
Quality of Life of Rural and Urban Population in Poland: Evaluation and Comparison

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Abstract:

Purpose: The purpose of this article is to compare the subjective quality of life of the inhabitants of rural and urban areas.

Design/Methodology/Approach: The study is based on a set of data from the Social Diagnosis 2015. Conditions and quality of life of the Poles project, which is comprehensive and representative in nature, were used. The study was conducted on the example of Poland in the global dimension as a general satisfaction with life and in terms of area concerning various areas of life. The work assessed the quality of life, including the division into rural and urban residents. A significance test for many structure indices was used to achieve the goal.

Findings: The results show that most often both the inhabitants of the rural and the urban have assessed their life as quite good or successful and quite happy. It was also found that the percentage of people living in the rural and urban assessing the quality of own life rather negatively is not significantly different. However, the percentage of inhabitants of rural and urban areas declaring satisfaction with global and local quality of life is not the same, i.e., the quality of life assessment in this case depends on the place of residence.

Practical Implications: The paper highlights the importance of subjective assessment of the quality of life of rural and urban residents to fully demonstrate how people live and how they assess their lives.

Originality/Value: This study contributes to the literature by showing that subjective assessment of the quality of life globally and in individual areas of life varies significantly between rural and urban residents.

Keywords: Quality of life, rural inhabitants, urban inhabitants, degree of satisfaction, test of significance for many indicators structure.

JEL code: C12, D69.

Paper type: Research study.

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1. Introduction

A discussion on conceptual and operational definitions of categories relating to social phenomena linked to human needs, such as well-being, welfare, level of socio-economic development, living conditions, level of life, dignity of life or quality of life, has been taking place for many years (Van Hoorn, 2007; Taylor, 2011; Mc Gregor, 2007). There is no universal definition of quality of life, which is caused by its interdisciplinary character and occurrence in all research discipline (Farquhar, 1995). The multitude of definitions is produced by the difference in the meaning of the quality of life among the representatives of various sciences. However, there is a consensus that in assessing the quality of life, both the assessment in objective and subjective terms and its multidimensionality are important (European..., 2003; Carta *et al.*, 2012). Objective assessment is based on measuring well-being through certain observable facts, such as economic, social and environmental statistics. People's well-being is assessed indirectly using cardinal measures. In turn, subjective well-being measures capture human feelings or real experiences directly (van Hoorn, 2007).

In the literature of the subject you can find a lot of studies on the evaluation of objective quality of life depending on the place of residence, e.g., in countries (Murawska, 2013; Serkebayeva *et al.*, 2018; Halicka and Surel, 2020), in regions (Nowak, 2018) or referring to rural areas (Sompolska-Rzechuła, 2017). Improvement of the quality of life of the population, including mainly employees, their families, communities, and society, contributes to sustainable economic development.

When assessing and measuring the quality of life, it is necessary to analyse different areas of life, including subjective ones (Hooghe *et al.*, 2011; Gilberta *et al.*, 2016; Dudek and Szczęsny, 2017; Morrison, 2019; Lenzi and Perucca, 2020), "*...because people's subjective responses are real and people act on the basis of them...*" (Farquhar, 1995). The American scientist Campbell is the creator of an American approach defining prosperity as the individual level of life satisfaction, together with Convers and Rogers. According to Campbell using available statistical data and objective indicators, it is impossible to fully indicate how people live and how they assess their lives (Campbell, 1976). Satisfaction and fulfilment of life can be understood as a reflective assessment of own life as a whole or its individual areas or the sum of assessments of individual areas (Wong *et al.*, 2006; Rokicka and Petelewicz, 2014).

Previous studies in the field of quality of life assessment are not explicit. In most of them, researchers point to the existence of disproportion to the detriment of rural residents, which means that the quality of rural life, despite improvement, is worse than the urban (Murray *et al.*, 2004; Millward and Spinney, 2013; Chmielewska 2016; Sompolska-Rzechuła and Oleńczuk-Paszal 2017). These conclusions relate primarily to objective quality of life, which is easier to operationalize, and which is measured using indicators, most often in the form of natural measures of intensity (quantitative or evaluative).

