboratorijoje jaunesniojo mokslo darbuotoju.

Doktorantūros studijų metu Antanas Kairys parengė keletą mokslinių publikacijų, pristatė disertacijos tyrimo rezultatus tarptautinėse bei Lietuvos mokslinėse konferencijose bei seminaruose, mokslo populiarinimo leidiniuose, dalyvavo radijo laidoje. Buvo Jaunųjų

mokslininkų psichologų konferencijos organizacinio komiteto pirmininku ir nariu, 2009 m. – konferencijos leidinio sudarytoju.

Mokslinių interesų sritys: laiko perspektyva, asmenybės ir socialinė psichologija.

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