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Left Behind in the Digital Age: An Evaluation of Digital Awareness among Rural Elderly in Tamil Nadu

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ABSTRACT

Elderly people in the rural areas continue to be substantially excluded despite the growing digitalization of public services including healthcare, finance and governance. This is because of lack of access to personal devices, lack of confidence and physical and cognitive constraints. This study examines the digital awareness of elderly persons, particularly those above 55 years of age in Nagakudi village of Tamil Nadu. Key barriers are identified by the study using qualitative techniques including informal interviews and observations during a digital awareness programme. The barriers include belief that digital tools and devices are irrelevant, dependence on younger members of the family and lack of support for learning digital skills. The findings highlight a need for context-relevant, need- based training and reinforcement. Engaging local adolescents as digital trainers and mentors, encouraging family members to support training of adults and using community spaces as digital learning spaces are few of the recommendations. In addition to adding to the expanding debate on digital inclusion, this programme evaluation findings provides insights for creating future initiatives aimed at older adults in rural areas.

Keywords: Digital awareness programme, older adults, Rural India

India's digital aspirations have experienced an incredible boost during the past 10 years. Critics highlight that digital inclusion is not only a technology need but also a nation building objective of "Digital India" toward the goal of Viksit Bharat, 2047 (Naik, LinkedIn post). According to the article, digital infrastructure and usage must expand throughout the country so as to realise a developed India by 2047, especially in rural areas and among marginalized populations that remain far from this digital transformation.

As a part of the large goal of Viksit Bharat, 2047, every citizen engages meaningfully in the digital ecosystem, irrespective of their age and location, India aspires to become a technologically equipped country. Along with the flagship initiatives like *Pradhan Mantri Gramin Digital Saksharta Abhiyan* (PMGDISHA), the National Digital Literacy Mission (NDLM) and many other Government programmes, attempts to provide digital empowerment to the rural residents in order to realize this national vision. By increasing access and developing capacity in underprivileged areas, these programs intend to bridge the digital divide (MeitY, 2021). But in reality, there are still issues with implementation of schemes regardless of its scope and goal (Singh, 2010). In terms of device ownership, internet access and digital skills, the rural population significantly lag behind the urban populations, as observed in national surveys conducted by NSSO.

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The elderly, especially those over 55 years old, are vulnerable groups in rural areas (Zhang *et al.* 2025). Their lack of exposure to digital technologies, lack of confidence and worries about safety and privacy as well as those which do not encourage their digital empowerment are some of the causes of their digital marginalization (Betts *et al*. 2019). As a result, even when they are provided with digital services, these elderly individuals fail to utilize them (Athavale, 2014).

Closing this gap is crucial for both equity and for Viksit Bharat's wider goals. Digital adoption needs to be inclusive for e- governance, digital payments and telemedicine for it to be effective. If elderly groups fail to participate actively, such initiatives run the risk of fostering new forms of exclusion.

In this regard, the current study is carried out during a digital awareness programme, which was conducted in Nagakudi village in Thiruvarur, Tamil Nadu. Thiruvarur, approximately 15 Kms away from this village, serves as an urban hub for these villagers for availing government services, district administrative offices, healthcare services etc. The village panchayat office served as the venue of the programme, ensuring easy accessibility of the participants. In this village, messages and information regarding healthcare emergencies, natural disasters, cybercrime alerts are usually distributed through digital channels. Essential services like Public Distribution System are also digitalised through the use of smart ration cards, biometric authentication and electronic weighing devices, making basic needs dependent on digital literacy. Similarly Direct Benefit Transfers for pensions and subsidies force older adults to explore online banking systems. Even though these older adults were not aware of digital services, they were a part of digital network through various government schemes and service delivery mechanisms. Thus, the programme focused on adults of 55 years and above. The goals of the programme were to spread awareness about the digital services, such as e-governance, digital payments and mobile banking and to increase awareness about cyber security risks such as OTP frauds and Phishing. In order to ensure effective delivery of the programme, teaching faculty from the Central University of Tamil Nadu (CUTN) conducted interactive sessions and practical demonstrations through videos. The Unnat Bharat Abhyan Cell, CUTN, which focuses on using academic resources to empower rural communities, organized this program as a part of SEWA PARV 2025 initiative of the Ministry of Education, Government of India. By reaching out to this crucial group, the programme addressed current gaps in digital literacy. In order to put into practice the goals of Viksit Bharat and to make sure that the older adults of the nation is not left behind in the ongoing digital transformation, such initiatives are vital.

