



Between neighborhood convenience and metropolitan opportunity: Residential narratives on the "15-minute City" lifestyle in Warsaw

Annika Lundkvist^{1, CDFMR}, Ewa Korcelli-Olejniczak^{2, CDFMR}

¹Polish Academy of Sciences, Institute of Geography and Spatial Organization, Warsaw, Poland, e-mail: annikalundkvist@gmail.com, <https://orcid.org/0009-0002-8288-3056>; ²Polish Academy of Sciences, Institute of Geography and Spatial Organization, Warsaw, Poland, e-mail: eko@twarda.pan.pl, <https://orcid.org/0000-0002-9247-6182>

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Abstract. In this work, we center the importance of residential narrative in communicating about the "15-minute City" concept by presenting and interpreting the results of a local survey investigating interrelations between: neighborhood-level availability and accessibility to services and amenities; perceived quality of life; and place attachment, this last often being disregarded in this concept. The results, based on qualitative research carried out in Warsaw, document strong links between the first two, with the primary observed benefits being time- and effort-saving, followed by advantages concerning general life comfort, safety and walkability. Regarding place attachment, we identify a division of residents into the categories "stayers" and "movers", which define their attitude irrespective of neighborhood convenience and quality of life perceived. Narratives emphatically attributed availability of public transport infrastructure an important role in contributing to life-quality, revealing the intensity and complexity of spatial interaction linking the neighborhood with the city-cum-metropolitan level. The study results may be useful in communication on urban sustainability issues.

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1. Introduction

The “15-minute City” is an urban planning model presented by Franco-Columbian scientist Carlos Moreno in 2016, compelled by a vision of more human-centered urban environments. The concept focuses on diverse services and amenities being accessible within short active mobility commutes and promotes a paradigm shift (Allam et al., 2022a, 2022b; Szymańska et al., 2024) away from decades of car-centric urban planning towards livable and walkable urbanism, meeting city resilience and sustainability conditions, promising a retreat of urban sprawl. Further developments (Moreno et al., 2021) include the accounting for Covid-19 pandemic effects, which entails the emergence of non-traditional workplaces. Density, diversity, proximity and digitalization are the four pillars that, when prioritized, can offer “cohesive solutions” for emissions reduction as well as increased “urban livability”. The idea has resonated and generated responses in urban studies and urban planning literature. According to Pozoukidou and Chatziyiannaki (2021: 21), the concept applies long-established urban planning principles to accomplish a bottom-up promotion of well-being and, hence, to underline the significance of neighborhoods as “intimate places” allowing for complex social interaction.

Spatial proximity has long been at the heart of “healthy” urbanism; in fact, it has been an imperative in common-sense urban planning approaches that prioritize diverse local mobilities and easy access to a myriad of amenities for residents. The 15-minute City concept as a novel perspective of chrono-urbanism has antecedents in numerous, diverse planning paradigms, including Ebenezer Howard’s Garden City (Howard, 1965), the Neighborhood Unit of Clarence Perry (1929), the Polycentric Model of Alain Bertaud (2001), the Central Place theory of Walter Christaller (1933), the Human scale of Jan Gehl (2010), the Pedestrian pocket of Calthorpe (1989), the City of Pedestrian of Leon Krier (2014), Christopher Alexander (2004) and diverse other planning approaches that have centered “nearness” and proximity. It also shares some common ground with the contemporary concept of the Sustainable City (Nijkamp & Perrels, 1994; Rogers, 1998).

Central to the approach taken in this study is the documenting of residential narratives about city inhabitants’ experiences of their neighborhoods – whether aligned with the 15-minute City concept and related ideas or lacking such features. At the same time, we recognize that this local context strongly interacts with the metropolitan one. The latter offers diverse opportunities that influence res-

idents of diverse backgrounds moving to and within the city, including international newcomers choosing where to live and work. The opportunities available in the city and the metropolitan ring relate to its labor market, the variety of lifestyles, cultural offerings, mobility options, and more (Florida et al., 2011). The metropolitan context also presents challenges of distance and commuting, not only for suburban residents but also for city inhabitants whose work demands and daily needs may require journeys over significant distances, often compounded by the congestion that affects many urban areas. In this regard, “neighborhood living” – in a functionally designed residential area equipped with amenities such as green spaces, schools, medical services, convenience stores, and other facilities within reasonable walking distance of home – serves as a crucial element in developing sustainable cities and is essential to individuals’ quality of life.

