

# Evaluation of the Quality of Urban Life in the Urban Sectors of Cheria City, Tebessa Province, Algeria

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## Abstract

This research paper aims to assess the quality of urban life in the urban sectors of the city of Cheria, the state of Tebessa, based on 20 indicators divided equally into the dimensions of sustainable development represented in the social, the economic, and the environmental dimension. The study is conducted by randomly distributing 1508 questionnaires that included four axes compatible with these dimensions, in equal proportions estimated at 10% of the number of families living in each of the thirteen urban sectors of the city of Cheria, which were divided based on several objective criteria such as the historical establishment of urban fabrics, housing, the degree of homogeneity and similarity, spatial distribution, the ratio of the structured roads in the city, and the state of the existing urban fabric, etc. The study and analysis of the results of this questionnaire resulted in differences in the degree of satisfaction with the various social, economic, environmental and institutional indicators adopted to assess the quality of urban life across the various urban sectors. Accordingly, the careful study concluded that there are three spatial levels of the quality of urban life in the city, which vary between acceptable, moderate, and poorly acceptable. These are compatible with the levels of urban planning and spatial management in the urban sectors of the city of Cheria, Tebessa Province, Algeria.

**Key words:** Urban Quality Of Life, Urban Sectors, Sustainable Development, Degree Of Satisfaction, Cheria City.

## INTRODUCTION

The quality of urban life expresses the extent to which individuals are satisfied with the various aspects of their daily lives (1). Therefore, it represents a multidisciplinary and multidimensional principle (2) that aims to solve the accumulated problems over time in the existing urban areas and to control future urban expansions (3) according to the logic of urban sustainability that aims to improve the urban environment, with a cross-cutting vision between the interests of the various urban actors (4). However, the urban output of Algerian cities was affected by various political, social and economic conditions, in which economic planning dominated the scene, especially in the two decades that followed independence, that is, in the seventies and eighties of the last century. Hence, this fact made the rest of the other planning aspects neglected, especially the urban aspect, which was characterized by chaos due to the weakness of the legal system and rural exodus widespread in several Algerian cities, that took place immediately during the decades following the independence. In the nineties (5), despite the efforts of the Algerian government in recent years to adopt urban sustainability policies, especially with the advent of the Territorial Development Law within the framework of sustainable development and the directive law for the city and others (6,7), these conditions made many Algerian cities experiencing traditional problems related to access to housing, work, services, transportation ...etc. (8). In addition, many cities witnessed huge challenges to ensure the quality of urban life. The evaluation of the quality of urban life in the Algerian cities has become an indicator of achieving urban sustainability for cities (9), and perhaps, the most important of these cities is the city of Cheria. This city was chosen as a field of study because its urban fabric is a mixture of planned and unplanned neighborhoods (10) in which the levels of urban life quality vary. Considering the preceding facts, the following question will be asked:

To what extent does the quality of urban life vary in the urban sectors of the city of Cheria, Tebessa Province - Algeria ?

## MATERIALS AND METHODS

### Study Area

According to the expectations of the year 2022, the inhabitants of the city of Cheria, exceeds 120,000 people. (11). Cheria is located at the intersection and convergence of National Road No. 83, which connects Cheria with some municipalities located to its east, and State Road No. 01 that connects it with some municipalities located north and south of it, and State

Road No. 05 that connects it with some municipalities located on its west. This geographical location made it occupy a privileged position within its state territory, which enabled it to be one of the first cities in terms of population and development programs after the state headquarters and the city of Bir al-Ater, as it is bordered from the north by: the municipalities of Bir Mokddam and Gourigueur. From the south: Thlidjene municipality, from the east: Al-Ogla Al-Malha municipality (12), and from the west: Al-Mazraa municipality.



