

Chapter 11

Is *Namma* Metro Age-Inclusive? Everyday Experiences of Transportation Inequalities for Older Adults



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Abstract Metro rail is envisioned as a core strategy in major Indian cities to address urban mobility issues such as congestion, air pollution, and lack of accessibility. Bengaluru, with its metro rail project, *Namma* Metro (“Our Metro” in English), begun in 2011, was one of the earliest adopters of this urban transport system in South India. Twenty-five other Indian cities will adopt the metro rail by 2025, with a total investment of \$54 billion (IIR, 2020). The focus of the discussion on *Namma* Metro has largely been on the state-of-art technology used, the aesthetics of the train and the stations, and the efficiency of the system. There is scant attention paid to the everyday experiences, struggles, adjustments and adaptations made by heterogeneous urban dwellers while using the metro system, and even less to that of older adults with limited digital literacy. Using an intersectional approach, we examine how interlocking categories of age, gender, caste, class and metro infrastructure interact and shape the ‘splintering urban’ experiences for older adults in Bengaluru’s metro. Based on sixty qualitative in-depth telephonic interviews with older adults, we explore interpretatively what *Namma* Metro means to their everyday mobilities and how they negotiate this ‘modern infrastructural ideal.’ We find that older adults’ unfamiliarity with ticketing systems, technology-driven navigation processes and the new infrastructure environment of metro rail evoked an ‘out of place’ feeling, leading to anxious journeys. Further, a poor grievance redressal system and lack of trust in the government contributed to normalising barriers as a by-product of age. Lack of agency made older commuters circumvent such barriers by avoiding the metro system. Such exclusionary experiences have shaped older adult’s perception of *Namma* Metro as designed for ‘youngsters’ and ‘officials’ and deprived them of the primary public transport network to access the city.

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1 Introduction

On April 9, 2021, the decomposed body of a 65-year-old man was found inside a duct at a metro station in Bengaluru. The older adult, who had diabetes, attempted to board a train without a “smart” card but was denied entry. Subsequently, he mistakenly entered an open duct on the first floor, assuming it to be a restroom, and fell to the ground, succumbing to his injuries (*Deccan Herald*, 2021). The incident is emblematic of the underlying dynamics that shape the everyday experiences of older adults as they navigate the metro rail system in the city. Given the escalating physical challenges and the unsafe driving environment, particularly in cities of the Global South, public transportation options such as buses and metro rail play a vital role in facilitating active aging among older adults (Musselwhite, 2017). In this context, public transportation serves as one of the key pillars of the age-friendly cities framework (WHO, 2007) and carries a substantial responsibility in connecting older adults to essential services and opportunities within a city.

In recent decades, policymakers have increasingly recognized metro rail as a core strategy to address pressing urban mobility issues such as congestion, air pollution, and limited accessibility in major Indian cities (Mohan, 2008). Bengaluru, home to *Namma* Metro (“Our Metro” in English), initiated its metro system in 2011 and emerged as one of the pioneering cities in South India to adopt this mode of transportation (Fig. 1). In addition to Bengaluru’s rapid adoption, it is anticipated that 25 Indian cities will inevitably embrace metro rail systems by 2025, supported by a combined public–private investment of USD 54 billion (IIR 2020). Discussions surrounding *Namma* Metro often revolve around its state-of-the-art technology, aesthetics, and occasionally involves debates regarding the feasibility of metro systems in comparison to other modes of public transportation (Mohan, 2008). Scant attention is given to the everyday experiences, struggles, adjustments, and adaptations made by diverse urban dwellers when using the metro system. Given the rapid increase in the share of older adults in cities of the Global South, the development of age-friendly transportation infrastructure that caters to the needs of for economically disadvantaged older individuals is a major social policy issue (WHO, 2007). This chapter draws on the thesis of “splintering urbanism” (Graham & Marvin, 2001: 2499) which connects the role of changing political economies of urban transportation planning as a result of neoliberalism to the creation of “premium networked spaces” through modern transportation infrastructure. Our chapter builds on this argument to highlight the differential experiences of older adults with varied exposure to digital practices when navigating the metro system built with global–local investments. With the broader aim of enabling older adults’ socio-economic and civic participation in the city, there is a need to engage with the user’s perspective of concepts such as affordability, accessibility, availability, and acceptability within their lifeworlds (Carruthers et al., 2005). Using an intersectional approach, we examine how the interlocking categories of age, gender, caste, class, and geography intersect and shape older adults’ user experiences with *Namma* Metro and, in turn, influence their relationship with the city.