Objectives of the Study

1. To assess the current level of Digital Literacy among the older adults in the village.
2. To create awareness about the existing essential digital practices.
3. To create awareness about cyber crimes and threats.

Methodology

A digital awareness programme for adults of 55 years and above was held in Nagakudi village, Thiruvarur. There were 65 participants, in total, from four villages namely *Pannaivilaagam, Chakkaramangalam, Aadhamangalam, Nagakudi*. Among them 55 were female and 10 were male. The one- day programme spanned for four hours, focussed on spreading awareness about the safe use of available internet services. The session was delivered entirely in their regional language, Tamil. The programme was conducted by a group of teaching faculty and research scholars. There were orientation sessions, PowerPoint Presentations, open discussions, live demonstrations using mobile phones and presentation of videos related to digital awareness to ensure engagement. Data for the programme evaluation was gathered through informal interviews and observations conducted during the sessions.

Key findings

1. Lack of Mobile ownership

Out of 65 participants, only 8 owned a personal mobile phone which was a noteworthy finding. Younger family members like their children and their grandchildren are the ones who usually owned mobile phones. The participants also stated that they

did not feel the need for a personal mobile phone due to low social and communication needs. They are engaged in household chores and had social interactions with the people in their surrounding neighbourhood, which reduced the need for frequent mobile phone usage. Their exposure to internet platforms and mobile technologies was consequently quite restricted.

2. Low digital awareness

The majority of the participants had limited knowledge of how mobile phones work. They merely see mobile phones as a device to communicate with others in long distance on phone calls. They were not comfortable with using touch screens, making a phone call, sending a message etc. They stated that it was usually their children or grandchildren who passed the phone calls when needed. It is noticed that all the participants had a bank account linked with mobile numbers which are maintained by their children or grandchildren. They are getting wages as they work in *Nooru Naal Velaivaippu Thittam* (100-day job scheme) and other government schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme. Due to their lack of awareness, they sometimes get exploited by their own family members, as they receive the funds directly into their accounts. Moreover, nearly all participants were unaware of online services like mobile payments, online banking, social media like Facebook, Instagram, YouTube and telemedicines. Even though shops in their village use QR codes for mobile payments, these participants had no idea of what it is and how it works. A digital divide has resulted in lack of exposure to digital technology which hinders their use of online services.

3. Cyber crime awareness

Total absence of knowledge about cyber safety and potential online hazards is another significant gap that was found. None of the participants knew about internet scams, phishing or OTP frauds. Many didn't recognize that answering strange calls and disclosing personal information can have a negative impact on their identity and finance. This emphasizes the immediate need for cyber crime awareness programmes, especially to the older adults as they are susceptible to manipulation due to lack of awareness about digital environments.

4. Engagement and Interest

The participants from the four villages, initially, did not have much awareness about the need to have knowledge about the Digital Literacy and Digital Infrastructure. The resource persons explained them orally, with practical situations, about urgent need for every Indian citizen to be familiar with these topics. They also played suitable video shows to describe the occurrence of digital fraudulence and the ways to get rid of such instances. The participants understood the relevance and applicability of the Digital Literacy. They showed interest in participating in the discussions and raised their doubts with involvement.

DISCUSSION

The multifaceted nature of lack of digital literacy knowledge among older adults in rural areas is revealed in this study. It highlights the related constraints including, socio-cultural norms, lack of digital resources and learning opportunities, which all together contribute to their digital marginalization. In the study villages, majority of the participants lack access to digital devices as well as they lack motivation to explore available online services. It aligns with the findings of Jena and Paltasingh (2024) highlighting that inadequate digital literacy skills and exposure to technology are the major reasons for limited adoption of ICT among Indian older adults. This reinforces dependency and passivity as they usually rely on their younger family members for digital tasks. Such findings are similar to the research carried out by Helsper and Eynon (2013), who found that age, socio- economic factors and educational background play major roles in digital engagement levels among individuals. According to Kaushik (2022), even among individuals who are interested in exploring digital technologies, a mix of fear and unfamiliarity caused hesitation particularly regarding cyber crimes. The Times New India (2022), observed that over 90% elders expressed desire in mastering digital services like Whatsapp and online banking, but nearly 60% received little to no help from their family members. Impaired vision, memory issues and slow learning curves and other physical problems contribute to their reduced use of digital devices. The present findings are consistent with the research conducted in Kerala by Nair *et al.* (2024) and Faridi and Shaheen (2024).

