ASSESSING TECHNOLOGY INTEGRATION AND USAGE PATTERNS AMONG SENIOR CITIZENS IN KERALA

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ASSESSING TECHNOLOGY INTEGRATION AND USAGE PATTERNS AMONG SENIOR CITIZENS IN KERALA

Thesis submitted to St. Teresa's College (Autonomous), Ernakulam in fulfillment of the requirements for the award of the degree of **Bachelor of Arts in Sociology**

By

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CERTIFICATE

I certify that the thesis entitled " **Assessing Technology Integration And Usage Patterns Among Senior Citizens In Kerala** " is a record of bonafide research work carried out by **Evelin Biju, Biminamol MK, Riya Vinod, Shilna Shyju, Anamika Balan, Japhia Samson, Meghana M Menon, Santhini V, Sreelakshmi Ramesh** , under my guidance and supervision. The thesis is worth submitting in fulfillment of the requirements for the award of the degree of Bachelor of Arts in Sociology.

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DECLARATION

We **Evelin Biju, Biminamol MK, Riya Vinod, Shilna Shyju, Anamika Balan, Japhia Samson, Meghana M Menon, Santhini V, Sreelakshmi Ramesh** ,hereby declare that the thesis entitled "**Assessing Technology Integration And Usage Patterns Among Senior Citizens In Kerala**" is a bonafide record of independent research work carried out by us under the supervision and guidance of Smt. Elizabeth Abraham . We further declare that this thesis has not been previously submitted for the award of any degree, diploma, associateship or other similar title.

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CHAPTER - 1

INTRODUCTION

In an increasingly digital world, technology plays a pivotal role in various aspects of daily life. While younger generations readily embrace technological advancements, the integration and usage patterns among senior citizens remain a topic of interest and importance. This research delves into the dynamics of technology adoption among older adults, examining the factors influencing their integration of technology into their lives and the patterns of usage that emerge.

Understanding the unique needs and challenges faced by senior citizens in adopting technology is crucial for designing inclusive and effective digital solutions. By exploring the intersection of technology and aging, this study aims to shed light on how older adults navigate the digital landscape and utilize technology to enhance their quality of life.

Technology is the exploration of scientific principles to develop tools and methods that enhance efficiency and impact various aspects of our lives. The advent of technological advancements had made significant changes in the day- to- day life of individuals to a wide extent. It eased the accessibility of various resources and all means of communication. It facilitates the availability of services and goods at our fingertips. Life without technological intervention can't be imagined as the world itself is going with the flow of technological advancement. It fundamentally altered the way we live, interact, communicate and work. Though it is a positive change one can't completely rely on technology for their day today needs.

Technological advancement had revolutionized every aspect of human life and existence. For every human needs some sort of machine is needed and used for further application. This advancement has improved our lives by easing the accessibility of technology by means of transportation, education, labor and much more. With the advent of Technology we are at the brink of artificial intelligence robotics and biotechnology. These transformation has offered future promises and challenges at global level. From the invention of wheel to the advent of internet technology has advanced and thereby facilitating the course of human civilization.

One of the significant Impact of technology is that it connects people across nations. This facilitates people to collaborate and interact across continents in real-time. It transformed the ways of communication and opened new avenues for global trade, education, and cultural exchange. It also plays a vital role in driving economic growth and development worldwide. With the advent of automation and digitalization various industries got transformed and increased the efficiency and productivity. This has lead to the creation of new jobs and opportunities in various industries and also generated job displacement and income inequality. The overall impact on the global economy has been largely positive, driving innovation and fostering economic prosperity.

Technology had a profound impact on healthcare, improving the health condition through diagnosis, treatment and patient care. Progress in medical technology has resulted in innovations in disease treatment, prolonging human life expectancy and enhancing living standards. Telemedicine and digital health solutions have enhanced healthcare accessibility and affordability, especially in remote and underserved regions.

Despite the innovations and advancements, technology has ushered into challenges and dangers. For instance, digital divide persists as a notable concern as a considerable proportion of population was lacking access to technology and internet. This has widened the gap between the Proficient with digital skills and the ones who can't even access the internet and other technology.

The swift progress of technology has marked the apprehensions it had on society and environment. Data privacy, cybersecurity and environmental sustainability emerged as the major challenges which needs addressal worldwide. Collaboration among policy makers and businesses was crucial to ensure responsible and ethical use of technology benefitting everyone.

Reasons for Technology Usage by senior citizens

Communication

In order to maintain connections with their family, relatives and friends most of them are using technical devices for networking and establishing face to face interactions through virtual calls. The major impact of technology is that the user can call in real-time to their loved ones across nations.

Information access

Technology has been used as an medium for accessing information throughout the world. Senior citizens mostly use technology for accessing the news, health information and other services online.

Socialization

Technology acts as a medium for senior citizens to socialize through virtual groups. They can join online communities or social media to meet people and stay connected.

Entertainment

For enjoying various television programs and other mobile apps like YouTube, Facebook have been used by senior citizens to avail content of their cognitive interest. They watch movies, music, videos and other forms of digital entertainment.

Convenience

For availing certain services online they uses apps for banking, online shopping, and accessing government services. This eased their efforts for accessing these services as every piece of information can be easily availed through the mobile phone itself.

Health Monitoring

Certain apps are there for accessing health related information and services. By utilizing these apps for tracking health apps and devices monitoring health metrics.

Learning

Nowadays retired senior citizens spend their time for learning new online courses and skills through tutorials for lifelong learning and skill development. This facilitates their outlook towards nation and boosts self- esteem.

Safety

Senior citizens use technical help for safety measures when they need help. This safety measures can be ensured by emergency assistance and home security desks.

Memory aids

They can memorize date, day or years of important events through using digital calendars and notes for better organization and memory support.

Independence

They can achieve independence by using technology for daily tasks like shopping or transportation. This improves their standard of living and working.

Patterns of technology usage among senior citizens

Technology has been an integral part of daily life of all ages. However there exists generation gap in technical adoption in which they were lagging behind younger generations. Patterns of technology usage among senior citizens is crucial for understanding the technology integration among senior citizens. There are various patterns for technology adoption significantly as the availability and accessibility of the of technology is increasing there exists limited adoption among senior citizens . There are various factors. for this. Limited adoption such as lack of exposure, perceived complexity and fear of adopting technology. Thus they are marginalized from the mainstream of technology. Among the senior citizens their usage tends to be basic such as making phone calls, sending messages and accessing information online etc. In the current scenario they were more used with smart phones than earlier period. and sometimes computer which were primarily for communication and information. Usage of devices has been improved their standard of living and accessibility to technology. Various technological features were helpful to cope up with the current digital world.

By using technology it helped the senior citizens to stay connected with their family and friends especially those who are live fat away. It greatly help to stay connected with the social circle and it also ensure their security as various forms of technological advancements were user friendly to senior citizens. Social media platforms like video calls through Zoom and Google meet and messaging apps such as Facebook, WhatsApp help them to maintain relationships and participate in social activities. Many senior citizens use technology to monitor their health and wellbeing. which includes tracking their vital signs, medication reminders and accessing telemedicine services etc. Technology has been advanced and became useful for senior citizens in addition to meet their health care needs which significantly improves their overall wellbeing. It also help them engage in entertainment and leisure activities as a result of technological advancements. They may use devices for watching movies, online gaming or engage in hobbies such as reading e books or listening to music. Some of the may use it for their skill development such as online courses, tutorials and apps which helps them to achieve new skills and knowledge through technology and to stay updated in this current scenario.

Even though technology has been updated there exists challenges and barriers among senior citizens. They face so many physical limitations such as cognitive decline, lack of digital literacy, affordability of devices, vision and hearing impairment and also concerns about their own privacy and security. It is essential to study patterns of technology usage among senior citizens to derive digital solutions in order to solve the challenges faced by them which leads to improve their quality of life and greater social inclusion.

Challenges faced by Senior Citizens in using technology

Senior citizens has been facing challenges when it comes to integrating technology in their daily life. Lack of familiarity with the digital devices and also they faces generation gap in exposure to technology. As a part of aging they also faces so many challenges which affects physical and mental state such as dexterity or vision impairments, hearing impairments. Which makes them difficult to interact with the small screens etc. Most of them were not much concerned with the reliability and security of the technical as there exists fear towards technology or reluctance to learn new ideas and more. Social isolation is also affect the wellbeing of the senior citizens due to lack of digital connectivity as many services and interactions were increasingly occurred online. Majority of younger population are migrating to another countries which leads to the problem of aging population. As they were disconnected from friends, family. Some of them were resistant to adopting new technology as they were following old stereotypes etc. so it is difficult to adopt new technology as they were too old to learn something. Affordability can be a barrier because most of them were retired and may be living by depending their families for their essential needs so they face barriers to adopt new devices or paying for new devices. These are the major challenges faced by senior citizens regarding technology integration.

