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Original research article

The importance of mobility for the autonomy of seniors

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Abstract
Spatial mobility of seniors is one of the current topics under investigation. Its relevance is due to both the ageing population and issues related to the quality of life of seniors. It is linked to how the spatial mobility of seniors affects their personal or family life, but also community and public life. The factors that promote spatial mobility and those that hinder it are the subject of contemporary research. Among the topics related to ageing and old age, the autonomy of seniors, which encompasses several aspects, is also under investigation. The intersection of these two topics, i.e., spatial mobility and autonomy, raises the questions of how these phenomena and processes are related, to what extent they condition each other and, as a result, what functions mobile autonomy, so conceived, fulfils or, conversely, under what circumstances it ceases to be functional. An analysis of 24 semi-structured interviews with seniors over 70 years of age was conducted. The main objective of the study was to discover what importance seniors attach to the outdoor mobility for their individual autonomy. We deconstructed this goal into the following research questions: (a) What importance do seniors attach to the outdoor mobility modes they use? (b) What circumstances do seniors identify as affecting their mobility? (c) How do seniors respond to the limitations in their outdoor mobility?

In particular, the modus of the car has been shown to be important, but the importance is differentiated according to different criteria, e.g., whether the senior drives alone, whether his/her partner drives or whether s/he relies on the help of others. A big question is how drivers cope when they stop driving or are forced to stop. The importance of the bicycle, usually linked to the wider radius of the elderly person's daily living space, depends on health, fitness, and lifestyle. From the interviews, it is evident that the situation of seniors and their coping strategies, especially in the case of advanced old age, are well characterized by their ability and commitment to walking. The analysis of the interviews leads to a typology of seniors' attitudes towards mobility and its importance for their own autonomy.

Keywords: Aging of seniors; Autonomy; Mobility modes; Outdoor mobility; Seniors

Introduction

The importance of mobility and spatial arrangement – of not only the indoor but also the outdoor environment – is a current area of concern in the prevention of healthy aging. Crews (2022), Burlando et al. (2021) point out that the mobility of seniors in the outdoor environment and the way it is arranged significantly affects the quality of life of seniors. The ability to move around the outdoor environment affects a variety of their needs. The mobility of an individual is determined by various factors (Khalek et al., 2021), which include demographical determinants (age, gender, household structure), environmental determinants (environment, economic opportunities, ownership, relationship to the environment), and determinants resulting from health status (health and ability to use mobility modes – driving, cycling or e-biking, use of public transport and walking) (Khalek et al., 2021; Smith and Sylvestre, 2001). These are of course related to the external conditions of the respective environment, especially if it is urban or rural, as different environments can be stimulating or constraining for mobility (Smith and Sylvestre, 2001). Mobility fulfils a series of essential functions in the lives of seniors. Burlando et al. (2021), Smith and Sylvestre (2001) specify the functions of outdoor space in the context of mobility as (1) journeys to reach utilitarian goals (shopping, visiting, using services, etc.), (2) stimuli arising from the journey and non-journey (learning about the environment, meeting and interacting with people), participation in public and community life, and (3) the benefits of movement for physical and mental fitness and well-being. Petrová Kafková (2013) points out the importance of outdoor mobility as a value in itself (awareness of the possibility and ability to move). Functions are imposed on the radius of the space used, from the zone of the dwelling, its immediate sur-

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roundings, the wider neighborhood and more distant spheres (in the village or outside). With age, the living space usually becomes smaller and the proportion of activities related to the apartment and its surroundings increases, mainly due to deteriorating health. Emphasis on changes in the functional mobility of seniors in the use of living space has been promoted in senior health research within the concept of LMS (Life-space Mobility) (Johnson et al., 2020). The latter involves a series of physical and psychological structures and processes. Research shows that a good predictor of health is subjectively perceived and assessed health (Hamplová et al., 2014; Khalek et al., 2021; Levasseur and Naud, 2022; Truhlářová and Vosečková, 2013). Other factors that either constrain or promote the expression of willpower by the elderly cannot be overlooked (Čepelka, 2021; Petrová Kafková and Sedláková, 2017; Sýkorová, 2007). These include strategies for coping with older age or their relationship to the place they live in. According to Sýkorová (2007), Čepelka's (2021) coping strategies differ in focus (health, interests, lifestyle, social relationships, etc.) and intensity (minimalist, accepting and ignoring). The way of experiencing and coping with the aging process significantly affects the psychological and health status of the elderly and their social integrity (Khalek et al., 2021). These factors are important elements for the quality of life of seniors.

Outdoor mobility is closely related to the autonomy of the elderly. The possibility and ability to use the external environment is one of the predictors related to the objectively and subjectively perceived autonomy of the individual (Fjordside and Morville, 2016; Matsui and Capezuti, 2008; Stachoň, 2015; Sýkorová, 2007; Truhlářová et al., 2016). In particular, it concerns physical, psychological and social aspects. The literature research discusses the relational definition of the concepts of autonomy, self-sufficiency, and independence, arguing that a senior dependent on the help of others for some activities may nevertheless be autonomous (Crews, 2022; Smith and Sylvestre, 2001; Su et al., 2021).

However, with regard to mobility, we understand individual autonomy as autonomy, self-sufficiency or independence in the choice and achievement of goals or activities that are related to outdoor mobility, i.e., a senior who achieves his or her own goals with the help of another person can be considered autonomous, the crucial issue being whether the senior does not perceive this help as interfering with his or her autonomy. Smith and Sylvestre (2001) link autonomy to the saturation of the individual's needs arising from maintaining a connection with the living environment (and not only with people), and the need to be in contact or communication with public and community life.

In the field of gerontosociological theories, since the mid-1980s, there has been an emphasis on an interpretive paradigm in which seniors are seen as actors in their own lives, albeit in the context of social conditions. Hence, our research also explored seniors' self-concept and their perceptions of spatial mobility and autonomy.