The article is a voice in the discussion regarding the subjective perception of the quality of life understood as feeling positive emotional and spiritual states related to elements of human life (Słaby, 2007). The subjective quality of life is the level of happiness resulting from the degree of satisfying diverse needs (Borys, 2003). In terms of subjective quality of life, there are, among others, such issues as general mental well-being, including the will to live, happiness, life satisfaction, satisfaction with particular areas and aspects of life, of subjective assessment of the material level of life (Diener *et al.*, 1999).

One of the most important issues concerning the quality of life is to determine whether a given group of people (e.g., residents of a given community) is happy and what factors determine the happiness of these people. Happiness is understood in this case as a subjective satisfaction with life (Veenhoven, 2012).

The main objective of the study was *to compare the subjective quality of life of the inhabitants of rural and urban areas*. The study was conducted on the example of Poland in the global dimension as a general satisfaction with life and in terms of area concerning various areas of life. The survey asked the following questions: *Are there disproportions in the subjective quality of life of the inhabitants of urban and rural areas?*

This study is a contribution to showing literature, which proves that the global quality of life may differ between the urban and rural residents. Subjective well-being therefore can be used as an indicator to monitor policies aimed at improving well-being at a national level (Helliwell, 2003; Diener, 2000). The use of structure importance tests for more than two structure indicators is an added value to the research. This method is less commonly used when analyzing economic society in comparison to the test for importance of one or two structural indicators. Therefore, this method ensures the newest application to grade the quality of live.

2. Research Material and Methods

The study is based on data from the *Social Diagnosis 2015. The conditions and quality of life of the Poles project*. The project covers many aspects related to the situation of households and individual citizens. For the purposes of the project, the subjective quality of life was measured based on a questionnaire. The respondents were all available members of the surveyed households aged 16 and over. These studies are representative and comprehensive. They included all important aspects of the lives of individual households and their members— both economic (e.g., income, material resources, savings, loans) and non-economic (e.g., education, treatment, ways of coping with troubles, stress, mental well-being, lifestyle, pathological behaviour, participation in culture, use of modern communication technology and many others) (Social Diagnosis, 2015).

To assess and compare the subjective assessment of the quality of life of the urban and rural residents in Poland, the responses included in the individual questionnaire were used, which concerned the assessment of past life and assessment in terms of feeling happiness. In the first case, the respondents had the following answers at their disposal: wonderful, successful, quite successful, neither good nor bad, not very successful, unhappy and terrible. While in the second – happy, quite happy, not too happy, and unhappy. Respondents were also asked to rate the following areas of life, in terms of their level of satisfaction. Relations with their loved ones in the family, financial situation of the family, relations with colleagues, health condition, own life achievements, situation in the country, housing conditions, place of residence, development prospects, education, way of spending free time, work, children, marriage, state of security in the place of residence, health care, local public transport, last holiday trips. When making an assessment in individual areas of life, one could choose the following responses: very dissatisfied, dissatisfied, quite dissatisfied, quite satisfied, satisfied, very satisfied.

10967 inhabitants of the rural (49%) and 11219 inhabitants of urban (51%) took part in the survey. The cities were divided according to the number of inhabitants into cities with a population less than 20,000, 20,000-100,000, 100,000-200,000, 200,000-500,000 and over 500,000. Among the urban residents, the largest group were people living in cities with a population of 20,000-100,000 (35%), then residents of urban with a population below 20,000 (23,5%). 15.7% of people living in cities came from cities of 200,000-500,000, slightly less - 13.7% from the largest cities, while 6% were inhabitants of urban with population of 100,000-200,000.