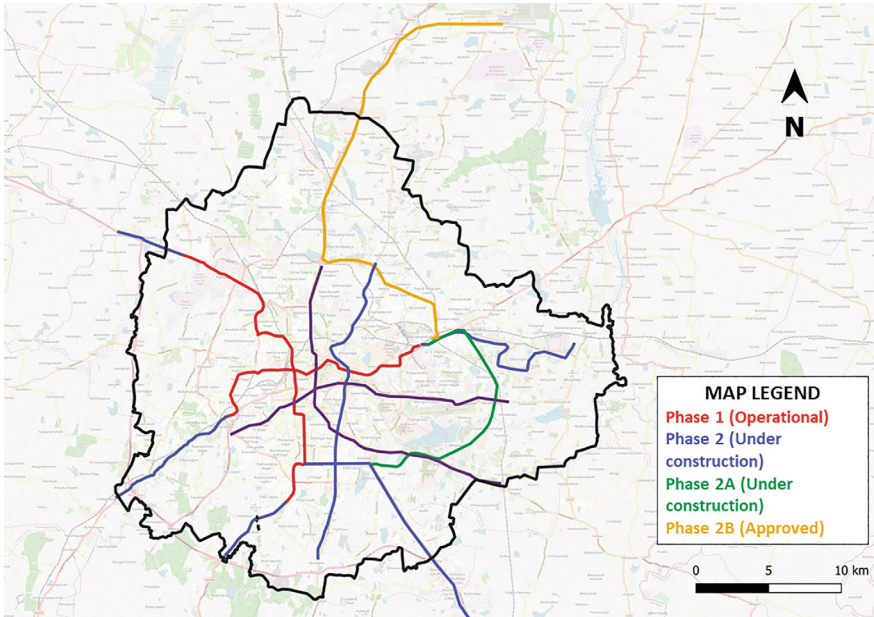


Fig. 1 Namma Metro’s network. (Source author’s representation based on Bangalore Metro Rail Corporation Limited (BMRCL) 2021)

2 Methods

We employed a qualitative research design to focus on the mobilities of older adults. Sixty telephonic interviews were conducted with older adults (aged 50–82 years) between June and November 2020. Prior consent was obtained before recording the interviews. Confidentiality and anonymity have been maintained throughout the research process. The audio files were transcribed verbatim and translated into English text. Open coding was carried out using NVivo 12 software and, based on the emerging themes, axial coding was applied to draw connections between the different codes. Furthermore, during the analysis, the assembled codes were used to generate themes which are discussed in the subsequent sections of this chapter. Excerpts from the telephonic interviews were used to depict participant’s mobilities in a spatial map created with QGIS software (see Fig. 2).

3 Results

We analyzed the everyday experiences of participants using the *Namma* Metro as well as the role the rail system plays in keeping older adults connected to the city. Special focus was dedicated to understanding how the intersection of socio-economic