Significance of the Study

Understanding the integration of technology among senior citizens is of paramount importance in the contemporary landscape for a multitude of reasons. Firstly, the society shifts towards an increasingly aging population, it becomes crucial to discern the patterns and challenges associated with technology adoption among seniors. This understanding is essential for developing tailored solutions that accommodate their unique needs and preferences, thereby fostering digital inclusion. Bridging the digital divide among seniors not only ensures equitable access to essential services but also empowers them to actively participate in the digital economy and social discourse.

Moreover, the integration of technology among seniors has profound implications for healthcare delivery and management. By embracing technologies such as

telemedicine, remote monitoring devices, and health apps, seniors can access timely healthcare services and better manage chronic conditions, leading to improved health outcomes and reduced healthcare costs. Additionally, technology serves as a powerful tool for mitigating social isolation among seniors by facilitating communication with peers, family members, and caregivers. Virtual social platforms, online communities, and digital engagement initiatives offer avenues for seniors to maintain social connections, thereby promoting mental well-being and overall quality of life.

Furthermore, the integration of technology among seniors contributes to their cognitive stimulation and lifelong learning. Engaging with digital devices and applications not only keeps seniors mentally active but also enhances their cognitive abilities and digital literacy skills. This, in turn, can help mitigate age-related cognitive decline and promote independent living. Additionally, technology empowers seniors to perform daily tasks more efficiently, such as online banking, grocery shopping, and accessing information, thereby fostering a sense of autonomy and self-sufficiency.

From a societal perspective, understanding technology integration among seniors has broader implications for workforce participation and economic productivity. As the retirement age increases and older adults seek to remain engaged in the workforce or pursue entrepreneurial endeavors, possessing digital skills becomes increasingly essential. By equipping seniors with the necessary technological competencies, society can leverage their experience and expertise, thereby enhancing productivity and promoting intergenerational collaboration.

In conclusion, studying the integration of technology among senior citizens is not only pertinent but also multifaceted, encompassing aspects of health, social well-being, cognitive function, independence, and economic participation. By recognizing the significance of this endeavor and investing in research, education, and policy initiatives, societies can strive towards creating an inclusive and age-friendly digital environment that empowers seniors to lead fulfilling and meaningful lives in the digital age.

CHAPTER -2

REVIEW OF LITERATURE

Technology encompasses the application of scientific knowledge to meet human needs. It comprises the skills, techniques, processes, and methods used in various fields, including scientific research and service production. Sociologist Thorstein Veblen's sociologist viewpoint on technology was deeply rooted in his analysis of conspicuous consumption and leisure. He believed that technological advancements, while ostensibly aimed at increasing efficiency and productivity, often served a different purpose in society. According to Veblen, the adoption of new technologies was frequently driven by a desire to display social status rather than meet practical needs. This concept of "conspicuous consumption" suggested that individuals would prioritize goods and services that were visible symbols of wealth and prestige, even if they did not offer significant utility. Similarly, Veblen introduced the idea of "conspicuous leisure," arguing that the upper classes engaged in non-productive activities to signal their elevated social standing. These perspectives on technology underscored Veblen's broader critique of capitalism and his belief that social norms and cultural practices heavily influenced technological development and adoption.

According to **Anne Lund** (2021) in her article she describes about the **Involving older adults in technology research and development discussions through dialogue cafés.** The aim of this study is development and implementation of assistive Technology. The study demonstrated that the engagement process was found to be positive by the participants in the dialogue café groups. The research of this study includes Dialogue cafés method, Recruitment method, Data collection and analysis method.

According to **Nahdatul Akma Ahmad** (12 January 2022) in this article he describes about the **Effectiveness of Instructional Strategies Designed for Older Adults in Learning Digital Technologies: A Systematic Literature Review**. The aim of this study how instructional strategies enhance user experiences of older adults in learning digital technologies. This includes a collaborative learning strategy, Group discussions to promote collective interaction. The research of this study includes Systematic Search Strategy method, Data Abstraction and Analysis method, Questionnaire method.

According to **Kristen R Haase** in her article he describes about the **Older Adults Experiences With Using Technology for Socialization During the COVID-19 Pandemic: Cross-sectional Survey Study**. The study aimed to conduct a population-based assessment of the barriers and facilitators to engaging in the use of technology. The purpose of this study is to conduct a province-wide survey in the Canadian province of British Columbia and to understand the barriers. The research

of this study includes Cross-Sectional method, population-based survey method, Open-text responses method.

According to **S.T.M. Peek** (2017) in this article he describes about the **Origins and consequences of technology acquirement by independent-living seniors: towards an integrative model.** The aim of this study is to understand the origins and consequences of technology acquirement by independent-living older adults. The study focus on understanding senior's technology acquirement. The research of this study includes sample method, Qualitative analysis method, Semi-structured interview method, Data collection method, Questionnaire method.

According to **Rachel V. Staddon** (2020) in her article she describes about the **Bringing technology to the mature classroom: age differences in use and attitudes**. The aim of this study was to determine how students use technology for course activities and personal use, and their attitudes towards technology. A factor analysis was carried out in order to determine the dimensions of student attitudes towards technology. The research of this study includes survey design method, pilot survey method, Questionnaire method, Participants for the main study, Data analysis method.

According to **Aline Ollevier** (23 November 2020) in her article she describes about the **How can technology support ageing in place in healthy older adults?** A systematic review. The objective of this study is to identify technologies that have been rigorously evaluated for supporting the ageing in place of healthy older adults. The aim of this study is to Promoting healthy behaviors to prevent or reduce illness and disability among the older adults. The research of this study includes strict testing method, The subjective and objective method, Data analysis method.

According to **Hsien-Chang Tsai** (2015) in his article she describes about the **A Senior Teacher's Implementation of Technology Integration**. The aim of this study focused on a junior high school biology teacher with 17 years of instructional experience. This study examined the teacher's perspectives, influencing factors, and professional development regarding technology use in instruction. The research of this study includes semi-structured interview method, class room observation method, Research design method, Data analysis method.

According to **Yazdani**-**Darki** in this article he describes about the Older **Adults' Barriers to Use Technology in Daily Life**: **A Qualitative Study.** The aim of this study to improve older adult independence, functional performance, and health. The purpose of this study was to explore older adults' experiences of barriers regarding the use of electrical household appliances in their daily life. The research of this study includes qualitative study method, Data were collected via face-to-face semi-structured interview method.

According to **Chainwoo Lee** in her article she describes about the **Technology and aging: the jigsaw puzzle of design, development and distribution**. The aim of this study to improve understanding of new technologies and their capabilities among older adults. The objective of this study to improve convenience, connectivity and care for older adults and families in a rapidly aging world. The research of this study includes data collection method.

According to **Najmi Najiha Mohd Zaid** (February 2023) in this article she describes about the **Elderly and their barriers to accepting and learning to use technology: A scoping review**. The aim of this study identifying barriers and challenges of elderly learning technology. The objective of this study to improve the state of cognitive abilities among the elders, thus increasing their acceptance of modern technology. The research of this study includes questionnaire method.

According to **Maurita T. Harris** in this article she describes about the **Older Adults and Smart Technology: Facilitators and Barriers to Use.** The aim of this study, we explored the experiences and attitudes of eighty older adults including those who had prior experience and those who had never used smart technologies through an online survey. The objective of this survey to assess the smart technologies older adults are using. The research of this study includes online survey method, t-tests method, descriptive statistics method.

According to **Ortal Cohen Elimelech** in this article he describes about the **Technology use characteristics among older adults during the COVID-19 pandemic: A cross-cultural survey.** The aims to screen older adults' technology-use characteristics across social, leisure, and education domains during the COVID-19 pandemic from a cross cultural viewpoint. The factors that play an imperative role in supporting and enhancing the usability of technology among older adults. The research of this study includes Interview method and qualitative study method.

According to **Ryan A Mace** in this article he describes the **Older adults can use technology: why healthcare professionals must overcome ageism in digital health.** The aim of this study older adults rapidly adopted technology for healthcare, known as digital health, during the COVID-19 pandemic. Research can increase representation by broadening eligibility criteria. The research of this study includes qualitative interview method.

According to **Ben Y. F. Fong** (15 July 2022) in this article he describes about **The use of technology for online learning among older adults in Hong Kong.** The aim of this study presented here investigated the attitudes of older adults towards technology adoption for online learning. In this study we used a qualitative approach to examine factors that affect technology use for online learning among older adults. The research of this study includes interview method, qualitative descriptive design method.

According to **William J. Chopik** in this article he describes about the **The Benefits of Social Technology Use Among Older Adults Are Mediated by Reduced Loneliness.** The aim of this study was to describe the benefits of technology use in 591 older adults from the 2012.The current study examines the association between using technology for social connection and health and well-being. The research of this study includes sample method and procedure method.