Materials and methods

The main objective of the study was to discover what importance seniors attach to outdoor mobility for their individual autonomy. We have deconstructed this goal into the following research questions: (a) What importance do seniors attach to the outdoor mobility modes they use? (b) What circumstances do seniors identify as affecting their mobility? (c) How do seniors respond to the limitations in their outdoor mobility?

The selected modes observed were mainly driving or using a car, cycling, and walking (Haustein and Siren, 2014; Khalek et al., 2021). The importance of these mobility modalities was examined in the context of health, family, and other relationships, housing and living environment, and coping strategies for ageing. The analysis of the interviews leads to a typology of older people's attitudes towards mobility and its importance for their own autonomy.

A qualitative methodology was used in the research, applying the technique of guided semi-structured interviews according to the manual (Hendl, 2012; Kaufmann, 2010; Mišovič, 2019; Novotná et al., 2019; Strauss, 2003).

The data collection was planned to allow for an inductive analysis within an interpretive paradigm with a constructivist-phenomenological focus, i.e., with an emphasis on how seniors themselves, as actors in their activities and relationships, construct a living space and attach meanings associated with their outdoor mobility and their individual autonomy in perceiving and understanding their own situation.

In processing the data, we followed an interpretative phenomenological analysis (Koutná Kostínková and Čermák, 2013), which focuses on the meaning of a person's lived experience and understanding of a given event or phenomenon. The emphasis was on the very way the respondent understands his/her situation. Our goal was not to pursue the quantification of the codes that saturated each category, but to look for content connections between themes and subthemes (Smith et al., 2009). The scenario included several main thematic units: the self-narrative of the life path, health status, social contacts and relationships, housing, relationship to the outdoor living space, outdoor mobility, its modes and meaning, movement constraints or barriers (reactions to them), reflection on the current situation (compared to the previous one), saturation of needs and future life plans.

The interviews were conducted by members of the research team, recorded on a dictaphone, transcribed, and for each interview a record of the findings and observations from the interview was made by the interviewer in a field diary. The interviews were coded by members of the research team, both in an open-ended manner and selectively sorted according to thematic areas (status and changes in the lives of seniors related to health, family and other relationships, housing and living environment, and strategies for coping with aging not only in the context of mobility modes – car, bicycle, pedestrian). Together, their interpretation was discussed (continuously and at the end) based on the constant comparative method, which led to interconnected findings and to a more systematic interpretation of the partial findings, including the development of the presented typology. In the text, we present and illustrate our interpretation of the findings with the open statements of individual informants (Koutná Kostínková and Čermák, 2013), which portray the content frameworks of the topics under study.

Selection

The research team selected the target population, the research population. The target population included seniors aged 70 years and above, a period when health limitations or loss of energy are more often manifested in the senior population, but also social changes associated with the level of contact with peers, widowhood, decline in child support (e.g., with grandchildren), redefinition of their own needs, etc. In contrast to the most commonly used formal age limit of 65 years, the age limit of 70 years was chosen because at this age there are already changes in the health, family situation,

activities of seniors, etc. The changes in the ageing process are more significant (Brabcová and Vacková, 2013; Corazza et al., 2019; Kahana et al., 2012; Zacher and Kooij, 2017). At the same time, it was important to consider that also at this age, differences persist in the elderly population, both in terms of health and fitness and in terms of lifestyle. The research team opted for purposive sampling. Several selection criteria were established for the selection of the research population. The population was to include both women and men with different health and fitness statuses that nevertheless allowed them to move outdoors (ranging from significant physical limitations to partial, temporary, or minimal limitations). Furthermore, it should have differentially taken into account the structure of the household and housing (whether the senior lives alone or with someone, whether it is an apartment, a detached house, a special facility for the elderly) and the place of living is in the city (with different locations) or in the countryside. Another criterion was whether or not they drive or use cars. For the purpose of the selection, consultants were approached to make suggestions, on the basis of which, according to the above purposeful selection criteria, the research team contacted potential respondents. The informants were recruited on the basis of recommendations from representatives of social life in villages and towns, mayors and social workers.

Semi-structured interviews were conducted between May and August 2021, which took place in the homes of seniors or in discreet public places (clubhouse, meeting room) and were recorded with the informed consent of interviewees. The topic is addressed within the project 'Modelling of accessibility for seniors, perception of accessibility and determinants of their spatial mobility', solved by VŠB-TU Ostrava, UHK, GA ČR 21-22276s, which aims to better understand the relationship between the measurement of mobility by various objective indicators and their perception by the elderly. To address the objectives of the whole project, several interviews were conducted, but below we only present the characteristics of those that were analyzed for the purpose of this topic. The research sample consists of 15 women and 9 men aged 70 years and older. The sample considered the location of residence, with 10 respondents living in the regional city Hradec Králové – city center, housing estate, outskirts of the city with houses, and 14 respondents in the village (one village in close proximity to the regional city and two villages at a distance of 15–20 km). There were 10 respondents living with a partner (in all cases they were married couples) and 14 respondents living without a partner (two of them in households with other family members). Eight respondents lived in a detached house, seven respondents in an apartment, six respondents in a home for the elderly, and three respondents in a house with special purpose apartments. Eight respondents were active drivers, and five respondents former drivers.

In terms of health and fitness, we divided the elderly into three groups. Group A (nine respondents) are the people who are not limited in their walking mobility, they have no problem walking longer distances from their flat. The seniors in Group B (seven respondents) face difficulties in their walking that are not severe, but which limit their pace, dexterity, and distance. Table 1 gives an overview of the respondents whose names have been changed for reasons of anonymity. Group C (eight respondents) are the people who have significant mobility difficulties that only allows them to get around outside the space of their own home with great difficulty and their walking requires support, some of them move with the help of a wheelchair.