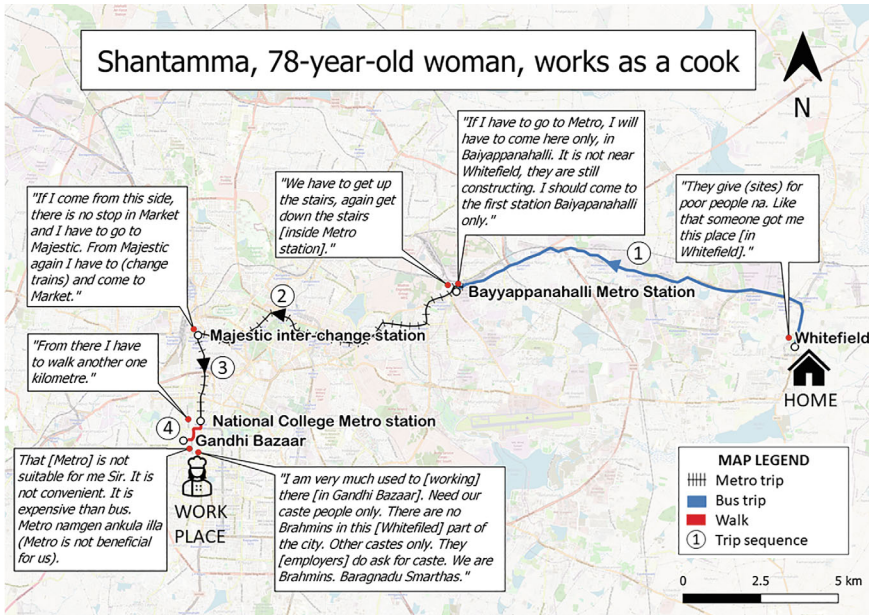


Fig. 2 Barriers to everyday use of metro rail for commuting to the workplace. (Source author’s representation using excerpts from participant’s telephonic interview)

factors shaped barriers, the strategies employed, and perceptions of the metro rail system.

3.1 Economic Class as an Eligibility Criterion and Affordability

The participants’ economic class emerged as a differentiating factor in terms of the access to and everyday experiences with *Namma* Metro. Among the participants, the economic profile of *Namma* Metro users encompassed a range of older adults working in formal settings such as banks, government offices, and private firms as well as those engaged in informal occupations such as domestic work, small private shops, and homemaking. To visit her business clients, Anuradha¹ (female) takes the metro from a station located opposite to her office. She explains the benefits of using metro rail as follows:

Usually, I use the metro to visit Kanakapura Road. I had to visit a site there. From Navrang to that place by car will take more than two hours. But by metro, we will reach within half an hour. That was very comfortable. [Anuradha, 62-year-old architect]

Similarly, the metro was utilized for longer trips which otherwise would have involved multiple bus rides. Although these trips were infrequent, they held significant socio-economic importance. In many cases, the trips connected participants to life-enhancing opportunities and services, encompassing various aspects such as commuting to the workplace (see Fig. 2), attending business meetings with clients, visiting family members and the military canteen, or seeking specific health services. In the descriptions of these longer trips, older adults emphasized the importance of “comfort.” The *Namma* Metro was appreciated for its cleanliness, air-cooling system, lack of pollution, absence of delays, and freedom from traffic congestion. These aspects made the journeys less strenuous and were often described as “*araamagi*” (comfortable).

Notably, many middle and higher income older adults referred to the absence of “*low-class*” (poor) elements on *Namma* Metro as a positive aspect. This class tension is evident in the account of Ramesh (male), who lives in Jaynagar, an affluent residential area. He shares his metro experience as follows:

Only thing is the public needs to make use of it [the metro] properly. They should maintain it [the metro] well. People are not fine here. Some people are the worst people. They don't understand anything. They come inside the train. They act like *halli gamaadgal tara* (like a village fool). They [metro staff] have *paapa* maintained the rail cleanly. People do not make good use of. [Ramesh, 60 years old]

Similarly, Radha, a 62-year-old woman and retired bank employee, visits her mother in the city's western periphery. She says the absence of “*low-class*” people makes the metro “very convenient.” This class exclusivity, which Graham and Marvin (2001: 249) term “premium networked spaces,” is also the secession by the elite of space and place from the urban fabric. This exclusivity extends beyond passenger attitude to pricing policy, which acts as a gatekeeper. Apart from a few respondents who were employed in formal workplaces, the majority struggled with low incomes from part-time jobs, employment in informal labor markets, retirement or state pensions (approximately \$13), or were dependent on family to meet their travel expenses. In this economic context, the absence of fare concessions for older adult passengers on *Namma* Metro renders it unaffordable for many individuals in this demographic. Older adults frequently drew a comparison between this scenario with the senior citizen concession pass provided for passengers over 60 years by Bangalore Metropolitan Transport Corporation (BMTC), a monopolistic state-run public bus service. Poorer older adults who needed to make essential trips within the city often referred to the lack of equity in the pricing policy exclusionary. For example, Shantamma, a 78-year-old Brahmin² woman living independently on the eastern periphery, works as a cook in a Brahmin household for a monthly salary of INR 7,000 (approximately USD 95). For her daily commute, she must first take a bus, followed by a metro, the change trains, and finally walk the remaining distance to reach her destination. According to her account, she describes how *Namma* Metro is physically and economically unviable for her commute, as depicted in Fig. 2.