Due to the representative nature of the data, a significance test for many indicators structure was used to achieve the goal. In order to test the equality of many structure indexes, k of independent samples is drawn from k of compared number populations n_1, \dots, n_k ,

where in $0.9 \sum_{i=1}^k n_i < kn_i < 1.1 \sum_{i=1}^k n_i$ and $\sum_{i=1}^k n_i \geq 20$ (Domański, 1990).

Based on the results of the trial, the hypothesis should be verified:

$$H_0: p_1 = p_2 = \dots = p_k$$

against the alternative hypothesis:

$$H_1: \exists j_1 j_2: p_{j_1} \neq p_{j_2}$$

where: p_i is the structure index ($i = 1, 2, \dots, k$).

The significance test for this hypothesis consists in determining the value of the test being checked according to the formula:

$$F = \frac{\sum_{i=1}^k n_i \left(\frac{n_i}{n} - \bar{p} \right)^2}{\sum_{i=1}^k \frac{n_i}{n} \left(1 - \frac{n_i}{n} \right)} \cdot \frac{k}{k-1}$$

when $0.2 \leq \frac{n_i}{n} \leq 0.8$,

where: \bar{p} is the average proportion and is determined by the formula:

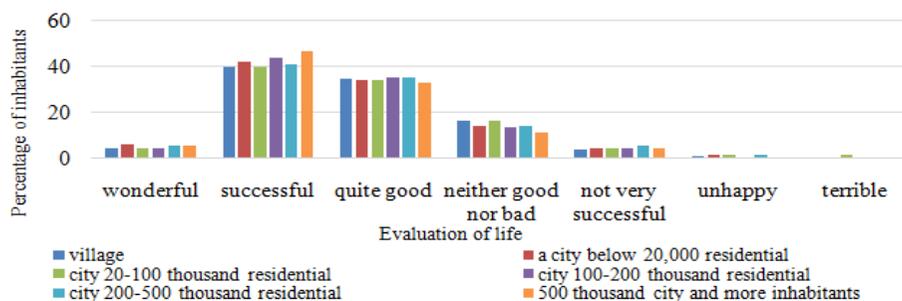
$$\bar{p} = \frac{\sum_{i=1}^k n_i \frac{n_i}{n}}{\sum_{i=1}^k n_i}$$

Statistics F assuming the truth of the H_0 hypothesis has the F -Snedecor distribution. The significance level of 0.05 was assumed in the study. On the basis of the critical level of significance marked as p^* , the decisions were made to reject the H_0 hypothesis or the lack of grounds for its rejection, while p^* is the minimum level of significance at which the null hypothesis should be rejected.

3. Results and Discussion

When assessing their own lives in the global dimension as the overall satisfaction with life, most residents in both the rural and the urban said that it was successful. This assessment was declared by 40% of residents of the rural and urban with a population of 20,000-100,000 and 47% of the residents of the largest Polish cities (500,000 and more inhabitants). The average percentage of inhabitants of Polish urban assessing their life as successful amounted to 42.2% and was higher than the percentage of rural residents (by 2.2 p.p.). 34%-35% of the rural and urban population assessed their past life as quite successful. A similar percentage of inhabitants of rural and urban declared their own life as not very successful (4%). Between 4% and 6% of residents rated their own lives as great (Figure 1).

Figure 1. Overall assessment of life of rural and urban inhabitants in Poland (in %)

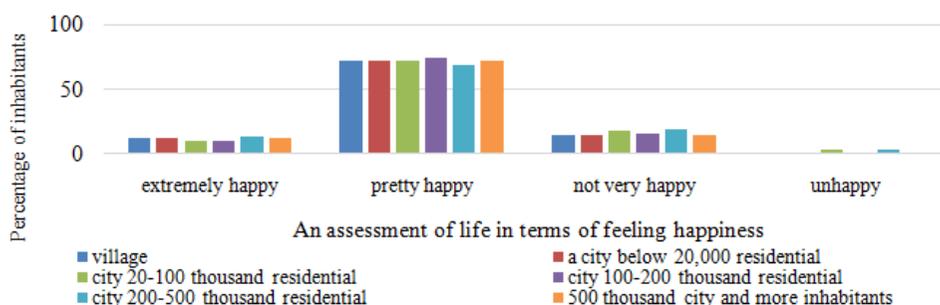


Source: Authors' calculations.