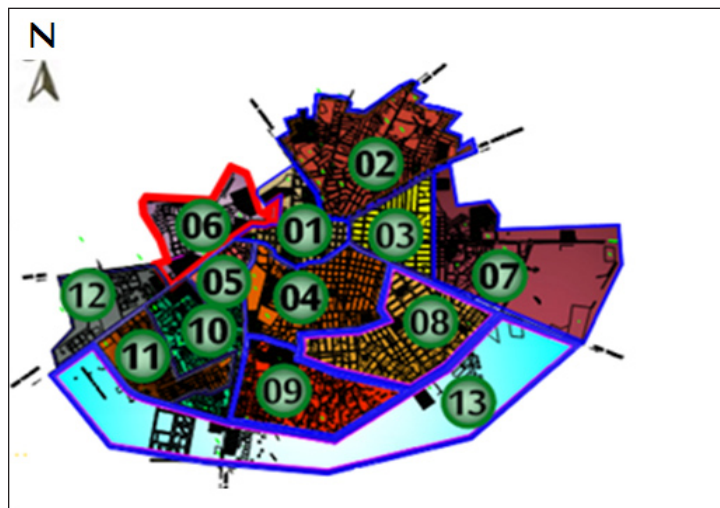
**Map 1.** The urban area of Cheria City. (Source: The work of the two researches based on Google Earth 2022)

## RESEARCH METHOD

### The Field of Study is Divided into Urban Sectors

To facilitate the assessment of the quality of urban life in the urban sectors of the city of Cheria, and to obtain measurable and comparable results, the city was divided into thirteen homogeneous urban sectors, as shown in the following map, based on the following criteria (12):

- The historical establishment of urban fabrics.
- Dwellings, and the degree of homogeneity and similarity, and their spatial distribution.
- The city's structured roads.
- The state of the existing urban fabric



**Map 2.** Dividing the field of study into urban sectors. (Source: Toumi Fahmi, 2016 + the processing of the researchers, 2022).

**Processing Research Data**

This study uses the descriptive analytical approach, which allows measuring the degree of satisfaction with the quality of urban life in cities, by classifying it according to measurable relative indicators derived from the most important indicators associated with the dimensions of sustainable development (13,14,15) which represents the social, economic, environmental and institutional dimensions. Adapting it to the local reality of the Algerian city based on a random distribution of 1508 questionnaires that include four axes with equal proportions estimated at 10% of the number of families living according to the following table:

**Table 1.** Indicators for assessing the quality of urban life

Dimension	Indicator Number	Indicator
The Social dimension	1	The degree of satisfaction with the number of individuals in the dwelling.
	2	The degree of satisfaction with the number of students in the classroom.
	3	The degree of satisfaction with the neighborly relationship
	4	The degree of satisfaction with the percentage of illiteracy of the dwelling members
	5	The degree of satisfaction with the sense of security inside the house
The Economic dimension	6	The degree of satisfaction with the monthly income of family members
	7	The degree of satisfaction with the cost of electric energy and gas
	8	The degree of satisfaction with the use of solar energy to light the house
	9	The degree of satisfaction with the use of solar energy in public lighting is
	10	The degree of satisfaction with the economy in the use of non-renewable resources
The Environmental dimension	11	Degree of satisfaction with the quality of drinkable water
	12	The degree of satisfaction with the indiscriminate dumping of waste
	13	The degree of satisfaction with the exposure of housing to the risk of flooding
	14	The degree of satisfaction with building on agricultural land
	15	The degree of satisfaction with the coverage of green spaces
The Institutional dimension	16	The degree of satisfaction with readiness to participate in volunteer campaigns in neighborhood
	17	The degree of satisfaction with the media within the neighborhood.
	18	The degree of satisfaction with bringing the administration closer to the citizen in Neighborhood
	19	The degree of satisfaction with bringing the administration closer to the citizen in Neighborhood
	20	The degree of satisfaction with coordination and consultation between the various actors in the neighborhood

(Source: Achievement of researchers based on the principles of sustainable development, 2022).

