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Smart or Wise?

Exploring (Technodigital) Domesticity in Home Environments of Older Adults

Abstract: This article examines the role of technodigital objects in the homes of older adults (66+) in Warsaw, focusing on how smart and non-smart objects shape "aging in place." Using Participatory Action Research—including in-depth interviews, VR experiments, and participant photography—the study explores how seniors use "wise" and nostalgic objects together or instead of smart technologies. The research highlights the interplay between "smart" and "wise" concepts of home. By analyzing appliances, medical devices, and nostalgic items, we demonstrate how generational habitus and accumulated wisdom coalesce with smart technologies in technodigital domesticity. Ultimately, the paper provides a nuanced framework for understanding the corporeal-material aspects of aging, showcasing the interplay of nostalgia and wisdom with smart technologies at home.

Keywords: aging, nostalgia, generational habitus, domestic technologies

Introduction

In the landscape of technodigital debate on aging in place (Hearn et al. 2025), an interesting distinction between "smartness" of objects (efficiency of tools) and "wisdom" of differently positioned generational users is often signposted rather than critically explored (Glück et al. 2025). While smartness is the hallmark of the modern world designed to optimize the domestic environment for safety and ease (Gillsjö, Schwartz-Barcott 2011; May, Muir 2015), wisdom is conjured with the past and, as such, is often the domain of older adults, representing a repository of lived experience driven by generational habitus and filtered through nostalgia (Ardelt 2010; Glück et al 2025; Stanier 2025). This nexus becomes crucial with demographic changes and aging populations, which call for better understandings of how older adults assign meanings to their living arrangements and make choices about housing, both in relation to the build environment (i.e., real estate, homes, apartment buildings) and interior features and design, for example furnishings, equipment, appliances and so on (e.g., Gillsjö, Schwartz-Barcott, 2011; May, Muir 2015).

Connecting debates on aging and smart homes, the older adults' experiences with—and attitudes towards—digitalization and technology, including the processes surrounding smartening-up of the home space, are present in the two concurrent discourses within the

literature. On the one hand, scholars and policymakers center "good" aging and health, discussing possibilities that technodigital progress can bring in relation to improving quality of life outcomes in later life (Braubach, Power 2011). "Smarter" homes become spaces where appliances and medical devices can be protective features capable of delaying or offsetting the deterioration of health (Eternamad-Sajadi, Gomes Dos Santos 2019; Szanton et al. 2016). In this context, a smart home is often narrowly defined as a dwelling equipped with technology that enhances older adults' physical safety at home, often in regard to health assistance and monitoring (Demiris et al. 2004).

On the other hand, the general enthusiasm is curbed by data showing that older generations are hesitant or resistant to implementing technological novelties into their everyday life practices, especially in the private spaces of their homes (Gilly et al. 2012; Krzyżowski, Suwada 2019). While quantitative models show that people weigh usefulness against trust in deciding on techno digital practices (e.g., whether a smart device is worth it might hinge on fear regarding privacy, Sorwar et al. 2023), qualitative researchers tend to reveal corollary processes of contestation towards the overly positive hegemonic "smart aging" discourse (Hearn et al. 2025). Specificity of generational habitus (i.e., set technological dispositions and practices rooted in formative experiences and lifecourse; Stanier 2025), as well as scapes and logics of nostalgia (Gillsjo, Schwartz-Barcott 2011; Hatcher et al. 2019; Hearn et al. 2025) might underpin rejection of certain facets of technodigitality. Henceforth, we posit, any discussions of what "smart" is to older adults should include both the societally driven technodigital logics of progress, and the intrinsic, individual perspectives (*emic*) on the place of technology at home (see also Hatcher et al. 2019). Thus, "smartness" found in (or absent from) older adults' homes is conceptualized as experience with objects that might not be considered "smart" in the general sense but are perceived as such in nostalgic framings that may coexist with 'smartness' in the context of generational habitus. To address this nuance, we propose the concept of "wise" objects that are positively framed through generational experiences (Gilleard 2004; Routledge et al. 2013; Ardelt 2010) with and without smart technological tools, accompanied by nostalgia experienced by older adults at home.

Using Participatory Action Research (PAR; Blair, Minkler 2009; Corrado et al. 2020) conducted as part of the project "Learning for old age and aging. Intergenerational education in a relational approach," implemented through a multimethod framework, the data was co-created with older adults (i.e., individuals aged 66 and over) residing in Warsaw, Poland. Specifically, we draw on individual in-depth interviews (IDIs) completed in 2023, videos from VR experiments performed in 2024; and participant-generated visual materials, namely photographs taken by Warsaw-based older persons in 2025.

The paper seeks to answer two sociological questions about the place of technodigital—smart and non-smart objects—in the lives of older adults in Poland, focusing on homes and immediate, localized surroundings as sites of daily practices within urban settings. The first empirically oriented question is: How specific objects—smart and non-smart—shape older adults' experiences of aging in place? while the second, conceptually focused question is: How the categories of nostalgia and wisdom contribute to the debates on aging in place/technodigitality nexus? The following sections first discuss the theoretical framework and model, followed by a detailed account of the methods, data and analytical strategies. Our findings are organized into three inductively distinguished themes, which encompass

smart and non-smart appliances, medical devices and nostalgic objects. The paper then finishes with discussions and conclusions, in particular showing the distinction between smart and wise objects within aging in place.

Theoretical Framework: Aging and Wisdom in the Context of Technology and Nostalgia

Early debates about smart homes and seniors, which hailed the advent of technology as a panaceum for challenges faced by individuals in later life, have been largely replaced by variegated voices about the role of technology in the lives of older adults (Wiles et al. 2012; Gilly et al. 2012; Hearn et al. 2025). Nevertheless, "smartness" remains strongly connected to the importance of home as a safe and age-adjusted space, conceptualized in contemporary social sciences as "aging in place" (Wiles et al. 2012). Research on avoiding institutionalization shows that quality home environments and their "smart" upgrades can—to a degree—offset consequences of increasing difficulties with managing daily life, mental and physical health, as well as offer tailored monitoring tools that help minimize risks (Braubach, Power 2011).

While the definitions of aging in place vary, they broadly point to equipping older adults with substantive agency regarding their housing and locality choices (Cannuscio et al. 2003; Choi 2022), especially retaining control over their homes as private spaces (Tulle 2004). More narrowly, the phenomenon is often operationalized as a possibility of growing old either in one's adult-life home (e.g., the house where one raised children) or another dwelling that is privately managed (noninstitutionalized) and local (Forsyth, Molinsky 2021). Generally, older individuals are said to maintain strong desires to remain at their own homes as long as possible, despite growing needs for support and assistance in later life (Gillsjo et al. 2011; Hatcher et al. 2019; Rowles, Ravdal 2002).