Around the world, digital literacy is widely accepted as a necessary ability for full involvement in the workforce and society. UNESCO (2011), stated that digital literacy is not merely the use of devices but also involves the ability to critically evaluate, create and manage information in digital technologies. According to Ng (2012) and Jimoyiannis and Gravani (2010), in order to meet the needs of elder adults, particularly those who have access and usage challenges of technology, guided and structured adult education programmes must focus on digital literacy. For digital learning to be effective for adults, the instruction methods have to designed with innovation with a focus on frequent real-life contexts as stated by Sharp (2017) and Tondeur *et al.* (2017). Furthermore, digital literacy and employability are closely related (Reddy *et al*., 2023). While the participants in this study are not actively looking for jobs, digital skills can help them in accessing online services like telemedicine, online payments and mobile banking. It can reduce their dependency on family members and neighbours and they can have access to all these facilities without burden from their homes. The "Grey Digital divide" is a critical barrier for digital revolution as these older adults show limited participation by using digital services like booking tickets, claiming pensions and updating their smart cards (Mubarak and Soumi, 2022). As stated by Kaushik (2022) and Upadhyay *et al.* (2025), online facilities are greater resources to elders, especially for those who live alone and have lack of physical support . Digital literacy skills can thus improve the quality of lives of older adults. As the present older adults will be part of the society for the next 30 years, their digital awareness cannot be ignored. The amount of digital transformation and technology advancements in the near future is unimaginable. Older adults must be equipped to face these transformations. Several studies call for targeted interventions and policy measures to bridge the digital divide and save older adults from social isolation, cyber risks and misinformation (Upadhyaya *et al.* 2025). To promote digital inclusion, awareness and training programmes must focus on training in local languages, community- embedded learning pathways and most importantly on increasing the confidence of the older adults in using digital services.

Recommendations

1. Digital skills training for senior citizens are relevant and meaningful. It will help them in the real world and everyday needs.
2. The expertise of academicians in Higher Education Institutions can be effectively used to promote Digital Literacy through the programmes like Sewa Parv of Unnat Bharat Abhyan, which can uplift the rural populations surrounding the Higher Education Institutions.
3. A welcoming, non-judgemental individualized support team can be formed by youths in the rural areas to reduce the technology uncertainty and nervousness. This can foster social cohesion and empathy.
4. Digital training programmes can be conducted in community centers and local Government bodies focusing more on basic use of mobile phones for digital transactions, availing online government schemes and also on identifying cyber threats.
5. Since older adults depend mostly on their family members for online services, the young members of the family must be encouraged to provide friendly learning environments at home. In addition, digital awareness programmes may be conducted in rural areas periodically to sue this idea in their minds.
6. Readable and comprehensible digital awareness notices and pamphlets can be prepared in regional languages and can be distributed among rural households, which can emphasize digital literacy development among older adults.
7. Television channels may be used to display digital awareness messages in their serials and movie shows. It can ensure retention of digital knowledge and skills, as older adults are the major viewers to entertainment programmes.
8. Older adults may monitor and guide digital practices in their homes, especially among youth. This can not only improve their digital knowledge, but also help in reducing cybercrime risks in family and community levels.

CONCLUSION

This study sheds light on the ongoing digital marginalization that older adults face in rural India. Older adults, especially those more than 55 years of age, experience lack of access with digital infrastructure due to physical, cognitive and psychological constraints. In addition to one-time digital awareness programmes, there is a need for exposure, contextualized support, follow-up and family support to encourage them to be a part of digital world users. The findings of this study indicates that, in addition to handing over digital devices to the elders, providing long-term support to them is essential for building digital confidence and relevance among them Inter-generational support and organized reinforcement through print and visual media will help to bring older groups forward in this digital age. Digital equity must be given top priority in local-level initiatives, as India moves towards a digitally empowered country. This would guarantee full involvement of the elders in social connectivity, healthcare, finance and governance.

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