**RESULTS AND DISCUSSION**

**RESULTS**

**Evaluation of Urban Life Quality According to Social Indicators**

Improving the quality of urban life is the goal of any urban development in the city of Cheria. This goal cannot be reached by measuring the degree of satisfaction related to the various dimensions, beginning with the indicators of the social dimension estimated at five indicators, represented in the degree of satisfaction with the number of individuals in the dwelling, the degree of satisfaction with the number of students in the department, the degree of satisfaction with the

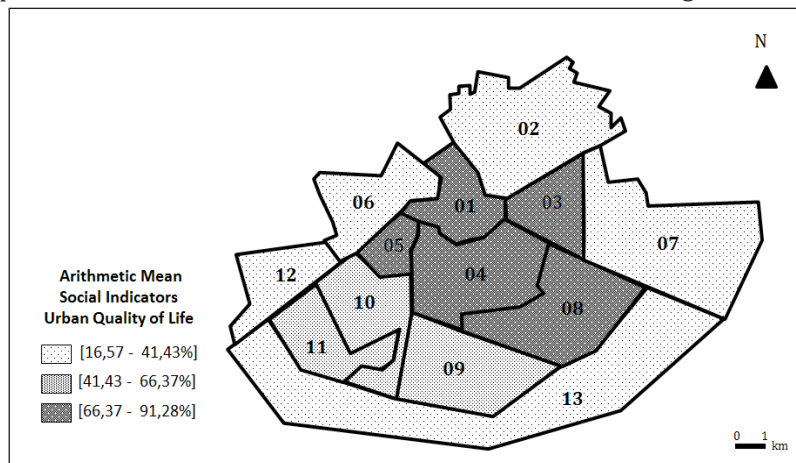
neighborly relationship, the degree of satisfaction with the percentage of illiteracy of the dwelling members, and the degree of satisfaction with the sense of security inside the dwelling.

By means of converting the absolute values obtained after analysing the questionnaire and converting the absolute values into relative values as shown in Table No. 01 included in the appendix. Thus, the following results are obtained:

-There is a variation in the degree of satisfaction with any of the indicators from one urban sector to another.

-There is a strong correlation between the values of the various indicators in the same urban sector. In order to reach an accurate assessment of the degree of satisfaction with the indicators of the social dimension of the quality of urban life in the urban sectors of the city of Cheria, the sum of the percentages of these indicators in each urban sector was relied upon, as shown in the following map, which resulted in the following categories:

- **The first category:** the degree of satisfaction with the social indicators of the quality of urban life ranges between 16.57 and 41.43% Five urban sectors fall within this category, represented in the second urban sector and the sixth urban sector, in each of which the degree of satisfaction with the social indicators of the quality of urban life is estimated at 16.57%, as well as the thirteenth urban sector, the twelfth urban sector and the seventh urban sector, which are estimated respectively by 25.17%, 33.52%, 36.52%. They are weak values compared to the rest of the other categories.
- **The second category:** the degree of satisfaction with the social indicators of the quality of urban life ranges between 41.43 and 66.37%. This category includes three urban sectors represented in the eleventh urban sector, the tenth urban sector, and the ninth urban sector, in which the degree of satisfaction with the social indicators of the quality of urban life is estimated, respectively, by 47.17%, 52.35%, and 66.15%, which are average values compared to the rest of the categories.
- **The third category:** the degree of satisfaction with the social indicators of the quality of urban life ranges between 66.37 and 91.28%. This category includes the rest of the urban sectors represented in the first, fourth, third, fifth and eighth urban sectors, where the highest rate of satisfaction with the social indicators of the quality of urban life is estimated in the first urban sector by 91.28%, and the lowest percentage in the eighth urban sector by 71.65%, which are high values compared to the rest of the sectors included in the other two categories.