Unpacking the significance of aging in place from a life-course stance, transition to retirement is often seen as the start of the life stage where people spend an increasing amount of time within their own home environments (Forsyth, Molinsky 2021; Gillsjo, Schwartz-Barcott 2011). During this transition, older adults engage in reshaping their space so that it can better fit with the demands of later life. This must be considered in the context of more individuals globally reaching an advanced age, corollary to steadily growing life expectancy and longevity in Europe and beyond (Fjordside & Morville 2016; Gillsjo & Schwartz-Barcott 2011). At this junction, the aging in place framework is in line with macrostructural and political interests, as evidence associates it with lower care and healthcare costs at the societal level (Forsyth, Molinsky 2021).

Homes can offer spatial rooting that underpins sense of belonging in the broader context of the physical environment (i.e., building, street, neighborhood, district or town) and social connections, including the so-called ties that bind (Polletta 2020). It is crucial to underscore that aging in place concerns both homes (places of belonging) and houses (infrastructure) (Forsyth, Molinsky 2021), if the latter is relevant to understandings of home. Typically suspended between progress and nostalgia (Pickering, Keightley 2006), homes are the daily sites of push and pull between biographic continuity and change, serving as a safeguard of ontological safety as one ages (Anderson et al. 2016; Lloyd, Vasta 2017).

Fleury and colleagues (2022) explore the desire to age in place in relation to nostalgia, which can substitute social relationships that dissipate due to health challenges and deaths of peers, as well as mitigate generational divides (Hepper et al. 2021). Through nostalgia in general, and nostalgic objects in particular, older adults can find a sense of security in familiar patterns, cohesion, and the continuity of identity and relationships (Fleury et al. 2022). Because it offers a sense of coherence, nostalgia can foster predictability in one's surroundings, including home spaces (Synnes 2015; Fleury et al. 2022). By recalling familiar memories, an individual can construct a secure cognitive framework that aids interpretations of current events. Furthermore, nostalgia reinforces temporal self-continuity, i.e., the connection between one's past and present self (Routledge et al. 2013; Fleury et al. 2022) that engenders one's sense of wisdom (Ardelt 2010) and functions as an "identity bridge," allowing older adults to recognize that despite physical or social changes, they remain essentially the same person. Such biographical integration is vital for maintaining a sense of purpose and ego integrity when faced with the inevitable losses associated with aging.

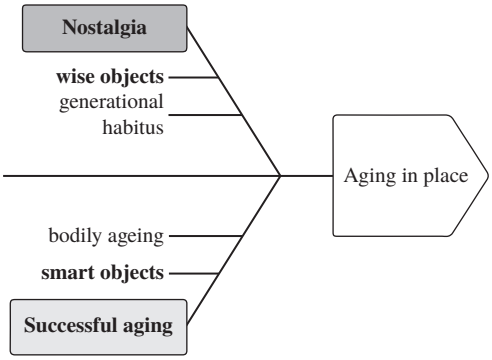
At the same time, homes are not free from challenges driven by change and need to be reimagined and practically adjusted (Gillsjö, Schwartz-Barcott 2011; Lloyd, Vasta 2017). This is especially evident in the context of digital domesticity and "smartening-up" of private life in modern, technologically shifting dwellings (Kennedy et al. 2020). Thus, while aging in place hinges on spatiality, it cannot be conceptualized statically, as housing needs change beyond requiring solely familiar or one type of barrier-free dwellings (Endter et al. 2023). Crucially, the older adults' places of living might not meet the criteria for smart and safe aging, with more nuanced interdependencies observed between spatial-material characteristics of modern homes and corporeal age and aging. In the living spaces of older individuals, there is a pronounced dialectic between independence and surveillance or—in some studies—usability and privacy concerns (Lupton et al. 2021; Hjorth, Lupton 2021; Hatcher et al. 2019; Sorwar et al. 2023). In their recent theoretical piece, Endter at al. (2023: 182–183) consider that an extended application of digital technologies to home spaces occupied by seniors raises two conceptual problematizations of (a) facilitating or enabling autonomy and agency, and (b) curtailing the capacity to maintain subjective sense of belonging and security in one's own home as a safe place. Empirical research sheds light on how domestic digitalization is experienced by older adults on a practical level, particularly in daily practices of home-dwelling in relation to care provisions and technologically affine aging societies (e.g., Hjorth, Lupton 2021).

Moreover, an emergent yet false opposition exists between the figures of a "stereotypical senior," often conceptualized through health problems/illness and activity limitations or restrictions (Thornton 2002), and a possibility—rather than reality—of a "smart senior," somehow immune or at least protected from negative framing of incapability despite age. The latter might be seen as a function of an older individual's successful engagement with technology and fitness (Crawford 1980). Successful aging, besides cognitive resilience, links smartness of homes with smart cities, free from architectural obstacles and conducive to social engagement late in life. This is an idealized model, which is hard to empirically attest to (Hearn et al. 2025), as issues at a micro-level (e.g. low/non-take up of technological assistance among seniors) and meso-level (e.g. architectural or spatial barriers of the building or area) may overlap. This is often described through the phenomenon of "Fourth

Floor Prisoners" (Janowicz 2025), that is older adults whose individual flats might be 'smart,' but their buildings fail to "smarten up," for instance because of having no elevators.

Last but not least, materialities in old age illuminate the significance of generational habitus (Bourdieu 1985; Gilleard 2004; Stanier 2025), which indicates that the experience of home, inclusive of its setup, equipment and evaluation, is embedded in cohort and generational experience that becomes deeply nostalgic (Pickering, Keightley 2006). Drawing on Routledge et al. (2013), we argue that not only technology, but also nostalgia, can be a substantive resource for wellbeing—both physical and psychological—in old age. Thus, smart and non-smart homes might be similarly powerful in underpinning successful aging in place. Notably, there is little work directly looking at smart and non-smart (for instance: nostalgic or what we call "wise") objects as features in seniors' homes and daily practices. This might create an impression that only two materialities—either modern ("healthy," "well-adjusted") or nostalgic (stereotypically failing at grasping modern technology, ill-prepared for modernity and instead latched to the memoryscapes of generationally formative technologies from the past) exist as oppositional. Contrarily, we posit that nostalgic and smart characteristics of homes should be examined together as aspects of individual experiences of aging in place.