In addition, the quality of life was assessed globally in terms of feeling of happiness. The highest percentage of inhabitants in the case, both in rural and urban areas, answered that life is fairly happy. This view was expressed by 74% of residents of urban with the population from 100,000 to 200,000. The lowest percentage (68%) was observed among people living in urban with a population of 200,000-500,000. In other places of residence, the percentage of people who were quite happy amounted to 72%. The average percentage of the residents of urban that were quite happy amounted to

71.7 and was almost at the same level as the percentage for the residents of rural areas. An incredibly happy life could be observed in 12% of people living in cities under 20,000 and over 200,000 of residents and among respondents living in the rural areas. In other urban, 9%-10% of people were very happy. While, on average 15% of the residents of rural and urban areas in Poland assessed their own lives as not very happy. The most (18%) the residents of urban with the population of 200,000-500,000, the least (14%) the residents of rural and the largest urban (Figure 2).

Figure 2. Overall assessment of life in terms of feeling happy by rural and urban inhabitants in Poland (in %)

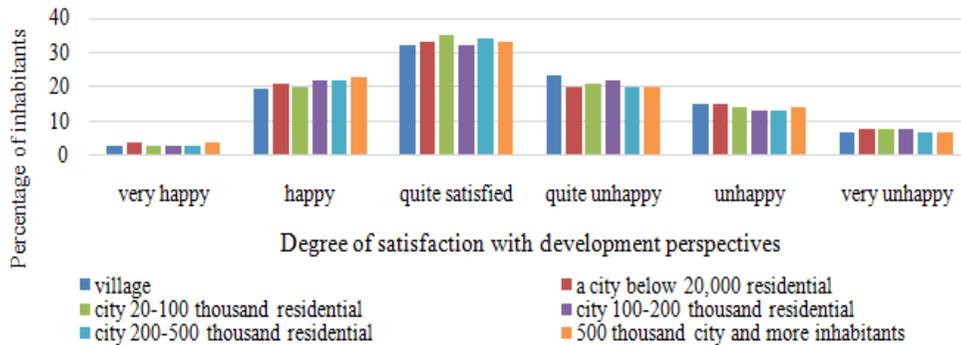


Source: Authors' calculations.

In addition to assessing the quality of life in the global dimension, the studied categories were evaluated in terms of the areas of life. It was observed that the majority of respondents, both urban and rural areas, were satisfied or quite satisfied with: the financial situation of one's own family, relations with colleagues, the condition of health, own life achievements, housing conditions, education, the way of spending free time, work and the state of security in place of residence.

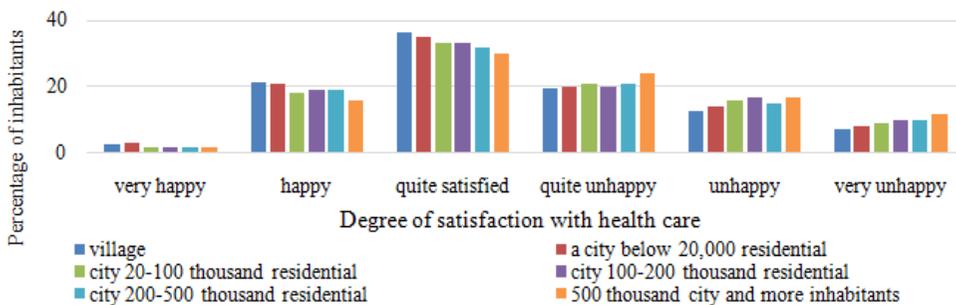
In the case of satisfaction with such areas of life as the situation in the country, development prospective and social welfare, most of the answers were quite satisfied. From 13% to 15% of residents responded that they are very unhappy with the situation in the country, and from 22% to 27% - that they are dissatisfied. A similar situation occurred in relation to the degree of satisfaction with development prospects. From 20% to 23% of people were dissatisfied or very dissatisfied with the prospects in relation to their own person (Figure 3). A high degree of dissatisfaction was observed in the case of healthcare. The inhabitants of the largest cities – with a population over 500,000 were the most dissatisfied (29%). In other places of residence, the percentage of dissatisfied people ranged from 20% (rural) to 27% (cities with a population from 100,000 to 200,000). There was 30% of the inhabitants of the largest urban and 36% of the residents of rural were relatively satisfied with healthcare system (Figure 4).