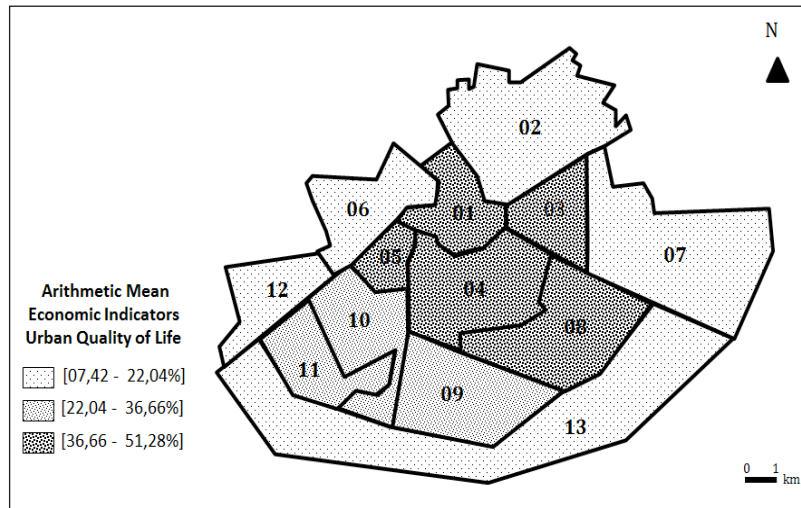
**Map 3.** Degree of satisfaction with social indicators of urban quality of life Across the urban sectors of Cheria City. (Source: Researchers' completion of the results of the questionnaire distributed between August and September 2022).

### Evaluation of the Quality of Urban Life According to Economic Indicators

Economic indicators are of no less importance than social indicators in evaluating the quality of urban life. As a result of evaluating the quality of urban life in the urban sectors of the city of Cheria, based on five economic indicators, the following map was obtained, from which the following categories emerge:

- **The first category:** the degree of satisfaction with the economic indicators of the quality of urban life ranges between 7.42 and 22.04%. This category includes five urban sectors represented in the second urban sector, the sixth urban sector, the thirteenth urban sector, the twelfth urban sector, and the seventh urban sector. The highest percentage in the sixth urban sector is estimated at 21.16%, which are weak values compared to the rest of the other categories.

- **The second category:** the degree of satisfaction with the economic indicators of the quality of urban life ranges between 22.04 and 36.66%. In this category, there are three urban sectors represented in the eleventh urban sector, the tenth urban sector, and the ninth urban sector, in which the degree of satisfaction with the economic indicators of the quality of urban life is estimated, respectively, at 32.31%, 29.22%, and 25.97%, which are greater values than the values of the first category except, it did not exceed the degree of satisfaction of a third of the study sample, which also makes it weak.
- **The third category:** the degree of satisfaction with the economic indicators of urban quality of life ranges between 36.66 and 51.28%. This category includes the rest of the urban sectors shown in the map, where the highest rate of satisfaction with the economic indicators of the quality of urban life is estimated in the first urban sector with 51.28%, and the lowest percentage in the eighth urban sector with 37.4%, which are higher values than the previous two categories, but they remain below the average.



**Map 4.** Degree of satisfaction with economic indicators of urban quality of life Across the urban sectors of Cheria City. (Source: Researchers' completion of the results of the questionnaire distributed between August and September 2022).

### Evaluating the Quality of Urban Life According to Environmental Indicators

The environmental dimension is considered as one of the most important dimensions that received great attention with regard to the quality of urban life. Therefore, the following is a study of the degree of satisfaction with the environmental indicators of the quality of urban life adopted in the research by the study sample, where it was possible to use the questionnaire distributed between the months of August and September across the urban sectors of the city of Cheria. The questionnaire helped to obtain the next map, which shows the following categories:

- **The first category:** the degree of satisfaction with environmental indicators of urban quality of life ranges between 12.64 and 37.21%. Five urban sectors fall within this category, as shown in the following map. The lowest percentage of satisfaction with environmental indicators of the quality of urban life is estimated in this category in the sixth and second urban sectors, at an estimated rate of 12.64% each, and the highest percentage in the seventh urban sector at 35.75%, which are weak values compared to the other categories.
- **The second category:** the degree of satisfaction with environmental indicators of urban quality of life ranges between 37.21 and 61.77%. This category includes three urban sectors represented in the eleventh urban sector, the tenth urban sector, and the ninth urban sector, with which the degree of satisfaction with the environmental indicators of the quality of urban life is estimated, respectively, at 42.04%, 48.86%, and 61.03%, which are average values compared to the rest of the other categories.
- **The third category:** the degree of satisfaction with the environmental indicators of urban quality of life ranges between 61.77 and 86.33%. The rest of the urban sectors shown in the following map is shown in this category, where the highest rate of satisfaction with the environmental indicators of the quality of urban life is estimated in the first urban sector with 86.33%, and the lowest percentage in the eighth urban sector with 66.85%, which are high values compared to the other two categories.