To illustrate this theoretical framework, we have developed a model capturing the contemporary complexity of the aging in place phenomenon in the corporeal-material dimension. Through this conceptualization, we operationalize the important aspects of contemporary aging on bidirectional axis. On one hand, it is rooted in generational habitus, reinforced by 'wise objects' that evoke a sense of nostalgia. On the other hand, it addresses physical aging and the resulting bodily limitations. These constraints are mitigated by smart devices and medical aids that enhance functional independence, thereby contributing to a sense of successful aging.



Data and Methods

The empirical material underpinning this work stems from the project "Learning for old age and aging. Intergenerational education in a relational approach."[1], a multicomponent qual-

[1] Project funded by the Ministry of Education and Science.

itative mixed-methods study, with the current study using selected data collected through three complimentary qualitative research techniques applied in line with Participatory Action Research (PAR) methodology (Blair, Minkler 2009; Corrado et al. 2020).

While PAR has been gaining traction as a collaborative research approach that systematically involves community members in every stage of the research process, its adoption to sociology of aging is quite new (Blair, Minkler 2009), especially in the Polish context. Trentham and Neysmith (2018) discuss the demands of PAR focused on older citizens' agency, seeing its challenges as interlaced with profound ageism. To this end, older adults could be better equipped to face age-based stereotypes head on if they can offset their defavorized social position by successful action that address their specific needs successfully (Raymond & Grenier 2015). PAR with older co-creators retains its transformative potential by widening their research roles as "both advisors and investigators" (WHO 2002: 52).

From this perspective, the methods adopted in the current study not only foster positive change in relation to a specific and practical issue important for the societal growth (here: intergenerational learning, understanding old age, combating ageism), but also hold the power to generate new knowledge while concurrently empowering its participants (e.g., Bilfeldt, Mahler 2024). This is done in combination with recognizing the lasting value of transferring knowledge between generations, with the older adults positioned as experts in charge of passing on socially beneficial knowledge that goes beyond technological development and scientific progress (Domańska 2024) Thus, the chosen ways of theorizing and research practice are based on relational and responsibility-oriented thinking, aimed at integrating different forms of knowledge.

As for the specifics of the current study, the overall project relied on qualitative techniques spanning interviews, experiments and elements of visual ethnography. Before the data collection phase began, approval from the Research Ethics Committee at the implementing institution was granted. Participant recruitment was based on a purposive qualitative selection. In particular, it hinged on the main researcher's practical, long-term engagement with the senior community in Warsaw.

The process began with interviewing, which established the foundational narrative context and biographical background of the older adults enrolled in the study. This was reinforced by photo-elicitation and auto-photography research, providing crucial visual evidence of material attachments to objects in the co-creators' actual home environments, effectively documenting their experiences. Finally, virtual reality (VR) was deployed to facilitate a shared analysis of recorded scenes from daily routines of older adults. This allowed researchers and co-creators to collectively identify and validate essential everyday objects. By subsequently analyzing their importance and potential for "smartification," the study could highlight the practical gap between current needs and future technological potential. The convergence of three perspectives—narrated motivations and visual/VR evidence—ensured robustness of the findings. From the meta-level, methodological triangulation was achieved by co-creating data with older adults through multiple methods—IDIs, PAR, and VRs and photo-generation—all aimed at constructing a comprehensive understanding of older adults' experiences of aging, technology and home spaces.

The targeted analyses covered: (1) ten individual in-depth interviews (IDIs) with older adults completed for the project in 2023, (2) six videos from VR experiments with 3D scans conducted in 2024, in which older adults took part; and (3) 180 photographs taken by eight older adults in 2025. Importantly, across all components the topics raised through this PAR study covered, among other topics, older people's living conditions in the city, their dwellings, as well as attitudes towards the changing technological surroundings, including material objects dedicated to facilitating daily lives of seniors. While all study participants are older adults (aged 66 to 90) who reside in their own homes in Warsaw, certain characteristics of the data sources and three distinct methods and data sources should be supplied. Co-creators were generally recruited separately into different components of the study, but some were eager to be involved in several components. Annex 1 offers detailed lists of co-creators within and across the components.

For 10 IDIs, individuals aged 67 to 79 (average 73) were recruited (see Annex) The interview guide included questions about the seniors' living conditions and surroundings, their definitions of old age, and the values they held. IDI data was analyzed after the recordings were transcribed, in accordance with the standards of qualitative analysis based on the Miles and Huberman model (1994). A thematic analysis was conducted in relation to codes such as *living conditions, health issues* and *materialities*.

The other two techniques should be viewed together, as they both rely on technology-mediated approaches to data collection. Utilizing visual techniques within PAR was a strategic design choice, as certain aspects of daily life often elude verbal description and are taken for granted. Including audiovisual materials makes it possible to grasp materialities, with photographs and videos capturing these beyond what can be verbally expressed in an interview (Pink 2007).

The Virtual Reality component was commissioned by the Intergenerational Activity Center in Warsaw in 2024, where Szatyłowicz and Sonik served as the technical experts and creators of the VR environment. The managerial aspects—including organizing contact with the senior participants, defining the research needs, and overseeing the entire social project—were handled by Romanowska.

The focus was on items that are important to the older co-creators' daily functioning. During this part of the study, the objects that they identified as particularly important, necessary or marked by symbolic value, were scanned using 3D technology. The resulting films are being used beyond the academic context by the Intergenerational Activity Center "Nowolipie" in Warsaw, including outreach events like the Warsaw Intergenerational Week. As they serve as an educational tool in the center's program on aging, special screenings are organized where interested individuals can talk with the older adults on screen. This ensures continuous engagement of the co-creators in the process of interpreting data, in line with PAR. The VR functioned simultaneously as a socially inclusive document and initiative, and as part of the research project.

Thirdly, in the final component the devices—disposable photo-cameras—were given to the involved older adults, allowing them to reveal aspects of their privacy in a way that was comfortable for them. Older adults were again not just providing data, but also co-curating stories. This is especially important in the context of studying home environments and the most intimate aspects of daily life. Co-creators attended a meeting where they were asked

to capture photographic accounts that reflect their experiences of growing older over the period of approximately one month. They were specifically asked to photograph objects they considered both 'essential' and "useless," capturing items often characteristic of their current life stage in terms of function and significance. Once the photos were developed, they were discussed during a joint meeting where the older co-creators reflected on what the images could reveal about their home lives in Warsaw. The photographic material was subjected to a detailed visual content analysis, organized by a systematic coding procedure based on three core dimensions: the functionality of the object (whether it was used daily, purely decorative etc.); its emotional charge (determining if it held sentimental value, such as a family heirloom or a gift); and its spatial placement (whether it occupied a central position or was hidden).