Ethical aspects

Respondents were provided with information about the purpose of the research, the sample, the focus and the method of the interview. As the interviews were recorded, informed consent was sought from respondents describing how the data collected would be handled, and in particular that the interview would be anonymized and used for data processing by the research team. The interview transcripts, interview protocols, and notes were archived without the respondents' real names.

Table 1. An overview of the respondents

Jana, 80 years, village, she lives alone, A
Marta, 80 years, village, she lives with other family members, A
Klára, 78 years, village, she lives with her husband, A
Marcela, 77 years, village, she lives with her husband, A
Alena, 74 years, city, she lives alone, A
Pavla, 74 years, village, she lives with her husband, A
Radka, 70 years, village, she lives with her husband, A
Václav, 89 years, village, he lives alone, A
Petr, 78 years, village, he lives with his wife, A
Ludmila, 85 years, city, she lives alone, B
Hana, 81 years, city, she lives alone, B
Bohumil, 85 years, city, he lives with other family members, B
Pavel, 78 years, village, he lives with his wife, B
Ludvík, 74 years, village, he lives alone, B
Zdeněk, 74 years, city, he lives with his wife, B
Jiří, 71 years, city, he lives with his wife, B
Jiřina, 93 years, city, she lives alone, C
Lada, 90 years, village, she lives alone, C
Marie, 87 years, village, she lives alone, C
Anežka, 82 years, city, she lives alone, C
Jitka, 79 years, village, she lives alone, C
Zdena, 71 years, city, she lives with her husband, C
Radim, 85 years, city, he lives with his wife, C
Karel, 78 years, village, he lives alone, C

Results

Based on the research questions we focused on the interpretation of three selected mobility modes, specifically car use, bicycle use, and walking, in the context of the above questions. The use of a car, bicycle and walking is an indicator that illustrates the different ways of using outdoor space and also how much autonomy seniors have. They also refer to the examined context of health, family and other relationships, housing and living environment, and coping strategies for ageing.

The use of a car in the context of personal autonomy of the elderly

Mobility is related to various modes, including the use of car transport. Respondents include those who still drive a car, or those who have stopped driving, but also those who have never driven a car. For many respondents, family members or

other persons substitute car transport. Seniors give up driving as they get older, as their health changes, or because of changes in social ties (death of a partner, loss of close or familiar persons), changes in their own interests and activities, or for financial or other reasons related to the car care. The questions that arise here are whether driving a car helps senior drivers in their autonomy, whether former senior drivers perceive the absence of driving a car as a limitation of their autonomy and how they cope with this absence, whether help from family members is important for seniors in the case of car transport, and whether this help contributes to their *"feeling"* of autonomy, albeit secured, substituted by someone else.

Driving a car or using it is not only a means of transport for the seniors in our group, but also a sign of their autonomy, as it allows them to choose and achieve their destinations independently, to carry out activities related to them, and to manage their time more freely. *"I'm not just dependent on this"* said Klára, a lady who enjoys the fact that she can be independent from public resources or from an environment that would have shackled her too much without a car. Car journeys can connect different destinations and give the opportunity to combine multiple purposes during the journey. *"That I connect it to the trip, ... my wife and I go to the spa, ... so we've practiced that pretty much every month"* (Pavel). For some seniors, their car has literally become a hobby. Senior drivers realize that by driving they have a wider and more accessible living space, which is often limited in old age, especially for health reasons. They are all the more strengthened in their sense of independence. And just being able to drive a car also helps them to maintain a better social status. A car can symbolize their autonomy, independence, as well as their health or wealth. Driving a car and what driving a car enables and symbolizes is welcomed by seniors: *"As long as I get in and out of the car, I like to drive"* (Pavel); *"My little car will take me everywhere, anytime, anywhere, only by car"* (Bohumil). The seniors who are still active drivers exhibit a high level of autonomy, and this is most fulfilled by those who are economically active and use a car for work or transportation to work.

Driving a car as a symbolic but mainly real indicator of unrestricted autonomy is particularly evident in the case of seniors who have lost their driving license due to a doctor judging their health condition to be unfit for driving. *"The most unfortunate thing was that I was in my nineties, everything according to the norm, but after I turned ninety, the doctor was already deciding whether to let me renew my driving license... so he extended it for two years. Oh, and did you use a car? Classically, like, even though I, like, said I wasn't going to do any big events, but for the family and stuff. Well, two years passed and the doctor said, Mr. Václav, I'm sorry, but I'm not going to renew it for you anymore"* (Václav). Mr. Bohumil is also concerned about getting another license from the doctor to drive a car, and takes great care to be as fit as possible at the time of his medical examinations.

There are various reasons for limiting or terminating the use of a car. In particular, health problems or a feeling of lack of safety in road traffic, and recklessness of other drivers. *"I'm so tired of it. But you know, I don't go anywhere, just here"* (Petr). This often includes financial demands or other maintenance worries. The female seniors in our cohort sold their car, which they no longer perceive as necessary due to family changes and reduced activities, when the children left and eventually the husband died. *"Like I don't have a car now that I'm retired. I'm alone now, the kids are gone, so I don't have a car..."* (Alena). They also associate the sale of a car with the relief of not having to take care of the car and its operation. *"Yes, I used to drive. And would you still drive? Not anymore. Not anymore, just when my husband died, I sold the car and I say now first of all, I wouldn't have been able to financially pull it off and it's unreal in this traffic and so I said to myself. The buses, now we've got a big discount and so I sold the car and I haven't driven since and that's when my husband died, right, and that's 18 years now. I used to drive"* (Jana). If the former driver is no longer interested in driving, this can be seen as an indicator of acceptance of ageing for some seniors, which is accompanied by a change in interests, orientation towards a smaller living space and a safer environment.

