Psychological Resources of Resilience to Terrorist Threat

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**Abstract**

The article deals with the problem of determining the positive and negative factors of psychological resilience to the experience of the terrorist threat. The risk factors are psychopathological symptoms and signs of posttraumatic stress. Their presence presumably increases susceptibility to the terrorist threat. Resource factors are the components of psychological well-being and features of life prospects. The entire sample showed a negative relationship between the experience of the terrorist threat and positive factors and a positive relationship with risk factors. People who are resistant to the threat of terrorist attacks, report a lower level of psychopathological symptoms, higher estimate their psychological well-being.

They are more positive about their social relations, strive for greater autonomy, easier to cope with everyday tasks, have life goals and strive for self-development. Women experience more intense terrorist threat than men, they are less resilience to information about terrorism, more anticipate terrorist attacks and are therefore more stressed. A high level of anxiety is manifested in the motivational content of the life perspective: in women it is associated with concern for loved ones, and in men – with concern for their own lives and well-being. Age specificity was studied: respondents older than 35 years experience more intense terrorist threat, have more pronounced signs of stress and their level of psychological well-being is lower than that of younger age groups.

**Key words:** terrorist threat; experience of terrorist threat; resilience; psychological well-being; life perspective; motivation; psychopathological symptoms; posttraumatic stress.

**Psychological resources of resilience to a terrorist threat**

A lot of data about the stressful nature of the terrorist threat have been accumulated in psychology. Understanding the clinical and psychological consequences of experiencing the terrorist threat is necessary to develop effective strategies to reduce the negative effects of the threat of terrorism on the mental health. The most common psychological consequences of experience of this threat are stress reactions, depression, sleep disorders, increased consumption of psychoactive substances. The results of longitudinal studies of the consequences of terrorist attacks show that the intensity of post-traumatic symptoms caused by information about terrorist attacks, gradually reduced for most of society and remains in a special, vulnerable part of society (Welch et a1., 2016; Caramanica, Brackbill, Liao, & Stellman, 2014; Thoresen, Jensen, & Dyb, 2014; Neria et al., 2013). These studies have demonstrated the ability of people to maintain optimal levels of functioning in extreme conditions, as well as to recover from traumatic events. The search and study of resources that allow a person to cope with life's difficulties, to function effectively and succeed is an urgent task of psychology, since the life activity of modern man is forced to unfold in the conditions of the constant threat of terrorist attacks. Social and psychological resources (for example, social support, social skills, level of education and income) and individual psychological characteristics should be considered.

The experience of the terrorist threat can be considered as a model of a stressor, whose action is based not on the direct impact on a person, but on the perception of information about it presence (Tarabrina et al., 2007). To date, in Western psychology, concepts of psychological resilience are being actively developed in contrast to the study of vulnerability factors and negative psychological consequences of experiencing the threat of terrorist attacks. In Russian psychology, the term “resilience” was introduced into a wide scientific use by V.A.Makhnach in 2003. According to his definition, resilience is" the ability of a person to overcome adverse life circumstances with the ability to recover and use all possible internal and external resources, the ability to live in all its manifestations, based on the will to it" (Makhnach & Dikaya, 2016, p. 13). This definition is consonant with foreign concepts of resilience, according to which it means that a person has the ability to overcome negative circumstances, adapt to a situation of injury, to realize themselves and reach well-being despite the potential stress of living conditions (Mukherjee & Kumar, 2017). The theoretical significance of the concept of resilience in psychology is the generalization and understanding of empirical data on the adaptive functioning of a person in stressful circumstances of threatening influence.

Currently, most researchers tend to view resilience as a process rather than a stable personality trait (Mukherjee & Kumar, 2017). It is noted that the action of risk or protective factors alone is not sufficient to enhance or reduce a positive outcome. The specificity of resilience as a process is its dynamism, which consists in balancing between risk factors and protective factors. Risk factors do not automatically lead to negative consequences, their presence only exposes the person to the circumstances associated with a high probability of such consequences. Protective factors have positive potential, regardless of risk status. Protective factors mediate the impact of risk factors; reducing their impact on the individual in a situation of threat and helping him adapt successfully (Mukherjee & Kumar, 2017).

The construct of resilience still lacks a single definition. The difficulties of operationalization of resilience lead to the lack of a unified method for its study. As a deductive construct, resilience cannot be observed or measured directly, but a judgment of the level of resilience can be derived from the observed behavior of an individual or a living system that has experienced extreme impacts.

From our point of view, resilience can be assessed using the construct of psychological well-being, which was proposed by C. Ryff in the 1980s to denote the set of psychological characteristics that act as determinants of health and happiness. The theoretical model and its main components originate in the concept of positive mental health, formulated in the mainstream of humanistic psychology.

In our study, we consider the presence of psychopathological symptoms and signs of post-traumatic stress as risk factors that increase sensitivity to the terrorist threat. The components of psychological well-being can be considered as resources that support the resilience of the individual and help to overcome the negative consequences of the experiencing of terroristic threat.