The notion of “quality of life” (Andrews & Withey, 1976; Ferris, 2004) is interpreted and applied in social science literature in both its subjective and objective dimensions. Winters and Li (2017) refer to *subjective* well-being, interpreted as synonymous to individuals’ overall life satisfaction. In this context, Layard (2005) uses the notion of happiness. It is argued (Winters, 2013) that the choice of place of residence is more often determined by perceived well-being, rather than by the well-being defined by more objective criteria. Life quality perception, Andrews and Withey (1976) give a detailed account of social indicators of well-being. These, in addition to the life-as-a-whole measure, include a number of specific life concerns (relating to, *inter alia*, economic situation, services, the community, and the neighborhood) that all tend to vary depending on a person’s age, socio-economic situation and family lifecycle. Joseph Sirgy (2011) distinguishes six theoretical concepts to which quality of life indicators refer, including those concerning socio-economic development, personal utility, just society, human development, sustainability, and individuals’ life functioning. Based on the personal utility concept and following Campbell et al. (1976) and Sirgy et al. (2000) developed the community quality of life model for assessing residents’ life satisfaction – a matrix for subjective evaluations about place of living, including prevailing economic and physical conditions, public services and other local factors that contribute to an individual’s life satisfaction level. In an adapted form (Peters et al., 2018; Peters, 2019), the CQL comprises an index regarding local residents’ ratings on the availability and quality of jobs, housing, medical services, public schools, healthcare, senior services, cultural amenities and local government

performance. Their sources are identified with the role of social networks. This set of criteria comes very close to those listed by Moreno and named as essential social functions of living, working, commerce, healthcare, education and entertainment that comprise the structure of the 15-minute City neighborhood (Moreno et al. 2021: 100).

The link between the effective 15-minute City neighborhood and quality of life is mediated through the walkability factor (Weng et al., 2019; Leyden et al., 2024), which may be interpreted in two ways. First, according to its functional (utilitarian) role and as a perceived life satisfaction component (*Note 1*) or attachment based on the residents' interest in the area – “the simple joys and excitements offered by the (place)” (Korcelli-Olejniczak & Tammaru, 2019); second – when introducing the related concept of pedestrianism – as an implicit precondition for mobility from a “floating life” perspective (Jensen et al., 2021).

At this sub-local level, the availability of goods and services needs to be interpreted in terms of physical accessibility (Handy & Niemeier, 1997) measured by time-distance, usually covered on foot. This varies notably depending on time spent in motion (Haegerstrand, 1970), a person's age and health status, but also due to the seasonal cycle of climate and to changeable weather conditions (Willberg et al., 2023). Leyden et al. (2024) distinguish between high- and low-walkable neighborhoods, based on economic ratings – among other criteria that include availability and quality of pedestrian infrastructure (Cao, 2016). In their study on Dublin, the authors assess walkability as a subjective measure of how many destinations a respondent felt he or she could walk in their neighborhood without too much difficulty. This served to evaluate, for four age groups of respondents, the effects of neighborhood walkability on their perceived happiness level (Leyden et al., 2011).

This paper aims to explore how, and to what extent, the city residents, based on day-to-day experience, assess their respective neighborhoods *vis-à-vis* the 15-minute City model and how these immediate surroundings affect both their life quality and their place attachment. The following questions are posed: Is the availability of functions related to the sense of life comfort, and, if so, in what way? How does the availability of, and spatial accessibility to neighborhood-level functions and amenities affect residents' place attachment? What values do residents find in experienced or desired neighborhood convenience and related lifestyle as opposed to the attractiveness, metropolitan dimension and scope of

city functions? The approach of documenting residential narratives was determined by awareness of the need to accommodate the vast range of needs and desires of city residents.

2. Urban clinic approach: communicating the 15-minute City as a portal to discussing best practices and barriers in walkable urbanism

The research design developed has its genesis in the Urban Clinic concept (Gieryn, 2006) with the perception of the city as a “clinic” (White, 1929: 24–25) where the “social engineer” (Jeter, 1929: 68) can engage in “prediction” (Mowrer, 1927: 267) and “diagnosis and treatment” (Smith, 1929: 227) of the city's ills.

The present “urban clinic” approach was developed as part of an ongoing dissertation study examining walkable urbanism in the context of the 15-minute City manifested at neighborhood level in Warsaw. Lundkvist (2025) details the motivations of deploying such an approach, as well as insights gained through the facilitation of this research method. The barriers to walkability are identified, and local solutions are documented as best practices. The data used in this paper were collected during fieldwork conducted in 2023 and early 2024 that, at its core, was based on a digital survey distributed among Warsaw residents. Contacts to potential participants were obtained by means of the snow-ball process, with a total of 145 responses acquired. The respondents, 80 female and 64 male, live in 16 of the total 18 city administrative districts and a few in neighborhoods of various ages and densities of residential fabric within Warsaw's suburbs. In terms of age composition, they include 64 persons aged 18–35, 53 aged 36–55 and 28 aged 66 and over (*Note 2*). As to educational attainment, they comprise a rather homogeneous group, with 93 percent of university graduates or students, and the other having high-school diplomas (*Note 3*).