The car performs a slightly different function for those who were not drivers themselves in the past. If drivers (even former drivers) associate the car with their autonomy, non-drivers see the opportunity to use the car (with the help of another person) as a practical means to achieve their goals. Admittedly, drivers also pursue such a strategy, e.g., when arranging shopping: *"You know, to go shopping. So, I still have to go shopping. I don't go shopping, I drive to go shopping... So I drive when I go out." "No, I haven't gotten on public transportation in many years"* (Bohumil). Mr. Ludvík, although there are grocery stores locally, prefers to drive to a nearby town. *"I don't like shopping here. It's not the same, the same product range. Well, and the shop assistants think they're something"* (Ludvík). Thus, using a car can be more convenient, flexible, operational, and opens up many more possibilities. The use of a car is often difficult to substitute in the case of trips to the doctor or contacts with family. *"They brought me. My daughter came for me... so she just always came for me. ... So far, they kept bringing me... and my son from that Polička... and they brought me again* (not using PT because of the pandemic)*"* (Alena). In these cases, the possibilities, frequency but *"bother"* depend mainly on the spatial or temporal availability of seniors' mobile loved ones and how their situation (e.g., work obligations) allows for flexibility. *"I'm lucky that my son is retiring right now and he lives 250 metres from me here. Well, for those important events, I've kept the car, although we've signed it over to my son, so for those various appointments, checks etc."* (Václav). *"And it would be possible, with children... I have three children, right, it would be possible. But they have a lot of their own... They are all in Brno, so I don't feel I need it at the moment"* (Hana).

In the case of seniors with serious health problems that limit their mobility, the possibility of using a car becomes a necessity to achieve some goal. Mr. Radim, who comes from the Highlands, is glad that today, when neither he nor his wife drives a car, he can visit his native region and visit his relatives thanks to the fact that his grandson provides transportation and delivery. *"But I wouldn't have got there any other way, by bus or train. I can't travel by train anymore."*

The importance of car transport as a healthier, safer alternative to public transport has increased greatly in the age of the COVID-19 pandemic. Car transport as an epidemiologically safer transport compared to public transport was of course perceived with *"gratitude"* by the elderly drivers themselves. And by those who are used to driving *"only by car". "No, I haven't gotten on public transportation in many years"* (Bohumil), as well as those who also use public transport but have replaced it with a car in the time of the COVID-19 pandemic. Mr. Jiří and his wife started to go to the urban forest by car although before they had used a very convenient public transport connection. *"I could go by public transport, but given the coronavirus situation, I try to avoid any contact with the public"* (Jiří).

On the one hand, the possibility and use of transport by a car driven by a close (family) member increases autonomy; on the other hand, seniors become more bound and obliged to their loved ones. *"I have a son who lives outside of Hradec and my daughter does too, so if I ask them, they will come and do what*

I need, but I don't want to, I don't want to bother them all the time because they all have their own matters, right" (Ludmila). On the one hand, Mrs. Radka prefers to have her children take her to the supermarket to shop and she can choose for herself, but also *"just look around"*, rather than having them provide her shopping, but she also realizes that it would be easier and quicker for her relatives to do the shopping for her and not have to wait for her to shop at her own pace.

Due to health problems, Mrs. Jitka often visits the doctor. Her son and his family are especially helpful. He lives in Hradec Králové. DPS workers also help. *"My son used to drive me to the emergency. Or if I need to go to Hradec for a check-up, I call my son." "I take one stick and catch him under his arm. We stop at the doorstep. He stops right there and they help me. And there's the elevator. Unfortunately, the backpack carries me and cut me down, they do all that." "Now I've arranged for the girls to drive me to the doctor."*

The car itself can also be a hobby. *"I had a car hobby, I mean, like I was always cleaning it, I was always like maintaining it..."* (Bohumil). The possibility of car transport also appears to be an important factor in transcending everyday living space for trips and holidays, it is used for activities that are perceived as leisure even in retirement. This is particularly evident in the case of married couples who have the opportunity to share this non-ordinariness, to experience it together, which can also be reflected in the satisfaction of their relationship. Mrs. Pavla was in business and needed the car for her work. Although she has now closed the business, she still drives and so does her husband, who has a musculoskeletal disability. *"He likes to drive and he drives well, and when he can't, he gets nervous, so we drive a lot, I would say. Much less now, of course, than when we were still going shopping for goods. Now we just drive for ourselves. Either to see family, or to see friends, or to see familiar places that we like." "We go to Prague or then even further, to the Orlická dam." "We've been going to Hungary on holiday for about eleven years. I'm there for three weeks, usually fourteen days."* The car is also used for visits to the theatre and other cultural events. *"Well I say, since we have driving licenses and since we have a car, I would say I am perfectly happy." "... my husband doesn't like trips, only by car."* The function of the pleasure of sharing the unusual is also illustrated by seniors who are now alone and no longer interested in going on trips: *"When mother lived, we used to go all the time"* (Ludvík).

For senior married or partner couples, driving is a situation where they experience activities together outside trips and other leisure activities. Although Mr. Jiří and his wife each have their own activities, their bond is walking or shopping together. *"... if we go shopping once a week, I don't let her go shopping, right. So, we go shopping together."*

The use of a bicycle in the context of personal autonomy of the elderly

Some seniors in our group use a bicycle or an electric bike for their outdoor exercise. However, many have stopped using this means of transport, mainly due to health reasons or lack of safety on the road. Seniors who keep using bicycles have them as a support while walking and/or transferring heavier loads such as meal supplies.

The bicycle or electric bicycle is a means that maintains mobile autonomy, allowing one to still enjoy, to be in contact, as before, with one's wider living environment (i.e., a zone that is not only accessible on foot, but also, for example, a nearby area that contains other destinations and close, familiar people).

On the other hand, bicycle use can be seen as an option that seniors lose over time due to deteriorating health. Mrs. Lada recalls how she used to love to go cycling on trips to the forest, plum trees, herbs or to the nearby town (Opočno). She used to go alone, sometimes with a friend. But she is now afraid of cycling, she is not sure. *"I'm old now, if I'm going to be picked up somewhere... not anymore."* She is learning to walk on two sticks and would need a wheelchair to lean on when walking.