The **aim** of this study is to examine the relationship of the terrorist threat experience with the components of the psychological well-being of the individual on the one hand and with the presence of psychopathological symptoms and signs of post-traumatic stress on the other.

**METHOD**

The following questionnaires have been used to attain the aim of the research:

1) The Scales of psychological well-being (SPW) (Ryff, 1989; adapted for Russia by Shevelenkova & Fesenko, 2005) is designed to assess the actual psychological well-being of a person. SPW consists of 6 dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance. The summation of points of all scales allows to get a general index of psychological well-being. The SPW is a widely used 84-item self-report measure of psychological well-being with well-established psychometric properties. Each item is rated on a 6-point Likert-type scale ranging from 1 to 6. The SPW has demonstrated excellent internal and test-retest reliability, in addition to strong convergent validity (Shevelenkova & Fesenko, 2005).

2) A scale of ‘Method of motivational induction (MMI)’ (Nuttin, 2004; adapted for Russia by Tolstyh, 2005) is aimed at studying the characteristics of the time perspective of the future. The blank contains 30 unfinished sentences (inductors: 20 sentences with positive wording ("I want...", "I dream...", etc.) and 10 negative sentences ("I don't want...", "I'm afraid that...", etc.). Inductors encourage people to write about their plans, goals, desires, intentions, etc. The answers of respondents are coded according to the system of codes: the code of content and temporal code. 10 categories are proposed for the analysis of the content of motivational objects: S (Self) , SR (Self-realization), R (Realization) , C (Contact), E (Exploration), T (Transcendental), P (Possessions), L (Leisure), Tt (Test), U (Unclassified). Temporal codes: categories of calendar time periods (T (Test), D (Day), W (Week), M (Month), Y (Year), categories of human social life periods (E (Education), a (Adult), O (Old)), additional categories whose temporal localization is difficult to establish (L (Life), l ("open present"), x ("historical future"). This questionnaire does not provide normative indicators and is used for qualitative analysis of the content and length of life prospects.

3) A questionnaire of ‘Prospect of my life’ (Misko & Tarabrina, 2004) allows to get the data of respondents views about the future life: emotional attitude; certainty and duration; social welfare; the role of personality about the future. The method includes 15 pairs of definitions of life prospects, including emotional, cognitive, goal-setting, etc. components. The indicator is obtained by summing up the scores of all points of the questionnaire. The extreme negative pole was assigned a value of 1, and the extreme positive – 7. The overall score reflects a tendency to assess the life perspective as a whole as pessimistic or optimistic (Misko & Tarabrina, 2004).

4) The Mississippi Scale (MS) (Kean, 1987, 1988) focuses on assessment of the severity of the symptoms of post-traumatic stress. The behavioral reactions and emotional experiences described in 39 items and grouped into several groups: obsessive memories, affective lability, various personal problems, etc. Each item is rated on a 5-point Likert-type scale ranging from 1 to 5. The Scale has one final indicator. It gives an overall assessment of the severity of post-traumatic reactions. The MS has good reliability and validity. The Cronbach’s alpha coefficient of the MS is 0.76 (Tarabrina et al., 2007).

5) Symptom Check List-90-Revised (SCL-90-R) (Derogatis et al., 1976) consists of 90 statements reflecting the presence of certain somatic and psychological problems. Each item is rated on a 5-point Likert-type scale ranging from 0 to 4. Evaluation and interpretation of the results is carried out on 9 main symptomatic sub-scales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism. There are three Global Scores: the Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), Positive Symptom Total (PST). The SCL-90-R has demonstrated high internal and test-retest reliability (Tarabrina et al., 2007).

6) The Questionnaire of the Terrorist Threat (QTT) (Byhovets & Tarabrina, 2010) assesses the intensity of the terrorist threat experience. The questionnaire is based on the three-component structure of the terrorist threat experience and includes the following scales: Anticipation, Resistance, Post-traumatic stress. It is important to note that the scale of Resistance is the reverse: the higher the value, the lower the resistance. The QTT consists of 50 items which have 5-point variable from 1 – “absolutely true” to 5 – “absolutely not”. The global index is obtained by summing up the scores of all points of the questionnaire and expresses the intensity of the subjective experience of the terrorist threat. Psychometric properties of the QTT are on satisfactory level (Byhovets & Tarabrina, 2010).

Sample

The participants of research were 301 residents (182 women and 109 men) of Moscow and the Moscow region aged 17 to 60 years. The sample was divided into three age groups. The youth group included 133 people aged 17-21 years - 80 female (mean age – 19.67) and 53 male (mean age -19.6). The respondents of this group were the students of higher educational institutes. The early adult group consists of people aged of 22-35 years and included 58 female (mean age – 26.72) and 50 male (mean age – 27.44). The third group included 60 respondents aged of 36-60 years – 44 female (mean age – 48.07) and 16 male (mean age – 51.94). The participants of the study older than 22 years were people of different professional backgrounds and different social status, who expressed their consent to participate in an individual survey. The study participants were never directly affected by the terrorist attack and had no relatives or closed friends who were injured or killed in the terrorist attack.