According to **Nancy. M. Gell** (2013) in her article she describes about the **Patterns of technology use among older adults with or without disabilities**. The aim of this study was to describe prevalence of technology use among adults ages 65 and older, particularly for those with disability and activity-limiting symptoms and impairments. The research showed that advancement of age was a major factor which influences the frequency of technology usage patterns among older adults. The research of this study includes sampling method, Questionnaire method and interview method.

According to **Helena Blazun Vosner** (2014) in her article she describes about the **Elderly People's Interaction with Advanced Technology**. The purpose of this study was to find out what are the elderly people’s reasons for not using advanced technology, and finally how elderly people are being motivated to use advanced technology. The research showed the familiarity with advanced technology by elderly people, reasons for not using advanced technology, motivation of elderly people to use technology. The research of this study includes Random sampling method and non standardized research Questionnaire method.

According to **Sebastiaan T.M. Peek** (2015) in his article he examines the **Older adults reasons for using technology while aging in place.** The preference of older adults to age in place or to live independently at home, rather than in an assisted living facility is widely recognized. At the same time, they also willingness to contribute to the design of technologies that would facilitate aging independently. Participants frequently mentioned the challenges of independent living. The use of tech was only one of several behavioral options to cope up with challenges in the domain of independent living. The use of technology and technology related attitudes and beliefs were also influenced by technology Suppliers home and agencies care providers that could provide financial compensation. Participants commented on the physical environment and this appeared to influence their use of tech as well their tech related attitudes and beliefs. The level of technology use in the context of aging in place is influenced challenges in the domain of independent living, personal thoughts of technology use, the influence of social network, the role of physical environment , influence of organizations, and the behavioral operations. The research of this study includes sampling and Semi structured interview.

According to **P. Vacek** (2017) in his article explains about the **Digital Technology in the Contemporary Lives of Senior Citizens**. In today's scenario, technology is advancing day by day with newer innovations and discoveries. Though it eased our daily lives we became dependent to it for everything. In the same way modern technology became a integral part of the lives of children and young people it is being used by senior citizens and older adults as well. The aim of this research is to analyse the technology integration among the senior citizens with respect to their usage patterns. The research methods for this particular study includes method of dialogue, case studies and observation. The aim of the study was to analyse whether the senior citizens was in contact with the modern technology and its functions as it is relevant for them to be aware of it for better integrating with their fellow beings.

According to **Niamh Caprani** (2012) in her article she describes about the **Technology use in everyday life: Implications for designing for older users**. This study examines the experience and attitudes of older adults towards technology and how they compare with younger age groups. The study focuses on the experience and attitudes of older adults towards technology and how they compare with younger age groups. The benefits of technology and technological devices can fulfill a number of rolls, including a sense of security and peace of mind, connectedness to the outside world and they can also live independently in their homes, social interaction remains an important factor for every day wellbeing. The research includes questionnaire method and snowball sampling method.

According to **Mirjana Pejić Bach** (2023) in her article she describes about the **Internet Usage among Senior Citizens: Self-Efficacy Social Influence Are More Important than Social Support.** This study delves into how self-efficacy, social

support, and influence affect Internet usage among Croatian senior citizens. The research aimed to show the extent to which social influence, self-efficacy, and social support are associated with the intensity of Internet use and reducing barriers to Internet use among older users. focus on the educational programs fostering perceived self-efficacy of Internet usage among senior citizens. The research of this study includes Descriptive statistics, confirmatory factor analysis, and structural equation modelling are used to analyse and test the data and hypotheses.

According to **Zoe Roupa** (January 2010) her article she describes about **The use of technology by the elderly.** The purpose of this research was to explore whether the elderly were familiar with modern technology. The sample of this research consisted of 300 people(134 men and 166 women) aged 65-85 + years .This research showed the ability of the elderly to meet with the rapidly advancing technology and mainly the use of everyday appliances and devices, such as household appliances. The research of this study includes Questionnaire, personal interviews.

According to **Stephen Foster**(June 2017)her article he describes the **Adaptations in the Age of Technology in Seniors**. We developed a structured survey to investigate the frequency of utilization of technology. The aim of this study was to assess how older individuals interacted with technology. This research has demonstrated continued adoption and integration of modern technology into the daily lives of older individuals. The research of this study includes Questionnaire method.

According to **O.A. Anikeeva** (May 2019) her article she describes about the **IT and Computer Technologies for Education of Senior Citizens and Improving the Quality of Their Life.** The objective of the research was to study the opportunities for improving the efficiency of education of senior citizens. The research of this study includes participant observation, Questionnaire method, survey method.

According to **Susan L. Gatto** (2008) in her research **Computer, Internet, and E - mail use among Older Adults :Benefits and Barriers** focuses on the Benefits of computer use listed by these elders included a sense of connectedness, satisfaction, utility, and positive learning experiences. Barriers included frustration, physical and mental limitations, mistrust, and time issues. Professionals who teach and care for older adults need to be aware of the characteristics of older computer users. They also need to know the perceived barriers and benefits of computer, Internet, and e-mail use in order to tailor education and interventions to this population. An increasing number of older adults are using computers for communication, entertainment, and information. This descriptive study examined the perceived benefits and barriers encountered by 58 older adults.

According to **Anna Dickinson** (2008) in her study **Promoting older adult's well being through Internet training and use. Response to Shapira et al** focuses on the psychological impact of learning how to use computers and the Internet in old

age, hypothesizing that such activities would contribute to seniors' well-being and personal sense of empowerment Both groups were administered measures of physical functioning, life satisfaction, depression, loneliness and self-control at pre- and post-intervention four months later. semi-structured interviews were conducted with participants who finished the computer course. ANCOVA was employed for controlling the effects of control variables and pre-intervention differences on participants who completed the activities. Results showed a significant improvement among participants in the intervention group in all measures except physical functioning, whereas deterioration in all measures was detected in the comparison group. Computer and Internet use seems to contribute to older adults' well-being and sense of empowerment by affecting their interpersonal interactions, promoting their cognitive functioning and contributing to their experience of control and independence.

According to **Minnamari Nauman** (2007) in her study **Guiding the elderly into the use of computers and internet**. Lessons taught and learnt focuses on the need to guide elderly into the digital world. In the current scenario services are brought or be in brought into digital format and available from the internet. However we should guide elderly people into new world from their motivation, life experiences and abilities. In her research she mentioned on the oneway teaching of elderly people of age 52 to 74 for basic skills in computer. Study is based on the experiences gained from two 20 Hour elementary computer courses held in the village of Joroinen, Finland in spring 2007. Data was gathered via pre-interviews and post- WWW-questionnaire. During the course, ethnographic methods were also used in case of observations and short field notes. Experiences from Seniors' Club were also utilized. Elderly people do need more time, very structured outline and instructions. However, they are very eager to learn and also possess capabilities for that. The main goal of the study was to inspire seniors to use ICT and to get rid of the fear of computers. This paper also presents the rules of thumb in teaching the elderly and discusses the task of course-design.

According to **Bucy EP** (2000) in her article **Social access to the Internet**. The relative costs and expertise associated with using the Internet, labeled technological and social access, have led to a concern about the rise of a “digital divide” between information haves and have-nots. To address whether and to what extent the Internet has become a medium of the masses and to identify the factors associated with social access to the Internet, I examine Internet use data from two statewide surveys, the Carolina Poll and the Indiana Poll, conducted during spring 1998.

According to **Cutler SJ,** (2003) in her article **Age differences in home computer availability and use.** The purpose of this study was to determine whether age differences in home computer availability and use are due to variations in compositional characteristics (eg, income or disabilities) of age cohorts. Methods.

Data are drawn from the September 2001 Current Population Survey and its supplement on computer and Internet use.

According to **Czaja SJ** (2007), Lee in her article **The potential influence of the internet on the transition to older adulthood**. New dynamics in old age: individual, environmental, and societal perspectives.

According to **Jeffry James** (2011) in her article **Information Development** There is widespread agreement that skills are a major determinant of Internet use in developing countries. There is much less discussion however of what such skills actually comprise and how they are best measured. This paper addresses these and other issues in an attempt to say what is known about Internet skills in developing countries and what still needs to be understood.

According to **Carol Taylor** (2000) in her article **Trends in computer use among international students**. The increasing use of computers in North American higher education as well as in language instruction and assessment raises concerns access and equity for many international students, who may be caught the wrong side of the digital divide. As Warschauer (this issue) p out, a very small percentage of the world's population (5% by a estimate) has access to the Internet, but for English language tea the figures of greater interest are those indicating the level of com access among English language learners globally. This report press profile of the computer familiarity of a subset of English lang learners-students hoping to participate in higher education in N America-and examines whether this profile has changed with relatively brief period. Computer familiarity was defined as frequency kind of computer use, frequency of use of English word- process programs, and frequency of use of the Internet. The results pro concrete data on an issue of particular importance to English academic purposes (EAP) teachers.

