

TRAUMA EXPERIENCE, PSYCHOLOGICAL RESILIENCE AND DISPOSITIONAL OPTIMISM: THREE ADULT GENERATIONS IN LITHUANIA

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Epidemiological studies suggest that the vast majority of people experience at least one potentially traumatic event in their lifetime; however, severe posttraumatic stress symptoms affect only few of those ever exposed to trauma. This study has been aimed to find out whether trait resilience and dispositional optimism are associated with trauma experience and a probable Posttraumatic Stress Disorder (PTSD). A cross-sectional study was conducted, enrolling 300 Lithuanian adults of three different age groups. The Life Events Checklist (LEC), Trauma Screening Questionnaire (TSQ), Resilience Scale (RS-14), and Revised Life Orientation Test (LOT-R) were used to measure potentially traumatic events, posttraumatic reactions, psychological resilience, and dispositional optimism. Results of this study revealed a high prevalence of potentially traumatic events among its participants (95%). Nearly 7% of the total sample had probable PTSD. A significant moderate positive relationship was found between the resilience and optimism, $r(300) = .40, p < .01$. Optimism was negatively associated with PTSD symptoms, $r(214) = -.17, p < .05$; however, contrary to what was expected, there was no significant association between the trauma reactions and trait resilience.

Key words: trauma, PTSD, psychological resilience, dispositional optimism, RS-14, LOT-R, LEC.

Psychological resilience has attracted more and more interest of trauma researchers. Together with optimism, resilience may shed more light on the understanding of trauma, especially regarding the query as to why some people develop PTSD following a trauma while others do not. Epidemiological studies on trauma exposure and PTSD suggest that up to 70% (Darves-Bornoz et al., 2008) or even 89.7% (Kilpatrick et al., 2013) of people experience at least one potentially traumatic event in their lifetime. Estimates of the prevalence of traumatic events may vary according to the measures used, yet severe posttraumatic stress symptoms affect only a minority of those exposed to trauma (Breslau, 2002). The prevalence of PTSD over the period of one year, according to the European Study of the Epidemiology of Mental Disorders Survey ESEMeD, is 1.1% (Darves-Bornoz et al., 2008) or 4.7% according to the USA epidemiologic survey (Kilpatrick et al., 2013). Environmental, genetic, and personal characteristics are researched in terms of resilience to trauma (Connor, 2006; Wagnild, 2009). This article is aimed to analyse the associations among traumatic experiences,

psychological resilience, and dispositional optimism in three generations of Lithuanian adults.

Trauma prevalence in Lithuania

According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013), traumatic events involve serious injury, actual or threatened death, or sexual violation. A person may be exposed directly, witness such event, or learn that the traumatic event has occurred to a close one (in this case, the actual or threatened death must be violent or accidental). Traumatic event is a necessary trigger for PTSD, which causes a clinically significant impairment in the important areas of individual's functioning and is manifested in symptoms of re-experiencing, avoidance, negative cognitions and mood, and arousal (American Psychiatric Association, 2013). There have been no epidemiological trauma exposure and PTSD studies in Lithuania, but several studies have reported similar traumatic exposure rates in Lithuania and in other European countries.

A study of a nationally representative probability sample ($N = 183$) of Lithuanian teenagers (aged between 13 and 17 years) revealed that up to 80.2% of youngsters experienced at least one potentially traumatic event in their lifetime (79.8% of females and 80.7% of males) (Domanskaitė-Gota, Elklit, & Christiansen, 2009). The participants have been directly exposed (experienced or witnessed) to a mean of 1.9 events, and indirectly exposed (a person close to them experienced an event) to a mean of 2.4 events. The estimated PTSD prevalence rate in this sample was 6.1% (boys 2.4% and girls 9.1%) according to the Harvard Trauma Questionnaire-Part IV.