Data Analysis

Mathematical data processing was carried out using the computer program Statistica 8.0 and included the procedures of descriptive statistics, calculation of the correlation coefficients r-Spearman and Pearson-r, comparative analysis of groups of respondents using the criteria t-student (in the case of normal distribution) and U-Mann-Whitney (for distributions other than normal).

**RESULTS**

**Study of terrorist threat experience, psychological well-being and psychopathological symptoms in groups of respondents of different age and gender**

The main constructs used in the study were analyzed in groups of respondents with different age and sex.

**The experience of terrorist threat**

Statistical analysis of age differences in QTT indicators was carried out using the t-test for independent samples. The group of respondents of early adult age statistically significantly differed on the scale of "Stability" from the group of young adults (M1=33.64, M2=31.03, p = 0.008) and the group of middle aged adults (M3=34.88, p = 0.002), while the differences on this scale are not observed between the groups of early and middle aged adults (p = 0.308). Thus, resistance to information about terrorist attacks is higher in the group of early adulthood (22-35 age). With the exception of this scale, the youth and early adult groups have no statistically significant differences in QTT. The group of middle adult age is the most different in all indicators of the QTT (p < 0.05). Despite the fact that people of this age expect the new terrorist attacks in the future about the same as other age groups, they experience more symptoms of PTS (M1=29.59, M2=27.73, M3=32.60, p < 0.05) and are more intensely worried about the terrorist threat in general (M1=120.24, M2=116.81, M3=131.00, p < 0.05).

Thus, the experience of the terrorist threat is the most intense among older respondents. Compared to the group of early adulthood, the older group, in which women predominate in our study, may no longer feel the self-confidence that is inherent in young adults. In addition, such specific stressors associated with age, deteriorating physical condition, health problems and other circumstances that limit opportunities for older age, can increase sensitivity to threats.

Analysis of gender differences showed that all components of the terrorist threat experience have a higher level in the group of women (differences in the t-criterion are reliable at the level of significance p = 0.000 on all scales). Thus, women seem to experience a terrorist threat more intensively, which is expressed in the alarming expectation of new terrorist attacks, greater sensitivity to information about terrorist attacks and a higher level of post-traumatic stress reactions in connection with it.

**Psychological well-being**

A comparative analysis of age groups on psychological well-being using the t-criterion showed that the youth and early adult groups did not differ statistically in the level of expression of the components of psychological well-being (p > 0.05), except for the scale of "Goals in life". This scale is higher in the early adult group (M1=63.21, M2=65.44, p = 0.034). The senior group of respondents whose indicators of psychological well-being are significantly different from other groups in the direction of its decrease (p < 0.05) is singled out.

Sexual differences were found in the expression of the component of psychological well-being "environmental mastery" (the average value in the group of women M1= 56.97, in the group of men M2= 59.35, p = 0.015). Since the overall psychological well-being index does not differ significantly between men and women, it can be assumed that psychological well-being can be achieved in different ways. Thus, higher values on the scale of "environmental mastery" in men may indicate a greater importance of the business sphere of life, the importance of competence in the performance of activities.

**Life perspectives**

Table 1 presents data on the overall outlook for the future in the three age groups.

**Table 1.**

**Mean values and standard deviations of total score of PML in three age groups.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Youth group | | Early adult group | | Middle adult group | |
| M | σ | M | σ | M | σ |
| **PML** | 87.74 | 9.41 | 85.71 | 13.57 | 78.87 | 13.22 |

*Note. M-mean, σ - standard deviation*

In table 1 it is possible to trace a tendency to decrease of total score of PML with age. However, if the youth and early adult group differ little from each other in assessing their own life prospects, the older group has significant differences from them in the direction of reducing this indicator (according to the Mann-Whitney criterion, p < 0.05). Nevertheless, it should be noted that the values of the method in all age groups are at a fairly high level.

**Psychopathological symptoms**

Psychopathological symptoms were examined in our study using the methods of SCL-90-R and the Mississippi scale (MS), which assesses the severity of post-traumatic stress.

Similar to the previous results of comparison in the study of psychopathological symptoms of the study participants, a group of older respondents found differences from the other two groups in the level of severity of signs of post-traumatic stress (M1=73.77, M2=76.55, M3=82.88, p < 0.05). In addition, the severity of signs of PTSD is higher in women than in men (M1= 79.25, M2= 72.19, p = 0.000).

Comparison of groups by SCL-90-r indicators was carried out using Mann-Whitney U-test and did not reveal significant differences between groups. However, the data allow us to trace the general trend of lower values for all symptomatic scales of SCL-90-r in respondents of early adult age (from 22 to 35 years). In addition, the tendency of higher assessments of the components of psychological well-being was noted earlier. All this suggests that the group of early adulthood is the most resource in our study. The age of early adulthood allows a person to lead an active lifestyle, while young adults may already have a fairly high social status, providing them with various opportunities for the realization of their goals and desires, stable earnings, arranged personal and family life, etc., giving confidence in their abilities and the future.