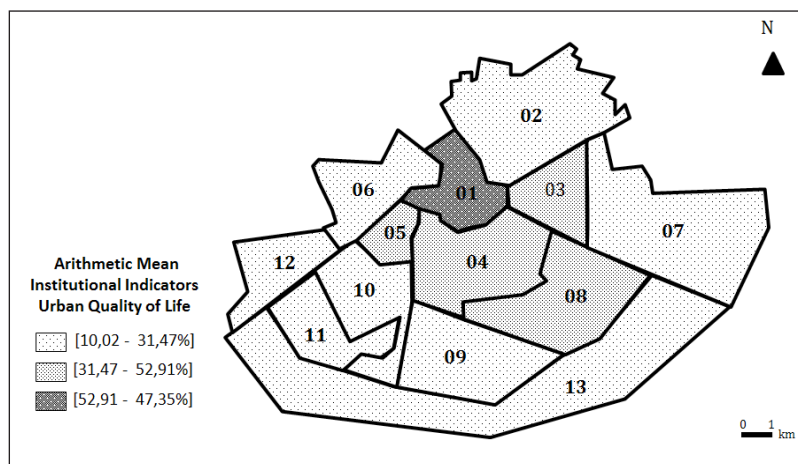


**Map 5.** Degree of satisfaction with environmental indicators of urban quality of life across urban sectors of Cheria City. (Source: Researchers' completion of the results of the questionnaire distributed between August and September 2022).

### Evaluation of Urban Life Quality According to Institutional Indicators

In light of the emergence of the concept of urban governance as a concept coinciding with sustainable urban development (14), it has become necessary to adopt the indicators of this dimension to assess the degree of satisfaction with the quality of urban life in the urban sectors of Cheria City, as processing the results of the questionnaire distributed between August and September 2022 enabled us to obtain the following map. The results are translated into the following categories:

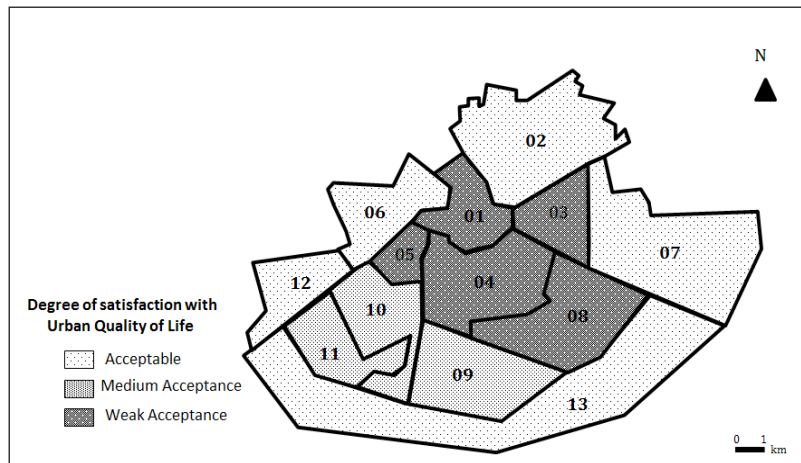
- **The first category:** The degree of satisfaction with the institutional indicators of the quality of urban life ranges between 10.02 and 31.47%. There are eight urban sectors in this category, as shown in the following map. The lowest percentage of the degree of satisfaction with the institutional indicators of the quality of urban life is estimated in the second urban sector by 10.02%, and the highest percentage in the ninth urban sector by 31.00%, which are weak values compared to the rest of the other categories.
- **The second category:** The degree of satisfaction with the institutional indicators of urban quality of life ranged between 31.47 and 52.91%. This category contains four urban sectors represented in the third urban sector, the fifth urban sector, the fourth urban sector, and the eighth urban sector, with which the degree of satisfaction with the institutional indicators of the quality of urban life is estimated, respectively, at 46.35%, 41.21%, 38.09%, and 33.98, which are values close to middle.
- **The third category:** The degree of satisfaction with the institutional indicators of urban quality of life ranges between 52.91 and 74.35%. This category is unique to one urban area represented in the first urban sector, in which the degree of satisfaction with the institutional indicators of urban quality of life is estimated at 74.35%, which is a high value compared to the rest of the urban sectors.