According to **Anne Morris**, (2007) in her article **Internet use and non-use: views of older users.** This paper reports the results of two connected surveys of computer and Internet use among the older population in the UK. One hundred and twenty questionnaires and interviews were completed with participants aged over 55 in Derbyshire and 353 questionnaires and interviews with over 50s in Scotland. Rates of use, computer and Internet activities, and reasons for use and non-use were investigated. These were backed up by four semi-structured interviews with IT trainers, describing experiences and issues of training this age group. The results indicate a “grey” digital divide, with many older people missing out on the benefits that computers and the Internet can provide. They also indicate some of the reasons why older people do not use computers and the Internet more. These suggest some

practical ways forward, highlighting the importance of changing older people's misconceptions about computers, better informing them about what they are, what they can do and how they can be of real practical use.

According to **SE Korupp** (2006) in her article **Korupp SE. No Man is an Island: the influence of knowledge, household settings, and social context on private computer use**. In modern societies, the digital divide indicates the emergence of a new form of social inequality. The theoretical model presented in this paper captures effects on the micro-, meso-, and macro-level. The empirical findings are replicated for the years of 1997 and 2001 of the GSOEP (the German Socio-Economic Panel). Large net effects are observed on the macro-level, for gender, Turkish ethnicity, and generation.

According to **Lawton MP**.in her article **Future society and technology**. In a sustainable investment in the future. Amsterdam: The work in DG XVI concerns regional and cohesion policies. My directorate-which is one of seven in DG XVI-is responsible for the coordination and evaluation of these structural policies. Our task is to contribute to improving the efficiency and effectiveness of the structural funds which amount to about one third of the budget of the European Union. The main purpose of these funds is to help local communities and regions to help themselves, ie to promote investment directed towards structural problems hindering economic

According to **Loges W.E** (2001), Jung J-Y.in her article **Exploring the digital divide: Internet connectedness and age**. The existence of a digital divide between old and young Americans has been well documented. It is usually defined as access or lack of access to the Internet. This study adds context to the understanding of the digital divide by demonstrating differences in Internet connectedness, a multidimensional concept that includes consideration of the scope and intensity of the relationship that people develop with the Internet. Age is shown to be significantly associated not just with access, but with a tendency to pursue a more narrow

According to **Blythe Suezann Harrell** (2000) in her article **Uses and Gratifications of the Internet** With the ever-increasing use of the Internet, researchers are curious how the Internet is used, who is using the Net and the gratifications users gain while using the Internet. People across the world use the Internet for different reasons: shopping, communication with friends and families through electronic mail, business transactions and communication, and entertainment are among the many opportunities of the Net.

CHAPTER -3

METHODOLOGY

Theoretical definition

Assessing technology integration and usage patterns among senior citizens in Kerala is crucial for understanding how this demographic engages with and adopts technological innovations. As Kerala rapidly embraces digital advancements, particularly in the urban areas, it is essential to explore how senior citizens, often a marginalized group in discussions around technology, navigate this changing landscape. This research seeks to provide a theoretical framework for understanding the dynamics of technology adoption among senior citizens in Kerala, considering factors such as accessibility, digital literacy, and the impact of socio-cultural norms on their technology usage patterns. By examining these factors, we can gain valuable insights into how to effectively integrate technology into the lives of senior citizens, ensuring that they are not left behind in the digital age.

Herbert Marcuse , a prominent Frankfurt School philosopher, viewed technology as a double-edged sword. While acknowledging its potential for liberation and efficiency, he also highlighted its capacity for domination and alienation. In the context of senior citizens, Marcuse's perspective suggests that technology, despite its advancements and conveniences, can sometimes exacerbate feelings of isolation or exclusion among older individuals. This is especially relevant as technology evolves rapidly, potentially leaving some seniors behind in terms of digital literacy or access to necessary resources. Marcuse's view underscores the importance of considering not just the benefits but also the potential pitfalls of technology in the lives of senior citizens, advocating for a balanced approach that empowers them while addressing their unique needs and challenges.

Seymour Papert , a key figure in educational technology, viewed technology integration as a means to enhance learning and cognitive development. His theory of constructionism emphasizes hands-on, experiential learning facilitated by technology. In the context of senior citizens, Papert's perspective suggests that technology integration should focus on empowering older individuals to actively engage with technology to construct their understanding and knowledge. This approach implies providing seniors with opportunities to explore and experiment with technology in meaningful ways that align with their interests and needs. For senior citizens, technology integration should not only aim to enhance their digital literacy but also to foster creativity, critical thinking, and problem-solving skills, ultimately leading to a more enriching and fulfilling experience with technology.

Theoretical definitions of " senior citizens " can vary depending on the context and perspective. Generally, senior citizens are individuals who have reached an age typically associated with retirement, often defined as 60 years or older. However, this definition can be flexible and vary by country or organization. From a sociological perspective, senior citizens are often seen as a distinct social group with specific needs and characteristics, including potential challenges related to health, mobility, and social integration. They may also be viewed as a resourceful demographic with unique experiences, wisdom, and contributions to society.

Statement of the Problem

In the global context, understanding technology integration and usage patterns among senior citizens is important as the world is moving to the aging population which increasing constantly in the current scenario.According to a report by the United Nations, by 2050, one in six people will be over the age of 65, highlighting the need to address the digital divide among seniors. Statistics from the Pew Research Center reveal that while the majority of older. adults own a cell phone, smartphone ownership remains lower among when compared to younger age groups. Additionally, data from the World Health Organization suggests that access to digital health technologies can improve healthcare outcomes for seniors, yet disparities in technology access persist across different regions and income levels. A study by the International Telecommunication Union highlights the importance of tailored digital literacy programs for seniors, emphasizing the role of education in fostering technology adoption and integration.

In India's context, statistics from the National Sample Survey Office (NSSO) indicate that the elderly population who are above 60 years old expected to reach over 340 million by 2050. However, the Digital India Report 2020 highlights that only about 26% of senior citizens in India have access to the internet.which means most of them were not. Very concerned about technology. data from the Telecom Regulatory Authority of India (TRAI) suggests that smartphone penetration among seniors remains relatively low compared to other age groups, with only a fraction of this demographic using smartphones for internet access.According to a study by the Internet and Mobile Association of India (IAMAI), digital literacy rates among older adults in India are significantly lower than the younger age groups, with only a small percentage actively engaging with the digital technologies for tasks beyond basic communication.

In the context of Kerala statistics from the Kerala State IT Mission, as of 2020, around 30% of the state's population is aged 50 years and above, indicating elderly population. Another study conducted by the Kerala State Planning Board suggests that digital literacy rates among older adults in Kerala are relatively low, with only a fraction of this population actively using digital technologies for tasks beyond basic communication.The reports from the Kerala government indicate that while there has been a gradual increase in smartphone penetration in the state, access to the internet among senior citizens remains limited, especially in rural areas. Moreover, cultural factors and generational gaps may influence technology adoption rates among the elderly in Kerala.

General Objective

To conduct a sociological study on the topic Assessing technology integration and usage patterns among senior citizens with special reference to Kerala.

Specific Objectives

*To find out the socio-economic profile of the senior citizens

*To determine the level of technology adoption and integration among senior citizens.

*To identify the types of technology devices and applications commonly used by senior citizens.

*To investigate the factors influencing the willingness of senior citizens to adopt and utilise technology in their daily lives.

*To explore the perceived benefits and challenges of technology integration from the perspective.

*To analyze the impact of technology integration on the well-being of senior citizens of senior citizens.

Hypotheses

*Experienced seniors are more likely to use technology in their daily lives than inexperienced ones.

*Seniors who find technology easy to use are more likely to use it daily.

*Seniors who see technology as helpful are more likely to use it regularly.

*Seniors who are supported by family, friends, or peers are more likely to use technology.

*Healthier and more mobile seniors are more likely to use technology than those with limited mobility or health issues.

*Seniors who can easily access technology are more likely to use it daily.

Definition of Concepts

Operational definition

Technology

Technology refers to the tools, devices, and systems that enable senior citizens to enhance their daily lives, engage in activities, communicate, access information, and maintain their independence through electronic, digital, or mechanical means."

Technology Integration

It involves the seamless incorporation of electronic devices, digital platforms, and mechanical systems into the daily routines and activities of senior citizens, enabling them to access information, communicate, manage health, engage in social interactions, and enhance their overall quality of life.

Senior citizens

Senior citizens are individuals who have reached a specific age threshold, typically around 60 years or older, and are considered to be in the later stages of life. This age group often experiences changes in physical, cognitive, and social aspects, which can influence their needs, preferences, and roles within society.

Independent Variables

Age : This refers to the chronological age of the senior citizen and how it relates to their adoption and integration of technology. Older age may be associated with different attitudes, preferences, and challenges in using technology compared to younger age groups.

