**Article**

**Is the Size of the City Important for the Quality of Urban Life? Comparison of a Small and a Large City**

Lucia Petrikovičová 1, Victoria Kurilenko 2, Amantius Akimjak 3, Beáta Akimjaková 3, Peter Majda 4, Anton Šatelinka 5, Yulia Biryukova 2, L’ubomír Hlad 6, Peter Kondrla 6, Daliborka Maryanovich 2, Lyubov Ippolitova 2, Marie Roubalová 7 and Jozef Petrikovič 8,*

---

1 Department of Geography, Geoinformatics and Regional Development, Faculty of Natural Sciences and Informatics, Constantine the Philosopher University in Nitra, 94901 Nitra, Slovakia
2 Russian Language Department, Medical Institute, Peoples’ Friendship University of Russia, 117198 Moscow, Russia
3 Department of Social Works, Faculty of Theology, Catholic University in Ružomberok, 03401 Ružomberok, Slovakia
4 Department of Theology, Faculty of Theology, Catholic University in Ružomberok, 03401 Ružomberok, Slovakia
5 Department of Practical Theology, Faculty of Roman Catholic Theology of Cyril and Methodius, Comenius University in Bratislava, Kapitulská 26, 81458 Bratislava, Slovakia
6 Institute for Research of Constantine and Methodius’ Cultural Heritage, Faculty of Arts, Constantine the Philosopher University in Nitra, 94901 Nitra, Slovakia
7 Department of Biblical and Jewish Studies, Hussite Theological Faculty, Charles University in Prague, 14000 Prague, Czech Republic
8 Department of Ecology and Environmental Sciences, Faculty of Natural Sciences and Informatics, Constantine the Philosopher University in Nitra, 94901 Nitra, Slovakia

* Correspondence: jozef.petrikovic@ukf.sk; Tel.: +42-19-1796-8678

**Abstract:** In the recent past, the question of determining the optimal city size in relation to the quality of urban life (QoUL) was raised of city inhabitants. This article has evaluated the correlation of the QoUL index in cities in relation to the number of inhabitants. We also deal with selected variables for which we assume a relationship with QoUL. The authors who calculated the indices of the quality of urban life equated the quality of life with its objective dimension considered as the quality of the place. It turned out that growth in the number of inhabitants of Slovak cities did not correlate with improving quality of life. Our article examined QoUL in two different countries on a scale of 0–10 through questionnaires. The obtained values are a subjective assessment. From a global point of view, one city is small and the other is big. The small city achieved better results in international rankings of quality of life, and it was assumed that this fact would also be reflected in the quantification of the quality of urban life. One hypothesis was that a small city will achieve better urban life quality values than a large city. The paper presents the results of measurement and correlation.

**Keywords:** quality of urban life; town; Nitra; Slovakia; Moscow; Russia

---

1. **Introduction**

Quality of life is a term that has boomed in recent decades [1]. It has the same fate as the terms “environment” or “globalization”; once a technical term, it has become part of everyday speech, and thus a word meaning anything. Quality of life is one of the two key elements of our article. What are we talking about when we describe the quality of our life? About the evaluation of one’s own life, in ordinary speech, and in professional terminology, numerically or verbally. A synonym for the term “quality of life” is “assessment of satisfaction with life”. The word quality [2] derives from the Latin “qualis”, which has the root “qui?”, meaning “who?” or “what?”.

When we evaluate our own life, we evaluate our own satisfaction with it. This brings us to the first insight in the conceptualization of quality of life: it is subjective, that is one of
its two dimensions. The second is the statement that we live in a material world, i.e., in an abode that objectively has demographic, social, technical, economic, ecological and cultural parameters that create its facilities. Settlements are urban or rural, so we talk about the quality of urban or rural life. However, the quality of life is not equal to amenities, which enters into the assessment of life satisfaction in the form of the quality of the place. This is the second, objective dimension of the quality of life. We consider the quality of a place to be the level of external conditions for living a good life.

Ref. [3] raises the theoretical question of the relationship between the size of the city and the quality of urban life of its inhabitants. Our article examines the answer to it, focusing on two cities in two countries of central and eastern Europe. One of the cities is small, and the other is large from a global point of view. According to [4], the size groups of settlements according to the number of inhabitants are as follows: small cities (number of inhabitants from 4999–19,999), medium-sized cities (20,000–49,999), big cities (50,000–99,999) and very big cities (100,000 and more). According to this classification, Nitra is a big city (with a population of 76,932 as of 31 December 2022), and the city of Moscow belongs to the very big city category (with a population of 12,640,818 million as of 2022). In the Slovak context, Nitra is considered a big city (regional), but compared to a very big city, to a metropolis such Moscow, Nitra is called a small city.

The urban structure of the cities of central and eastern Europe differs from the structure of the cities of Western Europe. Central and eastern European capitals generally have more than 1 million inhabitants. In Slovakia, no city has over 1 million inhabitants. The capital, Bratislava, has only 475,503 inhabitants (2022) and thus has been classified in the big city category, which also includes the city of Košice (229,040 in 2022). In Russia, there are up to 15 cities with a population of over 1 million that are in the very big city category.

