МУНИЦИПАЛЬНАЯ ЭКОНОМИКА

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Attractiveness of Cities during Social Isolation: Views of Residents of the Silesian Voivodeship (Poland) [1]

The SARS-CoV-2 pandemic has led to the widespread introduction of the principles of social isolation and drastically reduced the right of residents to use the city, limiting mobility and meetings. The article examines whether the temporarily limited mobility due to the SARS-CoV-2 pandemic, reducing the quality of life in the city, also reduces its attractiveness. The city, assessed from the viewpoint of its attractiveness, aims to strengthen its appeal. We assume that the attractiveness of the city and assessment of the quality of life in the city are based on similar features. We sought answers to the following research questions. (1) Is it really possible to notice a decrease in the city's attractiveness due to the pandemic? (2) Does a respondent's opinion (belief) about the city as a living environment influence the assessment of the city in which the respondent lives? (3) Do factors describing the mobility of city inhabitants influence the quality of life? We revealed that the demographic characteristics of residents are to varying degrees related to the assessment of the attractiveness of the city. Gender of respondents has no significant influence on the assessment of the city and current place of residence, while age and educational level of education are important for this assessment. The older is the respondent, the lower is their assessment of the city. Simultaneously, the higher is the educational level, the higher is the propensity to assess the attractiveness of the city. The analysis of mobility revealed that not all examined mobility elements will equally improve the quality of life (measured by the assessment of the place of residence). Out of the 7 factors identified in the study, only 3 turned out to be statistically significant. Therefore, it can be concluded that these factors improve the quality of life of city residents.

Keywords: city, quality of life, pandemic period, attractiveness of the city, limited mobility, mobility paradigm, mobility metaphors, cliché of the city's attractiveness, antecedence of city ratings, interdisciplinarity of mobility

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Привлекательность городов в условиях социальной изоляции: взгляды жителей Силезского воеводства (Польша)

Пандемия SARS-CoV-2 привела к повсеместному распространению принципов социальной изоляции, резкому сокращению прав жителей на пользование городом, ограничению мобильности и встреч. Цель статьи — исследовать, ведет ли временное ограничение мобильности из-за пандемии SARS-CoV-2 к снижению не только качества жизни, но и привлекательности города. Любой оцениваемый город стремится повысить свою привлекательность. Предполагается, что для оценки как привлекательности города, так и качества жизни в городе используются схожие характеристики. Данное исследование пытается ответить на следующие вопросы. (1) Можно ли заметить снижение привлекательности города из-за пандемии? (2) Влияет ли сложившееся мнение (убеждение) респондента о городе как жизненной среде на оценку места проживания респондента? (3) Влияют ли факторы, характеризующие мобильность жителей города, на качество жизни? Выявлено, что демографические характеристики жителей в той или иной степени связаны с оценкой привлекательности города. Пол респондентов не играет важной роли при оценивании города и текущего места проживания, в то время как возраст и уровень образования существенно влияют на эту оценку. Чем старше респондент, тем ниже он оценивает привлекательность города. В то же время, чем выше уровень образования, тем выше склонность оценивать привлекательность города. Анализ показал, что не все исследуемые элементы мобильности (измеряемое при помощи оценки места проживания) в равной степени улучшают качество жизни. Из 7 выявленных факторов, только 3 оказались статистически значимыми. Таким образом, можно сделать вывод, что эти именно эти факторы влияют на оценку качества жизни горожан.

Introduction

While the city is slowly becoming a place that satisfies people, offering them a variety of environments and living conditions, inclusion and acceptance, it can also be a prison during a pandemic. These opposing sentiments can be observed especially during the widespread public health threat of SARS-CoV-2, where, so far, the only effective way to prevent mass infection is to remain socially isolated. Such conclusions regarding the effectiveness of preventing the spread of the virus were drawn from the observations during the H1N1 pandemic in 2009 [1]. Due to the deprivation of free movement and direct contact with other people, which is contrary to the idea of the city, city dwellers often start to assess cities differently than before. The generally negative assessments of the city result from drastically increased possibilities of infection, high congestion, cultural and ethnic differences of inhabitants, previous habits, habitual mobility, etc. Such opinions can be increasingly seen in Internet forums, in discussions with isolated people, and in interviews with different groups of people during teleconferences or webinars. However, is it really possible to notice a decrease in the city's attractiveness or is it just the so-called media noise? Moreover, we were interested in the problem of antecedent ratings of the city and examined whether the general opinion on the city as a living environment influences the assessment of the city in which a respondent lives. We expanded the study by analysing the factors describing the mobility of city dwellers and their influence on the quality of living. Such research problems are formulated in this article.

