

## PSYRGGU 2020

### Psychology of Personality: Real and Virtual Context

# PSYCHOLOGICAL SECURITY IN THE CITIES OF THE SVERDLOVSK REGION

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### *Abstract*

Personality psychological security has an immediate linkage with the place of the person's residence, and the environment greatly affects both his behavior and development. The study aimed to examine characteristics of personality psychological security in residents of administrative and territorial units with different populations. The study involved citizens of 48 territories of the Sverdlovsk region. The methodical tools exploited in the work embraced techniques to identify both conscious and unconscious assessments of the respondents. The study revealed that the linkage between personality psychological security and the number of people living in the given territory has a non-monotonous, curvilinear character. The highest psychological security is typical of large cities' residents, the lowest – of small towns and a city of over a million inhabitants. Analyzing the link between particular aspects of personality psychological security and the number of residents in one administrative-and-territorial unit, the authors found the same regularity: the person's need for law and order, events' predictability, and stability has a quadratic-type bond with the population of the territory in question. Therefore, from the perspective of psychological security, inhabitants of a million-plus city and towns find themselves in less favorable conditions. And the very perceptions of security differ in the residents of these two types of administrative and territorial units. Mega-city dwellers tie up security with reliability, freedom, and comfort. Towns' residents maintain more traditional perceptions of security; they associate it with the order, institutions (army, the police) and family support.

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**Keywords:** Psychological security, psychology of environment, social representations.



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## 1. Introduction

Today, more than a half of the world population live in cities, and this tendency to urbanization is continuing. Life in a city is linked to the increase in population density, noise and the environmental pollution, on the one hand, and a growing availability of medical help and other services, on the other. Psychological security is a state of personality when the individual can satisfy his/her basic needs for self-preservation and be aware of his/her own (psychological) security in society (Zotova, 2011, p. 134). Personality psychological security has an immediate linkage with the place of the person's residence, and the environment greatly affects both his behavior and development (Dontsov et al., 2019, p. 74). Man is permanently exposed to environmental impacts to a different degree, and depending on a multitude of factors he experiences various sensations thanks to which he can either develop, or have arrested development due to anxiety, fears, stress, etc (Gold, 1990). From birth, people interact with their physical and social environment, which results in a particular vision of themselves in the world around them (Oswald & Wahl, 2003).

The risk of some serious mental diseases (for instance, anxiety, psychotic disorders, and mood disorders) is usually higher in cities. Research on anxiety including PTSD found higher indicators in the city districts in several countries of Latin America and Asia (Phillips et al., 2009; Prina et al., 2011; Silove et al., 2014; Sharifi et al., 2015), schizophrenia in large cities of China (Long et al., 2014), and urban areas of Germany (Frick et al., 2013; Jacobi et al., 2014). Danish researchers found that the risk of schizophrenia was more than doubled in people who had spent their first 15 years in cities compared to those who grew up in the countryside (Abbott, 2011; Galea et al., 2011; Heinz et al., 2013; Haddad et al., 2015; Lederbogen et al., 2011; Mortensen et al., 1999; March et al., 2008; Pedersen & Mortensen, 2001; van Os et al., 2010; Vassos et al., 2012). By contrast, rural inhabitants were more likely to be alcohol addicted than citizens, as shown in the Chinese research (Phillips et al., 2009). The main reason for lower psychological security in big cities is the lack of social links and cohesion in the areas.

In its turn, the place of residence characterized by higher social support and collective effectiveness can lower the perceived stress through the support of neighbors (Ahern & Galea, 2011; Bertotti et al., 2013). Besides, social aid protects from disorders associated with the intake of psychoactive substances, or the attempted suicide (Fone et al., 2014; Maimon et al., 2010; WHO, 2014).

Although the life in the city has many advantages such as availability of medical health, more jobs, higher salaries, and diverse cultural life, some research showed that city life causes stress due to noise, pollution, and lifestyle (Kennedy & Adolphs, 2011; Lederbogen et al., 2011). Several scholars also revealed that such factors as differences in social support (on the part of family or friends), stressful events and family responsibility between urban and rural areas can also impact psychological security on the quality of their life (Amato, 1993; Fuligni & Zhang, 2004; Hofferth & Iceland, 1998; Lederbogen et al., 2011; Paykel et al., 2000). Moreover, rural and urban environments differ in their natural resources, and urban territories, as a rule, have fewer green restorative zones necessary for people's health and wellbeing (Bernam et al., 2012; De Vries et al., 2003). One more study confirming the linkage between the environment and wellbeing demonstrated that unlike a walk down 'grey, construction areas', a stroll through the city woods have a positive impact on both cognitive functions and mood improvement (Bernam et al., 2012).