The final step was a combined data analysis that accounted for the role of the data collection method at play. This involved paying attention to the areas that older adults mentioned sequentially in individual interviews, while preparing VR materials and 3D scans, and those they selected independently in the photo interviews. These three analytical steps were then integrated to validate the themes identified.

Findings: Materialities of Older Adults' Homes

Based on data analysis, we have delineated three main categories important for daily life and homely material surroundings, effectively delineating how evolving technology and digitalization may translate into the experiences of domesticity among older adults in Warsaw. Interviewees' narratives were categorized under appliances, medical equipment and nostalgic objects, with subsequent sections of the article centered on these realms.

Analog and Smart Appliances in Older Adults' Homes

Modern home appliances—such as dishwashers, vacuum cleaners, kitchen aids—are used by people of all ages, though older adults are often perceived as using them less often than other age groups (see also Krzyżowski, Suwada 2019). In our study, co-creators primarily recognized the potential of modern devices that make household chores less daunting and physically trying, but rarely directly referred to the 'smart' component of digital technology and monitoring. Gabriela, however, emphasized her openness to modern solutions, mentioning Thermomix and Roomba, albeit in somewhat ambivalent terms:

> I can't imagine life without a washing machine, or a dishwasher (…) Especially not without a dishwasher! I use it because it's a great appliance. I have various gadgets that I've bought and continue to buy, and I feel like they make my life easier. Of course, things like Thermomix or other devices do simplify things. I think some of the well-designed modern tech appliances really do make life easier. It's a matter of getting used to something new, like a Roomba, and being open to the idea that you don't have to spend all your time vacuuming the whole house. Although I don't have a Roomba, I think there are things that make life easier and seniors should have them and learn how to use them. (Gabriela, F, 69)[2]

[2] For each narrative excerpt, we give a pseudonym, indicating the interviewee's gender (F for women, M for men and age at the time of the interview.

Smart appliances were judged through the prism of not only usability, but also a function of how much time can be gained from using them, on the one hand, and the effort necessary to master them, on the other. While many studies describe technodigital reluctance in relation to privacy worries in old age (Lupton et al. 2021; Hjorth, Lupton, 2021; Hatcher et al. 2019; Sorwar et al. 2023), the interviewees in this research rarely associated 'smart' devices at home with such risks. Rather than showing avoidance of novelty tech, the interviewed older adults struggled with challenges of living in small spaces. Particularly in Warsaw, seniors have a specific position in terms of housing (Janowicz 2025). They often own their flats due to generational benefits of the State Socialist system during their core adulthood—meaning the relatively high chance of acquiring an apartment in the intensely built blocks of flats. However, these dwellings are extremely small, making even installing a dishwasher impossible. Older people, who are often single, widowed or living alone in cities, additionally tend to do less cooking, instead choosing to eat out. This in itself can be an anti-technological but "wise" solution, as it saves time, allows them to socialize, and means that cleaning can be skipped. For men, this was an obvious choice:

I only have a fridge and a washing machine (…). I'd love to use [a dishwasher], but I have no place to put it. Besides, now that I live alone, I don't really need a dishwasher because I eat my meals here [at the intergenerational center]. I don't have much to wash, so to speak, just a small pot and a plate for breakfast and dinner, that's it. So why would I need a dishwasher right now? (Jan, M, 76)

Jan's statement echoes the traditional division of household chores, which explains why, paradoxically, widowers may be less inclined to make their homes—framed by them as spaces of female activity—in any way 'smarter.' The interviewee's late wife took care of the home and various kitchen appliances became useless after her death:

I need tools. Mechanical tools, locksmith tools, that sort of thing. Wrenches, hammers, and other things (…) The tableware, you know, glasses, pots, other things like that (I have no use for). My wife ran the household, after all. All sorts of things… pastry boards, not pastry boards, other things, machines (that) I don't use. When I make pancakes, I'll grab something to swirl around, but yeah… (Jan, M, 76)

Jan's home activity evokes gendering of objects he sees no need of upgrading. He rationalizes giving up things that do not serve him or are not necessary, strongly focusing on usability judgment (see Kennedy et al. 2020, Lupton et al. 2021; Hjorth, Lupton 2021; Hatcher et al. 2019; Sorwar et al. 2023). Similar explanations about appliances extend beyond the kitchen, as he reflects that a shower proves to be a smarter solution than a bathtub, with age being interlaced with spatial considerations in his argument:

I have a shower because I noticed at a certain point that we aren't as agile anymore, and getting into the tub was a hassle. You had to lift your leg and all that. When my wife was alive, we helped each other, but I decided that at this stage (…), a tub wasn't necessary due to the small space. If I had a larger bathroom, I would definitely have both a shower and a tub. But since the space is small, (we) went with a shower. (Jan, M, 76)

This relationship between older adults and appliances can be interpreted through the prism of generational habitus (Bourdieu 1985; Gilleard 2004). It is apparent that there are specific and practical dispositions in modus operandi at home, which emerge through habitual, gendered and generational experiences as one's life unfolds (see also Cannuscio et

al. 2003), with nostalgia becoming a valuable tool for identity coherence over time (Fleury et al. 2022). The beliefs as to whether one needs technology vary in relation to social class, but also gender, age and generation, as illustrated by the interviewees' changing views that denote older-age wisdom (Ardelt 2010).

The older adults' perception of objects is additionally transgressing the present day, instead pointing to the significance of analog devices that have been with them since their youth, such as radios or cassette players with a recording function. This is even more strongly related to a generational habitus (Bourdieu 1985; Gilleard 2004) specific to this age group, as nostalgia guides more positive and affine attitudes towards technologies and equipment that were "in vogue" during the older adults' formative years. From this perspective, what one generation sees as dated, may still be seen as 'smart' for another. This is the case with Krystyna (75) who uses radios but says she does not need to use a computer, even though other members of her multigenerational household have their own PCs:

I have appliances that are necessary. A vacuum cleaner, a TV, a radio, and a cassette player with a radio. [Family members I live with] also have everything in their rooms. (…) Each room has a TV and a computer. Except for my room, which doesn't have a computer. (Krystyna, F, 75)

A similar case is Janina who does not use or own a mobile phone. From the perspective of the health-focused aging in place discourse on smart seniors (Gillsjö, Schwartz-Barcott 2011; May, Muir 2015), this goes against medical advice on digital monitoring. The interviewee exclusively relies on a landline and, when asked about her reasons, replies that she would not like having a phone with her at all times. Her main worry originates from the combination of fear and lack of technological knowledge, since she is terrified that a mobile phone would ring during a mass at church. Moreover, the use of a traditional landline telephone exemplifies how nostalgia fosters a sense of coherence. By maintaining predictability in their immediate environment through familiar technology, older adults appear to reinforce their ontological security within the domestic space (Synnes 2015; Fleury et al. 2022).