Figure 3. The level of satisfaction with development perspectives by rural and urban inhabitants in Poland (in %)



Source: Authors' calculations.

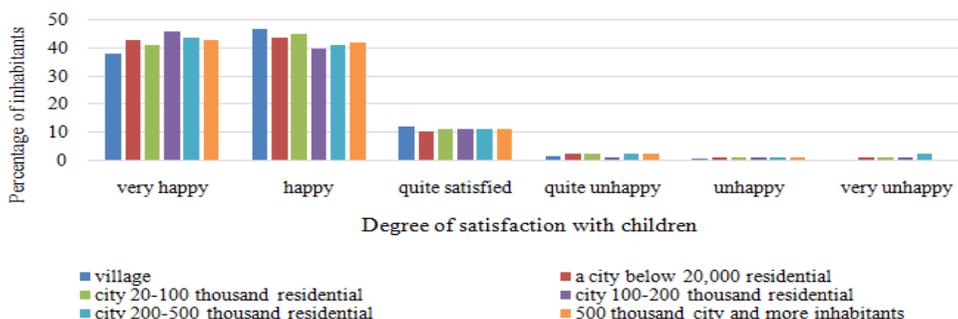
Figure 4. The level of satisfaction with healthcare by rural and urban inhabitants in Poland (in %)



Source: Authors' calculations.

In relation to areas of life such as relations with loved ones in the family, children, marriage and the place in which the respondent resides, the answers varied. In relation to these areas of life, the distribution of the percentage of people is directed towards responses expressing satisfaction. This can be especially observed in relation to the fields related to the family. As much as 87% of urban residents with a population of 20,000 to 100,000 is satisfied or very satisfied with their own children. A slightly smaller percentage was observed among residents of other types of urban and rural (85%). Dissatisfied people constitute a small percentage (1%-3%). A similar situation occurs in the case of the degree of satisfaction with marriage. 82% of residents of urban with a population from 20,000 to 100,000 are satisfied or very satisfied with marriage. It is similar in other types of urban and rural. Only in urban from 100,000 to 500,000 of inhabitants a slightly lower percentage of residents expressing their satisfaction with marriage was observed, amounting to 77%-78% (Figure 5 and Figure 6).

Figure 5. The level of satisfaction with children by rural and urban inhabitants in Poland (in %)



Source: Authors' calculations.

Figure 6. The level of satisfaction with marriage by rural and urban inhabitants in Poland (in %)



Source: Authors' calculations.

In the next step, the analysis was examined by means of a significance test with the equality of many structure indicators, whether the percentages of rural and urban residents with different populations are equal. In the study of global quality of life only in the assessment of life as successful, it was found that the percentage of people declaring such an assessment differs significantly ($\bar{p} = 41\%$, $F = 3,280$, $p^* = 0,006$). In other cases, the assessment of the global quality of life it was shown that the percentage of people declaring a given assessment is the same. In the assessment of the quality of life in terms of feeling happiness in all analysed cases, the answers were obtained that the percentage of persons does not differ significantly.