**Map 6.** Degree of satisfaction with institutional indicators of urban quality of life Across urban sectors of Cheria City. (Source: Researchers' completion of the results of the questionnaire distributed between August and September;2022)

## DISCUSSION OF THE RESULTS

The degree of satisfaction with the quality of urban life in the urban sectors of the city of Cheria varies according to the social, economic, environmental and institutional indicators. It differs from one urban sector to another and from one indicator to another according to the urban differences produced by the characteristics of the morphological and functional composition of the urban fabric as a result of its location, the conditions of its establishment, the stages of its development, its existing condition, the degree of its preparation and the nature of the services it provides and its adequacy and others...etc.. The central urban sectors represented in the first urban sector, the third urban sector, the fourth urban sector, the fifth and the eighth urban sector, and these sectors occupy the first ranks within the work plan of the local and state authorities with regard to urban planning and improvement of the city of Cheria (16). As a good example of this, the first urban sector, which considers the city center to be the most acceptable in terms of the degree of satisfaction with the social, economic, environmental and institutional indicators, being the first nucleus of the city's emergence (10) and containing various equipment and neighborhood services necessary for the daily life of the citizen with its distinction with a homogeneous urban morphology. However, in terms of the various constituent systems, it is covered by the green spaces acceptable to a certain extent compared to the rest of the other sectors, with reference to its rehabilitation and urban improvement in 2018 through the renewal of infrastructure (drinkable water network, sewage network, rainwater drainage network, telephone network, green spaces), in addition to the acceptability of public service It includes urban transportation, garbage removal, water distribution, etc..., followed by the urban sectors that come in the second belt, represented in the ninth, tenth and eleventh urban sectors. Consequently, there exist a deficiency in the urban structure, which negatively affects the degree of satisfaction with the quality of urban life in terms of social, economic, environmental and institutional aspects. As for the rest of the sectors located in the suburbs, which are represented in the second, sixth, seventh, twelfth and thirteenth urban sectors, they are sectors that witness great deficiencies in terms of urbanization, whether in terms of their lack of preparation and urban improvement, or in terms of the spread of slums and chaos, or in terms of the difficulty in providing public services in them. It was negatively reflected on the degree of satisfaction on the quality of urban life in terms of social, economic, environmental and institutional aspects. The following map shows the levels of urban life quality in the urban sectors in the city of Cheria, Tebessa Province, Algeria.



**Map 7.** Acceptability of the Degree of Satisfaction with the Quality of Urban Life in the Urban Sectors of Cheria City. (Source: Researchers' completion of the results of the questionnaire distributed between August and September 2022).

## CONCLUSION

Depending on the various developments witnessed by the three basic dimensions of sustainable development represented in the social, the economic, and the environmental dimensions that the Rio de Janeiro Conference focused on in 1992 (17), as well as the institutional dimension that emerged as a result of the ten commitments of the Alboraq Conference in 1994 in which the concept of sustainable urban development appeared. (3), A set of social, economic, environmental and institutional indicators were built, which were exploited in the form of a questionnaire distributed to the inhabitants of the thirteen urban sectors in order to assess the quality of urban life across the urban sectors of the city of Cheria, which resulted in treatment, not reaching a degree of ideal satisfaction of the various urban sectors that make up the city, but they vary according to three levels. The first level includes the central sectors (first, third, fourth, fifth and eighth) that witness an acceptable degree of satisfaction with the quality of urban life and are characterized