The group of middle-aged people (from 36 to 60 years) has a lower psychological well-being compared to other age groups, as well as a tendency towards higher rates of negative psychopathological status and post-traumatic stress. However, it should be noted that in the interpretation of the results for this group, there may be some limitations related to the uneven representation of men and women. Thus, the prevalence of women in this group almost 3 times, does not allow to draw a conclusion about the differences of this group, due only to age. The distribution of indicators is likely to be influenced by sexual characteristics in the formation of psychological reactions to the terrorist threat, in the structure of psychological well-being, as well as in the level of stress reactions.

**Correlation analysis of terrorist threat experience, psychopathological symptoms and components of psychological well-being**

A correlation was established between the experience of terroristic threat and most components of psychological well-being. The results are presented in table 2.

**Таble 2.**

**Values of the Pearson-r correlation coefficients between the indicators of SPW and QTT methods in the whole sample (n=301)**

|  |  |  |
| --- | --- | --- |
| Scales of psychological well-being | QTT | |
| r | p-level |
| Positive relationships with others | -0.11 | 0.071 |
| Autonomy | -0.26\* | 0.000 |
| Environmental mastery | -0.24\* | 0.000 |
| Personal growth | -0.12\* | 0.044 |
| Purpose in life | -0.12\* | 0.038 |
| Self-acceptance | -0.13\* | 0.022 |
| Index of PW | -0.21\* | 0.000 |

Table 2 shows that there is a significant inverse relationship between the experience of the terrorist threat and almost all components of psychological well-being: "autonomy" (r = -0.26), "environmental mastery" (r = -0.24), "personal growth" (r = -0.12), "goals in life" (r = -0.12), "self-acceptance" (r = -0.13). The inverse relationship with the general index of psychological well-being (r = -0.21) is also established.

On the other hand, we obtained data on the association of experiencing the threat of terrorist attacks with negative risk factors presented in our study by indicators of PTSD and other psychopathological symptoms. It is shown that the intense experience of the terrorist threat is associated with all the indicators of the SCL-90-r (the values of the rs coefficients are in the range from 0.27 to 0.35 at the significance level of p = 0.0000) and a high level of PTS (rs= 0.44, p = 0.0000).

Thus, the overall sample showed the conjugation of resource factors on the one hand, and negative risk factors on the other. It is shown that the higher the level of psychological well-being, the lower the intensity of the terrorist threat and the lower the level of psychopathological symptoms and post-traumatic stress.

The assessment of the future prospects was not related to the intensity of the experience of the threat of terrorist attacks, but is positively related to all components of psychological well-being (the values of rs coefficients are in the range from 0.18 to 0.51 at the level of significance p < 0.002). It can be assumed that the assessment of their own prospects is not a resource in coping with stressors, but is the result of assessing the current level of well-being and its extrapolation into the future.

Further analysis took into account the age and sex characteristics of the respondents. In all age groups the correlation analysis of association between the total score of QTT and components of psychological well-being was carried out. The results of the analysis for the youth and early adult groups are presented in table 3.

**Table 3.**

**Values of r-Spearman correlation coefficients between indicators of WBS and QTT methods in youth (n=133) and early adult groups (n=108)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total Score QTT | | | |
| Scales of psychological well-being | Youth group | | Early adult group | |
| rs | p-level | rs | p-level |
| Positive relationships with others | -0.13 | 0.1333 | -0.10 | 0.2940 |
| Autonomy | -0.25\* | 0.0042 | -0.33\* | 0.0005 |
| Environmental mastery | -0.17 | 0.0523 | -0.37\* | 0.0001 |
| Personal growth | -0.09 | 0.2934 | -0.01 | 0.8953 |
| Purpose in life | -0.09 | 0.3127 | -0.11 | 0.2430 |
| Self-acceptance | -0.16 | 0.0645 | -0.18 | 0.0643 |
| Psychological well-being index | -0.18\* | 0.0400 | -0.24\* | 0.0116 |

In both groups, the experience of the terrorist threat has a statistically significant negative relationship with the general index of psychological well-being and the scale of "autonomy". In the group of early adulthood, the index QTT is also associated with a scale of "Environmental mastery ". It is possible that people of this age have a great responsibility, and a sense of competence and the ability to plan their own daily lives is more important for them to cope with various external threats.

In the older group, none of the parameters of psychological well-being is interrelated with the experience of the threat of terrorist attacks (p>0.05). Thus, in this group, the intensity of the terrorist threat experience is not related to the actual status of psychological well-being, i.e. to the general feeling of satisfaction/dissatisfaction with one's own life. However, respondents with a low level of psychological well-being are more likely to suffer from signs of post-traumatic stress, compared with psychologically prosperous representatives of this age. The result may be due to the fact that the older group in our study is the smallest and is represented mainly by women. In our previous studies (Tarabrina & Bykhovets, 2014) it has been shown that women are more worried about the terrorist threat, and have higher levels of posttraumatic stress, which in turn can cause low level of psychological well-being. Thus, the results of comparison of different age groups may be influenced by sexual differences.