## **2. Problem Statement**

One of the key characteristics of modern society development is rapidly growing cities and cities' populations, the formation of conurbations. It inevitably leads to the intensification of information exchange and the acceleration of dynamic processes. Environmental factors influence the person's emotional state, and it is emotions through which a sense of security/insecurity is shaped. In the city, the individual faces a variety of threats to his psychological security. First of all, it is a high density of population, a high level of transport development, geographical fragmentation, and information overload due to the flourishing media. All this allows for assuming that the residents of different territorial areas will assess their psychological security taking into consideration the size of the administrative-and territorial areas they live in.

## **3. Research Questions**

The following issues were to be resolved for the implementation of the study.

1. Is there any link and of what kind between psychological security of the individual and the number of people living in the area of his residence?
2. Do the social representations of security differ in inhabitants living in the areas with different sizes of the population?

## **4. Purpose of the Study**

The survey aimed to research characteristics of psychological security in residents of the administrative-and territorial areas with different sizes of the population.

The realization of the aim required addressing the following tasks:

1. To single out the presence /absence of the link between psychological security of the individual and the number of the population of his place of residence.
2. To define the linkage of the substantive aspects of the person's psychological security and the size of the population of his territorial area.
3. To identify the structure of the security perceptions in residents of the administrative-and territorial areas with different sizes of the population.
4. To reveal differences in the structure and content of security perceptions in residents of the administrative-and territorial areas with different sizes of the population.

## **5. Research Methods**

### **5.1. Subjects**

The sampling consisted of inhabitants representing 48 administrative-and territorial areas of the Sverdlovsk region. To make the sample of each territorial unit representative and exact in reflecting the general population – the structure of the population according to gender and age – each area frame sampling was defined based on the analysis of demographic indicators of these territorial units. The indicators of the proportion of each group of the population were calculated (by age, gender). The quota sample of each

administrative-and-territorial unit was not fewer than 100 people. Thus, the total number of respondents who participated in the study made up more than 4800 testees.

## 5.2. Measures and tools

Methodological tools exploited in the study included techniques aimed at identifying both conscious and unconscious assessments of the respondents:

- The Assessment of Need for Security Satisfaction questionnaire by Zotova (2011).
- The Free Association method where the object security acted as a trigger.

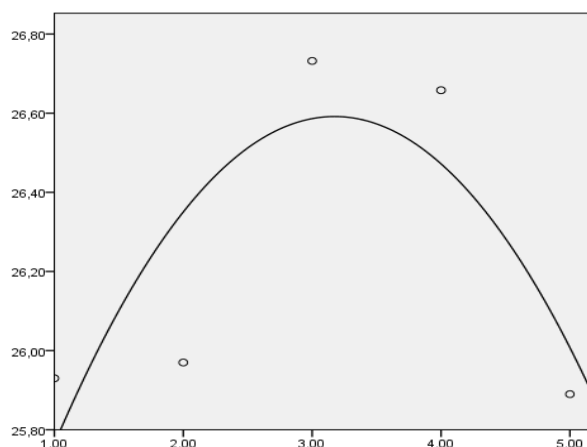
The authors used quantitative methods to process the data obtained – descriptive statistic methods, Pearson correlation coefficient, and regressive analysis. For results analysis, the authors exploited SPSS 20.0. and the quantitative analysis (Vergès, 1992).

## 6. Findings

At the first stage, the empirical data collected in 48 territorial units were grouped in five clusters depending on the size of the population:

- small towns (up to 20 thousand people);
- middle -size towns (from 20 to 100 thousand people);
- towns (from 100 thousand to 250 thousand people);
- big cities (from 250 thousand people to 1 million );
- over-million people cities (over 1 million people) (Manaeva, 2018).