City and the Quality of Living

Happy City is a slogan that has been justified not only by observations but also by numerous scientific works. The Happy City is not only a phraseological relationship that can be the mission of any city authorities: there are many ways to achieve this goal [2, 3, 4, 5]. The city builds its environment, both physical and metaphysical, also (or perhaps mainly) affecting the emotions of citizens [6, 7, 8] who are more willing to take to the streets of cities and benefit from opportunities to meet other people there. The struggle for the streets has been going on for some time with variable success, but it demonstrated the growing trend [8, 9, 10]. Happiness, as measured in cities, is related to the standard of living (Quality of Living), which is determined by the possibility of reaching and enjoying the advantages of access to both places and people, as well as the principles on which this accessibility is possible [2, 11]. This can be observed by applying various approaches to
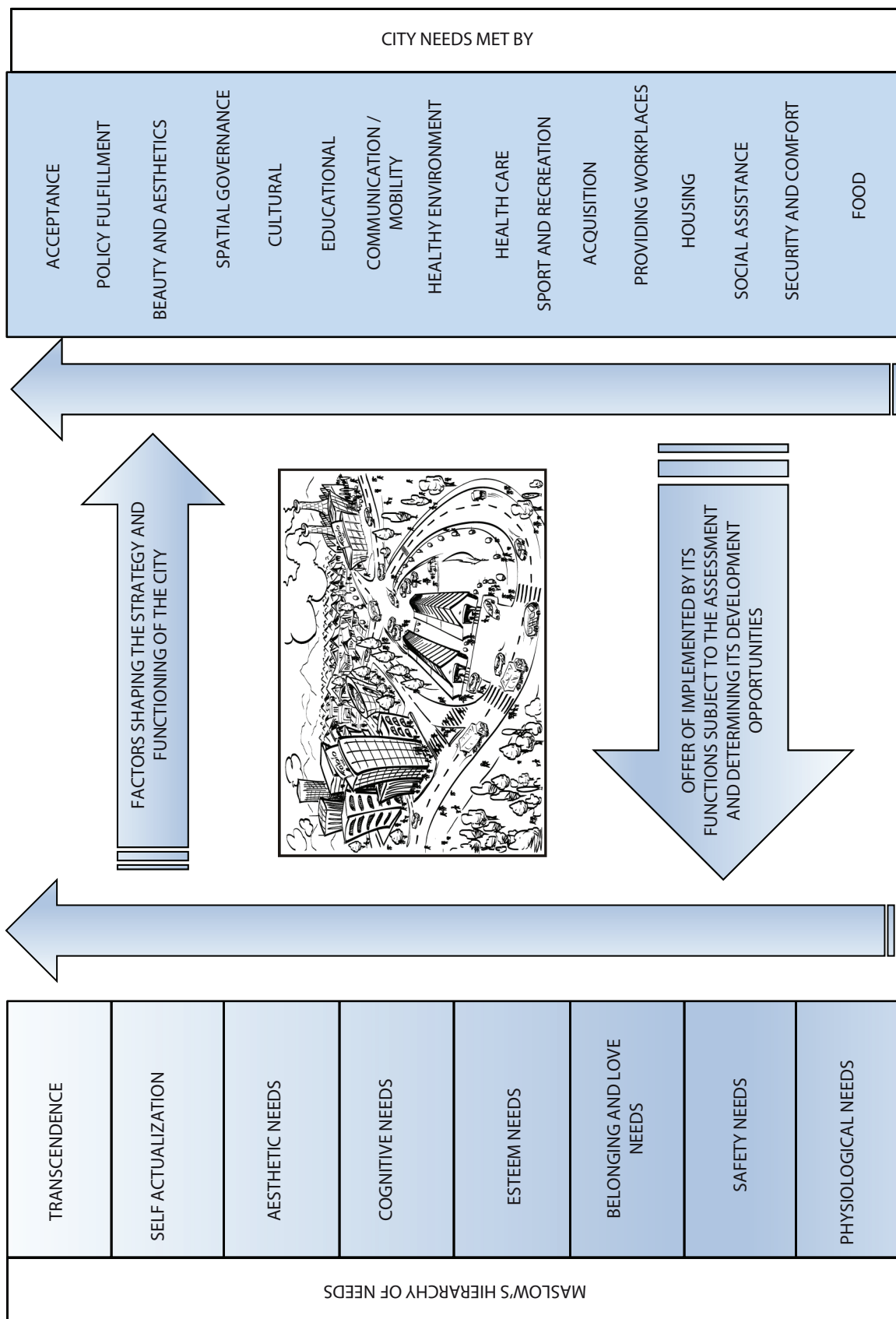
CITY NEEDS MET BY