Gender : Gender refers to the biological and social characteristics that differentiate between male and female. Gender may influence technology adoption and integration due to differences in interests, experiences, and societal expectations related to technology use.

Education : Education level indicates the senior citizen's formal education attainment, which can influence their familiarity with technology, digital literacy skills, and ability to adapt to new technologies.

Income : Income reflects the financial resources available to the senior citizen, which can impact their access to and ability to afford technology. Higher income levels may correlate with greater access to technology and resources for learning and adoption.

Occupation : Occupation refers to the senior citizen's current or past job or professional role. Occupation can influence technology adoption and integration through exposure to technology in the workplace and the development of relevant skills and attitudes.

Frequency of technology usage : This refers to how often the senior citizen uses technology in their daily life. Higher frequency of usage may indicate greater familiarity and comfort with technology, potentially leading to higher adoption and integration levels.

Types of technology : This refers to the specific technological tools and devices used by the senior citizen, such as smartphones, tablets, computers, or smart home devices. The types of technology used can influence adoption and integration outcomes.

Proficiency of technology : Proficiency indicates the senior citizen's skill level and comfort in using technology. Higher proficiency may lead to more successful adoption and integration of technology into their daily lives.

Dependent variable

Health and Wellbeing : This variable focuses on physical, mental, and emotional health and encompasses factors such as overall health status, quality of life, happiness, satisfaction, stress levels, and any specific health-related outcomes.

Attitude towards technology : This variable measures individuals' perceptions, beliefs, and feelings towards technology. It includes attitudes towards specific technologies, such as smartphones or social media, as well as general attitudes towards technology adoption, usage, and its impact on society and personal life. Attitudes may range from positive to negative and can influence technology acceptance, adoption, and usage patterns.

Universe

The universe in the context of assessing technology integration and usage patterns among senior citizens refers to the entire population of senior citizens in Kerala. This includes individuals aged 60 and above residing in various settings such as urban, rural, and semi-urban areas. The universe encompasses a diverse range of seniors with varying levels of education, income, health status, and access to resources. Understanding the characteristics and needs of this universe is essential for conducting a comprehensive assessment of technology integration and usage patterns among senior citizens.

Sample

A sample of 50 senior citizens in Kochi City was selected using convenience sampling. Data was collected through a questionnaire circulated via Google Forms. The questionnaire focused on types of technology used, frequency of usage, proficiency levels, and attitudes towards technology. Data was analyzed to identify trends and patterns in technology integration among senior citizens in Kochi City.

Tools of Data Collection

Questionnaire

The questionnaire method involves gathering data through a structured set of written questions, typically administered to a group of respondents, to collect information about their attitudes, opinions, behaviors, or characteristics. It's a common research tool for quantitative data collection and analysis.

Analysis of Data

Using SPSS (Statistical Package for the Social Sciences) for the analysis of data on technology integration and usage patterns among senior citizens can provide valuable insights. Various statistical tests and analyses to uncover trends, relationships and patterns within the data can be performed.

Conclusion

In conclusion, technology integration among senior citizens is steadily increasing, with usage patterns varying based on individual preferences and needs. As more user-friendly devices and tailored training programs become available, seniors are finding meaningful ways to incorporate technology into their lives, enhancing communication, access to information, and overall quality of life.

CHAPTER - 4

DATA ANALYSIS

Analysis of Data

In an increasingly digital world, understanding technology adoption and usage among senior citizens is paramount. This research aims to explore the patterns and challenges of technology integration among senior citizens in Kochi city. With a focus on 50 senior citizens, this study will investigate their current technology usage, their willingness to adopt new technologies, and the factors influencing their adoption decisions.

By examining the barriers and enablers of technology adoption, this research seeks to provide insights into how technology can be better tailored to meet the needs of senior citizens. Understanding their preferences and challenges will not only benefit technology designers and developers but also policymakers aiming to bridge the digital divide among different age groups. Through this study, we hope to contribute to a more inclusive and accessible digital society for all.

Socio-economic Profile of Respondents

The socio-economic profile is important in understanding technology adoption and usage among senior citizens, influencing both patterns and challenges in technology integration. Higher socio-economic status (SES) typically affords better access to technology and digital literacy, enabling more robust interaction with modern devices and the internet. Conversely, seniors from lower SES brackets may face hurdles such as limited access to technology, lower digital literacy, and health-related challenges that impede their ability to engage with digital tools. The role of socio-economic factors extends to the nature of social support networks, which can significantly influence a senior's willingness and ability to adopt new technologies. Moreover, the perceived relevance and utility of technology can vary significantly across different SES groups, affecting their motivation to integrate technology into their daily lives.

Age of the Respondents

Figure 1: Distribution showing Technology integration according to the Age of Senior citizens

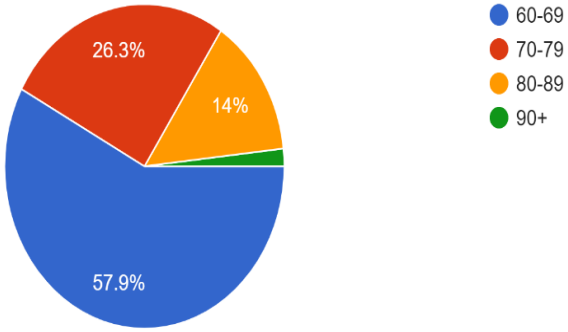


Figure 1 summarizes the age distribution of the elderly respondents. Four age groups are considered: 60-69, 70-79, 80-89, and 90 and above. The frequencies and percentages for each group are provided, indicating that the majority of respondents fall in the 60-69 age range 57.9%. This data makes it evident that the technology usage is more popular among the youngest category of the senior citizens.

Gender of Respondent

Figure 2: Distribution showing Technology integration according to the Gender of Senior citizens

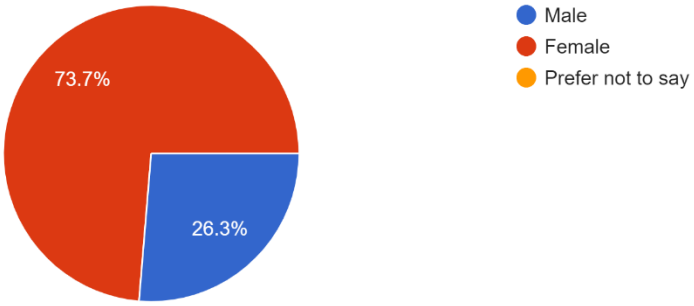


Figure 2 elucidates the gender distribution of respondents in the study, providing crucial insights into the demographic profile of the participants. The data is categorized into two groups: male and female. Among the 57 total respondents, 15 are males, constituting 26.3% of the valid responses, while the majority, comprising 42 respondents 73.7% are females.

Employment status of Respondents

Figure 3: Distribution showing Technology integration according to the Employment status of Senior citizens.

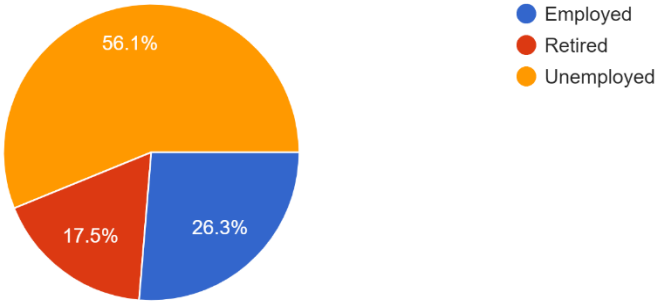


Figure 3 outlines the employment status distribution among the surveyed participants, offering valuable insights into the occupational characteristics of the sample. Three distinct categories are considered: employed, retired, and unemployed. The data indicates that 26.3% of respondents are currently employed, reflecting an active working segment within the study population. Additionally, 16.9% of respondents report being retired, contributing to a cumulative percentage of 43.9%. The majority of respondents, comprising 54.2%, are unemployed, representing a significant portion of the sample. This breakdown of employment status provides essential context for understanding the occupational diversity within the study.

Type of Residence of Respondents

Figure 4: Distribution showing Technology integration according to the type of residence of Senior citizens which includes nuclear family, joined family, retirement home, assisted living.

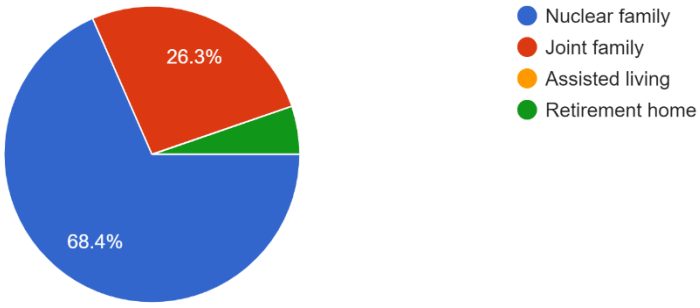


Figure 4 elucidates the type of residence among the Senior citizens, shedding light on the living arrangements within the sampled population. Three distinct categories are considered: nuclear family, joint family, and retirement home. The data reveals that the majority of respondents, comprising 68.4% of the valid responses, reside in nuclear families, signifying a prevalent family structure within the study cohort. Additionally, 25.4% of respondents report living in joint families and a smaller proportion of 5.1%, indicates residence in retirement homes. This breakdown of residence types provides a foundational understanding of the living dynamics within the studied population.