In another study of 179 Lithuanian young adults, 58.1% of participants have been exposed to traumatic events (Kazlauskas, Šimėnaitė, & Gailienė, 2007). The most common traumatic event was a sudden loss of a family member (49%). Participants specified that on average 43.4 ($SD = 41.2$) months have passed since they experienced the most traumatic event. A recent general population study in Lithuania ($N = 487$, aged between 18 to 80 years) revealed that 70.2% of participants (63.3% of females and 85.6% of males) experienced at least one potentially traumatic event in their lifetime (Kazlauskas & Zelviene, 2013). Among the most common traumatic events in this sample were: serious accident (car accident, accident at work or somewhere else) 27.7%; physical punishments or abuse in childhood 20.5%; being attacked, beaten up, or mugged 30.1%.

Trauma and resilience

Research on psychological resilience can be traced back to 1970s; nowadays, more and

more studies choose to analyze the strengths that lead to a good mental health despite all the difficulties persons can experience in their lifetime. There are many descriptions of resilience integrating biological, emotional, and psychological processes. In general, resilience is an ability to adapt successfully to adversities in life (Wagnild, 2009). There is a debate whether resilience is a human trait or a state – a reaction to the challenges of the environment. Growing research findings show both innate qualities and environmental interactions as important parts of resilience (Haglund, Nestadt, Cooper, Southwick, & Charney, 2007).

For decades, trauma research predominantly focused on psychopathology and the adverse effects of trauma on human psychosocial functioning, despite the low PTSD rates among those exposed to potentially traumatic events. Until recently, relatively little was known about resilience – “often the most common response to potential trauma” (Bonanno & Mancini, 2012, p. 77). Nowadays, resilience is viewed in different ways in trauma research. Some consider resilience as the absence of psychopathology after a severe traumatic event exposure. Others look at the dynamic resilient-resistant pattern of brief disruptions followed by a gradual return (Bonanno & Mancini, 2012). Another approach to resilience and its measurement is identifying a number of characteristics, such as the coping style, cognitive appraisals, social support, etc., that may reduce the likelihood of psychopathology (Hooberman, Rosenfeld, Rasmussen, & Keller, 2010).

Finally, resilience is also viewed as a characteristic of personal qualities that allow people “to grow and even thrive in the face of

adversity” (Connor, 2006, p. 46). This point of view represents resilience more as a trait; however, it acknowledges that resilience is too complex to be limited simply to a trait or a state, and that without a doubt a person’s resilience could be strengthened (Wagnild, 2009). Several studies have found a negative association between trait resilience and post-traumatic stress reactions (Ying, Wu, Lin, & Jiang, 2014), or trait resilience being a moderator between the potentially traumatic event and PTSD symptoms (Fincham, Altes, Stein, & Seedat, 2009).

For the current study, we have chosen to measure resilience with the Resilience Scale (Wagnild & Young, 1993) which was developed specifically to identify “the degree of individual resilience, considered a positive personality characteristic that enhances individual adaptation” (Wagnild & Young, 1993, p. 167). The scale was created based on the conceptual foundations from a ground-theory research (reflecting five characteristics of resilience: self-reliance, meaning, equanimity, perseverance, existential aloneness) and was first published in 1993 as the first instrument to measure resilience directly (Wagnild, 2009).

Traumatic experiences and optimism

Dispositional optimism refers to a way of approaching the world; optimists are “people who tend to hold positive expectancies towards their future” (Scheier, Carver, & Bridges, 1994, 1063 p.). Optimists not only expect positive versus negative outcomes, but they also tend to use more problem-focused and adaptive coping strategies, such as positive reinterpretation, seeking

social support, etc. (Scheier et al., 1994; Yehuda, Flory, Southwick, & Charney, 2006). The beneficial role of optimism for physical and psychological well-being is widely established in numerous of research studies. Also, optimism is considered to be one of the key elements in the personality construct of hardiness – a tendency to see challenges as opportunities for growth, which is associated with a lower risk of developing PTSD after a potentially traumatic event (Grasso et al., 2012; Yehuda et al., 2006). Hence, dispositional optimism is associated with resilience to trauma.

Indeed, research shows that optimism predicts better psychological responses to a potentially traumatic event. A study by Grasso et al. (2012) revealed significantly higher optimism of those exposed to trauma but without PTSD symptoms, compared to those with probable PTSD. Also, the control group of those non-exposed were significantly more optimistic than those with a probable PTSD. Similarly, Franzier et al. (2011) have found that more optimistic students experience lower levels of PTSD symptoms after a traumatic event. In another recent study, dispositional optimism was significantly associated with lower levels of PTSD symptoms after earthquake incidents in New Zealand (Kuijjer, Marshall, & Bishop, 2013).