ACCEPTANCE

POLICY FULFILLMENT

BEAUTY AND AESTHETICS

SPATIAL GOVERNANCE

CULTURAL

EDUCATIONAL

COMMUNICATION / MOBILITY

HEALTHY ENVIRONMENT

HEALTH CARE

SPORT AND RECREATION

ACQUISITION

PROVIDING WORKPLACES

HOUSING

SOCIAL ASSISTANCE

SECURITY AND COMFORT

FOOD

FACTORS SHAPING THE STRATEGY AND FUNCTIONING OF THE CITY

OFFER OF IMPLEMENTED BY ITS FUNCTIONS SUBJECT TO THE ASSESSMENT AND DETERMINING ITS DEVELOPMENT OPPORTUNITIES

TRANSCENDENCE

SELF ACTUALIZATION

AESTHETIC NEEDS

COGNITIVE NEEDS

ESTEEM NEEDS

BELONGING AND LOVE NEEDS

SAFETY NEEDS

PHYSIOLOGICAL NEEDS

MASLOW'S HIERARCHY OF NEEDS

Fig. 1. *Shaping Happiness in the City Environment*

Source: [13, p. 41].

examining urban processes and phenomena in developing cities [12].

The juxtaposition of human needs (Figure 1), the fulfilment of which determines the level of happiness, with the needs satisfied by the city creates a clear model of shaping the quality of life in the city in the conditions created by the city. Urban residents also often co-create these conditions. The happiness of city residents is also a factor for attracting new residents. Therefore, a situation in which the perception of quality of life begins to rapidly and massively change is a threat to the city as a social and spatial organisation. Such phenomena of changes in the sense of quality of life should be measured to serve as an alert to city authorities in case of a decrease in urban activity.

Perception of Quality of Life in the Context of Mobility

Mobility is the possibility and ability to overcome space, both physical and imaginative. As such, it accompanies us throughout our lives, and impaired mobility is a great trauma for any person. Issues of movement, too little or too much movement or the wrong sort at the wrong time, are central to many lives and many organisations. Thus, issues of «mobility» are centre stage. Such effect as a «mobility turn» is spreading into and transforming the social sciences, transcending the dichotomy between transport research and social research, putting social relations into travel and connecting different forms of transport with complex patterns, forming the «new mobilities» paradigm within the social sciences. Some recent contributions to shaping and stabilising this new paradigm include contributions from anthropology, cultural sciences, geography, migration studies, science and technology studies, tourism and transport studies, and sociology [14]. Therefore, in research related to human mobility and the impact of the satisfaction of mobility needs on the perceived quality of life, various scientific approaches are used, differing not only in assumptions and research perspectives, but also in methodology and inference resulting from the authors' belonging to different scientific disciplines. Hence, there are frequent misunderstandings in the interpretation of mobility observations. Studies on the impact of mobility on the quality of urban life are the subject of many papers, however, they are rarely published, indicating their interdisciplinary character. In Poland, such studies were conducted in 2017, published in 2018 [11] and covered the areas of medicine, architecture and urban planning, sociology, psychology, economics, logistics, demography. Each rep-

resentative of these professions demonstrated in their scientific workshops the influence of the city environment on the quality of life of its inhabitants; many of them identified various aspects of shaping the mobility of people in cities. The results of the mobility research presented in this book are described in more detail in the research section of this article. The fact that mobility can be shaped in Polish conditions was demonstrated in 2011 by J. Szołtysek [15]. This and subsequent studies [16, 17] have shown that for all age categories, mobility (both the right to mobility and the real possibilities to travel) significantly affects the quality of life. Hence, the impact of mobility on the quality of life in cities does not require the exclusion of any age group from the application process. This assumption is in line with the recommendation of the World Health Organization in the Global Age-Friendly Cities Initiative for the universalisation of mobility in the public domain. This means that all users of a city can be relocated, regardless of age [18]. The knowledge of these patterns can be used in cities to improve the quality of life by shaping ways of meeting the mobility needs. When considering mobility, is important to take into account the environmental context and psychophysical and political-social conditions of people and places where mobility is implemented. In this regard, the concept of «liquid modernity» [19], which redirects research away from static structures of the modern world to entities comprising people, machines, and information/images in the system of movement, is becoming increasingly popular. However, we can see mobility as a form of freedom or liberation from space and place. Nomadic metaphors celebrate mobilities that progressively move beyond both geographical and disciplinary borders [20, 21]. Instead of a totalising or reductive description of the modern world, the new mobility paradigm offers a set of questions, theories, and methodologies. Indeed, as other researchers of global networks argue, the increase in cross-border transactions and of «capabilities for enormous geographical dispersal and mobility» go hand in hand with «pronounced territorial concentrations of recourses necessary for the management and servicing of that dispersal and mobility» [22, p. 13–14]. The paradigm of «smart mobility», rooted in the concept of smart city, is inscribed in the context of movements in real space. This is the most common way to discuss urban mobility, although, as Popov and Semyachkov state, it is possible to go beyond this area of city perception [23, p. 16]. Both the first and second terms are based on Information and Communication Technologies implemented in

