

Social practice of urban environment quality assessment

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Abstract. The article describes the approaches and results of studying the urban environment quality of Stavropol city – the regional centre of southern Russia. The study is based on a questionnaire survey (carried out on a representative sample stratified in accordance with the territorial division of the urban environment into administrative regions). In total, 1172 people took part in the survey. The data are processed in SPSS (version 21). The random sampling error is about 2.0%. Assessing the level of satisfaction of the population with services in the field of culture, education, medicine, trade, housing, the work of the administration gives an idea of the quality of the urban environment and the directions of its development. According to the results of the survey, among the most acute problems requiring enhanced monitoring and operational decisions, respondents identified the problems of cultural, leisure and development activities for children and youth, and medical care for the population. In addition, some questions cause additional criticism from the respondents: personal security and safety, the quality of work of local police officers, the quality of work of management companies, the condition of sports facilities, the work of clinics, and the maintenance of cleanliness in apartment buildings. Thus, in the development strategy of a comfortable urban environment, these areas should be reflected.

1. Introduction

The quality of the urban environment is understood to mean its ability to satisfy the objective needs and requirements of city residents in accordance with the norms and standards of vital activity generally accepted at a given time. The quality of the urban environment determines the attractiveness of the city according to the range of socio-economic parameters, as well as the attitude of people to the city and the executive branch [1].

The trends in the development of the urban environment can be considered as justified if they satisfy the residents and provide an increase in the comfort of their living. The relevance of monitoring residents' satisfaction with the living environment is confirmed by numerous publications by researchers on this issue. There is a wide practice of assessing the environmental parameters of the urban environment based on the study of the opinions of urban residents. So in a study of air quality in



Latin America took part residents of 10 cities. The data are presented in the publication of the authors Franco J.F., Gidhagen L., Morales R., Behrentz E. [2].

The opinions of urban residents are widely used to determine options for improving public places in the urban environment. In this connection, urban planning, design guidelines and new methods for managing changes in public space in many countries are based on residents' expectations of modernization. The results of this approach are presented by the authors of the article "Public space and the challenge of urban transformation in cities of emerging economies: Jeddah case study" [3].

The satisfaction with socio-economic transformations as one of the important parameters for assessing the quality of the living environment is considered in the article "Evaluating residents' satisfaction with market-oriented urban village transformation: A case study of Yangji Village in Guangzhou" [4]. This suggests the need for an integrated approach to understanding the quality category of the urban environment, which can not be without the economic prosperity of the territory and the high welfare of the inhabitants of the village [5, 6].

Thus, the study of social practices for assessing the quality of the urban environment is relevant for the development of territories that meet the needs of residents and ensure the individuality and uniqueness of modern settlements [7, 8, 9].

2. Materials and methods

We used the questionnaire survey method to achieve the goal – to determine the satisfaction of the population with the quality of the urban environment. When assessing the quality of life of the population of a territory, one of the important components of which is the living environment, quantitative methods of collecting information are most often used, which allow concluding that the data are representative. A method of collecting empirical data in a study of the quality of life of Stavropol city population in 2019 was a questionnaire survey. The questionnaire survey gives a massive representative picture of the subject being studied - the quality of the urban environment, which allows taking into account all points of view of the studied population. When filling out the questionnaire, the respondent selects the appropriate time and speed for filling out the questionnaire. The survey of Stavropol city residents is organized territorially in three administrative regions. In total, 1172 people took part in the survey. The data are processed in SPSS (version 21). The random sampling error is about 2.0%.

A survey of respondents shows that almost 50% (586 people) of respondents have been living in the city for more than 10 years. This makes it possible to talk about satisfaction with the quality of the urban environment of the population living for quite a long time in the regional centre. At the same time, the share of people who have recently moved to the city (less than a year and up to 5 years) accounts for almost one third of respondents, which gives a new perspective on the issue under study. Data on the length of stay in the city are presented in the following table.

Table 1. Distribution of answers to the question "How long have you been living in the city?"
%

Possible answers	%
1. Less than 1 year	7.4
2. From 1 year to 5 years	25.2
3. From 6 to 10 years	19.0
4. Over 10 years	48.4

The following table provides information that shows an overall assessment of the comfort of living in the city.

Most respondents assess the degree of comfort in the city as satisfactory. 36.9% believe that their life is rather comfortable, 35.8% believe that their life is more comfortable than not comfortable, 15.9% live very comfortably in the city and only 11.4% live rather uncomfortably than comfortably or very uncomfortably.