The tensions between past and present are also evident from the seniors' stories and practices related to telling time. Alarm clocks and wristwatches were very much in use by the co-creators in this study. A wristwatch is especially useful for people who do not carry cell phones and have no other way to tell time.

Nevertheless, older adults' attitudes towards smartphones are changing—they are becoming more and more comfortable with them, even though this does not always translate into active use of the internet:

I don't use the internet, but when I need it, I sit down and my grandson explains it. (He) explains one day, and then the next day I don't know anything again [laughter] so he must explain again (…) I have internet on my phone. (…) I've mastered the phone, the smartphone, and the Internet somehow. I prefer books, though (Krystyna, F, 75).

It is clear that Krystyna is embedded in family networks and is willing to ask for help with smart devices often. Jan, who uses a smartphone and actively engages with social media, admits that operating the device does not come easily to him. Despite regular use, he says he still does not feel confident:

I can see for myself that the phone is something that really needs work. I haven't fully deciphered my phone (Jan, M, 76).

Illustration 1

3D scan of older woman's phone; photo by Piotr Szatyłowicz 2024

The complete VR project is accessible via the following URL: www.youtube.com/watch?v=lEEnje0qgns.

The telephone thus emerges as a device at the intersection of nostalgia and successful aging. The broad spectrum of available technodigital options allows the user to decide on embracing or forgoing a device. The outcomes stem from a careful weighing of nostalgia (as a preference for a disconnected life with no interruptions) against lived experiences of actual usability of the smart tool. Together, they entail technodigital generational wisdom, understood as an ability to select the right path for oneself.

Home-Smartening via Medical Equipment

The second category of objects concerns the medical equipment, which populates people's homes as they get older. Largely discussed in research on care (Endter et al. 2023; Gillsjo et al. 2011; Hatcher et al. 2019; Hjorth, Lupton 2021), the process of making homes smart by installing medical objects—such as ramps, walkers, rehabilitation equipment, medical alert bracelets, etc.—can support remaining in good health and overcoming physical barriers despite aging.

A most common example of medical objects perceived as smart in our study entailed items linked with worsening vision, as this made older people's daily activities harder and could even make living at home unsafe. The interviewees try to cope with this issue individually, though in some cases, it was reported as a cumbersome process necessitating

Illustration 2

A photograph of a male person's hand (2025), captured during the PAR visual study. A classic analog wristwatch is visible.

development of multiple strategies. For example, Leon uses several magnifying glasses depending on his distance from the object he looks at or the font in the newspaper.

Interviewees also reported suboptimal experiences with medical solutions in this realm, even though a physical modification that eliminates the need for assistive devices was the key priority. Hoping to avoid wearing glasses after surgery, Teresa's experience highlights a common desire among older adults with compounding vision problems:

> I'm sick. (…) It's been 1.5 years since my procedure. I have two eye diseases: glaucoma, and I had cataract surgery. That surgery wasn't very successful; I already had a laser correction. Before, I didn't have to wear glasses, but now I do. But on the other hand, I can read without glasses after the procedure, which is also important to me because I read a lot. (Teresa, F, 75)

Co-creators who are older and face serious illnesses, like Genowefa (90-years-old), use SOS emergency wristbands. This item was the most evident "smart" object in terms of technologies leveraged by older adults in our study. Thanks to the device, it is possible to quickly call for help—either alerting a loved one or medical services.

As noted, medical devices may refer to a wide range of objects, from small everyday items to mobility-assistive technology that is taken out of the home and into the public. In this category, we observe certain mirroring of the dynamic of accepting smart adjustments, while reporting on physical and structural factors that diminish the chances of smartening-up the home-space—a pattern that fits with broader research in this area (May, Muir 2015). Specifically, the medical context alerts us more to the phenomenon of the so-called

Illustration 3

A collection of analog alarm clocks of an older man (2025). Captured during a PAR visual study.

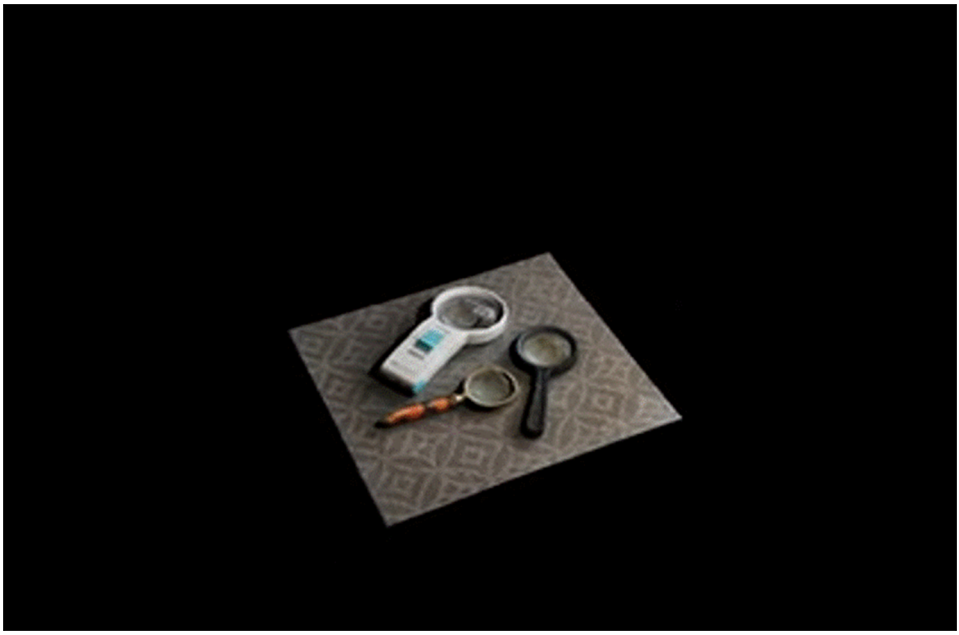
Prisoners of the 4th floor (Janowicz 2025). The interviewees point out the necessity of relying on others due to their buildings—houses rather than homes—not being adapted to the needs of older age. The most common problem is the lack of elevators, which is something Eleonora complains about. Even though she owns medical assistive devices helping her at home, architecture of her dwelling removes her option to move around the neighborhood independently:

> (I have) a walker and a wheelchair (…). My grandson has to carry them down and back up for me. It's more trouble than it's worth. I live on the third floor (…). To get down, I have to go down four steps just to get to the balcony (…). Then I have to go out to the stairwell, then down those forty or so stairs from the third floor, then down another set of stairs, and only then can I go outside. (Eleonora, F, 75).