The following questions were formulated for the purpose of the survey: (a) Which among the following functions: grocery stores, specialty shops, health and medical centers, pharmacies, schools, cafes and restaurants, playgrounds, recreational and sports facilities, public transit stops/stations, and your workplace are reachable within a 15–20-minute walk or cycle ride? (b) How do the availability and accessibility of these functions affect your quality of life? (c) How does this affect your place attachment?

3. Accessibility to services and amenities across city space

The city of Warsaw has 1.863 million inhabitants (2021) according to domicile registration system and 2.2 million on the basis of City Hall estimates. It covers a relatively compact urban area with a population density of 3,600 persons per sq km and has a housing stock strongly dominated by multifamily buildings. Hence, the saturation of city space with services of frequent use is expected to be high, in particular in case of commercial establishments generally oriented towards capturing local market potential (Curry, 1960; Berry, 1964, 1967). This is reflected in the survey returns, which report availability within 15 to 20 minutes' walking or cycling from home base at 98% for a grocery store, 94% for a pharmacy, 90% for some specialty store and 88% for a café or restaurant. The respective share is 89% in case of primary schools and 87% for health and medical services. Sports or recreational facilities are located within an accessible distance for 83% of respondents and cultural facilities for 72%. Conversely, for 93 out of 145 survey participants, the place of work or education is located beyond the neighborhood limits. This, together with the ubiquity (two exceptions only) of public transit stops/stations within 15 to 20 minutes' walking distance of home is indicative of socio-economic linkages and of functional interdependence at city and metropolitan area level. Still, for 20% of survey respondents, the accessibility to local services and amenities can be assessed to be partial or insufficient.

Behind these figures are aggregate data on the availability and accessibility to services and amen-

ities at local level in residents' perception (Table 1) and on the overall evaluations of neighborhood convenience by survey participants. As shown in Table 2, accessibility is in some measure relative to resident age (Willberg et al., 2023), although these results exclude consideration of all intervening factors, including the prevailing walkability conditions (Leyden et al., 2024) in individual neighborhoods.

Below is a selection of accessibility assessments by participants, divided into those who express overall satisfaction with neighborhood services or the transportation means used to reach them (OS); those who find some gaps (G); and those who express general concern (GC) in this respect:

OS:

"All of the above is available, except secondary education for my teenage kids and my workplace, which is in the city center" (Female, 36-45).

"Basic to me are bus stops. I need 4 minutes to reach the nearest one; between 8 to 20 minutes to the others I use" (Female, 56-65).

"The majority are available, except for work" (Female, 36-45).

"Practically everything except for my work, which is in another city district" (Male, 26-35).

"I'm able to reach all the functions within 15-20 minutes – but living very centrally" (Female, 36-45).

"To all apart from work" (Female, 56-65).

"Good access to the majority, with the exception of work" (Female, 56-65).

"Groceries, restaurants, healthcare, schooling, kindergarten, outdoor recreation, and sport" (Male, 36-45).

"I think about all of them besides work – I work in the city center, approximately 45 minutes by tram and metro" (Male, 36-45).

Table 1. Accessibility to services and amenities across city space and amenities by consolidated residents' age categories

Type of district	All available	One missing	2-3 missing	4+ missing	Total
Inner-city districts	32	25	15	8	80
Outer-city districts	12	21	19	13	65
Total	44	46	34	21	145
Age category	All available	One missing	2-3 missing	4+ missing	Total
18-35	22	21	16	5	64
36-55	15	15	14	9	53
56 and over	7	10	4	7	28
Total	44	46	34	21	145

Source: 15-minute City Residential Survey authors' elaboration

G:

"15 to 20 minutes is too far away. I would want them closer"
(Female, 36-45).

"To basically all, except secondary education and the workplace, to which I need to travel to the city center"
(Male, 18-25).

"I think, to all functions listed, the accessibility is good, although riding to the university takes more time, usually 25 to 30 minutes. Considering a job, if I were looking for one, I would evaluate the work offer, not the time-distance from home" (Female, 18-25).

"I still have to travel more often to other, further parts of the city. Hence, the efficient, punctual, and effective public transportation is significant for me" (Female, 18-25).