the city's «hard» infrastructure (including households, roads and electricity) that creates a «smart grid» contributing to low energy conception cities [24]. In this context, mobility can be considered from the perspective of service providers and buyers. As the two groups have different goals, they are assessed in different ways. Additionally, they differ in the ways of shaping the living standards of the inhabitants [25]. Apart from the numerous discussions on these views, we can assume that mobility research requires interdisciplinarity and appropriate paradigms. In our studies, we focus on urban mobility. There is no doubt that the largest part of mobility activity is nearby mobility, which is sometimes called «micro-mobility». Mobility takes place in a multi-faceted environment that not only determines its conditions but also creates a general feeling of satisfaction (or dissatisfaction) with the mobility. These observations concern both the implementation and planning phase, so the quality of life is influenced not only by the implementation conditions but also by the mentality. If it is assumed that the quality of life of inhabitants, and, consequently, the attractiveness of the city, to a certain extent depend on the level of satisfaction with the possibilities of meeting mobility needs, the limitation of the possibilities of mobility through social self-isolation and isolation (quarantine) reduces the quality of life of residents and may reduce the attractiveness of the city.

Methods

The survey was conducted between December 2019 and March 2020. The questionnaire contained a total of 8 closed questions. The Likert scale was used to assess the factors influencing mobility; in case of assessing the current place of residence, we used the scale of the semantic differential. Therefore, the research period covered two months of the so-called «normal» life, including one holiday month and one month in conditions of increasing limitations associated with SARS-CoV-2. Earlier research presented [15] differentiates mobility in terms of how it is implemented by various age groups. Therefore, if we were to examine ways of implementing mobility, then, due to the limitations of the existing sample related to the age of the respondents, we could narrow the subject matter of the study and focus only on the assessment of city residents aged over 40. In this regard, young people with their different worldviews and structure of needs and values should probably be excluded, as they would undermine the conclusions. Meanwhile, other studies, in particular concerning older people [16] show that despite the existing differences in terms of the preferred implementation of mobility needs, they do not differ from young people in terms of the impact of mobility on the quality of life. Conducting the study during limited mobility with respondents, staying in social isolation (self-isolation) in large numbers, we had to apply the snowball method, useful primarily for population exploration [26, p. 34–35]. The non-random selection of the sample consisted in the fact that initially a small group of respondents was surveyed, and then each member of this group defined other units belonging to the general population that was surveyed. In this way, we obtained a constantly expanding set of potential contacts. It was therefore assumed that in this case, there are «links» between members of the target population, which, in turn, allowed triggering the snowball effect in the circle of family and friends. Snowball sampling is also justified as a formal methodology for identifying the population of people who are difficult to count during the pandemic by using descending methods such as household surveys. Additionally, snowball sampling can relatively quickly produce in-depth results. Snowball sampling, as an ascending methodology, can be used as an effective method to fill the gap in different social contexts. In this sense, it can be considered as an alternative or complementary strategy to obtain more comprehensive data on a particular research topic [27, 28]. In this way, 310 respondents who completed the questionnaire were included in the survey. The respondents were residents of cities in the Silesian Voivodeship (Poland). According to the data of the Central Statistical Office, as of 31.12.2019 the Silesian Voivodeship was inhabited by 4.51 million people, out of which 3.46 million people lived in 71 cities. The largest group consists of 16 cities with a population of 20,000 to 50,000 people. A significant group includes cities with a population of at least 100,000; at the end of 2019, there were 12 such cities [29]. The respondents inhabited almost all cities of the Silesian Voivodeship (56 cities), including the largest number of respondents (81.25 % or 251 people) lived in cities with at least 100,000 inhabitants.

The descriptive statistics of the quantitative variable "age of respondents" are presented in Table 1.

The average age of respondents was 53.1 years. High coefficient variability (33.8 %) indicates a strong dispersion. The skewness of −0.19 informs about the occurrence of left-handed asymmetry of the respondents' age distribution, which means that most of the respondents are over 50 years old. Analysis of the table of the number of respond-

Descriptive statistics of the age of respondents

Variable	Mean	Median	Mode	Min	Max	Range	Standard Deviation	Coefficient variability	Skewness
Age	53.1	52	50	19	92	73	17.97	33.86	−0.19

Source: authors' developments.