To test this assumption, a correlation analysis of the variables studied in the groups of women and men was carried out. The results are presented in table 4.

**Table 4.**

**Values of r-Spearman correlation coefficients between indicators of WBS and QTT methods in groups of women (n=182) and men (n=119)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scales of psychological well-being | QTT | | | | | |
| Women | | | | Men | |
| rs | p-level | | | rs | p-level |
| Positive relationships with others | -0.17\* | | 0.0236 | | -0.16 | 0.0782 |
| Autonomy | -0.28\* | | 0.0002 | | -0.27\* | 0.0029 |
| Environmental mastery | -0.23\* | | 0.0015 | | -0.27\* | 0.0032 |
| Personal growth | -0.08 | | 0.2700 | | -0.20\* | 0.0343 |
| Purpose in life | -0.12 | | 0.0969 | | -0.15 | 0.1124 |
| Self-acceptance | -0.24\* | | 0.0011 | | -0.16 | 0.0907 |
| Psychological well-being index | -0.25\* | | | 0.0008 | -0.22\* | 0.0202 |

*Note. The sign \* indicates statistically significant correlation coefficients.*

In the group of women, the total score of QTT has a greater number of significant links with the components of psychological well-being. For both men and women, the threat of terrorist attacks is inversely linked to autonomy and environmental management. Apparently, in resilience to the experience of the terrorist threat in women is also more important the presence of warm relations with relatives and self-acceptance, while for men such importance is the scale of "Personal growth".

**Comparative analysis of the structure of psychological well-being and signs of stress in groups of respondents with different intensity of experience of terrorist threat**

Further analysis consisted in comparing the subgroups contrasting in terms of the intensity of the terrorist threat experience. Low and high scores on the total score of QTT were used as a criterion for the selection of subgroups. With this division, the group with a low intensity of experiencing the threat of terrorist attacks included those participants of the study, whose values of the total score of QTT are not less than ½ of the standard deviation below the average value, and in the group with a high intensity - those participants whose values of the total score of QTT exceed the average value of not less than ½ of the standard deviation. Thus, the group with a low level of experience of the threat of terrorist attacks included 96 people who scored by the QTT method from 53 to 108 points (Me=95.00). The group with high intensity of experience of terrorist threat is represented by 96 respondents who scored 134-188 points in the QTT (Me=148.50). Differences in the variables studied between the subgroups were analyzed using the Mann-Whitney U-test. The results are presented in table 5.

**Table 5.**

**Comparative analysis of the components of psychological well-being in groups with different intensity of experience of terrorist threat**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scales of psychological well-being | Me1 | Me2 | U | p-level |
| Positive relationships with others | 62.50 | 58.00 | 3719.500 | 0.0210\* |
| Autonomy | 61.00 | 54.00 | 2939.500 | 0.0000\* |
| Environmental mastery | 60.00 | 55.00 | 2988.500 | 0.0000\* |
| Personal growth | 63.00 | 60.00 | 3795.500 | 0.0348\* |
| Purpose in life | 65.00 | 62.00 | 3616.000 | 0.0010\* |
| Self-acceptance | 61.00 | 56.00 | 3275.500 | 0.0005\* |
| Psychological well-being index | 371.00 | 348.50 | 3119.000 | 0.0001\* |

*Notes. Me1 - the median value in the group with a low level of terroristic threat experience, Me2 - in the group with a high level of terroristic threat experience. The sign \* indicates statistically significant differences.*

Table 5 shows that respondents with a high level of terrorist threat experience have lower scores on all scales of psychological well-being: positive relations with others, autonomy, environmental mastery, personal growth, goals in life, self-acceptance. Their psychological well-being is generally lower than that of respondents with a low level of experience of terrorist attacks.

It should be noted that the values given in both subgroups correspond to the norms proposed by the authors of the method (Shevelenkova & Fesenko, 2005). Nevertheless, the results of the comparative analysis allow us to describe the differences between the subgroups. For example, respondents with a high level of experience of the terrorist threat are less capable of establishing close relations, more focused on the opinion of others in decision-making, lower assess their ability to resist social pressure. They are harder to perform daily activities and they often feel an inability to change or improve the conditions of life, and they are more likely to experience a feeling of powerlessness in managing the environment. These respondents are less satisfied with themselves, underestimate their strength and ability to overcome life's obstacles. In general, they are less satisfied with their lives than respondents with a low level of terrorist threat.

On the contrary, respondents who are more resistant to the terrorist threat demonstrate significantly higher rates of psychological well-being. These people are more satisfied with their relationships with others, more independent, they are able to control the circumstances and create conditions for achieving goals. They are more open to new experiences, positive about their past and have more goals for the future, on the way to which they feel a sense of continuous development and realization.

A comparative analysis of the intensity of psychopathological symptoms in the groups of respondents with high and low intensity of experience of the terrorist threat showed significant differences between them in all indicators of symptoms used in our study: they are higher in the group with a high level of experience of the threat of terrorist attacks. The results are presented in table 6.