"To some among these" (Male, 26-35).

"I can't complain, I have all I need in my day-to-day life. The only thing I'd add are more green spaces" (Female, 36-45).

GC:

"To none of the above functions" (Female, 56-65).

"No access; only to grocery stores and the playground"
(Male, 36-45).

Source: 15-minute City Residential survey by the first author, 2023.

The figures together, with the residents' perspectives, reveal effects of the "joint" operation of market forces and public policies in shaping the spatial-*cum*-functional organization of life at the neighborhood level. Reported differences between the city's inner and outer districts stem from generally lower population densities in the latter, but also from delays in the provision of public services in Warsaw's newly expanding residential zone. Notable in the case of the inner city is perceived accessibility within walking distance to *specialized* functions, in addition to local (*central place*) functions and *territorial* functions (i.e., those functions performed within city administrative borders) (Christaller, 1933; Smith, 1965; Bretagnolle & Pumain, 2010), another mark of the superimposition of metropolitan over neighborhood convenience.

4. Walkability, neighborhood convenience, and quality of life

Whereas at city level, residents' perceived life quality has been identified in the literature to be positively correlated with income, education, housing costs and values, as well as natural amenities (Blomquist et al., 1988; Florida et al., 2011; Winters, 2013), it is assumed at neighborhood level to be interdependent with convenient access to services and facilities of frequent requirement (Moreno et al., 2021).

When interpreting Warsaw residents' responses concerning the impact of availability of services and amenities upon perceived life quality, some differences are found between those inputs referring to the neighborhood level and those concerning also the role of the wider city as a location of workplaces, tertiary education, and other specialized services (Table 2).

The positive impact of the availability of services and amenities within convenient walking distance of home upon perceived life quality is well documented in the survey returns. Most frequently, the proximity aspect is seen to minimize effort and benefit the time budget. It can be found throughout the spectrum of participants' age and gender categories identified:

"Big work/life balance, more time on my own, spent with family, friends, and more time to relax" (Female, 18-25).

"Having everything at hand is of utmost importance for managing my everyday life, saving lots of precious time for work or quality time with the family. Not depending on public transport or cars is a key issue of my life and clearly influences my choice of residence" (Female, 36-45).

"I get everywhere in a short time, usually on foot or by streetcar (saves time and money). I am close to everything I need on a daily basis" (Female, 56-65).

"I don't have to worry about planning my daily activities because I can do them spontaneously when I find the time"
(Male, 18-25).

Table 2. Impact of accessibility to services and amenities upon perceived life quality

Age group	Positive effects – neighborhood level	Positive effects – city level	Weak or no effect	No response
18–35	49	9	4	2
36–55	37	6	7	3
56 and over	17	1	3	7
Total	103	16	14	12

Source: 15-minute City Residential Survey authors' elaboration

"It is very helpful, especially with 'emergency' situations where you can save a lot of time" (Male, 26-35).

"It definitely improves the quality of my life and saves my time" (Male, 36-45).

"Yes, it is good to have access to services and facilities of first necessity. I live in such a neighborhood" (Male, 46-55).

"Convenient for a retiree" (Male, 66 & over).

Some survey respondents perceive proximity to daily-use services and facilities to contribute to their overall life comfort, which in part comprises time efficiency, security and access to green areas. A young man stresses the importance of saving time, saying, "This is a very important issue and has a big impact on my quality of life because of the time I take to get to these basic necessities," (Male, 18-25). Meanwhile, a slightly older person adds a security aspect, explaining, "All functions significantly affect the quality of life, as they increase the sense of security and make for more free time," (Male, 26-35). Similarly, the security of village-type proximity and homeness matters to people with young children: "Having everything around the corner creates a village-like atmosphere, where it is easier to feel 'at home' and be able to, for example, send your kid to the bakery or the post office on their own," (Female, 46-55). Regarding green area availability, a younger woman mentions, "It definitely improves my quality of life, especially regarding the nature near my home," (Female, 18-25), while another reflects upon sustainability, explaining, "I live my life by my values: I can easily get around without a car, I cover local distances on foot, and being able to run various errands close to home gives me more time for my children and myself. The availability of repair shops prolongs the life of my shoes, clothes and equipment," (Female, 46-55).

Walkability is specifically referred to in several narratives:

"Tremendously, I specifically moved to this area for the kids to be able to get to their dad's home on foot (around 1 km distance from mine). I also walk to work (2 km), the school is within 20 minutes' reach as well" (Female, 36-45).

"I can walk a lot and I am super happy here" (Male, 26-35).