Three-fifths of Europe’s population live in metropolitan regions, so they are rightfully given a lot of attention. On the one hand, they accumulate a number of problems related to traffic, air pollution, lack of affordable housing, and, in some cases, increased crime. On the other hand, metropolitan regions are usually important centers of science and research, including the presence of top innovation and technology companies offering above-average salaries, which attracts young, educated people. Therefore, they are demographic growth regions [5]. Nitra is not a large city or a metropolitan region, and therefore it is not evaluated in various European city rankings. On the other hand, from the Slovak point of view, it is the sixth largest Slovak city, one of eight regional cities and the seat of two universities. Moscow is, according to think-tank The Globalization and World Cities Research Network (further on GAWC), the third highest in the ranking of global cities included in category A. It means it is ranked 10–24 in the world [6].

2. Materials and Methods

The aim of our article is to investigate whether the size of the city is important for QoUL by measuring the quality of life in a small city and a large city in two different countries. Before that, however, the measurement of the quality of life in Slovak cities [7] in comparison with the number of inhabitants of these cities has been evaluated.

Slovakia and Russia were part of one political and economic system for four decades. In the last three decades, however, the development of Slovakia differed from the development of Russia, as did their position in the measurements of human development or happiness. In the Human Development Index, Slovakia, with value 0.860, reached 39th place, while Russia reached 52nd place with value 0.824 [8]. In World Happiness Report 2022, Slovakia reached 35th place with value 6.391, while Russia reached 80th with value 5.5459. The data are for the years 2019–2021 [9]. The difference in these measurements between Slovakia and Russia in favor of Slovakia will also be reflected in the QoUL measurement in Nitra and Moscow. Based on this, there is Hypothesis 1.

**H1.** the QoUL index in a small Slovak city will be higher than the QoUL index in a large Russian city.
Quality of life is a complex multidimensional concept that is influenced by a number of factors, e.g., health. At the same time, it is itself influenced by many factors (predictors, variables). Considering the investigation of QoUL from the aspect of city size, it has been determined that trust, pre-pandemic relationships, happiness, quality of place, quality of environment, and expected future are relevant variables. We measured QoUL and variables using a questionnaire on the Cantril scale 0–10. The questionnaire had a Slovak and an English version. The research took place in the period January 2022–June 2022 in Nitra, and October 2021–January 2022 in Moscow, and was attended by bachelors, masters and doctoral students. In Nitra, 206 questionnaires were submitted, of which 2 were unfilled; in Moscow, 565 questionnaires were submitted, of which 10 were completely or partially unfilled. The number of participants in Nitra was therefore N = 204; the number of participants in Moscow, N = 555.

The quality of life was determined by asking the question, “What is the quality of your life? Please indicate on a scale of 0–10, where 0 is the worst possible and 10 is the best possible quality of your life”. Trust was determined with the question, “How do you trust people? Please indicate on a scale of 0–10, where 0 means you trust no one and 10 means you trust everyone”. Relationships before the pandemic were determined with the question, “What kind of relationships did you have with your loved ones before the outbreak of the pandemic? Please indicate on a scale of 0–10, where 0 means that you have had the worst possible relationships and 10 means that you have had the best possible relationships”. Happiness was determined by asking the question, “Are you happy? Please indicate on a scale of 0–10, where 0 means you are completely unhappy and 10 means you are completely happy”. The quality of the place was determined by asking the question, “What is the quality of the place where you permanently live in terms of conditions for living a good life? Please indicate on a scale of 0–10, where 0 means the quality of the place is the worst possible, I want to move out of there, and 10 means the quality of the place is the best possible”. The quality of the environment was investigated by asking the question, “What is the quality of the environment in the place where you live permanently? Please indicate on a scale of 0–10, where 0 means that the quality of the environment is the worst possible and 10 means that the quality of the environment is the best possible”. The expected future was investigated by asking the question, “What future do you expect after the end of the pandemic? Please indicate on a scale of 0–10, where 0 means you expect the worst possible future and 10 means you expect the best possible future”.

Slovak authors deal with the quality of life in Slovakia [10–17]. Russian authors examine the quality of life in Russia [18–20]. Non-Russian authors also examine the quality of life in Russia [21,22].

3. Quality of Life

According to ref. [13] “Quality of life is one of the concepts by which late modern society tries to understand the complexity of the contemporary world”.

Currently, quality of life research shows that some phenomena, considered to be strong predictors of quality of life, are not always so. The problem can be illustrated by the example of culture, or cultural values. Certain studies focus on the influence of culture on the quality of life [23–25]. Authors who assume that culture is a predictor of quality of life, such as [26], claim that the quality of life is “culturally rooted”. However, the measurement of the correlations between them shows a very small correlation [24]. This non-confirmation of the expected result is not isolated [13]; the authors report low correlation values between quality of life and social capital, which is generally considered a strong predictor of quality of life, in Czechia. For that reason, the findings of our article should be considered as a stone in the mosaic of complexity and multidimensionality that is the concept of quality of life, not as an indisputable statement.

The article deals with the quality of life in cities (QoUL). In quality-of-life research, QoUL research is receiving increasing attention. This fact is significantly connected with globally increasing urbanization.
3.1. Quality of Life Concept

The conceptualization of quality of life is addressed by several authors focused on non-medical quality of life and HRQoL (Health-related quality of life) [10,27–37]. There are well-known models of quality of life: Alard’s model with domains of Having, Loving, and Being; Raphael’s model with domains of Being, Belonging, and Becoming; Veenhoven’s model of four qualities of life; Ref. [29] recognizes the “American model” of quality of life, emphasizing its subjective dimension, and the “Scandinavian” model, emphasizing its objective dimension; Ref. [2] distinguishes a “descriptive” approach to quality of life, capturing the current state, and a “prescriptive” approach, expressing the desired state.