**Table 6.**

**Comparative analysis of signs of psychopathological symptoms in groups with different intensity of terrorist threat experience**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Me1** | **Me2** | **U** | **p-level** |
| **SCL-90-r** | Somatization | 0.42 | 0.67 | 2990.500 | 0,0000\* |
| Obsessive-compulsive | 0.40 | 0.90 | 2605.500 | 0,0000\* |
| Interpersonal sensitivity | 0.56 | 0.89 | 3171.500 | 0,0003\* |
| Depression | 0.33 | 0.69 | 3042.500 | 0,0001\* |
| Anxiety | 0.30 | 0.70 | 2685.500 | 0,0000\* |
| Hostility | 0.33 | 0.67 | 3211.000 | 0,0004\* |
| Phobic anxiety | 0.00 | 0.29 | 2956.000 | 0,0000\* |
| Paranoid ideation | 0.33 | 0.83 | 2807.500 | 0,0000\* |
| Psychoticism | 0.10 | 0.40 | 2855.500 | 0,0000\* |
| Additional items | 2.00 | 4.00 | 2722.000 | 0,0000\* |
| **MS** | | 69.00 | 85.00 | 2093.500 | 0.0000\* |

*Notes. Me1 - the median value in the group with a low level of terrorist threat experience, Me2 - in the group with a high level of terrorist threat experience. The sign \* indicates statistically significant differences.*

**Study of the motivational and temporal characteristics of the life prospects**

Protocols of 223 respondents aged from 17 to 35 years (the average age of the sample – 23 years) were analyzed in the study of the features of life prospects. Participants were divided into subgroups according to age and gender. The youth group (17-21 years) included 121 people (average age – 19.66 years): 72 girls (average age – 19.74 years) and 49 boys (average age – 19.54). A group of early age adults included 102 respondents aged 22-35 years (mean age of 26.90 years): 57 women (mean age of 26.72) and 45 men (mean age 27.14). The smaller number of participants than in the previous stage is explained by the fact that some respondents refused to fill in the MIM methodology.

Table 7 presents the data of descriptive statistics of motivational and temporal categories of MIM (n = 223). The most common categories in the test subjects ' responses were motives related to self (S), social contacts (C), self-realization (SR), productive activity (R), and motives and goals formulated for other people (C3). J. Nuttin refers to the empirical study, according to which the most frequently mentioned categories in the content of motivation greater significance in the life of the subjects (on a group level) (Nuttin, 2004). The goals, desires, motives reported by the study participants are most often planned by them for the period of 1-2 years (Y) and for the first period of adult life (A1).

**Table 7.**

**Descriptive statistics of motivational and temporal categories of MIM in the whole sample (n=223)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Code** | **Name of category** | **M** | **min** | **max** | **σ** |
| **Categories of motivation content** | *S* | Self | 6.16 | 0 | 20 | 3.38 |
| *Spre* | Self-preservation | 0.98 | 0 | 6 | 1.21 |
| *Saut* | Self-autonomy | 1.62 | 0 | 14 | 1.89 |
| *SR* | Self-realisation | 3.06 | 0 | 12 | 2.54 |
| *R* | Productive activity | 3.61 | 0 | 19 | 2.76 |
| *C* | Social contact | 5.12 | 0 | 19 | 3.44 |
| *C3* | Motives towards other people | 2.15 | 0 | 12 | 2.08 |
| *C3H* | Wishes to all mankind | 0.79 | 0 | 6 | 1.27 |
| *E* | Education | 0.89 | 0 | 7 | 1.22 |
| *Tx* | Existential motives | 0.21 | 0 | 4 | 0.52 |
| *P* | Consumer motivation | 1.88 | 0 | 12 | 2.14 |
| *L* | Rest, entertainment | 1.96 | 0 | 27 | 2.65 |
| *Tt* | Motives related to the testing procedure | 0.09 | 0 | 5 | 0.48 |
| **Temporal categories** | *TDWM* | Near future (up to 1 month) | 2.04 | 0 | 28 | 3.05 |
| *Y* | 1-2 years | 5.39 | 0 | 24 | 5.19 |
| *A1* | The first period of adulthood | 5.70 | 0 | 21 | 5.36 |
| *A, AO, O* | Maturity, old age | 2.07 | 0 | 10 | 2.40 |
| *L* | All life ahead | 7.43 | 0 | 25 | 4.36 |
| *L* | "Open present» | 3.15 | 0 | 16 | 2.89 |
| *X* | Historical future | 0.54 | 0 | 5 | 0.98 |
| *X* | The period after the death | 0.03 | 0 | 1 | 0.16 |

In empirical studies were shown the dynamics of the content of motivation and the length of the time perspective of the future in time. Each stage of human development makes a qualitatively unique contribution to the development of the time perspective of the individual. Thus, it is shown that the content of time perspective differs in different age and sex groups (Tolstykh, 2010). This material was the basis for a more detailed analysis of the data obtained in our study, taking into account the age and gender of the respondents. Using the Mann-Whitney U-test, a comparative analysis of the studied parameters in different age and sex groups was carried out.