Monthly income of Respondents

Figure 5: Distribution of Technology integration according to the Monthly income of senior citizens.

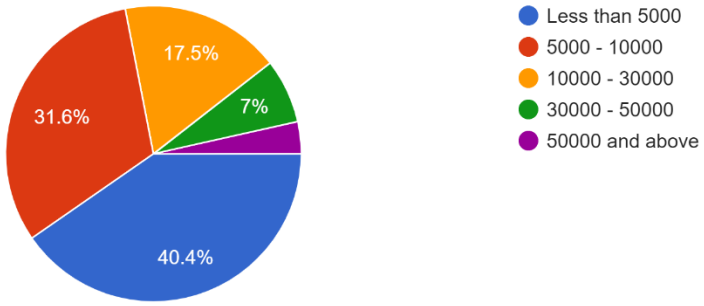


Figure 5 summarizes the monthly income distribution among the Senior citizens in the study, contributing valuable insights into the economic profile of the surveyed population. The data is classified into five income categories : Less than 5000, 5000-10000, 10000-30000, 30000-50000, and 50000 and above. Notably, a significant portion of the respondents 40.4% report a monthly income of less than 5000, highlighting a substantial proportion of individuals with lower income levels within the sample. The subsequent income category shows a gradual increase in income levels, with 30.5% falling within the 5000-10000 range and 17.5% in the 10000-30000 range. This detailed exploration of monthly income offers a nuanced understanding of the economic diversity within the study.

Level of Education of Respondents

Figure 6: Distribution of Technology integration according to the Level of Education of Senior citizens.

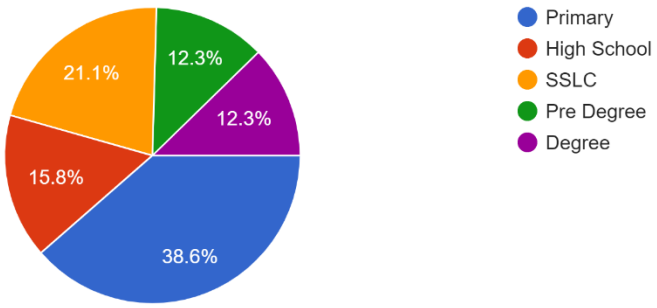


Figure 6 elucidates a detailed overview of the educational attainment levels of Senior citizens in the study, offering valuable insights into the academic background of the surveyed population. The data is categorized into five education levels: Primary, High school, SSLC, Pre-degree, and Degree. The largest proportion of respondents 38.6% have completed primary education, reflecting a significant portion of individuals with basic educational qualifications within the sample. Furthermore, 15.8% have completed high school, 21.1% have an SSLC (Secondary School Leaving Certificate) qualification, and 12.3% each have attained a pre-degree or a degree. This breakdown of educational levels contributes to a comprehensive understanding of the academic diversity within the study.

Level of Technology Adoption and integration among Senior Citizens

This research aims to assess the current level of technology adoption and integration among senior citizens in Kochi city, focusing on a sample of 50 individuals. By understanding the extent to which seniors are utilizing technology in their daily lives and the factors influencing their adoption, this study seeks to shed light on the digital divide among this demographic. Through a combination of surveys and interviews, we will explore the level of technology adoption and integration by senior citizens well as the role of cultural and social factors in shaping their attitudes towards technology. The findings of this research will not only contribute to academic literature but also provide practical recommendations for policymakers and community organizations to enhance the digital inclusion of senior citizens in Kochi city, ultimately improving their quality of life and social connectivity in an increasingly digital world.

Current device usage among Senior citizens

Figure 7: Distribution showing the current device usage frequency among Senior citizens.

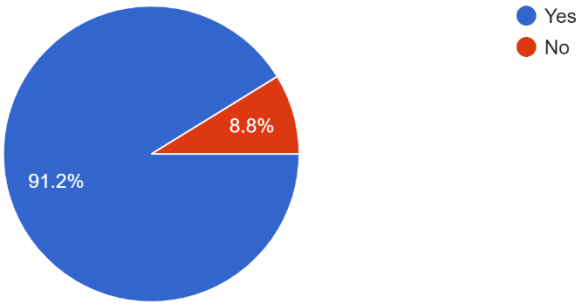


Figure 7 represents information on the current technology device usage among the Senior citizens in the study, offering insights into the prevalence of technology adoption within the surveyed population. The data is categorized into two groups: Yes for those who currently use technology devices and No for those who do not. The majority of respondents 91.2% indicate active technology usage, suggesting a high level of technological engagement within the sample. Conversely, a smaller proportion 8.8% reports not using technology devices. This breakdown of technology device usage provides a foundational understanding of the technological landscape within the study.

Frequency of device usage among Senior citizens

Figure 8: Distribution showing frequency of device usage among the Senior citizens.

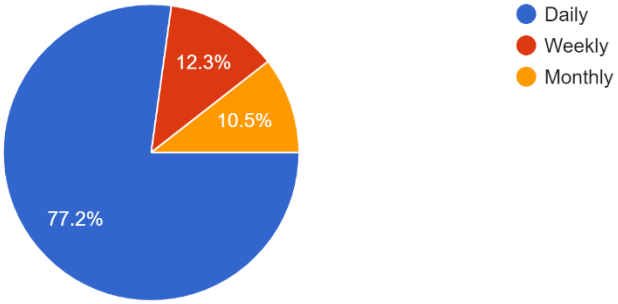


Figure 8 elucidates the frequency of device usage among the respondents in the study, providing insights into the patterns of technology engagement within the surveyed population. The data is classified into three categories: Daily, Weekly, and Monthly, representing the regularity of device utilization. The majority of respondents 77.2% report using devices on a daily basis, indicating a high frequency of technology integration in their daily lives. A smaller proportion engages with devices on a weekly 12.3% or monthly 10.5% basis. This breakdown of device usage frequency provides a detailed understanding of the technology adoption patterns within the study.

Hours spend by Senior citizens in using technology devices

Figure 9: Distribution showing the hours spend by senior citizens using technology devices

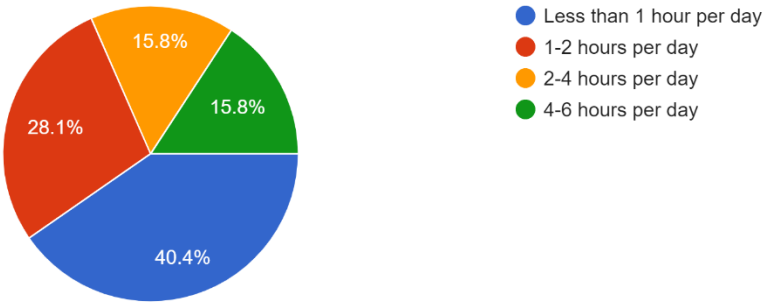


Figure 9 represents a detailed overview of the number of hours spent by Senior citizens on technology usage per day, offering crucial insights into the extent of their digital engagement. The data is categorized into four groups: Less than 1 hour per day, 1 to 2 hours per day, 2 to 4 hours per day, and 4 to 6 hours per day. The majority of respondents 40.4% report spending less than 1 hour per day on technology usage, indicating a significant portion with limited daily

digital interaction. Additionally, 28.1% spend 1 to 2 hours per day, 15.8% spend 2 to 4 hours per day, and an equal proportion spend 4 to 6 hours per day. This provides a detailed understanding of the time investment in digital activities within the study.

Types of technology devices and applications commonly used by Senior Citizens

Today senior citizens are increasingly embracing technology to enhance their daily lives. Among the devices commonly used are smartphones, which offer easy communication with family and friends through calls, messages, and video chats. Tablets are also popular, providing larger screens for reading, browsing, and accessing various applications. Wearable devices like smartwatches are gaining popularity for health monitoring and emergency assistance. Additionally, applications such as social media, health tracking, and entertainment apps cater to their diverse needs, promoting connectivity, health management, and leisure activities.