Research also shows a significant relationship between optimism and posttraumatic growth. Some argue that these two are overlapping concepts; however, it is more likely that dispositional optimism promotes posttraumatic growth through the positive cognitive appraisals and more adaptive and problem-focused coping strategies (Prati & Pietrtoni, 2009).

For this study, we have chosen to use a revised version of the Life Orientation Test by Scheier et al. (1994) because of its good internal and test-retest reliability and convergent validity. This test is widely used to research the relationship between the exposure to potentially traumatic events, PTSD reactions, and resilience to trauma.

* * *

Despite the increasing research on trauma resilience, still there is a lack of studies analysing the role of trait resilience and dispositional optimism on individuals' post-traumatic reactions after traumatic events in the general population. We go further and analyse the link among trauma experience, psychological resilience, and optimism in a cross-sectional study of young, middle-aged and older Lithuanian citizens. We aim to find out whether trait resilience and dispositional optimism are related to trauma experiences and a probable PTSD.

Methods

Participants

In total, 300 Lithuanian citizens participated in this study. Participants were selected to represent three generations (first, born between 1983–1995; second, born between 1960–1972; and third, born between 1940–1953), 100 participants in each group. In total, the participant age ranged from 18 to 73 years ($M = 45.24$, $SD = 18.62$). The mean age for the youngest group was 21.95 years ($SD = 3.23$), for the middle group $M = 47.50$ ($SD = 4.05$), and for the oldest group $M = 66.26$ ($SD = 4.58$). Participants were selected to ensure the variety of different education levels and places of residence. There were 110 male (36.7%) and 190

(63.3%) female participants. In total, 44% were residents of major Lithuanian cities (Vilnius, Kaunas, Klaipėda, Šiauliai), 30% lived in smaller cities, and 25.7% of participants lived in villages and rural areas. The occupation of participants was distributed as follows: 53.7% were employed, 22.3% were studying, and 26.7% were retired. Two out of five participants (41%) had higher education. Almost a half of all participants (48.3%) were married.

Measures

The current study is part of a larger study, therefore participants filled in a battery of scales and questionnaires. Here, we present only the scales used for the current topic. The participants of the study also answered questions about their gender, age, place of residence, occupation, and marital status.

The Life Events Checklist LEC (Weathers et al., 2013) was used to assess participants' exposure to traumatic events. The LEC was developed at the National Center for PTSD concurrently with the Clinician Administered PTSD scale to aid in the diagnosis of PTSD. The psychometric properties of the LEC were examined in the undergraduate and veteran samples indicating that the LEC is a reliable and valid measure of trauma exposure and that it correlates well with the PTSD (Gray, Litz, Hsu, & Lombardo, 2004). The LEC consists of 17 potentially traumatic events. Answers about these events, showing those directly experiencing them ("Happened to me") or being a witness ("Witnessed it") counts as a traumatic experience. The sum of all answers about experiencing or witnessing traumatic events was used in this study. The scale was translated into Lithu-

anian language (translation by Skerytė-Kazlauskienė M., Vaskelienė I., Mažulytė E., Vilnius University, Department of Clinical and Organizational Psychology, 2013) after acquiring the authors' agreement. Additionally, participants were asked to select the most traumatic event they had experienced, and to indicate how long ago it had happened.

The Trauma Screening Questionnaire TSQ (Brewin et al., 2002) is a brief self-report measure of reactions to a traumatic event. We used the TSQ to measure the current traumatic reactions to the most traumatic events indicated by participants. The TSQ consists of 10 items measuring re-experiencing and arousal symptoms, adapted from the Post-traumatic Stress Disorder (PTSD) Symptom Scale (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993). It is designed to use for identifying individuals who are likely to be currently suffering from a PTSD. Six or more positive responses mean that a person is at risk of having a PTSD according to the DSM-IV (American Psychiatric Association, 1994) and requires a more detailed assessment. The questionnaire has been widely used in a number of research projects, including the survey of Adult Psychiatric Morbidity in England (2007) and as part of a programme to screen survivors of the 2005 London bombings, to identify those who required treatment (Brewin et al., 2008, 2010). The Lithuanian version of the TSQ was used in the study; the translation to Lithuanian was made with authors' permission (translation by Skerytė-Kazlauskienė M., Vaskelienė I., Mažulytė E., Vilnius University, Department of Clinical and Organizational Psychology, 2013). The Lithuanian TSQ version showed a high

internal validity in this study (Cronbach's $a = .84$).