Table 2. Distribution of answers to the question “How comfortable do you personally live in the city?”, %

Possible answers	%
1. Very comfortable	15.9
2. Rather comfortable than not comfortable	35.8
3. Average	36.9
4. More likely not comfortable than comfortable	7.5
5. Very uncomfortable	3.9

Table 3. Distribution of answers to the question “Rate the quality of urban services”, %

Possible answers	%
1. Very high quality (the quality of the services provided to you and your family is absolutely (completely) satisfied) 5.9	5.9
2. High quality (the quality of the services provided to you and your family as a whole satisfies you) 17.9	17.9
3. Average quality (the quality of the services provided to you and your family is partially satisfied (only on certain issues) 59.3	59.3
4. Low quality (the quality of the services provided to you and your family is not satisfied to a greater extent) 11.4	11.4
5. Very low quality (the quality of the services provided to you and your family is absolutely not satisfactory) 5.5	5.5

59.3% of respondents rated the quality of services provided in the city as average, 23.8% fully or completely satisfied with the quality of services. 16.9% rated the quality of services provided in the city as low or very low.

Table 4. Distribution of answers to the question “Rate the quality of housing and communal services”, %

№	Housing and communal services:	Service quality assessment					
		very high quality	high quality	medium quality	low quality	very low	never used
1.	Electricity supply	19.4	39.5	28.4	6.2	5.2	1.4
2.	Water supply	20.0	35.5	29.7	10.7	3.4	0.7
3.	Heat supply	17.4	31.9	33.5	11.1	5.1	1.1
4.	General condition of the building	16.4	28.6	35.9	11.6	4.3	3.2
5.	Maintenance of cleanliness and good atmosphere in the entrance hall	14.4	24.4	29.6	18.2	7.5	5.9
6.	General condition of the yard territory	14.9	29.9	31.0	12.8	7.4	4.0
7.	The quality of the management company work	9.9	18.4	35.5	18.7	10.1	7.5
8.	The possibility of obtaining subsidies for public services	7.3	15.5	26.7	10.8	10.3	29.4

The services that are provided to residents of the city by healthcare, culture, and public utilities entities have received a fairly high or average quality rating. Less than ¼ of respondents consider that the quality of services provided in the city is low, very low. On average, 10% of respondents have never used one or another type of provided service, and therefore, they can not evaluate their quality.

Table 5. Distribution of answers to the question “Rate the quality of trade services”, %

№	Types of services, activities	Service quality assessment					
		very high quality	high quality	medium quality	low quality	very low	never used
1.	Food trade quality	20.5	37.3	34.4	5.7	2.1	-
2.	Quality of manufactured goods' trade	21.3	42.5	28.2	4.1	1.5	2.2
3.	Quality of public catering facilities' work	18.0	35.1	31.8	5.5	2.4	7.3

The highest rating of respondents among trade services was received by trade in industrial goods: 21.3% rated the quality of trade in industrial goods as very high, 42% rated it as high, 28.2% as average quality, less than 5% of respondents considered the quality of trade in industrial goods to be low, and less than 2% considered it as very low.

Almost 40% of respondents rated the quality of food trade and food service facilities as high, less than 6% as low and only 2% of respondents as very low.

Table 6. Distribution of answers to the question “Assess the quality of education”, %

№	Quality:	Service quality assessment					
		very high quality	high quality	medium quality	low quality	very low	never used
1.	Preschool education	9.3	28.8	30.2	8.6	3.6	19.5
2.	School education	8.6	35.0	33.6	8.6	3.4	10.7
3.	Secondary vocational education	9.7	31.4	25.3	9.0	2.2	22.4
4.	Higher education	22.1	37.6	26.2	4.7	4.3	5.2

Among educational services, higher education received the highest rating. 22.1% rate the quality of higher education in the city as very high, 37.6% – as high, 26.2% – as average. Less than 10% consider it as low or very low.

Among the respondents, the secondary education implemented in the city was also highly considered. 31.4% of respondents rated the quality of secondary vocational education as high, 25.3% – as average.

10.7% of respondents have no secondary education. 33.6% believe that the quality of school education in the city is average, 35.0% evaluated it as high. The same number of respondents, 8.6% rated the quality of school education as very high and low.

19.5% have never used the services of preschool educational institutions. 68.3% rated the quality of preschool education services as very high, high or of medium quality.

Respondents rated the services of the Ministry of Emergencies and fire services as a very high quality of services (24.4% and 17.6% of respondents).

The work of local police officers and the personal and civilian security received a very low quality rating.

Table 7. Distribution of answers to the question “Rate the quality of public order protection, ensuring personal security”, %

№	Types of services, activities	Service quality assessment					
		very high quality	high quality	medium quality	low quality	very low	never used
1.	Personal security	9.2	15.7	37.5	17.5	12.8	6.9
2.	The quality of work of district police officers	6.6	17.8	32.5	20.4	12.3	10.4
3.	The quality of the fire service	17.6	32.4	23.7	4.2	1.7	20.4
4.	The quality of work of the Ministry of Emergencies	24.4	25.8	20.2	4.0	2.8	22.8

Table 8. Distribution of answers to the question “Rate the quality of transport services”, %

№	Types of services, activities	Service quality assessment					
		very high quality	high quality	medium quality	low quality	very low	never used
1.	The quality and condition of roads, the work of road services	6.2	17.6	31.2	25.3	19.8	-
2.	The quality of public transport work	7.1	19.4	38.9	21.0	11.5	2.1
3.	The general condition of bus stops, pedestrian crossings	9.3	25.8	39.6	18.7	5.5	1.0

The respondents gave a rather high assessment of the quality and condition of roads, the work of road services, public transport, stops, and pedestrian crossings.