While disability—as a multimodal phenomenon embedded in mutual relations between people and their material/physical and social surroundings (WHO 2024)—is usually investigated in the public space, in later life homes become the key spaces where safety and risks must be navigated (Szanton et al. 2016). We can clearly see the limitation of smartening homes with medical devices as ill-fitting when the problems persist in the surrounding urban space. To that end, older adults must rely on their capital (Cannuscio et al. 2003)—including family networks and making wise judgements—when wishing to age in place. Relatedly, this partially explains why older adults in our study are increasingly focusing on preventative measures, exercising, and maintaining their fitness as long as possible. They are aware that their physical health may deteriorate, which would necessitate the use of mobility aids:

Illustration 4

3D scan of older man's collection of magnifying glass devices; photo by Piotr Szatyłowicz 2024.



The complete VR project is accessible via the following URL: https://www.youtube.com/watch?v=86_Avwdxe9A&t=102s

I don't use a walker yet. I don't use a wheelchair either. I don't use a cane either. But I do have poles (…), maybe that's typical for the older generation, walking poles, for Nordic walking (Piotr, M, 73).

I use rubber bands to exercise my legs because I have difficulty walking. It's only recently come up, since last year, but I'm already on the right track, because I've had CT scans, MRIs, and (…) I already know what's going on (Krystyna, F, 75).

In addition to physical fitness, maintaining good mental health is equally if not more important:

The most important thing is for the mind to work, because I have friends my age who have Alzheimer's. (…) If I walk with a cane or crutches, it won't be an issue, but if I don't know my name, it will be terrible, like if I think that my grandson is my husband. (Barbara, F, 75)

Older adults benefit from various—usually non-digital—tools to help them maintain good memory. These include puzzles, memory training, chess, and word games. While these objects may seem like a surprising choice in this category, they actually constitute a crucial element in the prevention of neurodegenerative diseases.

The narrative excerpt below underscores that aging in place is worth fighting for in the view of older adults, despite various difficulties:

I live alone. I have to fight for myself. I'm not giving up. I have better and worse days, but I know I simply can't burden anyone. I'm not the kind of person who just needs someone to take care of me now that I'm alone. So far,

Illustration 5

3D scan of SOS belonging to female participant, photo by Piotr Szatyłowicz 2024.

The complete VR project is accessible via the following URL: www.youtube.com/watch?v=B6VB-Ng3hZY&t=285s

I've done everything myself, I do everything myself. (…) When I'm sick and I know I'll be home for a while, I go shopping on my way to the doctor's. I buy more of everything, so as not to burden anyone by having them come shopping for me. I deal with the garbage by tying bags, putting them on the balcony, getting better, and taking everything out then. (…) I don't have any neighbors I could hire, my child is too far away, and I don't want to employ other elderly people. (Barbara, F, 75)

Older adults view health as a matter of personal responsibility, striving to maintain independence "in place" for as long as possible. As part of this approach, often consistent with the neoliberal lens known as "healthism" (Crawford 1980), they undertake a variety of preventative actions. However, we also see that they seem to reject the possibility of "easy" smart aging presented in hegemonic policy discourse as a cure for all ills (Hearn et al. 2025), instead underlining limitations of smart medical objects (see also Gillsjo et al. 2011) which become "unwise" when surrounding architecture or old-age inherent bodily transformations preclude their usability (see also Endter et al. 2023).

Nostalgia for "Wise" Objects

The material objects seen or described as sentimental emerged as the third and most complex theme. In essence, these types of objects, very distant from modern digital technologies, might be seen as resistance to smart homes, but are simultaneously representing aspects of material realities to which interviewees attach most meaning in the context of

Illustration 6

A photograph of a gameboard (2025), captured by a female PAR visual study participant.

successful aging in place. Nostalgic items, portrayed and narrated as items with sentimental value, serve as bridges between the present and the time of the interviewees' youth, spanning photographs, books and albums as memory carriers. They are substantive for understanding existential ties between generational materialities and immaterialities (experiences, memories, relations) coming to the fore in the home environments of older adults. Gabriela talked at length about temporalities of her home-space where modern presence and nostalgic past coexist through material objects:

> These are souvenirs of all kinds, or things we remember from our childhood. For example, I have one crystal vase that looks funny next to the IKEA furniture. I really like old teacups that I have no room for anymore. They're not very old, but they're colorful, and I like to drink my evening tea from them. I think that seniors, in their adult lives, return to their youth, so they are very attached to these things and can't get rid of them. Something that bothers me, and it was also in my family, is that seniors think that all the stuff they've accumulated over seventy years of their lives will be useful to us, the younger ones—like their grandchildren. But that's not true. (Gabriela, F, 69)

On the one hand, older adults hold onto things with younger generations in mind, believing these objects will retain usability. This stems from their material values, often shaped by times of scarcity when greater significance was ascribed to objects. On the other hand, these wise objects have a special connection to the history of their ancestors, and foster nostalgia associated with respect for older generations, their fate and wisdom. Some of the items refer to relationships with family members who witnessed historical events. Kamil reminisces through the preserved objects, recounting the story his grandfather experienced:

Illustration 7

A photograph of a porcelain collection, which the photographer described as their vision of old age (2025). Captured by a male PAR visual study participant.

I've already mentioned the old photographs, but there are also old frames (…), stylish frames. I also have a piece of furniture that was long ago written off but I saved it. It's a chest of drawers from 1898. (…) My grandfather rescued it after the Bolsheviks, or rather Russians, threw everything out and demolished the palace. But my grandfather happened to be passing by with his carriage, saw it, and took pity on the furniture. He took it home. Then, of course, a new fashion came, and it was considered old junk, relegated to the storage room. I upgraded it (…) to the living room in my house by the river (…) I had a phonograph and gave it to my friend, a carpenter, who restored the chest of drawers for me. (Kamil, M, 71)

Similarly, newspapers appeared to be a special item suspended between different periods—in history and in the older adults' lives. For some, newspapers were once a sign of the "smart" jump that printing technology has made. One of the participants also preserves newspapers, describing it as privileged access to lived history.