The Resilience Scale RS-14 is a short version of the Resilience Scale (Wagnild, 2009), which was created to measure resilience directly and is based on the grounded theory research by Wagnild and Young (1993). The scale is used worldwide to measure resilience; various studies support the validity and reliability of the scale (Wagnild, 2009). Its short version consists of 14 items directed one way. Every participant is asked to indicate how they relate to each of the statements on a 7-point Likert scale. There are two anchor points in the Likert scale: 1 point "totally disagree" and 7 points "totally agree". For the score of the scale, the sum of the answers is counted; the bigger the score, the higher the resilience. The range of the answers was from 14 to 98. In this study, we used the Lithuanian version of the RS-14; its translation was made with the supervision of the author (translation by Mažulytė E., Skerytė-Kazlauskienė M., Eimontas J., Gudzevičiūtė G., Molienė I., Vilnius University, Department of Clinical and Organizational Psychology, 2013). The internal validity of the Lithuanian RS-14 version in this study was high (Cronbach's $a = .87$).

The Revised Life Orientation Test LOT-R (Scheier et al., 1994) was used to measure the dispositional optimism. The original LOT-R consists of 10 items. Only six of them are scored, and others are filler items. The Lithuanian version of the LOT-R was used in this study; its translation into Lithuanian was made with the permission of the authors (translation by Skerytė-Kazlauskienė M., Vaskelienė I., Mažulytė E., Vilnius University, Department of Clinical and Organizational Psychology, 2013).

In the Lithuanian version of LOT-R we left only those six items which are scored. Respondents indicated the extent to which they agreed with each item on a 5-point Likert scale which ranged from 0 (*strongly agree*) to 4 (*strongly disagree*). Of the six scored items, three are worded in a positive and three in a negative direction. After reversing the scoring for the negatively worded items, item scores were totalled to yield an overall optimism score with higher scores representing greater optimism. Cronbach's alpha of the Lithuanian LOT-R version in this study was .71.

Procedures

The survey was conducted by specially trained researchers. Every interview was carried out in a face-to-face manner with no more than five individuals at a time. Participants were recruited to reflect the main characteristics of age, gender, education, and residence of the population of three Lithuanian generations. Each participant was asked to fill out a battery that consisted of scales, questionnaires and, groups of questions described above. Every participant was informed about the purpose and the proceedings of the survey. They were also informed about their right to stop the procedure at any time. All participants gave a written informed consent. The research was approved by the Vilnius University Psychological Research Ethics Committee.

All data analyses were conducted using the IBM SPSS Version 20. Descriptive statistics and group differences were first examined by conducting Chi-square tests, independent samples t-tests, and one-way ANOVAs on the number of potentially traumatic events, PTSD symptoms, optimism, and resilience. Then, the hypothesized correlations of these variables were tested by conducting the Pearson correlational analyses. The Kolmogorov–Smirnov tests were used to assess the normality of all variables.

Results

Traumatic experience

Traumatic experience

The vast majority of participants (94.3%) reported having experienced or witnessed at least one potentially traumatic event from the Life Events Checklist. Only 17 respondents out of total 300 (5.7%) did not report any trauma exposure; 11.3% of participants indicated one traumatic event, 13% two different events, 21.7% experienced or witnessed three events, and 16.3% four events. Five or more different traumatic events were experienced by 32% of participants. The youngest group experienced or witnessed 3.81 traumatic events on average ($SD = 2.47$), the middle-aged group 3.79 ($SD = 2.48$), the oldest 3.83 ($SD = 2.37$). No significant difference among the age groups was found, $F(2, 297) = 0.01, p > .05$. Men have experienced or witnessed significantly more potentially traumatic events ($M = 4.60, SD = 2.42$) than women ($M = 3.35, SD = 2.32$), $t(298) = 4.42, p < .001$. However, no significant differences were found in the number of traumatic experiences according to participants' education level or the place of residence (city, town or village).