The general condition of stops and pedestrian crossings was rated by 35.1% as very high or high, 39.6% – as average, 24.2% of respondents rated the status of stops and pedestrian crossings as low or very low, 1.0% of respondents never used stops and pedestrian crossings.

19.8% of respondents rated the quality and condition of roads, the work of road services as very low, 25.3% considered it as low, 31.2% considered the quality of roads and work of the road service to be average, 23.8% rated the condition of roads and the work of road services above average.

The quality of public transport 38.9% of respondents rated as average. 32.5% of respondents rated the work of public transport below average, 26.5% – above average and 2.1% have never used public transport.

42.2% of respondents believe that the quality of life in the city remained the same as last year. A quarter of residents believe that they began to live better, 13.8% – worse. For 18.3% it was rather difficult to answer.

Table 9. Distribution of answers to the question “Assess how the quality of life in the city has changed compared to last year?”, %

Possible answers	%
1. Improved	25.8
2. Deteriorated	13.8
3. Stayed at the same level	42.2
4. Difficult to answer	18.3

Table 10. Distribution of answers to the question “Rate the activities of municipal authorities on improving the quality of people’ life”, %

Possible answers	%
1. Excellent (the authority completely copes with the duties assigned to it and successfully solves the problems that arose in various spheres of life)	4.7
2. Good (the authority as a whole copes with the duties assigned to it, but still a number of unresolved problems remain)	27.7
3. Satisfactory (the authorities are doing something to solve existing problems, but this, in your opinion, is not enough)	45.5
4. Unsatisfactory (in your opinion, the authorities can not cope with the duties assigned to it, although some actions aimed at solving the problems of citizens are being taken)	16.8
5. Bad (the authorities do not work at all)	5.3

During the survey, 45.5% of respondents rated the activity of municipal authorities in improving the quality of people’ life as satisfactory, 27.7% – as good, 4.7% – as excellent. 22.1% of respondents believe that the authorities are not coping with the responsibilities assigned to it, although some actions are being taken or believe that the authorities do not work at all.

Table 11. Distribution of answers to the question “Indicate which problems, in your opinion, should the city administration pay attention to first of all?” %

Possible answers	%
1. Social targeted programs	19.2
2. City improvement	39.4
3. The maintenance of municipal housing	28.7
4. Public transport	41.0
5. State of the industry	17.1
6. Cultural and leisure activities for children and youth	49.0
7. Maintenance of public order	36.7
8. Medical care	49.1
9. Housing and utilities	40.1
10. Preschool and school education	29.2
11. Ecology	36.7

The key problems, according to residents, are the cultural and leisure activities for children and youth (49.0% of respondents), and medical care for the population (49.1% of respondents). Very significant problems that should be addressed, according to the respondents, are: public transport, housing and communal services, city improvement, ecology, maintenance of public order, preschool and school education, the maintenance of municipal housing.

3. Conclusion

The social practice of assessing the quality of the urban environment based on a survey of the population of the municipality makes it possible to draw a number of conclusions. 78.9% of respondents positively assess the activities of municipal executive bodies to improve the quality of life and the urban environment. The results of a study of the urban environment comfort showed that all the services of health care, culture and leisure, housing and communal services, transport and trade services, public order protection, personal safety, and education, as described by the respondents, were rated rather high. However, certain types of services, such as: personal security and safety, the quality of work of local police officers, the quality of work of management companies, the condition of sports facilities, the operation of clinics, and the maintenance of cleanliness in apartment buildings are criticized by the respondents and require additional control. Among the most acute problems requiring enhanced monitoring and operational decision-making, respondents identified the problems of cultural and leisure activities for children and youth, and medical care for the population.

The annual monitoring of residents' satisfaction with the quality and comfort of the urban environment provides a mechanism for continuous improvement.

Among the cities of Russia, an annual competition is held aimed at the development of a comfortable urban environment – “The most comfortable city in Russia”, organized by Rosstroy. In 2019, Stavropol was in the “Top ten Russian cities” with the best roads and parking lots. The city closes the top 10, but the situation has improved over the year – last year the regional centre took 12th place. Thus, the social practice of assessing the quality of the urban environment, which takes into account the opinion of residents, has an impact on the development of strategic directions for improving the urban environment and gives positive results.

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