In his model, Ref. [33] explores four qualities of life, raising the question of how many qualities of life there are? In a certain period of his life, a person is at the same time a son/daughter, grandson/granddaughter, brother/sister, father/mother, grandfather/grandmother, and he is still one and the same person. He has a somatic, family, sexual, parental, and work life, and spends his free time. He is employed or owns his own business, is a sports fan, a voter, has hobbies and interests, and is active in the community. In terms of quality of life, these forms of his life are the health domain, the domain focused on family life, and other domains. The same person is always being described. From this it is deduced that quality of life is one of many domains that can be quantified with many indicators.

The quality of life is significantly connected with the phenomenon of the good life [33,38,39]. Ref. [40] propose “Years of Good Life” as an indicator of well-being, while working with life expectancy. A good life has four key factors: meaning, virtue, resilience, and well-being. All of them are anchored in culture [41].

According to [25], cultural values can be divided into universal values for all mankind, “common human nature” on the one hand, and individual values that each of us carries within us on the other. The same thing about cultural values can also be said about the quality of life. According to Ref. [42], there as three factors determining the level of happiness and their share in it: set points (50%), intentional activity (40%), and circumstances (10%). It means that the level of our happiness is determined by our inherited genes, the experience of our daily life and, to a small extent, our demographic characteristics and the cultural–geographical characteristics of the region.

Ref. [42], as psychologists, naturally focused on the sources of happiness at the individual level. However, people do not live in a vacuum, which is why geographic space is also important in terms of the conditions for living a good life. Investigated at [11]: why did life satisfaction not grow in Czechia when indicators of prosperity, including the average monthly wage, grew? The explanation is found not only in the validity of Easterlin’s paradox, but also in the cultural–geographical characteristics based on Hofstede’s cultural dimensions [43]. Cultural–geographical characteristics belong to the ten percent circumstances group [42], which is labeled as “small”. Ref. [11] compared the characteristics of Czechia and Denmark. In fact, these ten percent determine the differences beyond those of Czechia and Denmark. There are several such “geographical” characteristics affecting the quality of life. Ref. [44] pointed out that, in Ukraine, the strongest predictors of well-being are parents and spouse, with the influence of friends and colleagues at work being smaller.

Ref. [45] distinguishes three approaches to understanding quality of life. The first, the “bottom-up theory”, focuses on the quality of life as the sum of many small joys received “from outside”. The second approach is the “top-down theory”, in which it is assumed that each person has characteristics or traits that allow him to live life more or less independently of external influences. The third approach consists in the “comparison theory”, according to which the level of a person’s quality of life depends on whether the people around him have a better or worse quality of life. In the conceptualization of the quality of life, it is necessary to describe the relationship between it, satisfaction with life, well-being, and happiness. Quality of life is two-dimensional; the subjective dimension is identified by psychologists with well-being. In fact, in addition to well-being, the subjective dimension also consists of ill-being. The objective dimension expresses the quality of the place in
terms of the influence of the conditions of the place on experiencing a good life. In graphic form, the quality-of-life model expresses Table 1.

Table 1. Quality of life model, Source [12].

<table>
<thead>
<tr>
<th>Poor Quality of Place</th>
<th>Good Quality of Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-being</td>
<td>Good life in the wrong place</td>
</tr>
<tr>
<td>Ill-being</td>
<td>Miserable life in the wrong place</td>
</tr>
<tr>
<td></td>
<td>Good life in the great place</td>
</tr>
<tr>
<td></td>
<td>Miserable life in the great place</td>
</tr>
</tbody>
</table>

Quality of life is usually identified with well-being, happiness, or satisfaction with life. The model of the subjective dimension and its parts based on its measurement on a scale of 0–10 expresses Table 2. It follows that the quality of life cannot be equated with ill-being, well-being, or happiness. These are parts of quality of life. Quality of life can only be identified with life satisfaction.

Table 2. Model of the subjective quality of life dimension. Source [14].

<table>
<thead>
<tr>
<th>Model Components of the Subjective Dimension of Quality of Life Measured on a Scale 0–10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Ill-Being  neither ill-being nor well-being Well-Being (Happiness)</td>
</tr>
</tbody>
</table>

None of the components of quality of life can be equated with the exception of the relationship between well-being and happiness. Happiness varies to be the highest possible well-being, expressed as 10 on a scale of 0–10.

3.2. Development of Quality of Life

The origins of the study the quality of life can be found in the Nicomachean Ethics [46]. The relationship between modernity and human happiness is described by the French sociologist Émile Durkheim in the work De la division du travail social published in 1893 (English title The Division of Labor in Society), [47]. In modern times, the American economist John K. Galbraith published the book Affluent Society, in which he used the term “quality of life” for the first time. He wrote that the American economy has reached a level that provides the majority of the US population with a basically rich and comfortable life [48]. The American social psychologist Michael Argyle was another who dealt with the relationship between material abundance and happiness. In his The Psychology of Happiness, he makes two statements: (a) there is no direct correlation between wealth and happiness, and (b) poverty and wealth produce different types of relationships. While poverty promotes the solidarity of the poor, on the other hand, wealth creates loneliness and extreme individualism [49].

American environmentalist Alan Durning takes a similar position in the work, How Much Is Enough?: The Consumer Society and the Future of the Earth [50]. The first survey of the quality of life was conducted in 1971 on a sample of 2164 persons over the age of 18. The survey concerned partial questions about life in the community, work, leisure activities, etc., and also for the assessment of satisfaction with “life as a whole”. The results of the survey have been published in [51].