by their acceptability in terms of their urban planning, preparation or management, followed by the urban sectors (ninth, tenth, and eleventh) are medium in terms of acceptability in terms of the degree of satisfaction with the quality of urbanization, although they are distinguished by acceptable urban planning. However, it witnesses a shortage in its preparation and management. As for the rest of the sectors that are located in the suburbs of the urban sector (the second, sixth, seventh, twelfth and thirteenth), the degree of acceptance of the degree of satisfaction with the quality of urban life is very weak, and it is characterized by the spread of chaotic neighborhoods and the difficulty of management. Thus, all these differences in the degree of satisfaction with the quality of urban life, the most important of which are due to the spatial and urban differences between the urban sectors, whether in terms of urban planning or in terms of its management, and this opens horizon to futures research studies to upgrade it in the city as a whole and try to find a positive balance between the various urban sectors. The city aims to improve the quality of urban life in line with the principles of sustainable development.

**Annex**

**Table 1.** Percentages of the degree of satisfaction with the quality of urban life in the urban sectors of the city of Cheria according to various indicators

Indicator Number	Urban sector number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	87,18	15,02	74,8	80,86	73,33	15,02	31,88	63,74	58,46	48,04	44,78	30,99	23,28
2	89,74	15,96	81,3	85,17	80	15,96	33,33	68,13	60	51,96	46,27	32,39	25
3	92,31	19,01	78,86	85,17	66,67	19,01	36,23	65,93	61,54	50,98	46,27	35,21	26,72
4	94,87	16,9	86,99	90,91	86,67	16,9	40,58	85,71	78,46	57,84	50,75	33,8	25
5	92,31	15,96	78,86	85,17	76,67	15,96	40,58	74,73	72,31	52,94	47,76	35,21	25,86
6	82,05	14,08	68,29	76,08	63,33	14,08	40,58	59,34	56,92	50,98	44,78	32,39	24,14
7	74,36	11,03	68,29	70,81	63,33	11,03	34,78	58,24	53,85	49,02	41,79	28,17	20,69
8	0	0	0	0	0	0	0	0	0	0	0	0	0
9	25,64	11,05	12,2	13,88	0	0	0	10,5	0	0	0	0	0
10	74,36	11,97	65,85	69,86	60	11,97	30,43	57,14	50,77	46,08	43,28	25,35	23,28
11	84,62	12,91	82,11	84,21	76,67	12,91	27,54	61,54	53,85	45,1	35,82	21,13	18,97
12	92,31	11,97	82,93	85,17	80	11,97	36,23	64,84	55,38	42,16	37,31	25,35	13,79
13	94,87	8,92	92,68	93,78	93,33	8,92	37,68	74,73	64,62	54,9	46,27	29,58	16,38
14	100	8,92	100	100	100	8,92	47,83	98,9	98,46	63,73	55,22	29,58	18,1
15	46,15	3,99	30,89	33,97	26,67	3,99	10,14	16,48	15,38	13,73	11,94	8,45	6,03
16	100	29,11	100	100	100	29,11	55,07	84,62	78,46	73,53	65,67	43,66	37,93
17	37,8	7,04	35,77	7,04	41,03	8,62	12,68	27,47	30	24,62	20,59	14,49	17,91
18	55,02	11,03	52,85	11,03	64,1	12,07	15,49	48,35	50	44,62	25,49	17,39	22,39
19	47,85	15,02	43,9	15,02	53,85	18,1	21,13	37,36	40	33,85	32,35	24,64	28,36
20	156,8	7	52,89	119,3	5,85	11,6	6,39	22,75	2,7	10,4	21,42	6,9	7,37
Sample size (family)	39	426	123	209	30	100	69	91	65	102	67	71	116

(Source: Researchers' completion of the results of the questionnaire distributed between August and September 2022).

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