Comparison of age groups in all categories of responses in MIM did not show significant differences (p > 0.05): there is similar frequency of mention of motivational categories in both groups.

Statistically significant differences were found only for temporal parameters of future prospects. In the youth group, such plans and goals are more often indicated, the implementation of which should take place in the next 1-2 years (category Y) (M1 = 8.53, M2 = 1.68, U = 1225.50, p = 0.000). In the group of respondents of early adult age, plans relating to the period of the first half of professional career or adult life are more often indicated (M1 = 2.10, M2 = 9.98, U = 1093.00, p = 0.000). This result is due to the fact that for each age group this period is a relevant period of life: for the youth group this period is 1-2 years, which corresponds to the time of study in higher educational institutions (their average age is 19.66). The age of respondents in the middle group is 22-35 years, which corresponds to the beginning of adult life, designated by category A1. Thus, despite the statistical differences, we can say that there are no age differences: the periods of social life that are relevant for each age are more motivational.

Further analysis of the data was carried out without taking into account the age of the respondents. A comparative analysis of the responses to the MMI points of men (n = 94) and women (n = 129) revealed differences in the frequency of mentioning the following motivational and temporal categories of the questionnaire. So, women are more likely to write about the motives related to self-preservation (M1 = 1.09, M2 = 0.82, U = 4966.50, p = 0.014), achievement of personal autonomy (M1 = 1.89, M2 = 1.23, U = 4317.00, p = 0.000), self-realization (M1 = 3.47, M2 = 2.51, U = 4856.00, p = 0.010), productive activity (M1 = 3.83, M2 = 3.32, U = 5063.00, p = 0.034), social contacts (M1 = 5.92, M2 = 4.02, U = 3885.00, p = 0.000), wishes to others (M1 = 2.62, M2 = 1.51, U = 4232.00, p = 0.000) and knowledge (M1 = 1.07, M2 = 0.66, U = 4896.50, p = 0.008). Among the time categories of MMI women are more likely to meet the category of the beginning of adult life (M1 = 6.33, M2 = 4.84, U = 5019.00, p = 0.027), "open present" (M1 = 4.36, M2 = 1.49, U = 2435.00, p = 0.000) and the historical future (M1 = 0.63, M2 = 0.43, U = 5243.00, p = 0.038). Higher mean values for all indicators (higher frequency) in women can be explained by the greater openness and willingness of women to share their internal goals and desires compared to men. Indeed, women were more willing to participate in the study and expressed greater interest in answering MIM questions.

Thus, we found sexual differences and did not find age differences in the features of life prospects. In accordance with the research objectives, we carried out further analysis among respondents with high and low levels of experience of the terrorist threat separately in a group of women and in a group of men.

In each age group, subgroups with a high and low level of experience of the threat of terrorist attacks were identified in terms of the QTT methodology. In this division, the group with low values included those participants of the study whose values of the total score of QTT are not less than ½ of the standard deviation below the average value, and in the group with high values - those whose values of the total score of QTT exceed the average value of not less than ½ of the standard deviation. Protocols of respondents with an average level of experience of the threat of terrorist attacks were excluded from the analysis. Differences in the variables between the subgroups were analyzed using the Mann-Whitney U-test.

It is shown that women with a high level of terrorist threat experience (n = 43) are more likely than women with a low level (n = 41) to use category C3 in their responses (M1 = 1.98, M2 = 3.00, U = 617.00, p = 0.017). This category includes motivation in which the subject expresses his or her hopes, desires or concerns about others. The goals and motives formulated for other people contain a whole complex of experiences, feelings, desires, which the subject, for some reason, is difficult to talk about in the first person. In such statements, respondents often indicate anxiety and excitement about relatives and friends (for example, wishes such as "that my family was not sick", "that my children did not know grief", etc.). Where there is no real danger, such fears may mask anxiety and worry about one's own well-being. Statements of this type have the character of an attributive projection and are a consequence of the subject's perception of other people by analogy with themselves, attributing to them those qualities that are peculiar to him (Shlyapnikova, 2005). Thus, more frequent mention of this category in the responses of respondents with a high level of experience of the terrorist threat can be considered as a projection of their own concerns to other people due to the lack of personal reflection of their own experiences.

Comparison of men with high (n = 33) and low (n = 27) level of experience of terrorist threat made it possible to find a difference in the frequency of mentioning the category of Self-preservation: men with a high score in the QTT often report motivation associated with self-preservation (M1 = 0.56, M2 = 1.21, U = 323.00, p = 0.046). At the same time, the motives for the protection and preservation of the "Self" can refer to both the physical level (not to get sick, recover, stay healthy, etc.) and the psychological level – to protect or ensure internal balance, stability, psychological well-being. People who are prone to neurotic manifestations are afraid of anxiety, tension and want to be calm and relaxed. They want to be protected from criticism and neglect, or they are afraid that their plans and aspirations will not come true.