"It's important, I don't waste time, I like to get around on foot or bicycle" (Female, 36-45).

"It gives me the chance to continue walking" (Female, 66 & over).

Conversely, in particular when the shortage of services and facilities of everyday use is combined

with the neighborhood's peripheral setting within city space, its negative impact upon experienced life quality (including lack of safety) is expressed (though sometimes implicitly):

"I don't use it except for package delivery points, food stores, and McDonald's. I don't need it" (Female, 26-35).

"I avoid meeting friends after it gets dark" (Female, 18-25).

"Poor life quality, as I don't have access to most functions" (Male, 36-45).

"It has a negative impact, as, for example, one small grocery store doesn't make life easier" (Female, 55-65).

"In the evening, one just feels excluded; there isn't even a night bus in this part of my district" (Female, 46-55).

In some circumstances, the experience of convenient access to services and facilities is overridden by environmental dysfunctions or diminished due to other factors.

"I live next to a major arterial road (3 lanes in each direction). It pollutes the environment by impairing air quality, increasing noise and light intensity. Due to the overwhelming number of cars driving nearby, I cannot really enjoy my neighborhood" (Female, 18-25).

"I really appreciate the good access. The drawbacks are high real-estate prices and high cost of living" (Male, 26-35).

In other circumstances, the lack of local services is felt to be outweighed by proximity to environmental amenities:

"The most important is the forest at the end of the street. All the rest need not exist" (Male, 46-55).

Some respondents depict their daily activities in the way they integrate the neighborhood with the city-wide level:

"It is very convenient to be surrounded with those functions. But I spend most of my days in the center of Warsaw because of my university and work location" (Female, 18-25).

"It makes my everyday life more convenient, but I still have to commute to work, or earlier for studies, so I could use some of the services also in the city center" (Female, 26-35).

"The presence of these functions nearby allows one to fulfill all basic needs. Still, one no longer evaluates the distance when searching for a specific product or firm that offers the service I am looking for" (Female, 18-25).

Source: 15-minute City residential survey by the first author, 2023.

5. Residential satisfaction and place attachment

Place attachment is what environmental psychologists define as “emotional bonds to places” (Steg 2018; cf. also Lewicka, 2008) or the building of social ties and community belonging (Zahnow, 2023). Such bonds are important because they affect people’s well-being and are hence a part of the subjective quality of life. Steg outlines three components of place attachment: sense of place, which links physical setting with a person’s beliefs, values and experiences; place identity, which comprises self-defining aspects linked to the physical environment; and place dependence, which can be broadly understood as how a place supports and fulfills the diverse needs of inhabitants (Raymond et al., 2010). Whereas research on place attachment often employs a quantitative focus, a qualitative approach can also be applied to investigate the process via the lens of inhabitants, in relation to the 15-minute City lifestyle focusing on the quality of the people–place bond (e.g., Altman & Low, 1992). The 15-minute City as an idea that prioritizes convenient and walkable accessibility to diverse services and amenities is thus a planning concept and portal offering the opportunity for exposing and studying the place dependence. We recognize that the primary focus in planning for the opportunity of proximity-based living is placed on centering quality of life as a goal. Proximity living need not produce place attachment, which is also a person-specific, intrinsic attitude. Place attachment may derive from the experience of proximity, but a lack of it need not deteriorate the quality of life. Proximity-based lifestyles do not necessarily generate place attachment yet may still offer improved quality of life.

In surveying residents in Warsaw, we asked how the availability of, and spatial accessibility to neighborhood-level functions and amenities affect their place attachment. The survey yielded 129 answers to this question (Table 2). Whereas the residential narratives depict place attachment and motives behind it in various ways, we do not interpret the phenomenon directly, but through the lens of the respondents’ implicit willingness to stay or move. This allows us to identify the two specific categories of “stayers” and “movers”, defining their stand irrespective of neighborhood convenience and quality of life perceived (Rogers & Willikens, 1986). Stayers are understood here as those who intend to stay due to major neighborhood convenience (62 responses) or despite minor neighborhood convenience (9 responses), while movers are interpreted as those who would move due to minor neighborhood inconvenience (10 responses) or in spite of major neighborhood convenience (19 responses). It should be noted here that we re-

strict the evaluation criteria to those defined in the survey: other preconditions regarding the intention to stay or move are not considered.