Age of respondents

Age (years)	≤20	21–30	31–40	41–50	51–60	61–70	71–80	≥81
number	5	54	7	62	78	34	57	13
cumulated	5	59	66	128	206	240	297	310
% cumulative	1.61	19.03	21.30	41.30	66.45	77.42	95.81	100.00

Source: authors' developments.

Gender and place of residence

Gender	Number	Percentage, %	Place of residence	Number	Percentage, %
Man	147	47.42	City, under 1 year	27	8.71
Woman	163	52.58	City, over 1 year	283	91.29

Source: authors' developments.

Educational level and social status

Educational level	Number	Percentage, %	Social status	Number	Percentage, %
primary, lower secondary	19	6.13	student	36	11.61
secondary, high school	156	50.32	employed. self-employed	172	55.48
undergraduate, engineering	72	23.23	pensioner	86	27.74
master's degree	63	20.32	unemployed	16	5.16

Source: authors' developments.

ents (Table 2) demonstrates that the largest group of respondents includes people aged between 51 and 60 years.

Qualitative characteristics of respondents (gender, place of residence, educational level) are presented in Table 3 and Table 4.

Most of the respondents were women (52.58 %) and people with secondary education/high school (50.32 %). The group of employed people (55.48 %) prevailed among respondents. The vast majority of respondents were residents of cities living there for over 1 year (91.29 %). Almost 55 % of respondents believe that the city is an attractive place to live, but for more than 25 % of respondents, the city is an unattractive place to live. In earlier studies (statutory research of the Department of Social Logistics of the University of Economics in Katowice "Logistics of the city in shaping the quality of life") conducted in the years 2015–2017 on a sample of 858 people concerning the attractiveness of the city as a living environment, almost 60 % of respondents found the city attractive for living. The results of the aforementioned research are similar to the answers of the current respondents living in the Silesian Voivodeship [17] (Table 5).

In the group of people who believe that the city is an attractive living environment (group 1 or 170 people), the value of the assessment of the attractiveness of the city where this group resides is 4. For people not perceiving the city as an attractive living environment (group 2), the average value of the current city's attractiveness is 3. The same assessment was expressed by the group of people for whom cities and villages have the same attractiveness (group 3). Only in the group of people considering the city as unattractive for living (group 2) there were the lowest ratings for the city in which the evaluators currently live (5 out of 80 with grade 1 or 2). In group 1, 11 out of 170 people gave 2 points to their city; in group 3, 4 out of 60 people chose grade 2.

The researchers asked respondents about their current place of residence. A 5-stage scale of the semantic differential (Osgood scale) was used for the assessment. The assessment was conducted by indicating the intensity of a given trait (evaluation of the current place of residence). Assessment 1 meant the lowest value, and assessment 5 meant the highest value (Table 6). Analysis of the Table of numbers allowed us to conclude that the largest group of respondents assessed the current place of

Variables of the city attractiveness (conceptual cliché)

Attractiveness of the city (cliché)	in the 2020 study		in the 2015–2017 study	
	Number	Percentage, %	Number	Percentage, %
attractive to live in	170	54.84	513	59.79
unattractive to live in (life outside the city is better)	80	25.81	174	20.28
there is no significant difference between town and countryside in terms of personal quality of life	60	19.35	171	19.93

Source: authors' developments.

Assessment of residence

Assessment of residence	1	2	3	4	5
number of indications	5	24	118	130	33
cumulated	5	29	147	277	310
% cumulative	1.61	9.35	47.4	89.35	100.00

Source: authors' developments.

residence between 3 and 4 (mean score is 3.52 and standard deviation is 0.85).

To sum up, the majority is working women aged 50 years, with secondary education, who believe that the city is an attractive place to live. It should be noted that the current place of residence is assessed by respondents at a level significantly above the average value of the examined variable.

Results: City Attractiveness Using Correlation Analysis

We used the correlation analysis to answer the question about the existence of a (statistically significant) relationship between the considered variables (characteristics). Spearman's rank correlation coefficient (r) was used to assess the strength of these relationships. We also examined the statistical significance of the compounds, assuming its level of $p < 0.05$. The results of the analyses together with the commentary are presented in Tables 7–10. In addition, Table 7 presents the results of earlier studies from 2015–2017 [17].

The analysis of the data contained in the Table above allows the following conclusions to be drawn:

— age of respondents is significantly correlated with the attractiveness of the city and the assessment of the place of residence made by the respondents. In case of the city's attractiveness, it can be concluded that with the increase in age, the inhabitants' propensity to positively assess the city's attractiveness decreases; an inverse relationship should be noted in the assessment of the current place of residence,

— gender of respondents has no significant impact on the assessment of the attractiveness of the city and the current place of residence,

— educational level of respondents is significantly correlated with the assessment of the city's attractiveness: the negative correlation means that a higher educational level results in a higher assessment of the city's attractiveness.