Regularly used devices by respondents

Figure 10: Distribution showing regularly used devices by Senior citizens

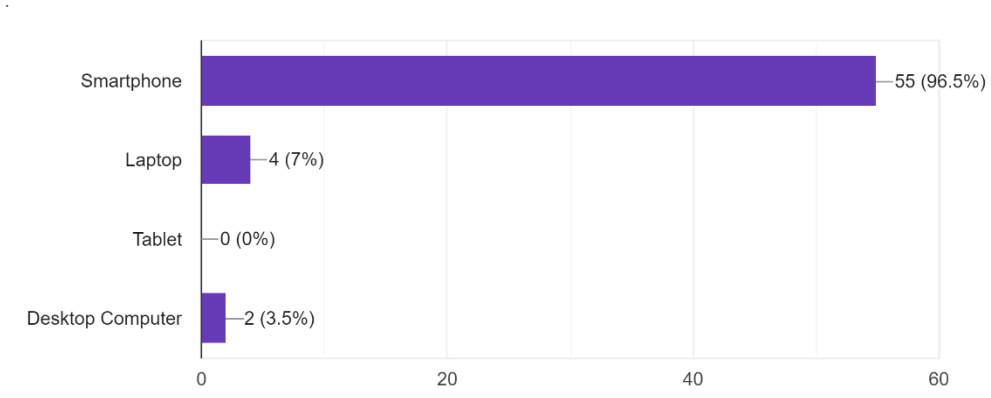


Figure 10 represents an overview of the regularly used devices by Senior citizens in the study, providing crucial insights into the prevalent technological tools within the surveyed population. The data is categorized into various devices, with respondents indicating the devices they use regularly. The majority 89.5% report using smartphones as their primary device, highlighting the ubiquitous nature of mobile technology in daily life. A smaller percentage use laptops 1.8%, desktops 1.8%, a combination of smartphone and desktop 5.3%, or a combination of smartphone and laptop 1.8% . This detailed exploration of regularly used devices provides valuable insights into the technological habits of the study.

Purpose of using devices by respondents

Figure 11: Distribution showing the purpose of using devices by Senior citizens

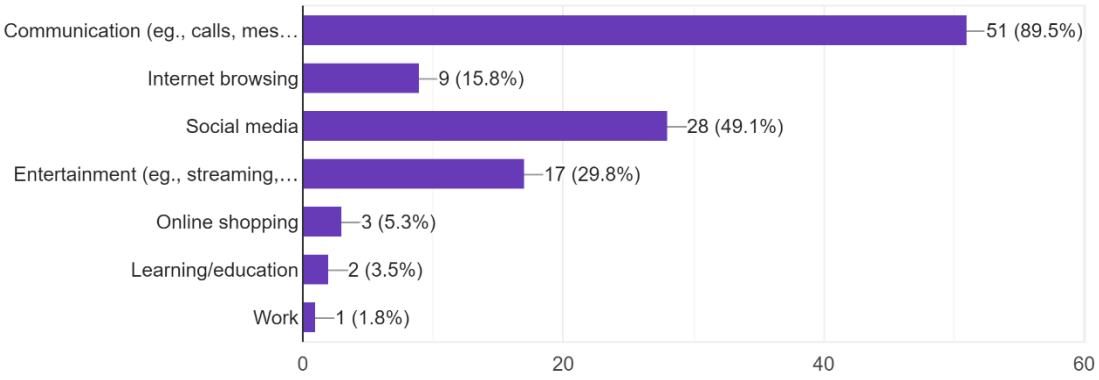


Figure 11 represents a comprehensive breakdown of the purposes for which respondents use devices, offering detailed insights into their technological habits and preferences. The data is categorized into various purposes, indicating the multifaceted roles that devices play in the daily lives of the surveyed population. The most common purpose is communication e.g., calls, messages, with 39.7% of respondents using devices primarily for this function. Additionally, respondents engage in a combination of activities such as communication, internet browsing, and entertainment (e.g., streaming, gaming) 8.6%. Other prevalent purposes include communication, internet browsing, and social media 13.8% , and communication, social media, and entertainment 17.2% . This detailed breakdown of device usage purposes provides a nuanced understanding of the diverse roles technology plays in the lives of the study.

Factors influencing the Willingness of senior citizens to adopt and utilise technology in their daily lives

The willingness of senior citizens to adopt and utilize technology in their daily lives is influenced by a variety of factors. Firstly, individual characteristics such as age, gender, education level, and previous experience with technology play a significant role. Older adults who are more familiar and comfortable with technology are more likely to adopt new devices and applications. Secondly, social factors such as peer influence, social support, and perceived usefulness of technology can impact their willingness to adopt. Additionally, factors like accessibility, affordability, and ease of use also play a crucial role. For instance, user-friendly interfaces and tailored training programs can enhance the adoption of technology among senior citizens. Understanding these factors is essential for designing strategies to promote the adoption and utilization of technology among this demographic.

Usefulness in Health-related information

Figure 12: Distribution showing usefulness in Health-related information regarding Senior citizens

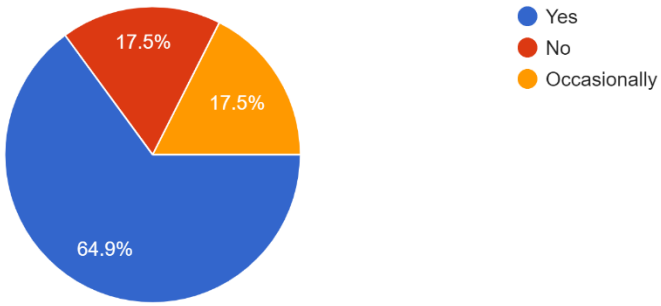


Figure 12 represents the perceived usefulness of technology devices in accessing health-related information among the Senior citizens. The data is divided into three categories: Yes for those who find devices useful, No for those who do not, and Occasionally for those who find them useful occasionally. The majority of respondents 64.9% affirm the usefulness of technology devices in obtaining health-related information. Additionally, 17.5% state that they do not find devices helpful for this purpose, and an equal percentage indicates occasional usefulness. This shows the perceived usefulness of devices in health-related information retrieval contributes valuable insights into the technology's impact on health information access within the study.

Participation of Respondents in virtual social activities

Figure 13: Distribution showing participation of senior citizens in virtual social activities

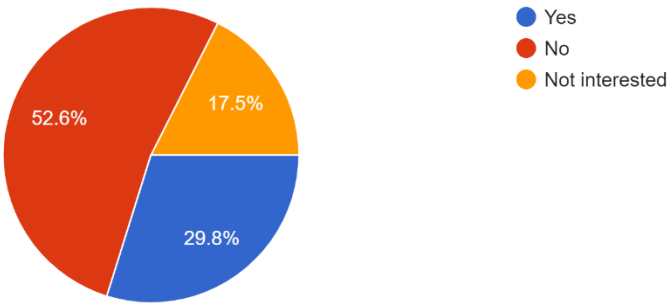


Figure 13 represents data on the participation of Senior citizens in virtual social activities. The sample size comprises 59 respondents. The frequency distribution shows that 17 participants, constituting 28.8% of the total sample, engage in virtual social activities. This group is represented in the Yes category. Meanwhile, 30 respondents, making up 50.8% of the sample, indicated that they do not participate in virtual social activities, as reflected in the No category. Another 10 individuals, accounting for 16.9%, expressed a lack of interest in virtual social activities, categorized as Not interested. The data serves as a valuable insights into the respondents' engagement levels in virtual social activities, shedding light on the prevalence and preferences within the studied population.

Capacity of Respondents to stay updated

Figure 14: Distribution showing the capacity of senior citizens to stay updated

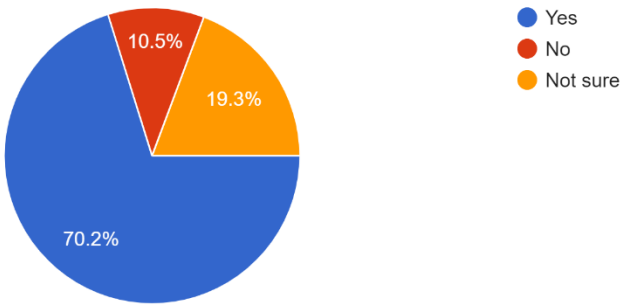


Figure 14 provides insights into the capacity of senior citizens to stay updated . The dataset includes responses from 59 participants. The majority, represented by 40 respondents or 67.8% of the total sample, affirmed their ability to stay updated, categorized as Yes. In contrast, 6 participants, constituting 10.2%, indicated a lack of capacity to stay updated, falling into the No category. A further 11 individuals, making up 18.6%, expressed uncertainty about their ability to stay updated, classed under the .Not sure category. In summary, it serves as a valuable depiction of respondents self-reported abilities to stay updated, contributing to a broader understanding of information awareness within the studied population.

Benefits of Technology usage

Figure 15: Distribution showing the benefits of Technology usage among Senior citizens.