Some interviewees notice differences between generations in their attitudes towards objects, including Piotr, who points out the possession of paper books:

In the apartments of young people, there are often no books. Among older people, this is a much rarer sight because they still have encyclopedias, which essentially just take up space today (…) Among the older generation, there are very few homes without books. (Piotr, M, 73)

The interviewed older adults demonstrated a different approach to acquiring knowledge, which we see as stemming from their generational habitus (Bourdieu 1985; Gilleard 2004) and body memory. Instead of using databases and digital searches, they prefer traditional methods, such as reading paper books and conducting independent literature searches. This practice not only allows them to exercise their memory—being tied to the "medical"

Illustration 8

A photograph of a box containing a collection of old newspapers that document significant events in Poland, captured by a PAR visual study participant in 2025.

Illustration 9

3D scan of older man's books; photo by Piotr Szatyłowicz 2024.

The complete VR project is accessible via the following URL: www.youtube.com/watch?v=e-iFtt8Dtaw

health realm—but also contributes to the development of erudition that underpins wisdom. Thanks to unmediated contact with sources, older adults often possess in-depth knowledge in many fields, an advantage that distinguishes them from younger generations whose learning habits are shaped by the digital environment.

In this context, the concept of "smart" takes on a particularly interesting meaning, prompting reflection on the not-so-clear-cut impact of new technologies and artificial intelligence on human potential, long-term quality of life and health. The analysis of these wise objects reveals not only nostalgia but also generational wisdom (Ardelt 2010)—a kind of knowledge that complements the "smart" approach while requiring a certain dose of criticism towards technological innovations.

Discussion

The departure point for this study was the contention that opposing smart and non-smart homes to understand successful and failed aging is a false position (see also Gluck et al. 2025). Through data analysis, we found that multiple objects—both those considered smart and associated with smart homes, and non-smart or wise—shape older adults' experiences of aging in place. It became clear that nostalgic objects are incredibly significant for good experiences of living at one's preferred home, positively contributing to later life unfolding in a manner that the interviewees embraced.

Regarding the empirical question, i.e., How specific objects—smart and non-smart—shape older adults' experiences of aging in place?, the findings differ across the three analytical themes. Under the first theme, we demonstrated that appliances expectedly make life easier for seniors, but the observed choices are highly individualized, filtered through personal experiences. They are dictated by residential and financial circumstances interlaced with generational preferences (Gilleard 2004). Even though multiuse devices like smartwatches and smartphones are available, the interviewed older adults used nostalgic objects instead, having multiple separate devices like a wristwatch, an alarm clock, a landline phone or a mobile phone—each serving a different purpose. Hence, it does not matter too much if the devices are purely "smart" and used as such or not, as long as they can be considered "wise," i.e., adapted to fit the senior's lifestyle, not the other way around (see also Lupton et al. 2021; Hjorth, Lupton 2021; Hatcher et al. 2019; Sorwar et al. 2023, Endter at al. 2023).

Moreover, the differences in attitudes toward household appliances often correlate with stereotypes and gender divisions (see also Thornton 2002). The commendable prescriptions of smart aging in place remain blind to loss, exemplified in old age by the death of a partner and ensuing widowhood, which often prompted rejection of entire categories of modern or smart objects associated with the loved one who is gone. This demonstrates how the power of generational habitus around commitment can be stronger than the prospect of objectively simplifying life.

Our research empirically shows that framing smart solutions as bound to private homes is problematic, as it can lead to the trap of perceiving older adults as isolated individuals whose needs end at the doorstep (Sorwar et al. 2023; Hatcher et al. 2019) Investing solely

in private improvements can dull the need for systemic action on behalf of an aging society, privatizing the care problem and shifting responsibility onto individuals (Hearn et al. 2025). Therefore, it is crucial to apply the principles of universal design (e.g., Preiser, Smith 2011) in public spaces. A truly smart approach still requires intergenerational solidarity and social support (Cannuscio et al. 2003).

To the second theme, health devices and aids—such as walkers, crutches, or SOS wristbands—are present in the interviewees' lives, highlighting that Poles are generationally aligned with older adults' elsewhere (Eternamad-Sajadi, Gomes Dos Santos 2019; Szanton et al. 2016; Demiris et al. 2004). The main finding here is linked to the above and pertains to the perceived incompatibility of "smart" home with "not-smart" surroundings, as simply lacking an elevator prevents independent mobility and necessitates assistance from others upon crossing one's place threshold (Janowicz 2025). Our data furthermore shows that targeted medical and surgical interventions are just as important as mental health and (self)care. Complex matrices of advantage and disadvantage are in place in relation to health, where being "smart" means adapting the environment to the needs of people with disabilities, not just increasing the comfort of able-bodied individuals. It seems that these solutions should be "wiser" and personalized to the needs resulting from health and broader life situations.

Thirdly, the relationship between technodigital smartness and conventional analog wisdom was explored in the narratives pertaining to nostalgic engagement with materialities of the past (see also Gluck et al. 2025). As noted, our contribution innovatively questions unreflective reliance on smartness as a cure for all challenges of old age. Conversely, we have suggested that resisting smart domesticity might help maintain connections and belonging through nostalgia (Fleury et al. 2022), thus supporting aging in place in a different way. Surrounding older adults with historical objects can lead to them being perceived as "people of the past" (Wrzesień 2021), yet as hybrids of the old and new order, they offer valuable experience and wisdom that can inspire younger generations (Ardelt 2010). In the context of technological development, ensuring equal access to services is crucial, both for those skilled in the tools used in the digital world, and for those whose generational capital was formed before the digital revolution (see also Cannuscio et al. 2023). The experience of seniors raises critical questions about the rationale behind the mass outsourcing of competencies, for example, to artificial intelligence. It allows us to see what we might lose by forgoing the development of autonomous cognitive and analytical skills. This makes the concept of "smart" more humane and friendly to people of all ages, while not excluding solutions and material objects that are not "smart" but "wise."