In some cases, seniors purchase an electric bicycle to replace their diminishing strength, and to allow them to do the same activities as before. Mr. Petr still uses the bike today. He has used it all his life. He regularly uses it, especially in his village on his trips to the garden and back home. For reasons of convenience and speed, he bought an electric bike. As he says: *"It's a bit of an uphill ride back* (from the garden)." He used to ride his e-bike to football games, but found that batteries were expensive. He uses it for trips to the garden or shopping in the village. Some seniors have bought an e-bike as a necessity for more demanding and distant destinations, but they still ride a normal bike for as long as possible. *"I ride a bike. Well, I also bought an electric bike... But my legs are getting weak... I only use it in an emergency or to run a quick errand and I keep riding a normal bike..."* (Václav).

For some seniors, the bicycle is a means for them to keep fit and healthy, although their cycling journeys have another purpose. However, Mr. Pavel, a former professional athlete, has a stricter standard for playing sports due to his sporting past. *"Not so much sport. I don't think of this as sport anymore, I do, somebody cycles... five thousand kilometers a year, I don't know, yeah, but I cycle, I don't know, a thousand kilometers maybe not even that." "... I'll jump on my bike and I'll go and see, for example, Chlum. I'll have a beer there, I'll look around the countryside for an hour, or I'll go to Velký Vřešťov to see how the fishermen fish in that pond. I'll have a beer and go back, so I have routes like that. I drive twenty, thirty, forty kilometers a day."* Mr. Pavel doesn't want an electric bike. *"No, I don't. I don't ride routes like that, and especially when I do, I want to experience it."*

For seniors who have actively used a bicycle all their lives, the bicycle can be a major symbol of their mobile autonomy. Jitka's husband was a great cyclist. He cycled regularly to work from České Meziříčí to Hradec Králové, but also later, in retirement. That was when he and his wife went on some trips. And when health problems were reported, he would tell his wife, *"Grandma, remember, if I get off the bike, it will be bad."* His son eventually made him a tricycle that he could take on easy trips. But health problems led to his leg being amputated. He was suffering mentally, too. Mrs. Jitka was widowed four years ago. She herself is now happy to make the outdoor journey on foot.

The use of walking in the context of personal autonomy of the elderly

"... So I always say, if you want to let someone die, put them down, because it's a tragedy... the important thing is that you have to move" (Anežka). Walking is the basis of mobile autonomy and self-sufficiency, not only in activities outside the home, but also in the home.

Physically active seniors walk. However, not all of them are in the habit of taking health walks. Many very active seniors do not "walk", but move around during other activities (gardening and around the house, work activities, social activities). They include both people who do not yet experience significant health limitations and those who perceive increasing health difficulties. *"Not so much* (for walking), *... that was more of an exception"* (Hana).

"... that's something that still sticks with me. I just like to walk" (Alena). For a large group of seniors, regular health walks are one of the most important activities and serve multiple functions. *"No, physical activities, just up there with my neighbor, so we walk ... every day, if the weather was good, if it wasn't windy or raining or that, we walked every day..."* (Klára). Mrs. Jana organizes her daily activities so that she can go on her walk at a suitable time, if it is warm and it is suitable to go for a walk in the morning, she cooks her lunch the night before. *"In the morning I get up at about 7. I have breakfast and I go out, I walk either now, if it's so hot I go in the morning, if it's better... I go in the afternoon. Well, I still have that one trail... that's where I really like to go, I just like... I'm that kind of person, I like to march by myself and think and I see my town, the family house, we still had that field there... and there was a lime tree there and there's still that lime tree, it's still there, so I always look at that one and remember"* (Jana). Regular walks are also usually taken on the same routes, or seniors have variations of them, which they choose depending on the weather (wind blowing, sun shining, muddy), or whom they are walking with and what their current state of health is. Particularly for seniors whose walking is no longer completely problem-free (due to musculoskeletal problems, but also sensory issues), it is important to know how safe routes are in their area. *"... I have a problem with the fact that after cataract surgery there was bleeding, there was swelling and I can't see very well, I can orientate myself in space but it causes me some insecurity, I have to be very careful when I walk and I have to walk slowly because if I walk slowly and I stumble, I pick it up, if I walk fast, I fall." "It limits me a lot in the evening, I just don't see that. Yeah, I have to walk with someone then because I can't see ... in the day it's good, I'm orientating myself in space, I'm looking where I'm stepping"* (Anežka). They then appreciate flat surfaces, which for them mean less risk of tripping and falling. *"Like me, I think walking is very important and five years ago, I climbed Green Mountain with a stick and also Praděd. It's good on Praděd, there's an asphalt road"* (Anežka).

"So definitely yes, right... I think even with the limitation, I still need to overcome that limitation. Otherwise, it's a way to bed just right" (Hana). Seniors who actively try to overcome health problems related to old age, who often even struggle not to worsen or improve their health condition, give themselves tasks and in some cases, similar to athletes, even kind of "training plans" in the context of walking. *"Well, I'm giving myself tasks now. I'm walking around Harmony, then I'm going to Alberta, I did a test today, I got to Harmony II, so I'm gradually getting in shape that way, and that would be it!"* (Anežka). Mrs. Ludmila directly uses the sporting vocabulary *"... some laps around the neighborhood, go around a couple of houses, right, just train those legs..."*

If we ask whether outdoor mobility contributes to the autonomy of the elderly, we can say that it certainly does. Not only is it associated with utilitarian goals (Burlando et al., 2021; Smith and Sylvestre, 2021), but it particularly affects physical and mental fitness and well-being. We have identified that another level is its symbolic meaning ("I still own a car and drive", "getting off my bike will be bad", "I'll still get there"). If we ask whether autonomy contributes to outdoor mobility, the answer is not so clear-cut. Research has shown that the factors that influence mobility are not only related to health status (especially musculoskeletal and sensory), family and other contacts, but also the relationship to place (especially in the case of a change of residence), the perception of the living environment, including order, the sense of safety, the terrain around the residence, the transformation of hobbies, interests and other activities are important factors. Strategies of response of the elderly to the limitations of their autonomy and what approaches they choose to these limitations turn out to be very important.