Figure 2 portrays the complex spatial processes through which caste, class, and age affect people's infrastructural reach. Due to the caste norms surrounding purity

and pollution, Shantamma is compelled to work as a cook in Brahmin households only. However, the city's social geography is characterized by privileged middle and upper castes (*Brahmins*) residing in the core of Bengaluru and the vulnerable on the periphery. Despite being a Brahmin, Shantamma's class excludes her from housing within the core, pushing her residence to a peripheral area called Whitefield. This complex interplay of economic geography and housing gentrification necessitates these longer trips to work using public transportation. Shantamma, in a tired tone, explained that as she ages, she finds her everyday mobilities using the *Namma Metro* physically cumbersome and economically unviable. Her disadvantages accumulate from biographical factors such as increasing physical debility and societal factors such as declining income and poor family support as well as state welfare factors such as lack of social security and lack of concessions for older adults in the metro. Such forced mobilities at a later age result from transportation infrastructures that neglect the complex socio-economic geography and the everyday realities of low-income aging in cities.

3.2 *Unfamiliarity, Affective Episodes, and Accessibility*

Many research participants expressed that their lack of familiarity with the physical infrastructure of *Namma Metro* was a barrier, resulting in further consequences for their everyday mobility patterns. First, the automated elements in *Namma Metro*'s physical infrastructure, such as mechanized entry gates, escalators, elevators, and automatic doors within the rail coaches, often led to feelings of anxiety and panic among older adults. In the excerpt below, Rajeshappa provides an account of the anxiety he experiences when boarding a metro coach with automated doors during peak hours:

What happens, you know, it hardly opens for one or one and a half minutes, that's all, that duration at least if they mind, they can increase another half minute. Within 30 seconds, so many things may take place. Yeah, because of that too during peak hours, you know. Once they stop, people are all coming out, only after their exit you are supposed to get in... that duration may be slightly increased by 25–30 seconds, at least it will be helpful for people like us aged people [Rajeshappa, 67 years old]

Participants frequently drew comparisons between the automation of *Namma Metro* and the manual operations found in public buses. This comparison, mostly made by older adults traveling alone, sometimes carried a tone of self-guilt for not being able to use these automated features. Vertical mobility, such as using escalators from the station entrance to the rail platform, was a key issue for many participants. Muniyamma, a 65-year-old housekeeper, has a metro station opposite to her residence that connects her to workplace. The "fear of falling" on the escalator makes her nervous and dissuades her from taking the metro to work. Further, participants reported that several metro stations did not have elevators, thereby compelling them to use the stairs. Basappa (male), a retired military person, uses the metro to travel from his house in the southern periphery to the military canteen located ten miles

from the city center, to buy groceries. He said, “In Nayandanahalli, they have a lift to go up, but not to come down. Because, while getting down, we will have luggage. Problem will be bigger.” Given that all metro stations are either situated underground or on elevated platforms, vertical mobility becomes a necessity. The absence of proper vertical mobility options causes physical and mental stress among many participants.

The digital ticketing system and automated gates were other unfamiliar automation processes for older adults. *Namma* Metro has promoted the use of metro cards by providing additional concessions in lieu of tokens bought for each trip. Sharanappa (male) said, “The Metro card is not user friendly. It is not for people who are illiterate. There should be more people to help them just because everything is automated.” These cards were also the only mode of payment accepted during the COVID-19 pandemic, a disadvantage to older adults who did not have smartphones or had limited technological know-how. For example, Melinda, who works in a private company, described how she struggled to use the metro’s digital payments system during the pandemic:

Now we have to go online I believe, and I am not into online, I don’t handle normally also. What I did myself, is I downloaded the metro app and my co-sister also helped me. I am a little scared, more than caring, I am scared to handle this online business because a lot of cheating happens. Uh you know------(unclear words) some cheating, fraud, and all will be involved, so I am a little scared about this issue. [Melinda, 63-year-old woman].