After the Second World War, in connection with the establishment of the World Health Organization, development of the Healthy Related Quality of Life began, which has an independent position in the study of quality of life. Probably most articles dealing with quality of life are focused on the connection between health and quality of life. In recent decades, research on quality of life has been booming, supported by two processes. The first is the strong growth of prosperity in the USA and other western countries, which was also joined by the countries of central and eastern Europe after the collapse of the bipolar world. Hedonism became the predominant lifestyle [52], man became a consumer, society became consumerist. The goal of man’s life has become never-ending happiness. The second process
consisted in the emergence and expansion of positive psychology after the election of Martin Seligman as president of the American Psychological Association in 1998. Seligman brought a paradigmatic change to psychology in the form of its reorientation to the positive aspects of human life. Psychologists began to equate quality of life with well-being. The authors of [12] reject this and state: “The argument against identifying well-being with quality of life is trivial—if identification were valid, what would ill-being be?”

A separate place in the development of the quality of life belongs to the work of the American economist Richard Easterlin, Does economic growth improve the human lot? from 1974. Its essence is the claim that despite the growth of prosperity in American society, the happiness of Americans is not growing, and this claim has become known as the “Easterlin paradox”. This paradox not only has a separate entry in Wikipedia but also in the Encyclopedia of quality-of-life research [53]. Some authors refuted the validity of Easterlin’s paradox and proved their claims with calculations; other authors confirmed the validity and also proved their claims with calculations. The dispute heated up; it can be stated that it continues to the present. Ref. [11] lists the actors of the dispute and its development, which raises the question in his article “Why does the satisfaction with life of Czechs stagnate when prosperity increases? Does that mean that the Easterlin paradox is true?” He answers it with “yes”, but at the same time adds a second factor involved in the explanation, which is the cultural–geographical characteristics. The question of the validity or invalidity of Easterlin’s paradox is part of the question about the relationship between prosperity and quality of life [54,55]. Ref. [56] considers the issue of Easterlin’s paradox as part of research in the economics of happiness. Authors [57–61] focused on quality-of-life indicators, more precisely poverty in Slovakia. New directions in quality-of-life research include “sustainability of quality of life” [15,62–64]. The effort to create a universal Quality of Life Index continues. Veenhoven created the Happy life-expectancy index [65], and later constructed the index, Happy Life Years—HALY [66]. The Danish Happiness Research Institute, in cooperation with Leaps by Bayer, has created the index, Wellbeing Adjusted Life Years—WALY. The index is based on the belief that the world has gotten richer over the past decade, but not happier. The goal is “Converting wealth to wellbeing” [67].

3.3. Quality of Urban Life

People live in settlements, either in cities, urban agglomerations, metropolitan areas or in rural settlements. The number of people living in cities worldwide has been growing for a long time; at the beginning of the 21st century, it exceeded 50% of the world’s population [68]. The quality of life in settlements is the quality of urban or rural life. The interest of scientists dealing with quality of life is not evenly divided between urban and rural life, the investigation of QoUL is highly predominant.

QoUL research has gained importance in the last fifty years. Ref. [3] defines it as follows: “... the concept of quality of urban life regards the living conditions in urban areas and mainly in the cities”. With the increasing complexity of urban development, the number of articles focusing on QoUL is increasing [69–73]. Ref. [74] presents the opinion that the quality of life in the countryside is higher than in the cities.

Ref. [74] examined the quality of life in all municipalities, i.e., in cities and rural settlements of the Czech Republic. Table 3 shows the regional cities with the highest and lowest values of the QoUL index and their ranking in the quality of life of all municipalities. Table 3 shows that there are large differences in QoUL between the most important cities of the Czech Republic, regardless of the number of inhabitants. The authors of [75–77] also dealt with the quality of life in rural settlements and in Nitra [78].

In Slovakia, the population of regional towns, with the exception of Bratislava, is decreasing, while the population of settlements in their hinterland is increasing. In Bratislava, the number of inhabitants has been increasing since 2005, also in its hinterland [79]. Moscow according [80–82] has 10,381 mil. inhabitants, the number has been steadily increasing since 1950. Data for long-term quality of life measurements in Slovakia and Russia are not available, and therefore neither are long-term data for the quality of urban life in Slovak...
and Russian cities. The statistical portal [83] in its Quality of Life Index by City 2022 lists Moscow in 85th place out of 91.

Table 3. Regional cities of the Czechia with the highest and lowest values of the index QoUL. Source: adjusted according to [74].

<table>
<thead>
<tr>
<th>Regional City</th>
<th>Index QoUL</th>
<th>Rank of the City from All Czech Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brno</td>
<td>7.74</td>
<td>12</td>
</tr>
<tr>
<td>Hradec Králové</td>
<td>7.63</td>
<td>24</td>
</tr>
<tr>
<td>Jihlava</td>
<td>7.40</td>
<td>70</td>
</tr>
<tr>
<td>Ústí nad Labem</td>
<td>4.68</td>
<td>4628</td>
</tr>
<tr>
<td>Karlovy Vary</td>
<td>4.57</td>
<td>4797</td>
</tr>
<tr>
<td>Ostrava</td>
<td>4.16</td>
<td>5327</td>
</tr>
</tbody>
</table>

Ref. [7] measured QoUL in 140 Slovak cities. They used indicators in the economic, social, infrastructural, health, demography, and environment domains. It follows that QoUL is about the quality of the place.