‘Stayers’ due to major neighborhood convenience

The largest group of the survey respondents explicitly refers to functions and amenities available within their close surroundings as a source of enjoyment, and the intention to stay in their present place of residence is related to neighborhood convenience, a direct appreciation of the 15-minute City functions. The terms most frequently recalled by the respondents are: “place of attachment”, “quality of life”, “motivation to buy property”, “comfort”, “15-minute City walk”. Here are some examples of how convenience motivates people to want to stay in their neighborhood:

“My place of attachment is great. I feel I can do everything I need to do within walking distance. Doctor, gym, park, etc. Also, great public transit. This is where I live, although I have a very small apartment. I could definitely have a space twice as big if I moved to the outskirts. But I have such great access to everything. I would love more space, but my quality of life is pretty good, especially when it comes to my surroundings” (Female, 36-45).

“It makes me feel motivated to eventually buy an apartment here since I know that the area itself provides most of my necessary amenities” (Male, 26-35).

“Strongly positive. I love that almost all my needs I can meet in my district” (Female, 25-36).

“Enormously. To the point where I don’t want to travel to other parts of Warsaw, and I force myself a bit to go and visit them for the sheer experience” (Female, 46-55).

“When I travel, I fill the lack of accessibility to so many things and places that I have around” (Female, 18-25).

“Strong attachment, maybe even too little challenge because of availability of many functions on the spot” (Male, 56-65).

“The comfort of reaching any point around in a short time makes me feel attached to this place” (Male, 26-35).

“Greatly, I am not moving anywhere” (Female, 36-45).

“Very much, I would not like to live anywhere else anymore” (Male, 26-35).

“When all the functions are accessible within a 15-minute walk, this may encourage people to live in such a neighborhood for a longer time” (Male, 26-35).

“I haven’t even realized how complete my neighborhood was in terms of all these functions” (Female, 56-65)

"I love my neighborhood, I have lived here since I was born. I can't imagine living somewhere in the suburbs, though it is not just attachment to the place, it is attachment to style of life" (Male, 18-25).

"I love my neighborhood, I have lived here since I was born. I am very attached to this place" (Female, 36-45).

"The low intensity of traffic flows is the benefit here" (Female, 56-65).

"Stayers' despite minor neighborhood convenience

Quite conversely, in its "unconditional" form, place attachment is expressed by a few Warsaw residents who live in neighborhoods lacking functions of every-day need while appreciating their other advantages.

"Living back in the boondocks is an advantage as much as it is a flaw" (Female, 46-55).

"I like to live here, though it is rather my asylum; I still feel a lack of entertainment functions in the vicinity, and of space for young adults to spend their free time. The majority of existing ones are offered to children, their parents and to elderly persons" (Female, 18-25).

'Movers' due to minor or despite major neighborhood convenience

Place attachment is alien, or of secondary importance to a notable share of survey respondents who may still appreciate walkable neighborhoods with their range of functions and amenities locally accessible.

"It's very convenient, but I could live somewhere else as well" (Female, 36-45).

"Hard to say, I have been living here for the overwhelming majority of my life. I find it convenient, but I am still considering moving out to a small town or even the countryside" (Male, 36-45).

"I don't know, I change my place of residence every 4-10 years, but the last time I moved over 2 kilometers only, so perhaps I am attached" (Female, 36-45).

"Moderately, because I believe that most of Warsaw districts are 15/20-minute neighborhoods" (Female, 26-35).

Finally, whether satisfied or not with functions and amenities at the neighborhood level, some among survey and workshop participants, while appreciating attachment, do not strictly connect it with their neighborhood but rather type of place that allows for a specific lifestyle:

"I feel more attached to the city as a whole" (Male, 18-25).

"I am attached to Mokotów, which is a large district, far more than to my neighborhood" (Male, 18-25).

Source: 15-minute City Residential survey by the first author, 2023-2024; 15-minute city workshops 2022-2023.

6. Effect on commuting

Reducing inhabitants' reliance on cars is a critical and transparent objective indicated in the 15-minute City concept. Shifting away from "conventional urban planning models" towards a paradigm that supports walkability and cycle infrastructure de-prioritizes vehicular flow and car-centric models (Allam et al., 2022b). This question is reflected on by survey participants and urban mobility interviewees in their narratives concerning neighborhood services and public transport availability effects (*Note 4*):

"My day-to-day life is comfortable, and I can reduce the number of everyday travels" (Female, 26-35).

"It's good, I don't need to spend a lot of time on unnecessary traveling" (Male, 26-35).

"With the availability of PT I don't need to waste time commuting" (Male, 18-25)

"I don't have to worry that I don't have a car because I can walk everywhere. I don't have to spend money on car maintenance, and so I save money on gasoline" (Female, 26-35).

"The public transport system allows me to take advantage of many facilities outside of my neighborhood confines, so I do not feel affected by the limited range of activities in my area. "I live in a big city, so it's not a surprise" (Male, 18-25).