On the contrary, older adults with higher education and income levels expressed considerable ease with accessing metro facilities. Their narratives highlighted that travel in the metro is “comfortable,” “time-saving,” and “reliable,” while physical infrastructures, such as escalators and elevators, make their journey less strenuous, as described by one older woman:

I feel it is comfortable. Because there is no traffic congestion and it is air-conditioned. Even if you stand, you will not feel discomfort. [Shobha, 60-year-old woman]

Despite encountering situations where they lacked information regarding exit and entry points or the process of changing trains, older adults seldom blamed the system. Instead, they acknowledged that they required more time than others to comprehend such instructions. They even normalized this experience by comparing it to “finding the way in a new shopping market.”

3.3 Perception of Rights and Agency

At a later age, agency in terms of mobility is often curtailed for multiple reasons. One of the primary concerns raised by older adults was their self-exclusion, where they faced accessibility barriers for the greater benefit of the city as a whole. Irrespective of their individual experiences and encountered barriers, older adults from various backgrounds universally praised *Namma* Metro as the “finest thing,” describing it

as “*araam*” (comfortable), and even as “god’s gift to Bengaluru.” There existed a widespread sense of aspirational pride associated with metro’s “modern” infrastructure and the belief that it would solve the city’s future mobility issues. However, while narrating their experiences, stories of embarrassment, shivering fear, lack of operational information, and unaffordability were common. Frequently, there was a conscious effort to refrain from attributing their individual struggles to the system itself. On the other hand, others expressed a lack of belief in both the system and the government’s ability to address their grievances. When asked about grievance redressal, these concerns were met with laughter and remarks such as “we cannot expect anything from government” or “we cannot do anything.” In some instances, participants even responded by questioning whether their feedback would lead to any actual changes. A prevailing sense of distrust towards the state was coupled with a perceived inadequacy of the grievance redressal system in transportation systems. However, one exception to this sentiment was Devappa (male), a long-time social rights activist. He said:

In the metro train as well, they do not charge less for senior citizens. It is expensive, they won’t believe if we say so. They should reduce [the fare]. We should protest that as well. We don’t know [where to complain]. Maybe they will have their own depot and we should complain there. [72-year-old Devappa, retired security guard and a social-rights activist]

Alongside the lack of popular mechanisms for grievance redressal, avoidance emerged as the most common strategy to circumvent the issues of *Namma* Metro accessibility. For example, after an injury while parking his scooter, 68-year-old Ramchandra (male) never parked his scooter again in a metro station; after the episode of falling on an elevator, 72-year-old Shantamma never returned to metro again and 66-year-old auto-rickshaw driver Imtiaz believes the fare is unaffordable but would want his children to use it. Underlying the “bypassing” design of grievance redressal system common in cities of the Global South, older adults perceived that the accessibility for future generations is more important than their inclusion in the city. Given Bengaluru’s history, there have been far and few political and civic assertions for the rights of commuters from the intersection of gender, caste, class, and age (Gopakumar, 2020). As a culmination of these factors, older adults, especially from the marginalized socio-economic category, perceived *Namma* Metro to be designed for the “officials” and youngsters. The missing element of equity in *Namma* Metro’s vision could further restrict older adults’ access to the city.

4 Discussion

The broader gerontological literature highlights the various responsibilities that older adults manage as they age, including having to work beyond legal retirement age, grandparenting, and social and civic participation. Processes that create spatial inequities within the city, such as peripheralization and gentrification, further intensify the pressures faced by older adults in carrying out these essential activities, as

they are compelled to longer journeys. Given that metro rail is a reality in rapidly expanding urban India, we have engaged with the question of equity and inclusion at a later age.

Public transportation can serve to make cities more livable for all citizens by being more efficient, affordable, and accessible. However, India's Metro Rail Policy (2017), while solving time-efficiency problems, lacks any discussion on equity issues, including those which affect older adults. This chapter highlights the fact that *Namma* Metro's policies are based on a homogeneous understanding of the transportation needs of urban dwellers, which inadvertently excludes individuals who are made more vulnerable by not being young, educated, or tech-savvy. In cities such as Bengaluru, a large section of older adults lives on the crossroads of intersecting disadvantages of poverty, social marginalization, including residing in areas on the expanding peripheries of the city. Not recognizing their specific travel concerns creates a vicious cycle of splintering in the urban fabric (Graham & Marvin, 2001: 383).