Participants indicated all types of potentially traumatic events on the LEC (see Table 1). The most often reported traumatic event was a sudden, unexpected death of someone close ($n = 176, 58.67\%$). The other most common events were: traffic accident

($n = 162, 54\%$), other kind of a very stressful event or experience ($n = 153, 51\%$), physical assault ($n = 129, 43\%$), serious accident at work, home ($n = 119, 39.67\%$), fire or explosion ($n = 105, 35\%$), life-threatening illness or injury ($n = 88, 29.33\%$). The rarest events were captivity (2%) and combat or exposure to a war-zone (2.67%). We have also asked participants to provide information on one event that was the most traumatic in their lifetime, and 163 participants (54.33%) chose one of the LEC events as the most traumatic experience (Table 1). Almost half of those who provided information on the most traumatic event indicated a sudden, unexpected death of someone close (24.67% of all 300 participants).

The oldest group reported more cases of a life-threatening illness or injury as compared with other age groups, $\chi^2(2, N =$

$300) = 6.31, p < .05$. Women experienced a severe human suffering more often than men, $\chi^2(1, N = 300) = 9.51, p < .01$. Also, women indicated witnessing traffic accidents more often than men, $\chi^2(1, N = 300) = 5.33, p < .05$; while men more often witnessed exposure to a toxic substance, $\chi^2(1, N = 300) = 5.34, p < .05$.

Participants specified the time since the most traumatic event between .08 to 68 months ($M = 14.34, SD = 14.36$). The mean time duration since the event differed significantly across all three age groups, $F(2, 158) = 25.0, p < .001$. The youngest group indicated more recent events as those most traumatic to them ($M = 4.31, SD = 3.79$), the middle-aged group indicated moderately distant events ($M = 15.35, SD = 11.66$), and the oldest group reported the most distant events ($M = 21.48, SD = 17.14$).

Table 1. Frequencies of potentially traumatic events experienced and witnessed (according to LEC) in different age groups

	Experienced			Witnessed			Total $N = 300$	Most traumatic $N = 300$
	Youngest $n = 100$	Middle-aged $n = 100$	Oldest $n = 100$	Youngest $n = 100$	Middle-aged $n = 100$	Oldest $n = 100$		
Natural disaster	8	11	5	6	6	4	40	5
Fire or explosion	9	15	17	18	22	24	105	9
Transportation accident	37	47	33	14	19	12	162	10
Serious accident at work, home or during recreational activity	27	18	33	14	16	11	119	7
Exposure to toxic substance	5	7	11	2	1	3	29	2
Physical assault	39	30	32	15	9	4	129	9
Assault with a weapon	14	6	7	5	1	1	34	1
Sexual assault	4	6	4	1	0	1	16	5
Other unwanted or uncomfortable sexual experience	11	8	5	2	0	1	27	2

	Experienced			Witnessed			Total N = 300	Most trau- matic N = 300
	Youn- gest n = 100	Middle- aged n = 100	Oldest n = 100	Youn- gest n = 100	Middle- aged n = 100	Oldest n = 100		
Combat or exposure to a war-zone	0	3	4	0	0	1	8	0
Captivity	2	1	2	0	0	1	6	0
Life-threatening illness or injury	13	17	33	10	9	6	88	7
Severe human suffering	28	23	39	15	14	8	0	10
Sudden, violent death	–	–	–	13	13	7	33	5
Sudden, unexpected death of someone close to you	39	48	61	10	9	9	176	74
Serious injury, harm, or death you caused to someone else	3	6	4	1	1	3	18	2
Any other very stressful event or experience	53	38	37	6	12	7	153	15

Only those participants who had specified the most traumatic event ($n = 214$) were asked to fill in the TSQ about their post-traumatic reactions related to this event; there were 65 participants from the youngest group, 70 from the middle-aged group, and 81 from the oldest group. Almost half of those who completed the TSQ (49.1%) did not report any PTSD symptoms and scored 0 points. Twenty participants scored

six or more points on the TSQ, indicating a probable PTSD, accounting for 9.35% of trauma-exposed participants and 6.7% of the total sample. Eight people with a probable PTSD were from the youngest group, four from the middle-aged and eight from the oldest group.