The further analysis of the data was produced via the comparison of these five united clusters, which enabled the authors to achieve a better demonstration of the results of more than 4800 respondents. The homogeneity of the results of the territorial entities united in one cluster was tested based on the Pearson correlation coefficient' estimate. The results combined in each of the clusters showed a high coherence (the estimates of the Pearson correlation coefficient was  $> 0.665$  where  $p < 0.012$ ).



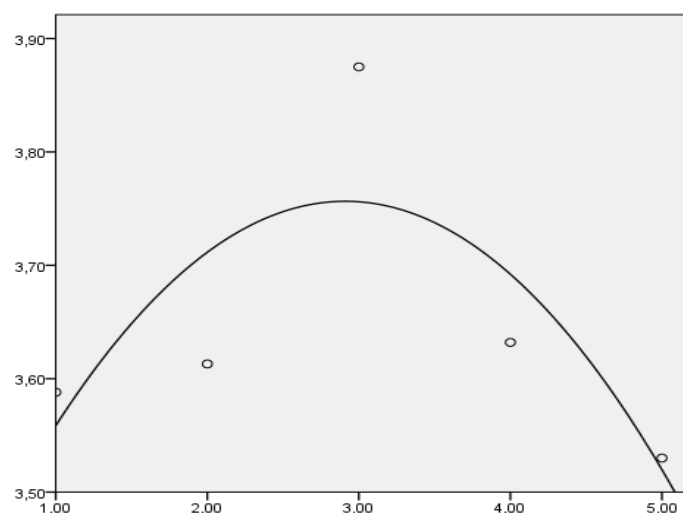
**Figure 01.** The graph demonstrating the linkage between personality psychological security and the population of the given territorial unit (axis X – the size of the city where: 1 – small towns; 2 – middle-size towns; 3 – big towns; 4 – large cities; 5 – a city with the population over 1 million people. Axis Y – indicates psychological security)

The next stage involved regression analysis and the design of the two-dimensional scatter plot to establish the absence/presence and the nature of the linkage between personality psychological security and the size of the population of this territorial unit. According to the data obtained, the linkage under study has non-monotonous, curvilinear nature (figure 01). i. e, with the increase in the number of inhabitants in a settlement, their psychological security does not go up or down in a linear fashion. The scatter plot has a pronounced maximum, and when moving to the edge of the plot the variable ‘psychological security’ diminishes. The highest psychological security is typical of large cities’ residents, the lowest – of small towns and a city of over a million inhabitants. It is the psychological security of over-a-million-city residents that has the smallest value of all (25.89). The conducted regression analysis showed a significant correlation coefficient between the variables under study ( $R^2 = 0.659$  when  $p = 0.034$ ).

The further analysis attempted to explore the link between the substantive aspects of personality psychological security and the number of the population in the area where the respondent lives.

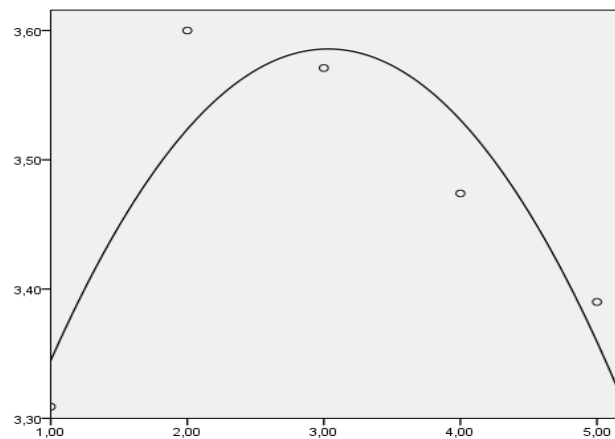
In the course of the analysis, the authors indicated neither linear nor quadratic bonds between the values of the variables: the need for a reliable job, the need for being loved, the need to be protected from dangers and calamities presenting the aspects of psychological security and the size of the population in the place of the respondents’ residence.

Curvilinearity of the linkage between the need for law, order and the number of people living in the place of the individual’s residence is also worth noting (figure 02). The application of statistical criteria to further analysis showed a quadratic connection between these variables ( $R^2 = 0.597$ ). And the low level of  $p$  ( $p = 0.040$ ) testifies to high statistical validity of the obtained results. Therefore, high satisfaction of the need for law and order relates to the person’s settlement in town with the populations from 100 thousand to 250 thousand people. With the number of the population being higher or lower, the degree of satisfaction with this need decreases. The inhabitants of the one-million-plus city exhibit the least satisfaction with this need.