The cities were divided into three groups: large cities with over 50,000 inhabitants, medium cities with 20 to 50,000 inhabitants, and small cities with up to 20,000 inhabitants. The city of Poprad was included among the cities with over 50,000 inhabitants, because by 2020 it had over 50,000 of inhabitants. Our goal was to find out whether the quality of life, calculated by [7], is higher in large cities or in small cities (Tables 4 and 5). For this reason, we calculated the average value of the QoUL index and the average rank in large (Table 4) and small cities (Table 5).

Table 4. Large cities with the highest values of the QoUL index and their ranking. Source: authors according [7,84].

<table>
<thead>
<tr>
<th>City</th>
<th>Number of Inhabitants 2021</th>
<th>QoUL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Index</td>
</tr>
<tr>
<td>Bratislava</td>
<td>475,503</td>
<td>65.23</td>
</tr>
<tr>
<td>Banská Bystrica</td>
<td>76,018</td>
<td>57.15</td>
</tr>
<tr>
<td>Trenčín</td>
<td>54,740</td>
<td>54.57</td>
</tr>
<tr>
<td>Košice</td>
<td>229,040</td>
<td>53.71</td>
</tr>
<tr>
<td>Trnava</td>
<td>63,803</td>
<td>52.72</td>
</tr>
<tr>
<td>Žilina</td>
<td>82,656</td>
<td>52.48</td>
</tr>
<tr>
<td>Nitra</td>
<td>78,489</td>
<td>49.20</td>
</tr>
<tr>
<td>Prešov</td>
<td>84,824</td>
<td>49.13</td>
</tr>
<tr>
<td>Poprad</td>
<td>49,855</td>
<td>46.84</td>
</tr>
<tr>
<td>Martin</td>
<td>52,520</td>
<td>46.29</td>
</tr>
<tr>
<td><strong>Averages</strong></td>
<td></td>
<td>43.46</td>
</tr>
</tbody>
</table>

Table 5. Small cities with the highest values QoUL. Source: authors according [7,84].

<table>
<thead>
<tr>
<th>City</th>
<th>Number of Inhabitants 2021</th>
<th>QoUL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Index</td>
</tr>
<tr>
<td>Stupava</td>
<td>12,659</td>
<td>56.24</td>
</tr>
<tr>
<td>Svätý Jur</td>
<td>5954</td>
<td>54.63</td>
</tr>
<tr>
<td>Malacky</td>
<td>18,935</td>
<td>54.54</td>
</tr>
<tr>
<td>Kremnica</td>
<td>4870</td>
<td>53.63</td>
</tr>
<tr>
<td>Ilava</td>
<td>5591</td>
<td>53.08</td>
</tr>
<tr>
<td>Nová Baňa</td>
<td>6983</td>
<td>50.68</td>
</tr>
<tr>
<td>Trstená</td>
<td>7124</td>
<td>50.40</td>
</tr>
<tr>
<td>Levoča</td>
<td>14,256</td>
<td>50.01</td>
</tr>
<tr>
<td>Vysoke Tatry</td>
<td>4250</td>
<td>49.37</td>
</tr>
<tr>
<td>Žarnovica</td>
<td>5786</td>
<td>49.36</td>
</tr>
<tr>
<td><strong>Averages</strong></td>
<td></td>
<td>57.25</td>
</tr>
</tbody>
</table>
The investigation of QoUL in large and small cities in Slovakia shows that, according to the quality-of-life indices calculated by [7], the quality of life is higher in small cities than in large ones.

### 3.4. The Optimal Size of the City for Experiencing a Good Quality of Urban Life

Probably the first work aimed at investigating the relationship between the quality of life and the size of the city was a book *City Size and the Quality of Life* [82], which was followed by others. The investigation of the relationship between the size of the city and the quality of life of its inhabitants is based on the “optimal city size theory” and the finding that the quality of life measured by non-economic indicators decreases with the growth of the population. The optimal size of the city is the one in which the ratio of benefits to costs is greatest in favor of benefits [3]. The authors of [45] extend the study of the optimal city size for experiencing good QoUL by the relationship between the quality of urban life and population density.

From the terms “benefit” and “cost” it follows that the theory of the optimal city size in relation to the quality of life is based on economic principles. Economic indicators, together with social indicators such as crime or health, and an indicator of subjectively assessed quality of life, are expressions of three philosophical approaches to quality of life [83]. It follows that economic and social indicators are part of the quality of the place, i.e., the objective dimension of quality of life. However, economic indicators cannot be equated with economic principles. Quality of life has no benefits or costs. The authors of [84] ask the question of whether it is possible to measure the optimal size of cities in relation to the quality of life and answers it negatively. Another argument for rejecting the application of the optimal city size theory is reality. Let us assume that someone for the city T with 1.4 mil. inhabitants and a QoUL of 6.88 on a scale of 0–10 calculates the optimal ratio of benefits and costs in the city. The value of the QoUL index in city T will increase to 7.45. What will follow? Calling residents to move out of the city? If they do not obey, will their electricity and water supply be turned off or will they be evicted against their will? Moreover, should people of all ages be evicted, or only senior citizens who do not pay taxes so there is zero benefit from them and, on the other hand, high health care costs? Or will the parliament decide on the demolition of the city T with 1.4 mil. and the construction of “new T” with 1.1 mil. residents?