Both studies confirmed the above dependencies were confirmed. The significance of correlative compounds was confirmed in them to the same extent, although with different intensity.

The researchers analysed in detail the correlation between the variable "attractiveness of the city". By grouping the variable, the correlation relationships were analysed and then subjected to descriptive analysis (Tables 8–10).

In the case of people stating that the city is attractive for life, there is a statistically significant correlation between the respondents' age and the assessment of their current place of residence (Table 8). It is stronger than in the case when attractiveness is considered without grouping. In this group of respondents, no significant correlative relationship is observed when analysing gender variables and educational level.

In this group of respondents (for whom the city is unattractive), there are no statistically significant correlations, important for the exploration of the examined fragment of reality (the significance of the correlation relationship between the variables of age and educational level is not related to the study of the attractiveness of the city) (Table 9).

In the last group of respondents analysed, there are no statistically significant correlations (Table 10), which would be aimed at a deeper research exploration (the significance of the correlation relationship between the variables of age and education level is not related to the study of the attractiveness of the city).

Correlation analysis of the considered variables

Variable	age	sex	educational level	attractiveness of the city (cliché)	assessment of the place of residence
in the 2020 study					
age	1.00	−0.03	−0.28*	0.23*	0.20*
gender	−0.03	1.00	−0.05	0.11	0.00
educational level	−0.28*	−0.05	1.00	−0.18*	0.04
attractiveness of the city (cliché)	0.23*	0.11	−0.18*	1.00	−0.24*
assessment of the place of residence	0.20*	0.00	0.04	−0.24*	1.00
in the 2015–2017 study					
age	1.00	−0.02	−0.30*	0.27*	0.09*
gender	−0.02	1.00	−0.01	0.08	−0.03
educational level	−0.30*	−0.01	1.00	−0.15*	0.07
attractiveness of the city (cliché)	0.27*	0.08	−0.15*	1.00	−0.17*
assessment of the place of residence	0.09*	−0.03	0.07	−0.17*	1.00

* significance of correlation $p < 0.05$, $N = 310$.
Source: authors' developments.

Analysis of the correlation of the city's attractiveness (answer: the city is attractive)

Variable	age	sex	educational level	assessment of the place of residence
age	1.00	0.01	−0.15	0.40*
gender	0.01	1.00	−0.03	0.03
educational level	−0.15	−0.03	1.00	0.10
assessment of the place of residence	0.40*	0.03	0.10	1.00

* significance of correlation p < 0.05, N = 170.
Source: authors' developments.

Analysis of the correlation of the city's attractiveness (answer: the city is not attractive)

Variable	age	sex	educational level	assessment of the place of residence
age	1.00	−0.13	−0.44*	0.10
gender	−0.13	1.00	0.09	0.11
educational level	−0.44*	0.09	1.00	−0.20
assessment of the place of residence	0.10	0.11	−0.20	1.00

* significance of correlation $p < 0.05$, $N = 80$.
Source: authors' developments.

Analysis of the correlation of the city's attractiveness (answer: there is no significant difference between the city and the countryside in terms of personal quality of life)

Variable	age	sex	educational level	assessment of the place of residence
age	1.00	−0.22	−0.37*	−0.01
gender	−0.22	1.00	−0.17	−0.13
educational level	−0.37*	−0.17	1.00	−0.03
assessment of the place of residence	−0.01	−0.13	−0.03	1.00

* significance of correlation $p < 0.05$, $N = 60$.
Source: authors' developments.

Based on the conducted research on correlations between the examined variables, significant correlations can be observed for the following variables: age, educational level, the attractiveness of the city, and assessment of the place of residence. The results of the research did not reveal any significant correlations in the examined aspect of mobility of the residents, taking into account the social status of respondents and the size of the city inhabited by respondents. We suspect that the reason for the latter may be the significant level of urbanisation of the Silesian Voivodeship, the existence of regional transport unions in the area of the Voivodeship and the specificity of the Upper Silesian conurbation, which spatially unites 19 cities concentrated around its centre (the city of Katowice) into one whole. It should be noted that these relations do not indicate a strong correlation between the studied variables. In the case of the variable "attractiveness of the city", statistical conclusions should refer to the group of respondents who believe that the city is an attractive place to live.

Mobility and Assessment of Residence

Mobility is a specific aspect of quality of life in the city. The specific nature of mobility, as one of the 9 determinants of quality [30, p. 190], lies in the fact that it fulfils (apart from such determinants as being, acceptance, health and safety) a bonding function in the assessment of the quality of life in the city against other determinants (Figure 2).