While Glück et al. (2025) define wise aging as a way of navigating the challenges and demands of very old age—a stage where "successful aging" may no longer be attainable—our approach emphasizes the necessity of incorporating non-human factors, the material environment, and technology. In the face of technology's growing influence on aging, we advocate for a humanistic orientation that honors traditional modes of functioning rooted in Bourdieu's generational habitus. Our conception of "wise objects" validates the wisdom of experience derived from the body and long-term practice, inclusive also of the functional nostalgia (Fleury et al. 2022). In this sense, we show that navigating external adversities in later life becomes possible through an acute awareness of both one's physical

limitations and remaining capabilities. This perspective does not invalidate the concept of successful aging. From a medical and public health standpoint, extending the period of successful aging—wherein individuals maintain sufficient cognitive and physical capacities for independent living and social engagement- remains a highly valuable objective.

Conclusions

From the meta-level perspective, this study offers new knowledge on how smartness and nostalgia are translated to (technodigital) domesticity of older adults in Poland, recognizing that aging is a relational experience that includes both interpersonal interactions and engagement with non-human elements (e.g. built environment and technology). By placing an emphasis on the corporeal-material dimensions of aging in place (Wiles et al. 2012; Choi 2022)—both in terms of technodigital domesticity and in regard to nostalgia, the study contributes new and empirically grounded and complex categories of materialities and old age at home, expanding applications of theoretical literature (e.g. Endter et al. 2023). As the data originates from the rarely researched Polish context, the study illuminates how older adults might arrive at understandings of home and age through material inconveniences.

Notably, technological usage barriers and structural challenges were narratively more pronounced than digitalization when it came to understanding old age and the infrastructure it requires. From this stance, the data shows that the involved co-creators surround themselves with various digital/smart and nostalgic/sentimental—though not always non-technological—material objects, actively constructing what is 'wise'—rather than just "smart" to them in the process of home-meaning-making (Anderson et al. 2016; Gillsjö et al. 2012; Gillsjö, Schwartz-Barcott 2011). They also execute agency through smart technology resistance when its costs and benefits are misaligned and bring no benefits in terms of usability. A visible openness to solutions that make everyday life easier, such as dishwashers and vacuum cleaners or their smart counterparts, should not overshadow that there is a strong attachment to objects of sentimental value. Evoking generational habitus linked to formative years in one's life-course (Stanier 2025), the seniors taking part in this PAR project perceived certain objects as modern because they were desirable in their youth. In this perspective, tape recorders and wristwatches were seen as "smart."

From a methodological perspective, the project informs optimization of sociological research designs that move beyond standard qualitative approaches, instead demonstrating that engagement fostered by multimethod PAR can offer a broader picture of old age and (smart or wise) domesticity in Poland, as it is done in other countries (e.g., Blair, Minkler 2009; Corrado et al. 2020). A combination of methods facilitated data saturation during analysis, as multiple themes—especially those related to nostalgia—coalesced between individual interviews, VR experiments and photographs.

In terms of practical implications for research practice, the research process generated significant intergenerational exchanges and learning. As younger researchers accustomed to digital ubiquity, we initially viewed "smart" solutions as inherently superior. However, through the Participatory Action Research (PAR) process, the older co-creators effectively challenged our technocentric bias. They revealed that their reluctance towards technological

novelties was often a rational choice stemming from life wisdom, rather than a mere lack of skill. This fundamental shift in the researchers' perspective stands as a key outcome of the study.

Simultaneously, the process proved deeply valuable for the older adults themselves. By having the opportunity to closely examine their own surroundings and reflect on their daily routines, focusing on the objects they use, the involved older adults could directly confront common perceptions (which often dismiss a "non-smart" approach as "unmodern") with their actual capabilities. The ability to navigate the world without ubiquitous technology, rooted in their generational habitus and experience, was identified and reinforced as a strength and a unique competence. Thus, the study not only contributed to a better understanding of technological needs but also, by reinforcing the positive aspects of the participants' approach, indirectly combats ageism, promoting a strong sense of self-worth and competence among the older generation (see also Blair, Minkler 2009).

When discussing living as older adults in their homes in Warsaw ("aging in place"), the interviewees exhibited "wisdom" as the cognitive and emotional capacity to synthesize generational habitus with experience (Stanier 2025). Conceptually, we argue that generational habitus in the context of smart homes should be understood as dispositions and values inherited from the interviewees' formative years, evoking a social DNA of specific spatiality and temporality of biographies. In this context, lived experiences with (smart and non-smart) technodigital objects serve as a 'filter' of possible inclusion or inclusion of technodigital sphere. These are often conditioned by successes and failures with technology that can refine or dismantle attitudes to smart homes. The interviewees use nostalgia not as a retreat to the past, but rather as a tool to navigate the present (Fleury et al. 2022).

In this model, nostalgia is directly related to wisdom, a repository of lessons learnt and the ability to look back at the past with a clear eye as context for modern challenges (Ardelt 2010). We argue that while a "smart" home can monitor a fall or automate a schedule, it lacks the contextual depth of "wisdom," which understands the emotional nuances of autonomy, the value of ritual, and the historical perspective needed to navigate a changing world during aging in place (see also Wiles et al. 2012; Choi 2022; Forsyth, Molinsky 2021; Gillsjo, Schwartz-Barcott 2011). Integrating both terms is essential: smart technology provides the infrastructure for physical independence, but wisdom ensures that this digital integration serves a meaningful and ontologically safe life (Anderson et al. 2016) rather than merely a monitored one.

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Annex 1. Sociodemographic characteristics of older adults in the study and their involvement in different components

ID (Pseudonym)	Age	Gender	Socio-economic status	Active aging (social engagement and volunteering)	IDIs	VR Experiment	Photos
Gabriela	69	F	High income	No	Yes	No	No
Jan	76	M	Pensioner / medium income	Yes	Yes	No	Yes
Krystyna	75	F	Medium income	Yes	Yes	No	Yes
Teresa	75	F	Medium income	Yes	Yes	No	Yes
Eleonora	75	F	Medium income	No	Yes	No	Yes
Piotr	73	M	High income	Yes	Yes	No	No
Barbara	75	F	Medium income	Yes	Yes	No	No
Kamil	71	M	Medium income	No	Yes	No	No
Eugeniusz	74	M	Low income	No	Yes	No	No
Zbigniew	78	M	Medium income	Yes			
Janina	80	F	Low income	No		Yes	
Katarzyna	66	F	Medium income	Yes			Yes
Włodzimierz	74	M	Medium income	Yes			Yes
Leon	84	F	Medium income	Yes		Yes	
Genowefa	90	F	Medium income	No		Yes	
Danuta	77	F	Medium income	Yes			Yes
Jolanta	72	F	Medium income	Yes			
Matylda	76	F	Medium income	Yes		Yes	Yes
Henryk	77	M	Low income	No		Yes	