In a civilized society, the application of the theory of optimal city size in relation to QoUL is unthinkable. The theory of optimal city size in relation to QoUL was rejected, but admitted the question of whether QoUL is higher in a large city or a smaller city, just as it has been investigated whether the quality of life in cities is higher than in the countryside. The authors of [74] list ten settlements in Czechia with the highest and ten settlements with the lowest value of quality of life and the number of their inhabitants. The village with 157 inhabitants has the highest quality of life value (8.47). The village with 167 inhabitants also has the lowest quality of life value (1.88). It means that villages with almost the same number of inhabitants have the highest and lowest quality of life values. However, they differ in geographical location, these villages are not in the same district or region. It follows that the size of the city in the Czechia is insignificant with respect to the quality of life of its inhabitants.

### 4. City

The second key element of our article is “city”. As in the case of quality of life, in this case too we can ask ourselves the question: What are we talking about when we describe the city? About a human artifact that has accompanied mankind since the beginning of civilization, thousands of years before Christ. The essence of cities is people, not buildings. Cities, especially large cities, are mankind’s greatest invention. Cities are carriers of progress, the Renaissance originated in Florence, the industrial revolution in Birmingham. There is an almost perfect correlation between the height of the standard of living and the degree of urbanization; people in countries with a high level of urbanization
are happier than people with a low level of urbanization [85]. Development of cities, criteria for the creation of a city, and classification of cities are explored in [72].

The development of cities in the modern age was fundamentally influenced by the industrial revolution with its need for a large number of workers. It meant moving from the countryside to the cities, and thus the boom in urbanization. In 1785, there were only four towns in England and Scotland with a population of more than 50,000. Seventy years later, they were already thirty-two [86].

Due to the influence of the industrial revolution, cities began to change urbanistically as well, new working-class neighborhoods and upper-class neighborhoods, e.g., garden cities for the rich, were added. In 1852, the Paris prefect, Haussmann, began to tear down the city walls because they had lost their meaning from a military point of view, and to create wide boulevards with sewers in their place. His example was followed in other cities. There are few cities with well-preserved walls, such as the French Carcassonne, or partially preserved walls such as the Croatian Dubrovnik; both cities are UNESCO monuments.

In addition to the urban transformation, the development of cities also brought a second revolutionary change, and that was the improvement of hygiene as a result of the creation of a sewage network. This, together with significant discoveries in medicine and pharmacology, meant a fundamental reduction in mortality. The result was a very significant growth of one of the most important demographic parameters, which is life expectancy. The importance of life expectancy is also confirmed by the fact that it is the first of the three pillars in the Human Development Index [8]. It happened in the 19th century first in Europe, North and South America and Oceania, and then in Asia and in the 20th century and in Africa [87]. In the Encyclopedia of Quality of Life and Well-Being Research, life expectancy is defined as “the expected number of years of life remaining at a given age determined statistically” [88]. Relationship between life expectancy and well-being are explored in [89]. The authors state that well-being, or happiness, does not correlate with economic growth; what correlates with economic growth is life expectancy. However, even this correlation is not indisputable, as evidenced by the comparison of the USA and Greece. Both countries have the same life expectancy, but the income per inhabitant is much higher in the USA.

According to Population Division of the UN Department of Economic and Social Affairs in 2014, 54% of the world’s population lived in cities in that year; in 2050, the urban population is forecast to be 66% [68].

The process of urbanization, like other contemporary social processes, is qualitatively and quantitatively uneven. Urbanization is not the only process taking place in contemporary post-industrial cities of the developed world; most of them can be said to be unaffected by urbanization. The growth quantity in them, which had the form of growth in the number of their inhabitants, stopped and turned into the growth of the quality of life of their inhabitants. In the cities of the developing world, there is an explosion of urbanization in the big cities; every month 5 million people are added to them all over the world inhabitants. This is illustrated by the Congolese Kinshasa, which in 1960 had 446 thousand of inhabitants, in 2010 had 10.4 million, and in 2020 it had 17 million. Unmanageable population growth takes the form of the growth of slums, neighborhoods of the poorest residents. Cities do not cause poverty but attract poor people. Urban poverty should not be compared with rich city dwellers but with rural poverty [85].

Urbanization is also very differentiated spatially, which is related to the natural increase/decrease of the population. Depopulation, and thus deurbanization, occurs in some size categories of cities. In Slovakia, the urbanization rate reached 56.8% in 1991 and has been decreasing since then. According to the portal [90], in 2021, it was 53.8%, the third lowest in Europe after Bosnia and Herzegovina and Moldova. Russia in 2021 had an urbanization value of 73.9%.

In the cities of Central and Eastern Europe, industrialization and related urbanization took place after World War II. In Nitra, the number of inhabitants has been decreasing in recent years (Figure 1), which is related to the separation of parts of the cadaster (small
villages). For environmental consequences of the urban sprawl in the suburban zone of Nitra, see [91].

![Figure 1. Development of the population of Nitra. Source: [79].](image1)

In Moscow, the demographic development is different. From the end of the 19th century, the number of inhabitants is continuously increasing (Figure 2).

![Figure 2. Development of the population of Moscow in millions. Source: [92].](image2)

Urban planning processes in post-industrial cities were not simple or straightforward; cities struggle with serious problems in transport, air pollution, and social problems. In urban development, other processes such as deurbanization, suburbanization, urban sprawl, and shrinking city processes also occur. Nevertheless, it can be stated that the current post-industrial cities are a good place to live for the majority of their inhabitants [93].

Post-industrial cities are the physical materialization of social, economic and ecological processes taking place in the contemporary period of late modernity. They express the material form of the standard of living and lifestyle as well as the immaterial form of quality of life and social relations.