**Figure 02.** The graph demonstrating the linkage between satisfaction with the need for law, order and the number of people living in the place of the individual’s residence (Axis X – the size of the city where: 1 – small towns; 2 – middle-size towns; 3 – big towns; 4 – large cities; 5 – a city with the population over 1 million people. Axis Y – an indicator of satisfaction with the need for stability)

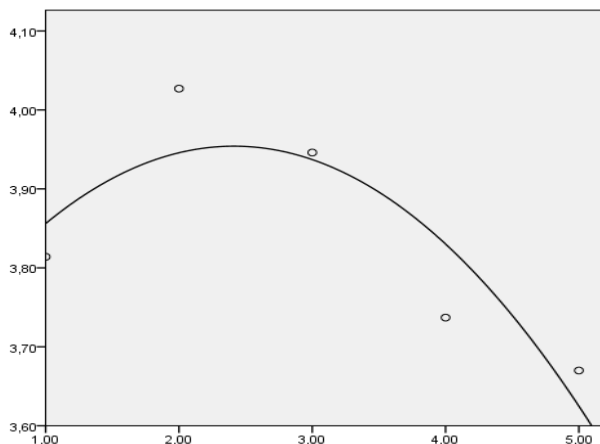
The authors revealed the connection of the same nature ( $r = 0.806$  where  $p = 0.0194$ ) while comparing the satisfaction with the need for predictability and the size of the population in the place of the respondent's residence (figure 03). In other words, high satisfaction with this need is likely to be due to the person's living in towns with the populations from 20 thousand people to 100 thousand people and from 100 thousand citizens to 250 thousand accordingly. With the number of the population of the territorial unit being higher or lower, the degree of satisfaction with the need for events' predictability diminishes. The inhabitants of small towns demonstrate the least satisfaction with this need. One may assume that the reason for this can be a limited possibility of these towns residents to change the place and line of their professional activity, their living conditions in case of sudden, unpredictable changes. Owing to this, small towns' dwellers experience a greater need for certainty, predictability of events. Capabilities to forecast changes of social and economic conditions allow the small towns' inhabitants to work out necessary adaptive strategies of behavior. And the need for stability is not in great demand for this group of the respondents (figure 04). On the whole, one can conclude that for the residents of all types of settlements the need for events' predictability is more relevant than other needs – one can observe the reduction of this graph about the Y-axis compared to others.



**Figure 03.** The graph demonstrating the link between the person's satisfaction with the need for predictability and the population of the given territorial unit (Axis X – the size of the city where: 1 – small towns; 2 – middle-size towns; 3 – big towns; 4 – large cities; 5 – a city with the population over 1 million people. Axis Y – an indicator of satisfaction with the need for stability)

The findings also showed that there is a curvilinear connection between the person's need for stability and the population of area he lives in (figure 04). The regression analysis indicated a significant correlation between the given variables ( $R^2 = 0.778$  where  $p = 0.021$ ). The high satisfaction with the need for stability as well as the need considered above is associated with the fact that the respondents live in middle-sized and big cities with the population from 20 to 100 thousand people and 100 to 250 thousand people correspondingly. Citizens of one-million-plus city demonstrate the lowest satisfaction with this need, i.e. it is residents of a modern mega city who are in need of reliability and a sense of being protected.

Therefore, one can conclude that from the psychological security perspective, the inhabitants of the city with a population over one million people and small towns are the most disadvantaged.



**Figure 04.** The graph demonstrating the link between the satisfaction of the person's need for stability and the population of his area of residence (Axis X – the size of the city where: 1 – small towns; 2 – middle-size towns; 3 – big towns; 4 – large cities; 5 – a city with the population over 1 million people. Axis Y – an indicator of satisfaction with the need for stability)

The next phase of the analysis focused on what lies in the core of the very perception of security maintained by the residents of the biggest city and the smallest towns – territorial units with the highest and lowest number of the population – those respondents who exhibit the lowest indicators of psychological security. Based on the results of the association test, the authors singled out the structural elements of security perceptions in the comparison groups under investigation (the inhabitants of the city with the population over one million people and small towns). The associations mentioned by at least 5% of the respondents entered the test.