The mean TSQ score was 1.7 ($SD = 2.36$). There were no differences among the age groups, $F(2, 211) = 1.53$; $p > .05$

Table 2. The means of PTSD symptoms, psychological resilience, and dispositional optimism in different age groups

	Youngest			Middle-aged			Oldest			$F(df)$
	n	M	SD	n	M	SD	n	M	SD	
TSQ	63	1.84	2.48	70	1.30	1.98	81	1.94	2.55	1.53 (2, 211)
RS-14	100	72.79	12.53	100	76.55	10.28	100	74.93	11.75	2.66 (2, 297)
LOT-R	100	17.35	4.69	100	17.86	3.55	100	15.58	4.34	8.05 (2, 297)*

Note: TSQ, Trauma Screening Questionnaire; RS-14, short version of the Resilience scale; LOT-R, Revised Life Orientation Test. * $p < .01$, two-tailed.

(Table 2); however, women experienced significantly more PTSD symptoms ($M = 2.02$, $SD = 2.49$) than men ($M = 1.19$, $SD = 2.49$), $t(212) = -2.64$, $p < .01$. No significant differences were found in the TSQ scores regarding participants' education level or the place of residence (all $ps > .05$).

Resilience and optimism

The mean score of psychological resilience on the RS-14 was 74.76 ($SD = 11.62$), indicating a moderate resilience (Wagnild, 2009). The resilience of 23 participants (7.7%) was very low, of 28 (9.3%) it was low, of 68 (22.7%) on the low end, of 93 (31%) moderate, of 65 (21.7%) moderately high, and of 23 (7.7%) it was high according to the RS-14 categories (Wagnild, 2009). The mean score of dispositional optimism on the LOT-R was 16.93 ($SD = 4.32$). There were no significant differences in resilience among the age groups, $F(2, 297) = 2.66$, $p > .05$. On the other hand, the oldest group was significantly less optimistic than the other two age groups, $F(2, 297) = 8.05$, $p < .001$ (see Table 2). There were no gender differences in resilience or optimism; however, respondents from major Lithuanian cities (Vilnius, Kaunas, etc.) showed more optimism as compared with participants living

in smaller towns, $F(2, 296) = 3.30$, $p < .05$ (Tukey HSD, $p < .05$). Psychological resilience was not related to education, but there was a significant effect of the education level on optimism, $F(5, 291) = 3.23$, $p < .01$, participants with secondary education showing highest levels of optimism while participants with a college (but not university) degree showing the lowest levels of optimism (Tukey HSD, $p < .01$).

Trauma experience, resilience, and optimism

A moderate positive relationship between psychological resilience and dispositional optimism was found (Table 3), $r(300) = .40$, $p < .01$. Also, there were weak, yet significant, negative correlations between optimism and PTSD symptoms, $r(214) = -.17$, $p < .05$, and the time after the most traumatic event, $r(200) = -.20$, $p < .01$. More optimistic participants had less PTSD symptoms, and experienced the most traumatic event more recently. Participants' age was negatively associated with dispositional optimism, $r(300) = -.13$, $p < .05$: the older the participants were, the less optimism they had. Older people also indicated more distant events as the most overwhelming, $r(200) = .48$, $p < .01$.

Table 3. Correlations between the number of potentially traumatic events, time after trauma, PTSD symptoms, psychological resilience dispositional optimism, and participants' age.