A typology of seniors' attitudes towards limiting their outdoor mobility in the context of personal autonomy

Table 2 of typologies of approaches is based on an analysis of the interviews not according to individual modes, but in terms of an overall approach to the importance of mobility for one's own autonomy. The presented typology of seniors' attitudes towards limiting their outdoor mobility provides an answer to the sub-research question (c). Each type represents specific features of seniors' approach to limiting their outdoor mobility. It is not a classification of informants.

Specifics of approach I.a – Resisting activity: The seniors associate outdoor exercise with its health benefits, often taking regular and planned health walks or similar activities. For the seniors classified under I. a., autonomy is a value in itself. This approach is typical for people who are very active, lively, and interested in social events. They plan physical activities, make certain demands on themselves in this respect, movement brings them satisfaction and enables them to consciously overcome the barriers and actively resist the limitations.

Specifics of approach I.b – Utilitarian adaptation: The seniors do not perceive mobility as a matter of autonomy, but respond in a utilitarian way to health limitations in order to benefit from (regular) physical activities. They maintain their health condition to be able to continue to pursue their hobbies. They do not worry, but at the same time soberly assess their options.

Specifics of approach II.c – Adaptation/with regret: The seniors' health limitations and loss of autonomy represent a major life change, which they experienced negatively. The life change is significant when confronted with a previously very active life (often in sport or work). The previous possibilities

Table 2. The typology of seniors' attitudes towards limiting their outdoor mobility in the context of personal autonomy

I.a **Resisting activity** They enjoy a high degree of autonomy and, even if it is very limited, they try to be active. They recognize the value of *autonomy and actively seek to use, maintain* or improve it.	I.b **Utilitarian adaptation** The loss of *autonomy is not a problem* for them, as *they adapt* to the possibilities and conditions of their situation *in a balanced way*. They reflect their health limitations rationally. They adapt their physical activities in a way that is *beneficial* to them.
II.c **Adaptation/with regret** *They are acutely aware of the loss of autonomy;* the loss of physical activity means a major change in their quality of life, which they accept *with regret*.	II.d **Resignation** *Their autonomy is largely limited*, it represents a turning point in their lives, and *they react resignedly* to the loss of activity.

to satisfy their needs through outdoor exercise are now experienced with regret. The outdoor exercise brought them fulfilment of their autonomy, personal self-realization, the possibility of interpersonal communication and connection with the environment they used.

Specifics of approach II.d – Resignation: The life change represents a major break in their physical activities, which, however, leads to resignation. They live without ambition to resist the situation, passively accepting their limitations or submitting to them with a sense of injustice.

Discussion

The aim of this article was as follows: (a) What importance do seniors attach to the outdoor mobility modes they use? (b) What circumstances do seniors identify as affecting their mobility? (c) How do seniors respond to the limitations in their outdoor mobility? The selected modalities included, in particular, driving or using a car, cycling, and walking. Although it is assumed that health is the main limitation of the outdoor mobility, our study showed that other factors also determined the outdoor mobility, especially the outdoor mobility access strategies, social environment and relationship to place. These findings complement the study by Burlando et al. (2021) and Khalek et al. (2021). An important finding of our study is that outdoor mobility supports the autonomy of the elderly (Crews, 2022; Fjordside and Morville, 2016; Petrova Kafková, 2013; Smith and Sylvestre, 2001), but the autonomy associated with outdoor mobility depends on the elderly's attitudes towards different types of limitations/constraints. These include not only health status and family situation, but also relationship to the lived environment, changing interests and support from the environment. Equally significant is the finding that seniors attach symbolic meaning to outdoor mobility, which determines their perception of their own self-sufficiency, independence, choice, and self-advocacy in relation to their environment and their way and quality of life.

The concept of safety emerged as one of the determinants to the use and perception of outdoor mobility, which is related to the findings of Vidovićová (2018).

Outdoor mobility fulfils many functions, but it can also be a value in itself (Petrová Kafková, 2013). The outdoor mobility of seniors shapes the radius of their living space, i.e., with its places, meanings, stimuli, or challenges, with the definition of needs, the choice of goals, activities, and the formation of those expectations whose fulfilment is accessible and achievable. The autonomy in the sense of what I want and can do, how I can organize my own time and fulfill my intentions (which does not exclude that together with others) supports the self-concept of the elderly.

The outdoor mobility reinforces the autonomy as a value (Crews, 2022; Fjordside and Morville, 2016; Smith and Sylvestre, 2001), and the extent to which the autonomy is reflected in the outdoor mobility is indicated by its status.

Our research has shown that seniors encounter various current constraints or risks that mark the mobility modes they use. Different modalities perform different functions. The modalities are given different meanings by seniors depending on their way of life, network of contacts, or the means and forms through which they achieve their own self-realization. The knowledge that as long as "I can", it is good, brings confrontation with reality (in its spatial, temporal, and social dimensions) into the lives of seniors and triggers the need for control over one's own situation. Particularly important is how seniors cope with change and how they react to it.

Our defined typology of elderly people's approaches to outdoor mobility limitations consists of 4 types. *The resisting activity* approach is typical of the seniors who benefit from the outdoor mobility with a strong sense of autonomy. Although it may be limited, it provokes all the more effort to resist obstacles. *The utilitarian adaptation* approach is inherent in seniors with rational reflection on how much constraints need to be accepted, but it is still possible to derive some benefit from them. *The passive approach* may occur in those seniors who are caught off guard by change and, when confronted with reality, accept change with resignation, regret, or apprehension for the next stage of life. *The extreme situation is then full resignation*, to which seniors without life plans, with a feeling of harm or life failure, succumb. These findings lead to a reflection on how to help seniors to better understand the roles they construct or who co-creates them, and to offer relevant self-concept and strategies for enhancing the autonomy through the outdoor mobility (Smith and Sylvestre, 2001, Sudré et al., 2015). This depends in many ways on the attitude of the elderly person, but it can be supported from the outside, by cultivating the outdoor environment, with the help of relatives and others, by finding modes of mobility that are appropriate, safe, and pleasant for the elderly. As it turns out, the factors that stimulate the outdoor mobility can be many. It is certainly not only health and fitness, but also social contacts, interest in communication and social events, the natural environment, the relationship to the place of residence, the settlement or the region, and places that are important to the elderly and have an encouraging effect on them.