5. Results and Discussion

The measurement was introduced of QoUL in Slovak cities [7] with objective indicators based on available statistical data. As was have already stated, QoUL understood in this way is an objective dimension, one of the two dimensions of quality of life. The authors
of [74] conceptualize it as the quality of place. The second dimension is subjective, expressing the individual’s personal evaluation of the quality of his life, usually on the Cantril scale of 0–10. The quality of life in Nitra and Moscow on this scale was measured. The data in the following tables (Tables 6 and 7) are summary data calculated as average values.

Table 6. Values of QoUL of men and women and other variables in Nitra. Source: authors.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Quality of Life</th>
<th>Trust</th>
<th>Relationships before the Pandemic</th>
<th>Happiness</th>
<th>Quality of Place</th>
<th>Quality of the Environment</th>
<th>Expected Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>6.71</td>
<td>5.14</td>
<td>8.05</td>
<td>6.55</td>
<td>6.89</td>
<td>6.81</td>
<td>6.86</td>
</tr>
<tr>
<td>Women</td>
<td>6.82</td>
<td>5.30</td>
<td>8.09</td>
<td>6.57</td>
<td>6.85</td>
<td>6.57</td>
<td>7.07</td>
</tr>
</tbody>
</table>

Table 7. Values of QoUL of men and women and other variables in Moscow. Source: authors.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Quality of Life</th>
<th>Trust</th>
<th>Relationships before the Pandemic</th>
<th>Happiness</th>
<th>Quality of Place</th>
<th>Quality of the Environment</th>
<th>Expected Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>7.57</td>
<td>5.15</td>
<td>8.10</td>
<td>7.22</td>
<td>6.96</td>
<td>7.43</td>
<td>7.61</td>
</tr>
<tr>
<td>Women</td>
<td>8.14</td>
<td>5.30</td>
<td>8.23</td>
<td>7.72</td>
<td>7.33</td>
<td>8.31</td>
<td>8.44</td>
</tr>
</tbody>
</table>

The following conclusions can be drawn from the comparison of the measured values of quality of life and other variables:

- The quality of life of men and women and the variables of happiness, quality of place for women, quality of the environment. and expected future have significantly higher values in Moscow than in Nitra;
- The variables of trust, relationships before the pandemic. and the quality of place of men have similar values in Nitra and Moscow;
- Hypothesis H1, according to which QoUL in Nitra should have been higher than QoUL in Moscow, was not confirmed;
- Our QoUL assessment in Nitra and Moscow, as well as the QoUL assessment of Slovak cities [7] and Czech cities [74], show that QoUL is not a function of city size;
- Favorable values of the quality of life in Nitra and in Moscow are achieved despite the low declared values of trust, which is considered one of the most important components of social capital; this finding is particularly significant in the case of Moscow. The statement is in line with the statement of [13] about the relatively high values of the quality-of-life index in the Czechia while, at the same time, the relatively low values of trust in this country.

In addition to the quality of life, we were also interested in the variables that affect QoUL. In the following tables (Tables 8–11) was presented the values of the Spearman correlation coefficient. The authors of [94] verbalized the numerical correlations as follows: Correlation value 0—no correlation; 0.01–0.09—very small correlation; 0.10–0.29—small correlation; 0.30–0.49—medium correlation; 0.50–0.69—large correlation; 0.70–0.89—very large correlation; 0.90+—near perfect correlation.
Comparing the correlations of QoUL with other variables in men and women in Nitra shows their similarities and differences. The similarity is in the correlation between QoUL and happiness, which is very large. The difference in the male–female correlation between QoUL and relationships before the pandemic is surprisingly high. While for women,
relationships before the pandemic were very important for QoUL (correlation value 0.59, a large correlation), for men they reached a value of only 0.25 (a small correlation).

From the correlations between the other variables, we observed high values, i.e., values of medium correlation and above, and at the same time a causal connection between QoUL on the one hand, and the quality of the place, the quality of the environment, and the expected future on the other. There is a high correlation value between the quality of the place and the quality of the environment. We are not sure of the causal relationships between the high correlation values of happiness and quality of place and happiness and environmental quality, but are inclined to believe that they exist.

Women’s QoUL correlates with other variables similarly to men. The correlation values with the quality of the place and the quality of the environment are somewhat lower. On the contrary, the difference between trust and relationships before the pandemic is significant, for women the correlation has a value of 0.42, while for men it has a value of zero.

If we accept the statement that the predictor of quality of life is a variable that correlates with a value of 0.30 and higher, then the predictors of QoUL in Nitra for men are all variables except for trust and relationships before the pandemic, for women they are all variables.

In Moscow, as well as in Nitra, the comparison of the correlations of QoUL with other variables in men and women shows their similarities and differences. In the QoUL assessment in the capital of Russia, we used the same criteria as in the QoUL assessment in Nitra. The correlation between QoUL and happiness in Moscow is very high for both men (Table 8) and women (Table 9) at the very large level. The correlation between QoUL and quality of place is equally high for men and women. In Nitra, we recorded a QoUL correlation of 0.23 for men, i.e., a small correlation [94]; in Moscow it is equally low for men (0.18) and women (0.16). All variables except confidence are predictors of QoUL of men.

For women (Table 9), the value of the Spearman correlation coefficients is similar to that for men. A negative very small correlation between trust was noted on the one hand and the quality of the environment and the expected future on the other, but do not assume a causal connection between these variables. All variables except trust and quality of environment are predictors of QoUL in women.