	LEC	Time after trauma	TSQ	RS-14	LOT-R
Age	.01	.48**	.01	.10	-.13*
LEC		.11	.05	.02	-.07
Time after trauma			-.11	.07	-.20**
TSQ				-.12	-.17*
RS-14					.40**

Note: LEC, Life Events Checklist; TSQ, Trauma Screening Questionnaire; RS-14, short version of the Resilience scale; LOT-R, Revised Life Orientation Test. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

To analyse the relationship between trauma experiences, resilience and optimism further, we divided participants into three groups – those with high symptoms of PTSD (TSQ 5 points or more, $n = 26$), those without signs of any PTSD after a traumatic event (TSQ zero points, $n = 76$), and those having mild symptoms (TSQ 1 to 4 points, $n = 60$). Participants with a probable PTSD have been exposed to 4.62 potentially traumatic events on average ($SD = 2.30$), while the mean of potentially traumatic events for participants without PTSD was 4.09 ($SD = 2.21$); however, the difference was not statistically significant, $F(2, 159) = 0.54, p > .05$). Also, there were no significant differences in the time after the most traumatic event among the groups, $F(2, 157) = 2.33, p > .05$. No significant differences among the groups were found in their psychological resilience, $F(2, 159) = 1.86, p > .05$, although the group without PTSD symptoms showed the highest score on the RS-14 ($M = 76.99, SD = 11.83$), and the group with a probable PTSD showed the lowest score ($M = 74.69, SD = 12.34$). The only significant statistical difference was found among the groups in their optimism, $F(2, 159) = 3.17, p < .05$. The group without PTSD symptoms after a traumatic event was more optimistic ($M = 17.79, SD = 3.95$) than the group with a probable PTSD ($M = 15.50, SD = 3.82$).

Discussion

This study was intended to evaluate traumatic experiences, psychological resilience and dispositional optimism as well as the associations among them in three adult Lithuanian generations. We found an extremely high prevalence of potentially traumatic

events in the current study as compared with other Lithuanian sample studies (Kazlauskas et al., 2007; Kazlauskas & Zelviene 2013); however, it was the first time that the LEC was used in a Lithuanian sample. Other studies that estimate a similarly high rate of traumatic events (e.g., Kilpatrick et al., 2013) suggest that these estimates are highly sensitive to the measures used. The LEC includes some vague items such as “Severe human suffering”, “Any other very stressful event or experience”, that may lead to a very subjective and individual interpretation of traumatic events and eventually result in a high trauma prevalence rate. These events were reported quite often in our sample. Another weak point of the LEC is that the scale does not allow participants to indicate whether they were affected with the event in any way or not. This may also lead to the overestimation of trauma prevalence. As we have asked participants to specify the most traumatic event in their lifetime, 54.33% (the percentage of trauma-affected participants) represent a more realistic image of trauma prevalence in Lithuania and is consistent with other studies (Kazlauskas et al., 2007; Paris, 2000) showing numbers between 55% to 69%, as well as the result that men experience more potentially traumatic events than women.

Our participants have experienced on average 3 to 4 different potentially traumatic events in their lifetime, which is considerably more than the mean of 1.46 different traumatic events estimated in the Lithuanian general population study by Kazlauskas & Zelviene (2013). The limitations of the LEC, described above, may also explain the difference between these two studies. The most common traumatic event in our study

was a sudden, unexpected death of someone close. It was also most often mentioned as the most traumatic event, similarly as in the study by Kazlauskas et al. (2007).

The estimated prevalence of probable PTSD in our sample is consistent with other studies (Paris, 2000; Kilpatrick et al., 2013), showing 4.7% to 10.6% depending on the cut-off points used and the time after trauma. Also, our estimated rate is very close to the one reported in a representative Lithuanian teenager sample (Domanskaitė-Gota et al., 2009). Results of the current study support other findings that women experience more PTSD symptoms than men do (Kazlauskas et al., 2007; Kilpatrick et al., 2013).

The mean score of resilience RS-14 in our sample is similar to that in an original study by the authors of the scale (Wagnild, 2009); however, the results of the current study did not reveal any effect of gender or age. We think that the contradiction could arise from the sample differences, especially because of the small effects they found in the original study. On average, our participants according to the LOT-R scores were more optimistic than participants of other studies (Grasso et al., 2012; Scheier et al., 1994). There may be some cultural differences in terms of dispositional optimism, or specific features of the Lithuanian version of the LOT-R.