The limitations of this study are as follows: (a) The selected research design does not allow the findings to be generalized to the entire elderly population; the conclusions should be assessed with respect to the general limitations of qualitative research. (b) The research findings may be affected by the risk of randomness resulting from the situation of the elderly at the time of the interviews (the research was conducted at the time of the loosening of the anti-epidemic measures). The interviews were conducted on a one-off basis and it would have been better to conduct repeated interviews with the respondents to eliminate the risks associated with the respondents' momentary reactions. Although seasonality was an issue, interviews were conducted during the warmer months when the impact of adverse weather conditions was not as relevant to respondents. (c) The selected research design is based only on the testimonies of the seniors themselves, the subject of the research was not the view of their relatives. Conducting interviews only with senior respondents may lead to the risk of self-styling, especially if the interviewees are from an academic background. (d) We did not address some aspects of outdoor mobility that may be relevant to mobility and its importance for autonomy, e.g., people who use electric wheelchairs or are dependent on assisted mobility were not targeted. In addition, the highest level of education, performed work activity, or financial and material security, dog ownership, or other criteria, and the difference between rural and urban environments were not considered.

Conclusions

The importance of outdoor mobility for the quality of life and personal autonomy of seniors is unquestionable. This topic resonates in the fields of urban planning and transport, social

support, health, mental health, and social cohesion. It is an important determinant of perceived human autonomy. Therefore, it is also important for future research to investigate this association further. Health and fitness are important, but the strategy of access to the outdoor mobility is also very important. For the elderly, the topic of security and safety is crucial. For some seniors, psychological support and motivation to go outdoors is important. This concept can be a great opportunity and challenge for the field of community work. Health difficulties that can be barriers to the outdoor mobility need to be addressed holistically, in the complexity of a person's life situation.

Another aspect important for the outdoor mobility that supports the autonomy of seniors is the creation of a favorable physical environment in which they can feel safe, especially the immediate surroundings of the house (such as uneven roads, tidiness, lighting). Attention should be paid to educating them in the use of compensatory aids to support their mobility (walking and sensory limitations). Transport design is also important; public roads should ideally be adapted so that traffic can be separated according to individual modes (cycle paths separated not only from car traffic but also from pavements, safe intersections). These need to be addressed in cooperation with the state and local authorities, and a strong emphasis should be placed on these in the development of community plans and urban and architecture solutions.

Ethical aspects and conflict of interests

The authors have no conflict of interests to declare.

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Význam mobility pro autonomii seniorů

Souhrn

Prostorová mobilita seniorů patří k aktuálním zkoumaným tématům. Její aktuálnost je dána jednak stárnutím populace, jednak otázkami spojenými s kvalitou života seniorů. Je spojena s tím, jakým způsobem prostorová mobilita seniorů ovlivňuje jejich osobní nebo rodinný život, ale také život komunitní a veřejný. Předmětem soudobých zkoumání jsou faktory, které podporují prostorovou mobilitu, a naopak ty, které jí zabraňují. Ke zkoumaným tématům spojeným se stárnutím a stářím je také autonomie seniorů, která zahrnuje řadu aspektů. V průniku obou témat, tj. prostorové mobility a autonomie, vznikají otázky, jak spolu tyto jevy i procesy souvisejí, nakolik se podmiňují a ve výsledku, jaké takto pojatá mobilní autonomie plní funkce, či naopak za jakých okolností přestává být funkční. Byla provedena analýza 24 hloubkových rozhovorů se seniory staršími 70 let. Hlavním cílem bylo zjistit, jaký význam přisuzují senioři venkovní mobilitě pro svou autonomii. Cíl byl rozpracován do následujících výzkumných otázek: a) Jaký význam senioři přisuzují využívaným módům venkovní mobility? b) Jaké okolnosti senioři identifikují jako ovlivňující jejich mobilitu? c) Jak se senioři vyrovnávají s vnímanými omezeními venkovní mobility?

Zvláště se ukázalo, jak významný je modus automobilu, význam je však diferencován podle různých kritérií, např. zda senior sám řídí, zda řídí jeho partner nebo zda je odkázán na pomoc druhých. Velkou otázkou je, jak se právě řidiči vyrovnávají se situací, kdy řídit přestanou či jsou nuceni přestat. Význam kola spjatý obvykle s širším rádiem každodenního žitého prostoru seniora závisí na zdravotní situaci, kondici a životním způsobu. Z rozhovorů je patrné, že situaci seniorů a jejich strategie zvládání stárnutí zvláště v případě pokročilého stáří dobře charakterizuje to, jak jsou schopni pěšího pohybu a jak se mu věnují. Analýza rozhovorů vede k typologii přístupu seniorů k mobilitě a jejímu významu pro vlastní autonomii.