To the question posed in the title of the article, whether the size of the city is important for the quality of urban life, the answer is: the size of the city is not important for the quality of life.

6. Conclusions

The aim of our article was to investigate whether the size of the city is important for QoUL. It was conducted by measuring the quality of life in a small city in Slovakia, Nitra, and a large city in the Russian, Moscow. QoUL was assessed through a questionnaire placed on the Internet on a scale of 0–10. Even before, was analyzed the results of measuring the quality of life in Slovak cities [7] in comparison with the number of inhabitants of these cities. The issue of the relationship between the size of the settlement or city was illustrated, as was the QoUL index of its inhabitants using the example of settlements in the Czechia [74]. Both studies showed that there is no relationship between the size of the settlement/city and the QoUL of its inhabitants.

In the beginning of our article, we hypothesized that the QoUL in Nitra, with its lower population, will be higher than in Moscow, with a much higher population. The hypothesis was based on internationally known measurements of the quality of life and the Human Development Index, in which Slovakia achieved better results than Russia. The measurements did not confirm our expectations, the value of the QoUL index for men in Moscow (7.57) is higher than in Nitra (6.71). The difference in favor of women in Moscow (8.14) is significant compared to women in Nitra (6.82). The complexity of the concept of quality of life is confirmed by the fact that better results in Moscow than in Nitra are achieved with lower values of correlations of quality of life with selected variables, which were also measured in the article.

The authors of [13] deal with social capital as a predictor of quality of life, based on the generally valid belief in a strong positive correlation between quality of life and
social capital. Our quantifications showed that high QoUL values in Nitra and especially in Moscow were achieved with low values of social capital, measured as trust. Whether these results mean that, in the countries of central and eastern Europe, good quality of life is achieved even without adequately high values of social capital, or if our results are coincidental, will be shown by future research.

According to [7], the highest quality of life is in Bratislava; Nitra is 27th. Whether the ranking of Bratislava result from the fact that it has high QoUL values that attract Slovak residents to move to the capital, or whether it results from the fact that it attracts people with a high QoUL, it is not obvious. In the social sciences, in contrast to the natural and technical sciences, the problem is clearly stating what is the cause and what is the effect. Martin Rode aptly expressed this knowledge in the title of his article “Do Good Institutions Make Citizens Happy or Do Happy Citizens Build Better Institutions?” [95]. In the countries of central and eastern Europe, there is not as strong a tradition of moving for work as in the USA [96,97]. With Migration flows of Slovakian residents to Bratislava, or however, the agglomerations are distinct. The value of the QoUL index in Bratislava contributes to these migration flows.

Final finding: QoUL is higher in both men and women in Moscow; values of the Spearman correlation coefficient between QoUL and other variables are higher in Nitra. However, it does not follow from these measurements that the QoUL index of its inhabitants increases with the growth of the city’s population. City size is not important for QoUL.

**Author Contributions:** Conceptualization, L.P. and P.M.; methodology, A.Ď., D.M.; software, J.P., L.I.; validation, V.K., A.A. and B.A.; formal analysis, I.H.; investigation, M.R.; resources, L.P.; data curation, Y.B.; writing—original draft preparation, L.P., M.R.; visualization, P.K. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by Scientific Grant Agency VEGA project No. 1/0880/21 “Transformation of the Nitra Region in Changing Socioeconomic Conditions with Special Focus to the Effects of the COVID-19 Pandemics”.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** The authors thank the Happiness Research Institute and Leaps by Bayer, owners of the “Taking 10 Leaps” report, for permission to reproduce it.

**Conflicts of Interest:** The authors declare no conflict of interest.

**References**


15. Petrović, F.; Mugaš, F.; Maturkanić, P. Linking sustainability and happiness. What kind of happiness? GeoScape 2020, 14, 70–79. [CrossRef]

16. Petrović, F.; Maturkanić, P. Urban-Rural Dichotomy of Quality of Life. Sustainability 2022, 14, 8658. [CrossRef]


18. Berkalov, S.V.; Pluchevskaia, E.V.; Kozlova, N.V. Quality of life—The factor of Russia success at present and in the future. In SHS Web of Conferences; EDP Sciences: Les Ulis, France, 2016; p. 01012. [CrossRef]


25. Lomas, T. Positive cross-cultural psychology: Exploring similarity and difference in constructions and experiences of wellbeing. Int. J. Wellbeing 2015, 5, 60–77. [CrossRef]


42. Hofstede, G. Dimensionalizing Cultures: The Hofstede Model in Context. Online Read. Psychol. Cult. 2011, 2, 2307. [CrossRef]

43. Danylenko, T. Correlation between the individual’s experience of well-being and social evaluation. J. Educ. Cult. Soc. 2021, 2, 179–189. [CrossRef]

58. Lenovský, L.; Slábová Nováková, K. *Culture–Religion—Ethnicity (Alliance of Identities in the Environment of Foreign Slovak Communities)*. *Religions* 2021, 12, 883. [CrossRef]
78. Trembošová, M.; Jakab, I. Spreading of Food Deserts in Time and Space: The Case of the City of Nitra (Slovakia). *Sustainability* 2021, 13, 7138. [CrossRef]
94. Rode, M. Do Good Institutions Make Citizens Happy or Do Happy Citizens Build Better Institutions? *J. Happiness Stud.* 2013, 14, 1479–1505. [CrossRef]
95. Rappaport, J. The Increasing Importance of Quality of Life. *J. Econ. Geogr.* 2009, 9, 779–804. [CrossRef]