"It affects me a lot. As I don't have a car, it's very important to have everything in the neighborhood" (Male, 18-25).

"Positively, I don't need to travel far to other parts of the city, so I have more time for other activities" (Female, 18-25).

"Very good impact, one can return home during the day, e.g. between school and afternoon activities, work, and evening outings to theater, cinema, swimming pool, or other sports activities" (Female, 46-55).

"Greatly. I am very glad that I never have to drive a car to fulfill my everyday needs, and if I need to go further, I can use public transport easily" (Female, 18-25).

"It allows me not to use the car and saves time"
(Female, 18-25).

"Every moment that I can devote to something other than commuting is an attractive proposition" (Male, 26-35)

"Lack of services and stores makes it necessary to use a car"
(Female, 46-55).

"Since I don't own a car, being able to do a lot of things in a quick way greatly improves the quality of life"
(Male, 18-25).

"It's nice to have transport that is fast. I like the freedom that I can choose a tram or a bus to go to the center. Even if I prefer trams, it is nice to have the option of the bus. I like in Warsaw that there are always buses in the evening. It's a freedom that I can stay long out in the city with my friends and get home. I also feel a lot of freedom in Warsaw when walking" (Female, 18-25)

Source: 15-minute City Residential survey & Urban Mobility interviews by the first author, (2023).

7. Discussion and conclusions

Concerning the relation between the availability and accessibility to services and amenities at the neighborhood level and perceived life quality, the results of our enquiry indicate that the former improves the latter through their provision of time savings and the minimizing of effort (Zipf, 1949), i.e. the chance to cut down on travel time (which is considered a disutility) (Broemmelstroet et al., 2022). As to overall life-quality evaluation, the generally high share of positive assessments decreases to some extent with respondents' age. While enjoying a wider average convenient walking range (Willberg et al., 2023), residents of 18–35 years of age can access a larger scope of services and amenities compared with those in older age categories (Table 2). At the same time, in their life-quality

assessments, they more often allude to specialized city functions (Table 3). Older age-cohort members reported neighborhood convenience-related effects that include factors such as overall life comfort, satisfaction with place, a sense of security, lack of need to use a car, and place attachment. In several narratives, residents in various age groups refer to the neighborhood's walkability as a quality-of-life aspect. Whereas young residents more often perceive accessibility at neighborhood level from a utilitarian perspective, as one that helps them optimize their typically stringent time budgets, other local benefits (including enjoyment of nature and walking for pleasure) tend to be shared mainly by residents in the 36–55 and 66-and-over age groups. Though statistically not valid, these observations are consistent with results of the comprehensive study on neighborhoods' walkability by Leyden et al. (2024), who found that, compared with those in younger age groups, adults aged 46–60 reported finding more attractive sites to visit in the area, indicating that they considered walkability not only in terms of convenience effect but also as a life satisfaction factor.

Concerning place attachment, against the general division used in migration studies (Rogers & Willekens, 1986) into "mover" and "stayer" categories, the rather differentiated survey returns display this attitude's complex determinants (Raymond, Brown & Weber, 2010) but presumably also diversity of interpretations of the notion itself among survey respondents. It can be suggested that, whereas some respondents who declare their continuing or growing attachment to the present place of living may be motivated by the neighborhood convenience they actually enjoy, those who lack walkable access to services and amenities of regular need, if still feeling attached, express an attitude of intrinsic place attachment.

The links between the neighborhood and the city/metropolitan area level were an implicit theme of the survey. This theme was introduced by the inclusion of references to workplace and transit facilities and the investigation of the impact that their availability,

Table 3. Neighborhood convenience as a factor of Warsaw residents' place attachment with a focus on 'movers' and 'stayers' categories

Place attachment category	No more than two functions unavailable	Three or more functions unavailable	Total
Positive	62	9	71
Low or none	19	10	29
Other factors and/or effects	22	7	29
Total	103	26	129

Source: 15-minute City Residential Survey authors' elaboration

accessibility and quality had upon residents' subjective quality-of-life assessments and perceived place attachment. The survey results confirm that the role of a large city as a single labor market persists in the post-pandemic period, with its rapid expansion of "work from home" (Quigley, 1998; Martin, 2000). They also indicate that the city is the locus of specialized production and reproduction functions – perceived intermediary correlates of life quality (Florida et al., 2011). This also pertains to the city/metropolitan area occupying prime position in the chain of individual mobility decisions as to the choice of place for advanced education, work and housing across space (Clark, 1982). Setting aside reservations concerning the size of the residential survey and the composition of its participants (Willberg et al., 2023), the variety of views expressed in the study and the factors standing behind them may hopefully contribute to the documentation and interpretation of the interlocking of city/metropolitan and neighborhood levels in urban residents' perception of and search for enhanced life quality.