In consistence with other researches, we found a moderate positive relationship between the resilience and optimism (Wagnild, 2009). Contrary to our expectations, psychological resilience was not significantly associated with trauma experiences; however, participants with PTSD symptoms scored a little bit lower than those without PTSD symptoms after a traumatic exposure. On the other hand, optimism was negatively

associated with PTSD symptoms as expected. It is possible that the role of resilience in persons' reactions towards a traumatic event is not as straightforward as we thought; still, the limitations of the current sample size must be taken into account. Only 20 participants had a probable PTSD; therefore, the further research with a larger clinical sample is needed to be able to generalize the results. Connor (2006) states that cross-sectional associations in the area of trauma resilience studies can be difficult to interpret because of the complex notion of resilience itself. Therefore longitudinal studies are needed to provide a clearer understanding of how the trait of resilience works when a person is confronted with a traumatic event.

Limitations. Although we sought a diverse sample from the general population in terms of participant age, gender, education level and place of residence, still this was not a representative study, and conclusions about the Lithuanian general population should be drawn cautiously. The cross-sectional type of the study provided the opportunity to compare trauma experiences, psychological resilience, and dispositional optimism in different age groups. Nevertheless, longitudinal studies are needed to understand the role of resilience and optimism in the person's reactions after a traumatic event.

Notwithstanding these issues, we conclude that the prevalence of potentially traumatic events in Lithuania is high, with the vast majority of people being exposed to at least one potentially traumatic event in their lifetime and more than half of them experiencing such event as personally traumatic. The estimated rate of a probable PTSD is similar to that in other countries.

A significant association was found between dispositional optimism and reactions to trauma. Although the trait of resilience was highly associated with optimism, our study did not reveal a significant link between trauma and resilience.

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TRIJŲ KARTŲ LIETUVOS GYVENTOJŲ TRAUMINĖS PATIRTIES SĄSAJOS SU PSICHOLOGINIŲ ATSPARUMU IR OPTIMIZMU

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S a n t r a u k a

Epidemiologiniai tyrimai rodo, kad nuo 70 iki 90 % žmonių per savo gyvenimą patiria bent vieną potencialiai traumuojantį įvykį. Potrauminio streso sutrikimas (PTSS) pasireiškia tik nedidelei daliai jų – įvairių tyrimų duomenimis, nuo 1 iki 4,7 %. Tyrimuose ieškoma atsakymų, kas lemia, kad vieni asmenys yra atsparesni traumuojantiems įvykiams nei kiti. Šiame tyrime siekėme atskleisti ryšius tarp potencialiai traumuojančių įvykių patyrimo, psichologinio atsparumo ir optimizmo.

Metodika. Tyrime dalyvavo 300 tiriamųjų. Jie buvo atrinkti taip, kad atspindėtų tris Lietuvos gyventojų kartas (po 100 iš kiekvienos kartos: jauniausios – g. 1983–1995, vidurinės – g. 1960–1972, vyriausios – g. 1940–1953 m.) pagal lytį, išsilavinimą ir gyvenamąją vietą. Tyrime naudojome į lietuvių kalbą išverstas skales: *Life Events Checklist (LEC)* – gyvenimo

įvykių klausimą, *Resilience Scale* trumpąją versiją (RS-14) atsparumui matuoti, *Revised Life Orientation Test (LOT-R)* optimizmui matuoti, *Trauma Screening Questionnaire (TSQ)* PTSS simptomams įvertinti.

Rezultatai. Statistinė duomenų analizė atskleidė, kad dauguma (94,6 %) tiriamųjų per savo gyvenimą yra patyrę bent vieną potencialiai traumuojantį įvykį. Kliniškai reikšmingų PTSS simptomų paplitimas tyrimo imtyje yra 6,7 %. Tai atitinka kitų tyrimų duomenis. Gautas statistiškai reikšmingas teigiamas ryšys tarp optimizmo ir psichologinio atsparumo bei neigiamas tarp optimizmo ir PTSS simptomų. Tačiau, kitaip nei tikėtasi, psichologinis atsparumas nebuvo statistiškai reikšmingai susijęs su PTSS simptomais.

Optimistinis požiūris į gyvenimą susijęs su potrauminėmis reakcijomis ir psichologiniu atsparumu. Lieka neaišku, koks yra atsparumo kaip bruožo poveikis asmens reakcijoms po trauminio įvykio.