In the study of particular areas of life, it was found that in the majority of analysed cases of using the test on equality of many structure indexes, there is no basis for rejecting the hypothesis about the equality of the percentage of people declaring an assessment of a given life aspect. Such a situation occurred, for example, in the

assessment of satisfaction: (1) with relations with people closest to us at a very satisfactory level ($\bar{p} = 23\%$, $F = 0,974$, $p^* = 0,432$); (2) with the state of one's health assessed as satisfactory ($\bar{p} = 33\%$, $F = 1,954$, $p^* = 0,082$); (3) with one's own education, from which the respondent is very satisfied ($\bar{p} = 8\%$, $F = 2,100$, $p^* = 0,062$); and (4) with work, from which the person is dissatisfied ($\bar{p} = 6\%$, $F = 0,198$, $p^* = 0,963$).

Therefore, it was stated that the place of residence, (i.e., a rural or an urban with a given number of inhabitants), does not affect the degree of satisfaction with given areas of life. Only in one case – the assessment of own education to an extent that is quite dissatisfactory, the percentage of people declaring such an assessment was not the same. Other areas of life highlighted for which the percentages of Polish residents are not the same, have been assessed at least at the satisfactory level (Table 1). Therefore, it can be observed that the assessment of areas of life as unsatisfactory does not depend on the place of residence.

Table 1. Test results for many structure indicators for selected areas of life

Area of life	Degree of satisfaction	Average proportion	Value of the test F	Significance level p^*
Relations with their loved ones in the family	satisfied	50	3.151	0.008
Relations with colleagues	satisfied	46	14.295	0.000
Situation in the country	quite satisfied	22	4.303	0.001
Place of residence	very satisfied	11	10.401	0.000
Education	satisfied	8	8.405	0.000
Education	quite satisfied	34	4.638	0.001
Education	quite dissatisfied	11	9.406	0.000
Children	very satisfied	41	4.036	0.001
Children	satisfied	45	3.087	0.009
Marriage	very satisfied	32	3.197	0.007
Marriage	satisfied	49	4.605	0.000
State of security in the place of residence	satisfied	49	10.933	0.000

Source: Authors' calculations.

4. Conclusion

On the basis of the study regarding the assessment and comparison of the quality of life of the inhabitants of Polish rural and urban areas in the global aspect and in selected areas of life, it is noted that both inhabitants assessed their lives as quite good or successful.

Regardless of the place of residence, most of the respondents (about 72%) said they felt quite happy. It can be noted that most areas of life were assessed by both urban

and rural residents at least satisfactory level. These were mainly areas of life such as: the financial situation of the family, relations with friends, health condition, housing conditions, education, way of spending free time, work, and safety in the place of residence. These areas of life were rarely evaluated by the respondents at an unsatisfactory level. On the other hand, in the areas of life such as relations with the closest ones in the family, place of residence, children and marriage, a high percentage of both rural and urban residents showed very high satisfaction. Both urban and rural inhabitants were mostly dissatisfied with the overall situation in the country, prospects, and health care. It is noted that people dissatisfied with the health care were mostly based in the largest cities of Poland (53%), while the rural population was slightly less dissatisfied with the health care (39%). On the other hand, much more rural residents (45%) were dissatisfied with prospects than those living in cities (42%).

On the basis of the significance test for many structure indicators, it can be concluded that in most of the analyzed cases concerning global and area-based quality of life assessment, the percentage of inhabitants is equal, which proves that the quality of life assessment is not related to the place of residence. This kind of situation was noted primarily in the case of negative quality of life assessment. On the other hand, in the case of satisfactory quality of life assessment, it was found that there are differences in the percentages of people declaring satisfaction with the global and area' quality of life. Therefore, it can be concluded that in this case the quality of life assessment depends on the place of residence.

The subject of subjective assessment of the quality of life becomes extremely current during the prevailing pandemic in most countries in the world. It takes on greater significance than before, for institutions responsible for the development and implementation of appropriate programs aimed at improving the quality of life of urban and rural residents. Future research should repeat existing research to identify the subjective assessment of rural and urban residents in terms of other areas of life. It is worth analyzing how the COVID 19 pandemic affected the subjective feeling of life satisfaction. One should expect a decline in public confidence in public institutions, a greater sense of social injustice or a sense of limited development prospects.

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