Participants in our study identified three types of barriers in *Namma* Metro—economic, infrastructural, and social—which affect the 4As of Carruthers et al. (2005). The study engages with the undercurrents and negotiations of these barriers while cautiously recognizing that barriers are dynamic. In the first place, *Namma* Metro's fare policy marks a departure from the earlier socialist policy that was followed in the public bus system, which provided subsidies for older adults. *Namma* Metro practices a one-price-fits all policy in its fare pricing. The only concessions provided by *Namma* Metro are digital top-ups, which exclude older adults who have lower levels of digital literacy. On the macro-policy front, we need to reflect on the changing funding strategies for public transportation in Bengaluru and across Indian cities. The inequitable ticket pricing could also result from the public–private model opted for the *Namma* Metro as opposed to the full public funding of public buses. However, by pricing out socio-economically vulnerable older adults, the flat pricing policy fails to recognize the economic precarity of aging and their digital space absence, which coalesce to create “premium transportation networks” (Graham & Marvin, 2001). This systemic exclusion further impedes access to decent work, health care, and social life, making it an urban poverty trap.

It is worth noting that the Metro Rail Policy (2017) consistently espouses technocratic solutions as a means to address the issue of accessibility gaps in metro systems. The technological infrastructures, particularly its “automatic” features, need to be deconstructed through the use of bottom-up experiences or the perspectives of marginalized users. We draw attention to the “virtual bypass” (Graham & Marvin, 2001) created for premium users by overlaying ICT on physical infrastructures such as “smart ticketing.” Socio-economically marginalized older adults' lack of familiarity with the cumulative technological installation in *Namma* Metro evokes “out of place” feelings and creates anxious journeys. The hegemony of speed and technology edges out the relatively slow-paced mobility of older adults. The study participants' everyday experiences highlight this endless negotiation with the politics of space and pace that takes place within the physical contours of the metro system.

In addition to infrastructure-induced challenges, older adults also experience constraints to their agency in asserting their rights. As Graham and Marvin (2001) note, “bypass” strategies in these neoliberal infrastructures, such as lack of grievance redressal forums and the state’s inability to address concerns, were evident from the everyday accounts of older adults using the *Namma Metro*. Further, the normalization of barriers led older adults to self-exclude and undermined their agency to articulate “resistance” (ibid: 387). The primary response was silent disapproval and avoidance despite everyday experiences of confusion, uncertainty, fear of digital infrastructures, and unaffordable fares. Though dynamic and remediable, these barriers receive insufficient recognition within urban debates and from transportation policymakers. In line with Gopakumar (2020), we argue that, to be an age-inclusive city, Bengaluru requires a heterogenous imagination of aging and a user experience-led approach to transportation planning. Unless intersections such as age, caste, and space are at the center of such discussions, there is a danger of perpetuating “splintering urbanism” characterized by the creation of exclusive transportation networks such as *Namma Metro* that primarily cater to the elite.

5 Conclusion

Older adult mobility within the city is already constrained by unsafe pedestrian walkways and driving conditions. This chapter presents empirical evidence of the transportation inequalities in older adults’ experiences with *Namma Metro* and how this further impedes their ability to age well in cities. We highlight older adults’ everyday struggles and negotiations to fit into this “modern” space. With more cities in the Global South opting for capital-intensive transportation solutions such as the metro, the question of equity and age-friendly infrastructure requires renewed attention. India will be witnessing two dominant trends of aging and urbanization in the coming decades. The absence of age-friendly public transportation attenuates the policy goal of building an age-friendly city (WHO, 2007). The lack of age-friendly infrastructure, particularly inclusive public transportation, may result in older adults from vulnerable groups in specific urban geographies being compelled to age in isolation. This isolation can lead to disconnection from vital opportunities and services in the city. In light of the absence of age-inclusive planning in *Namma Metro*, it becomes crucial for policymakers to address a broader reflexive question: Is *Namma Metro* envisioned as a policy instrument to mitigate growing urban inequities, or is it primarily perceived as a quasi-public transportation system?

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