When presenting and interpreting residential narratives relating to the 15-minute City concept (Moreno, 2016; Moreno et al., 2021), using the case of Warsaw, we aimed in this paper to document how local residents perceive their neighborhood living and what impact it exerts upon their quality of life and place attachment. We also intended to find out how the residents' daily and weekly activities at the neighborhood level intertwine with those pertaining to the city-wide (in fact, the metropolitan) dimension. In examining strategies and planning interventions undertaken in several cities around the world, while applying assumptions common to the 15-minute City idea, G. Pozoukidou and A. Chatziyiannaki (2021) identify five evaluation criteria relating to: (a) spatial proximity for people to enable access to urban services and amenities, (b) active mobility options, (c) accessibility to transit, (d) safety of urban environments and (e) connectivity and multi-functionality of green open spaces. When formulating the introductory question for the purpose of residential survey, we focused on the first three criteria. With its bottom-up, participatory approach, the 15-minute City concept has proved useful in collecting materials and interpreting the study results, even if doubts can be raised concerning its evaluation of "flexibility" (i.e., the choice of walking vs. cycling) and of 15- vs. 20-minute accessibility. In this respect, the concept differs from the 20-minute city idea (Da Silva et al., 2020), which applies the latter time accessibility range to the city as a whole, when involving walking, cycling and public transit; this equates, in practice, to an

urban place of middle size. Reference should also be made to the 30-Minute City idea by David Levinson (2020) that focuses on ways to optimize metropolitan transportation and transit systems, so as to cut average travel time (including work commutes) to half an hour, thus allowing to better utilize metropolitan city potential and bringing quality of life benefits. Hence, it may be regarded as complementary to the 15-minute City concept. Additionally, as Moreno notes (2024: 14) "The 15-minute City represents an urban model in which the essential needs of residence are accessible on foot or by bicycle within a short perimeter and high density areas. Similarly, the 30-minute territory extends this concept to less densely populated areas where commute can take a little longer."

The residential narratives presented in this paper reflect focused views and opinions of residents who expressed their interest in participating in the survey. These outlooks can be found valuable for stakeholders, including developers, and urban planners identifying gaps in provision of services. They can also be broadly useful within urban communication efforts to help shape awareness on spatial equity issues within the context of sustainable urban development. As phrased by Jane Jacobs (1961): "Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody."

The present paper analyzes the various opinions and attitudes of residents on life quality through the lens of the 15-minute City concept, reflecting upon their convenience, perceived quality of life, and place attachment. The authors perceive the qualitative data representing the reflections of residents themselves as a valuable source of practical insight on the diversity of perceptions of proximity as relates to urban quality of life and place attachment. Such ethnographic and narrative approaches can play a valuable role in urban audits and diverse research and advocacy approaches that have as one of their central aims understanding contemporary urban resilience at social, economic and environmental scales, and pathways to improve it. Such knowledge can also be vital for the development and prescription of governance solutions and help stakeholders and city-shapers better understand both the enablers of and obstacles to accessibility, walkability and neighborhood convenience that residents experience in their diverse lifestyles and neighborhoods.

Notes

1. The latter aspect is reflected upon in a quote from an interview with a small town's local resident: "Upon their retirement, the couple sold their dwelling in Warsaw and bought one here, where there is a difference in price. They do not want to have anything urban around, but just to enjoy walking these two - three kilometers to the town's other end." (Korcelli-Olejniczak 2000: 61).
2. This is tilted in favor of the 18-35 group, as the young adults cohort of 20-34 years accounts for 20.5% of the city population (*Demographic Yearbook of Poland 2022*: 154). Still, their number as well as share in the total were notably higher, had non-registered domestic migrants been accounted for.
3. The fieldwork also included 18 workshops between December 2022 and December 2023 held at diverse locations around the city that served to communicate about and discuss with local residents and stakeholders the '15 Minute City' concept, its benefits and specific local challenges in developing as well as their experience (or lack of) with the 15-minute City lifestyle. Evidence from the workshops will be analyzed in a separate paper.
4. According to a statistical survey authorized by Warsaw City Hall, more than one half of the city residents above 15 years of age, traveling daily to work or education facilities use public transport for the purpose. Approximately 77 % out of the total number of the interviewed finds this transport mode to be the optimal means of moving around the city (Warsaw City Hall, 2024).

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