Klíčová slova: autonomie; módy mobility; senioři; stárnutí seniorů; venkovní mobilita

References

1. Brabcová I, Vacková J (2013). Koncepce deseti sociálních determinant zdraví. Kontakt 15(4): 406–412. DOI: 10.32725/kont.2013.048.
2. Burlando C, Ivaldi E, Ciacci A (2021). Seniors' Mobility and Perceptions in Different Urban Neighbourhoods: A Non-Aggregative Approach. Sustainability 13(12): 6647. DOI: 10.3390/su13126647.
3. Čepelka O (2021). Aktivity seniorů ve třetím věku. In: Stárnutí 2021, Sborník příspěvků 5. gerontologické mezioborové konference Praha, 11.–12. února 2021, Praha: Pražská vysoká škola psychosociálních studií, pp. 17–30.
4. Corazza ST, Vacková J, Costa DL (2019). Analýza kvality života starších dospělých v České republice a Brazílii – systematický přehled. Revista Kairós-Gerontologia 22(4): 161–188.
5. Crews DE (2022). Aging, frailty, and design of built environments. J Physiol Anthropol 41(1): 2. DOI: 10.1186/s40101-021-00274-w.
6. Fjordside S, Morville A (2016). Factors influencing older people's experiences of participation in autonomous decisions concerning their daily care in their own homes: A review of the literature. Int J Older People Nurs 11(4): 284–297. DOI: 10.1111/opn.12116.
7. Hamplová D, et al. (2014). Rodina a zdraví – jejich vzájemné souvislosti. Praha: Sociologické nakladatelství (SLON), 147 p.
8. Haustein S, Siren A (2014). Seniors' unmet mobility needs–how important is a driving licence? J Transp Geogr 41: 45–52. DOI: 10.1016/j.jtrangeo.2014.08.001.
9. Hendl J (2012). Kvalitativní výzkum: základní teorie, metody a aplikace, Praha: Portál, 407 p.
10. Johnson J, Rodriguez MA, Al Snih S (2020). Life-space mobility in the elderly: current perspectives. Clin Interv Aging 15: 1665–1674. DOI: 10.2147/CIA.S196944.
11. Kahana E, Kelley-Moore J, Kahana B (2012). Proactive aging: A longitudinal study of stress, resources, agency, and well-being in late life. Aging Ment Health 16(4): 438–451. DOI: 10.1080/13607863.2011.644519.

12. Kaufmann J-C (2010). Chápající rozhovor. Praha: Sociologické nakladatelství (SLON), 151 p.
13. Khalek FA, Marechal L, Barthod C, Benoit E, Perrin S, Godiard B (2021). Toward a person-centred, multidisciplinary method to assess the vulnerability of the elderly. In: JetSan. Toulouse. HAL Id: hal-03245959.
14. Koutná Kostínková J, Čermák I (2013). Interpretativní fenomenologická analýza. In: Řiháček T, Čermák I, Hytych R. Kvalitativní analýza textů: čtyři přístupy. Brno: Masarykova univerzita, pp. 9–43.
15. Levasseur M, Naud D (2022). The Application of Salutogenesis for Social Support and Participation: Toward Fostering Active and Engaged Aging at Home. The Handbook of Salutogenesis. Springer, Cham, pp. 249–258.
16. Matsui M, Capezuti E (2008). Perceived autonomy and self-care resources among senior center users. Geriatr Nurs 29(2): 141–147. DOI: 10.1016/j.gerinurse.2007.09.001.
17. Mišovič J (2019). Kvalitativní výzkum se zaměřením na polostrukturovaný rozhovor. Praha: Sociologické nakladatelství (SLON), 292 p.
18. Novotná H, Špaček O, Šťovíčková Jantulová M (2019). Metody výzkumu ve společenských vědách. Praha: Fakulta humanitních studií Univerzity Karlovy, 496 p.
19. Petrová Kafková M (2013). Užívání prostoru a venkovní mobilita městských seniorů. Fórum sociální politiky 7(3): 19–23.
20. Petrová Kafková M, Sedláková T (2017). Čtvrtý věk jako specifické pole pro vyjádření aktérství. Sociologický časopis/ Czech Sociological Review 53 (5): 719–735. DOI: 10.13060/00380288.2017.53.5.362.
21. Smith GC, Sylvestre GM (2001). Determinants of the travel behavior of the suburban elderly. Growth and Change 32(3): 395–412. DOI: 10.1111/0017-4815.00165.
22. Smith JA, Flowers P, Larkin M (2009). Interpretative phenomenological analysis: Theory, method and research. London: Sage Publications, 240 p.
23. Stachoň M (2015). Diskurz, kritika a medziľudská komunikácia In: Okrasa M, Maliszewski WJ, Fiedor M (Eds): Komunikowanie sie w środowisku szkolnym i pozaszkolnym: nowe trendy i obszary, Toruń. Wydawnictwo Adam Marszałek, pp. 13–29.
24. Strauss AL (2003). Qualitative analysis for social scientists. Cambridge University Press. DOI: 10.1017/CBO9780511557842.
25. Su R, Xiao J, McBride EC, Goulias KG (2021). Understanding senior's daily mobility patterns in California using human mobility motifs. J Transp Geogr 94: 103117. DOI: 10.1016/j.jtrangeo.2021.103117.
26. Sudré MRS, Reiners AAO, Azevedo RDS, Floriano LA (2015). Socioeconomic and health conditions of the elderly assisted by Family Health Teams. Cienc Cuid Saúde 14(1): 933–940. DOI: 10.4025/cienccuidsaude.v14i1.19794.
27. Sýkorová D (2007). Autonomie ve stáří. Praha: Sociologické nakladatelství (SLON), 285 p.
28. Truhlářová Z, Vosečková A (2013). Autonomie z pohledu seniorů. Aktuální otázky sociální politiky – teorie a praxe 7(1): 97–110.
29. Truhlářová Z, Vosečková A, Janebová R (2016). Importance of Subjective Health for the perception of seniors autonomy. In: 3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2016, pp. 589–596.
30. Vidovićová L (2018). Vybrané rozdíly v kvalitě života českých seniorů ve městě a na venkově. Fórum sociální politiky 12(3): 2–8.
31. Zacher H, Kooij DTAM (2017). Aging and proactivity. In: Parker S, Bindl U (Eds). Proactivity at work: Making things happen in organizations. London: Routledge, pp. 258–294.