**Conclusion**

Modern scientific psychology has accumulated extensive theoretical and empirical material that testifies to the stressful nature of the information impact of terrorism on society. Therefore, a natural direction of research development was the theoretical and empirical study of the factors contributing to the increase of people's resistance to the extreme impact of the terrorist threat. This is consistent with the overall interdisciplinary trends in psychology to the treatment of the attention of researchers on the positive aspects of life, the development of models, including resource and protective factors, in contrast to the studies of vulnerability.

Modern social, political, economic, etc. circumstances force a person to make significant efforts to protect themselves and their loved ones, to achieve stability in everyday life, and at the same time maintain a sense of harmony, well-being, and happiness. The terrorist threat, of course, contributes to the creation of a general negative background of uncertainty for the future, but it is in such conditions that the life of an ordinary citizen of a modern metropolis is realized. This is confirmed by the data obtained in our study that regardless of the level of experience of the terrorist threat, people tend to be optimistic about their future. In other words, most people find the strength to cope with everyday and intense stress and continue to live, plan their future and hope for the best.

It has already been shown that increased anxiety is the predictor of intense experience of the threat of terrorist attacks. In the context of this study, anxiety was considered as one of the characteristics of the emotional sphere of the person, which determines his or her ability to adequately assess the reality of the terrorist threat. Accordingly, the experience of the terrorist threat was seen as a specific anxiety (Bykhovets & Tarabrina, 2010).

The level of psychological well-being (or distress) may indicate a degree of satisfaction with the need for security. "The theoretical and empirical study of the phenomenon of psychological well-being shows that it can be rightly attributed to such integrative characteristics that have close links with the subject's signs of negative affectivity and, consequently, affect the level of mental health" (Zhuravlev & Tarabrina, 2012, p. 9). In our study it was shown that the experience of the terrorist threat is negatively correlated with most of the components of psychological well-being (positive relationships with others, autonomy, environmental mastery, personal growth, goals in life, self-acceptance). On the other hand, this experience is associated with a high level of psychopathological symptoms and signs of post-traumatic stress. Thus, the reduction or absence of internal protective resources negatively affects the overall resilience of the individual, increasing his sensitivity to various threats. The experience of the terrorist threat in this case can be considered as a model of a special kind of stressors invisibly presented in the life of society and forcing people to correlate their life activity with a subjective assessment of the probability of suffering from this stressor.

The data obtained in previous studies (Tarabrina & Bykhovets, 2014) on the age and sexual specifics of the terrorist threat experience were confirmed in the present work. The present study shows that the group of respondents of early adulthood (from 22 to 35 years) seems to be the most optimally functioning in terms of resilience. This group has a higher psychological well-being, less psychopathological symptoms and less intense experience of the terrorist threat than other age groups.

We also obtained data on the differences in the content of motivation of respondents with a high and low level of experience of the threat of terrorist attacks. In this regard, it is interesting to study the linguistic predictors of PTSD symptoms after the events of September 11. The authors of this study showed that the use of certain words by the participants of the study (who were not directly affected in the terrorist attacks) in describing the memories of how they first heard about terrorist attacks, affects the subsequent psychopathological symptoms. The use of more emotional (r = 0.63), religious (r = 0.60) and death-related words (r = 0.41) in stories about their memories after a short period of time (about 1 week) was significantly associated with the onset of PTSD symptoms 5 months later. The use of the words for his own anxiety, at the first examination was associated with lower levels of PTSD when re-examination. Thus, people who are open to discussing their anxiety provoked by terrorist attacks can thereby reduce their symptoms (D'Andrea-Merrins et al., 2006).

The projective mechanisms of protection were examined in the study of identifying with the victims of the sniper attacks in Washington. In this work were studied the relationship of the signs of PTSD and symptoms of depression with different types of identification with the victims (identification of ourselves as victims, identification of friends or family members). The authors of the study believe that, in the wake of a negative event, people may begin to emphasize their dissimilarity with those who have experienced the event, allowing them to establish a psychological distance and maintain a sense of control and invulnerability to future threats. Identifying yourself with the victim of a traumatic event can, on the contrary, increase the sense of vulnerability, which will serve as a trigger for increased anxiety and sense of threat. The results of this study showed that the overall score of identification is positively associated with the symptoms of post-traumatic stress and depression. Self-identification with victims is only associated with increased levels of post-traumatic stress, which may reflect the experience of a personal threat. Identification of friends and relatives with the victims of the attack is associated with symptoms of posttraumatic stress and depression symptoms, which can speak about the experience of threat or anticipation of the loss of the significant other (Mash, Ursano, Benevides, & Fullerton, 2016).

Thus, to understand the consequences of experiencing a terrorist threat, it is not enough to measure the level of negative psychopathological symptoms. In the practice of providing psychological assistance to people who are concerned about terrorist attacks, it is also important what form and content this concern takes. And in this regard, the results obtained in our study may be useful to improve the effectiveness of psychotherapeutic assistance to the population.

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