In the group of the one-million-person city ( $n = 145$ ), the respondents produced 721 associations to the trigger security, which, on average, makes up 4.97 associations per respondent. The dictionary of notions consisted of 262 words and word-combinations. 346 associations formed the core and the periphery of the repression representation (48% of the total number of associations expressed by the respondents).

The respondents from small towns ( $n = 724$ ) made 3258 associations to the given stimuli, which on average accounts for 4.5 associations per subject. The dictionary compiled 277 different words and word combinations. 2019 associations formed the core and the periphery of the repression representation (62% of the total number of associations expressed by the respondents).

Similar contents are characteristic of the security perceptions shared by the residents of the compared settlements – the structural zones of the core and the periphery of the first group entails 12 notions, of the second one – 14 notions. Also, the elements of the structure of the security perceptions of the two groups overlap: eight notions are common for both groups, which speaks about shared understanding of the respondents (table 01).

According to the results gained and irrespective of the population of the settlement, the core of the security perception is stability (the core contains the most persistent stereotypes and prototypes associated with the object). The content of the core reflects the key characteristics of the state of security for the respondents. While the inhabitants of the one-million-person city value such characteristics as calmness, reliability, and home, the residents of small towns appreciate protection and money. The notion of money, as well as the notion of welfare, is unique as they both disclose the substance of the security perception in

the group of small towns' dwellers. These notions are absent in the perception of the other group of the respondents.

**Table 01.** The structure of security perception in the groups of the one-million-person city and small towns' residents

Elements of the structure	Notions-associations of the one-million-person city residents	Notions-associations of small towns' residents
The core zone of the social representation	Stability (29; 1.550) Calmness (31; 1.810) Home (14; 1.600) Reliability (17; 1.833)	Stability (160; 2.625) Protection (250; 2.760) Money (110; 2.545)
The potential zone of changes	Peace (14; 2.100) Safeguard (10; 1.750) Protection (34; 2.083) Life (6; 1.750) Comfort (9; 1.667) Freedom (10; 1.286)	Peace (90; 3.667) Safeguard (60; 2.667) Home (160; 3.375) Family (140; 3.643) Calmness (140; 3.000) Order (50; 2.600) Army (40; 2.250) Police (40; 2.750)
The periphery system	Confidence (10; 2.143) Family (9; 2.500)	Confidence (70; 3.000) Welfare (40; 3.300) Health (50; 3.600)

The elements of the core zone acquire concretization through the periphery elements; in this case, they reveal what helps to achieve the state of security. If for the group of the residents of the one-million-person city it is specific to define means of obtaining security through the states of comfort and freedom, for small towns' inhabitants these means include army, police, and order. The periphery system itself includes a reference to the result of experiencing the state of security – confidence. This state provides the citizens of a megacity with the conditions to start a family, and the small towns' inhabitants – to have a prosperous life and good of health. It is necessary to note how different the role of the family in these two groups of comparison is. For small towns' residents, it acts as a foundation of security and support. For the one-million-person city inhabitants family is a potency that can be realized in conditions of security. This is one of the facts that highlight the specificity of the establishment, maintenance, and meaning of interpersonal relations for the individual living in a megacity or a small town.

## 7. Conclusion

The study conducted allowed the authors to find that the linkage of the person's psychological security and the number of people living in the place of his residence has non-monotonous, curvilinear nature. The highest psychological security is typical of large cities' residents, the lowest – of small towns and a city of over a million inhabitants. Analyzing the link between particular aspects of personality psychological security and the number of residents in one administrative-and-territorial unit, the authors found the same regularity: the person's need for law and order, events' predictability, and stability have a quadratic-type bond with the population of the territory in question.



Thus, from the psychological security perspective, the inhabitants of the city with a population over one million people and small towns are the most disadvantaged. And the very perceptions of security differ in the residents of these two types of administrative and territorial units. Mega-city dwellers tie up security with reliability, freedom, and comfort. Towns' residents maintain more traditional perceptions of security; they associate it with the order, institutions (army, the police) and family support.

The empirical results of the research can be used in the work of environmental psychologists to assess the quality of life of urban population, to explore the impact of different stress-factors on the inhabitants of small and big cities, to design prevention programs aimed at lowering anxiety and stress-factors provoked by the city environment.

## Acknowledgments

The article was supported with a grant from the Russian Science Foundation (project № 16-18-00032-II).

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