In previous studies on indicators of quality of life in the city, respondents, regardless of the age group, generally agree that quality of life depends on mobility, entertainment and livelihood opportunities (relatively high frequency). The determinant groups are also independent of respondents' age, city size and are the same; the only thing that changes is only the order of the city quality indicators. Mobility, as research has shown, enables contact with other people, and improves the quality of life; however, it is also necessary to «do» basic things in the city. Additionally, it is a result of the logistical perspective of the study. Therefore, mobility consists of various issues: financial, organisational and infrastructural [30, p. 200–202].

This fact means that mobility is a feature that underpins the other determinants of the quality of life in the city: work, education, recreation, neighbourhood, agora. Such a location also leads to the conclusion that it would be impossible to realise the remaining domains of quality of life in the city without mobility [31, p. 2]. The quality of life of city dwellers cannot be improved through mobil-
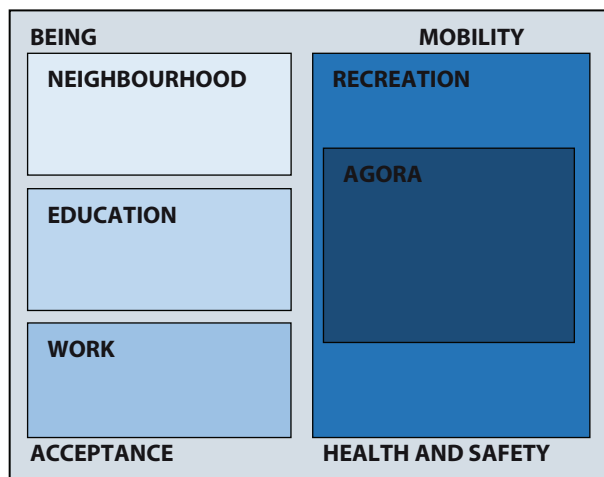

Fig. 2. *Model of quality of life areas in the city*
Source: [13, p. 43]

ity without the possibility of contact with other people; additionally, it is necessary for the implementation of basic tasks in the city, such as shopping, using services, learning, etc. For researchers, another dimension of mobility is also important, which is the result of the research perspective. The study assumes, with reference to previous studies, [30, p. 190] that factors describing mobility (as well as indicators of quality of life in these cities) are:

— public transport ticket price (M1),
— access to public transport (M2),
— access to car parks (M3),
— possibility to travel by other means of transport (M4),
— capacity of the main transport routes (traffic jams) (M5),
— waiting conditions at bus stops (canopy, seats, wind shelters, etc.) (M6),
— travel conditions (standing, seated, crowded, cleanliness, temperature) (M7).

Each of these factors has been examined to answer the question of their impact on improving the quality of life of city dwellers. The results of this analysis are presented in Tables 11 and 12.

The data contained in Table 11 do not allow concluding that there is a significant variation in the factors studied. High mean values indicate their high significance, and similar values of standard deviation prove their similar level of differentiation. An in-depth analysis of these factors is based on the examination of the significance of correlation compounds, which is presented in Table 12.

The research results suggest that not all components of mobility will equally improve the quality of life (measured by the assessment of the place of residence). Out of 7 factors identified in

Table 11

Descriptive statistics of factors determining mobility

Factor	Mean	Median	Mode	Frequency of Mode	Standard Deviation
public transport ticket price (M1)	3.72	4	5	98	1.15
access to public transport (M2)	3.80	4	4	106	1.17
access to car parks (M3)	3.64	4	4	92	1.14
possibility to travel by other means of transport (M4)	3.63	4	4	92	1.10
capacity of the main transport routes (traffic jams) (M5)	3.83	4	5	116	1.17
waiting conditions at bus stops (canopy, seats, wind shelters, etc.) (M6)	3.69	4	4	94	1.13
travel conditions (standing, seated, crowded, cleanliness, temperature) (M7)	3.78	4	4	103	1.08

$N = 310$.
Source: authors' developments.

Table 12

Analysis of the correlation of mobility in the context of the assessment of residence

Factor	Spearman's Rank Correlation Coefficient
public transport ticket price (M1)	0.14
access to public transport (M2)	0.18[*]
access to car parks (M3)	0.34[*]
possibility to travel by other means of transport (M4)	0.26[*]
capacity of the main transport routes (traffic jams) (M5)	0.17
waiting conditions at bus stops (canopy, seats, wind shelter, etc.) (M6)	0.15
travel conditions (standing, seated, crowded, cleanliness, temperature) (M7)	0.06

[*] significance of correlation $p < 0.05$, $N = 310$.
Source: authors' developments.

the study, factors M2, M3, M4 turned out to be statistically significant. In these cases, it can therefore be concluded that they have an impact on improving the quality of life of urban residents.

Discussion

During the first month of social isolation caused by the SARS-CoV-2 threat, statistical observations did not show any significant change in respondents' views on the assessment of the attractiveness of the cities in which they live (Tables 5 and 7), which we supplemented with explanatory notes in the limitations section. This is the answer to the first research question. The quality of life is influenced by the assessment of the city's attractiveness: there is a significant statistical correlation between the attractiveness of the city and the assessment of the current place of residence. This assessment does not depend on the initial cliché of the city's attractiveness, i.e., on the view whether the city is generally an attractive place to live or not (in contrast to the village). An interesting observation is that the general rating of a city decreases with the increase in the age of respondents(the cliché concerning views on the city's attractiveness as a category decreases with age), whereas the rating of the city in which the

respondent currently lives increases with age. The assessment of the city's attractiveness conducted in relation to the degree of satisfaction with living in a specific city is not gender-dependent. It seems that the cliché of a city's attractiveness influences the assessment of the city in which respondents currently live. We may speculate that the conceptual cliché concerning the attractiveness of the city as a living environment may have a stimulating effect on the overall assessment of the city in which respondents currently live. If it is assumed that conceptual clichés are co-created through the accumulation of experience, a decrease in the quality of life in the city (as perceived by respondents) may cause changes in the clichés. When the image of the city as a category deteriorates, it may worsen the chances of other cities desiring desire to acquire new residents. Therefore, the task of cities (in the sense of city authorities as well as civic groups/city movements) is to prevent the opinion deterioration. For that purpose, when inhabitants find reasons for dissatisfaction, it is advisable to identify them and conduct information campaigns explaining the reasons for the restrictions and their origin. Moreover, it is necessary to describe how the city aims to change the situation, as well as possibly indicate measures to miti-

gate the severity of the restrictions (mainly mobility and social) and the benefits resulting from the current restrictions on future personal and collective well-being.

Limitations

The conducted research gives an initial answer to the research questions, taking into account the relatively short period of social isolation (less than 1 month), the lack of the effect of «fatigue» on inhabitants and the domination of other feelings (fear of infection, fear for the future), which do not translate directly into the assessment of the quality of living in the city. However, it is likely that excessive prolongation of the period of social isolation will lead to the deterioration of the quality of life and the attractiveness of the city. We came to these conclusions, using enumerative induction, which, based on the observed number of certain recurring situations, allows us to draw attention to their similarity, or to certain features relevant to this similarity. Verification of the presented results may take place only in a longitudinal study after the end of the pandemic. We are prepared for such a study. Moreover, the results obtained were influenced by the way the research sample was selected and the fact that the questionnaires were filled in on their own (no additional interviews were conducted). Only persons who have access to a computer and the Internet filled in the questionnaire. The criterion of access to selected social networks conditioned specificity of a social sample. Hence, the views expressed belong only to this group. Comparison with earlier studies, based on a targeted and random selection, allowed us to conclude on the attractiveness of cities. Despite these efforts, we are aware that the sample structure was not methodically determined and, in this sense, it has the character of a result. The study conclusions should be treated with great caution in terms of generalisation of the results obtained.

New research perspectives

The problem of changing the attractiveness of cities, related to a potential decrease in quality of life due to a drastic reduction in the mobility of residents, should be analysed on an ongoing basis. There are many reasons for such an analysis. Examination of the mood of inhabitants is a valuable source for city authorities and city movements, as they can take actions aimed at improving the attitude and implement targeted assistance (tailored to specific groups of inhabitants and their individual needs). The observation of these activities may be a source of recommendations for other cities, as well as observations of a sociological, anthropological, logistic, and general management nature.

Another reason for observing moods is to create an ideological, informational and civic message, implement aid programmes, especially the ones addressing excluded groups of inhabitants (in particular digitally), and initiate bottom-up activities aimed at the equalisation of living conditions for different groups of inhabitants.

Finally, observations from the pandemic are extremely valuable material collected in real conditions that people would never create for scientific research. The conducted study introduces a new research impulse, aimed at analysing the dependencies discussed in the article on a much larger scale, as well as providing city managers and logisticians, sociologists or other observers of urban life with knowledge on social behaviour. We believe that the results and conclusions presented in the article are the first Polish (and, probably, international) reports on the impact of social isolation on the perception of the city in terms of its attractiveness. This attractiveness is assessed through the prism of mobility, which is a binder, connecting and enabling the implementation of practically all activities that make up the lives of contemporary city dwellers. The study's usefulness for sociology (in particular analytical), management (in particular public) and logistics (in particular social) is based on supplementing previously unrecognised dependencies and stimulating scientific discourse in the scope discussed. The research is a practical manifestation of interdisciplinary approach to urban phenomena.

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