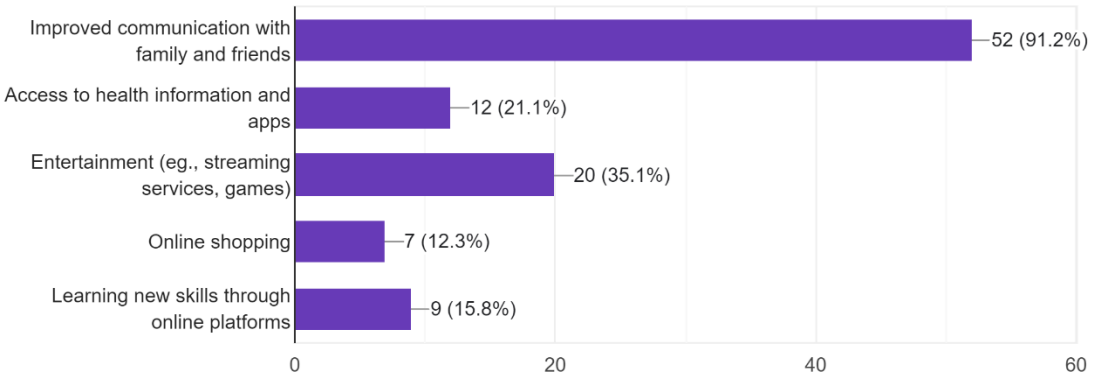


Figure 15 delineates the reported benefits of technology use among the senior citizens offering a comprehensive overview of the diverse advantages attributed to technological engagement. The data encompasses responses from 59 participants. The most frequently cited benefit is Improved communication with family and friends, identified by 26 respondents, constituting 44.1% of the total sample. This is followed by a combination of benefits, with 11 participants 18.6% emphasizing Improved communication with family and friends alongside Entertainment e.g. streaming services, games. Additionally, various respondents highlighted a mix of advantages, such as Access to health information and apps, Learning new skills through online platforms, and Online shopping, either individually or in combination.

Factors contributing to Technology adoption

Figure 16: Distribution showing factors contributing to Technology adoption by senior citizens

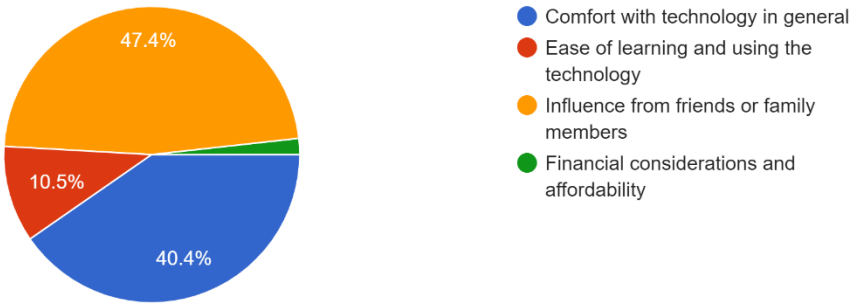


Figure 16 represents key factors contributing to the adoption of technology, offering valuable insights into the motivations behind senior citizen's engagement with technological tools. The dataset comprises responses from 59 participants. The most frequently cited factor is Comfort with technology in general, reported by 23 respondents, representing 39.0% of the total sample. Following closely, Financial considerations and affordability emerged as a significant factor, influencing 27 participants, constituting 45.8% of the respondents. Ease of learning and using the technology was highlighted by 6 participants 10.2%, showcasing the importance of user-friendly interfaces and accessibility in driving technology adoption. Additionally, one participant 1.7% noted Influence from friends or family members as a contributing factor. These insights contribute to a detailed understanding of the dynamics shaping individuals' decisions to adopt and engage with technological advancements.

Benefits and challenges of technology integration from the perspective of senior citizens

Senior citizens' perspectives on technology integration encompass both perceived benefits and challenges. On one hand, technology offers numerous benefits, such as enhancing communication with distant relatives, accessing information and entertainment, and improving health management through various apps and devices. Technology can also promote independence by enabling seniors to perform daily tasks more easily. However, challenges exist, including a learning curve for new devices and software, concerns about privacy and security, and potential feelings of isolation or frustration when technology does not work as expected. Understanding these perspectives is crucial for designing technology that meets the needs and preferences of senior citizens while addressing their concerns.

Challenges in adopting and using Technology

Figure 17: Distribution showing challenges faced by senior citizens in adopting and using Technology

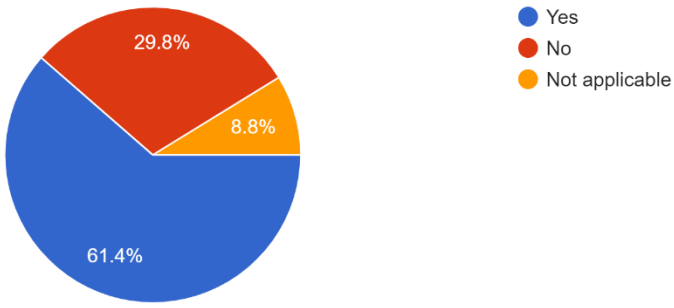


Figure 17 represents the challenges faced by senior citizens in adopting and using technology, providing crucial insights into the barriers that hinder technological integration within the surveyed population. The dataset comprises responses from 59 participants. The majority, represented by 35 respondents 59.3%, acknowledged encountering challenges in adopting and using technology. On the contrary, 17 participants 28.8% reported not facing any challenges in this regard. Understanding these challenges is crucial for devising strategies to enhance technology accessibility and usability, ultimately fostering more inclusive and user-friendly technological environments.

Specific challenges in using Technology

Figure 18 : Distribution of specific challenges faced by senior citizens in using Technology

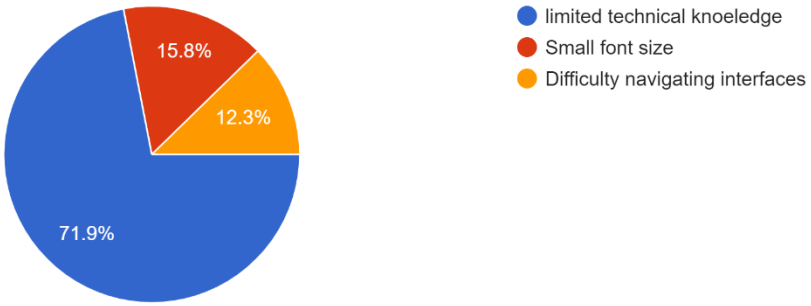


Figure 18 represents the specific challenges faced by senior citizens in using technology, providing a detailed understanding of the obstacles encountered within the surveyed population. The dataset includes responses from 59 participants. The most prevalent challenge identified is Limited technical knowledge, cited by 41 respondents, constituting 69.5% of the total sample. This underscores the importance of addressing knowledge gaps to enhance technology literacy and proficiency among users. Another notable challenge is Small font size, reported by 9 participants 15.3%, highlighting the significance of accessibility features and user interface design considerations, especially for individuals with visual impairments or difficulties in reading small text. Difficulty navigating interfaces is identified as a challenge by 7 respondents 11.9% , emphasizing the importance of user-friendly interfaces to facilitate a seamless and positive user experience.

Reluctance to adopt new Technology

Figure 19 : Distribution showing reluctance by Senior citizens to adopt new Technology

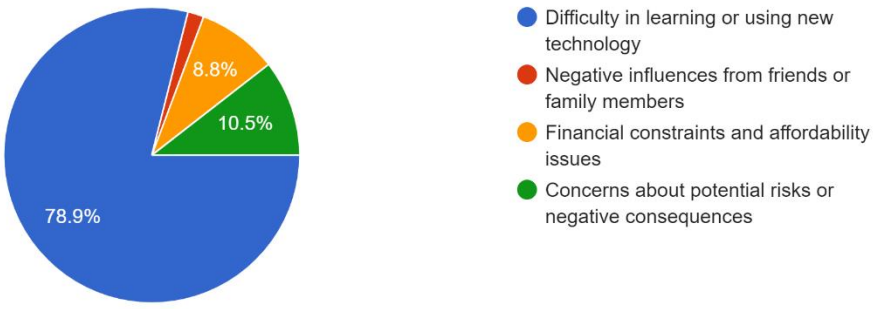


Figure 19 represents the factors contributing to senior citizen's reluctance to adopt new technology, shedding light on the various considerations that may hinder the acceptance of innovative technological tools within the surveyed population. The dataset includes responses from 59 participants. The most frequently cited reason for reluctance is Difficulty in learning or using new technology, acknowledged by 45 respondents, constituting a substantial 76.3% of the total sample. This underscores the significant impact that the ease of learning and using new technology has on adoption rates. A minor proportion, represented by 1 participant 1.7%, noted Negative influences from friends or family members as a factor contributing to their reluctance, highlighting the potential external pressures influencing individual decisions.

Financial constraints and affordability issues were reported by 5 participants 8.5%, emphasizing the role of economic factors in shaping individuals' attitudes towards adopting new technology. Concerns about potential risks or negative consequences emerged as a factor for 6 respondents 10.2%, indicating the importance of addressing individuals' apprehensions and ensuring the safety and security of new technologies.

Seeking support for Technological challenges

Figure 20: Distribution showing the support seeking by Senior citizens for Technological challenges

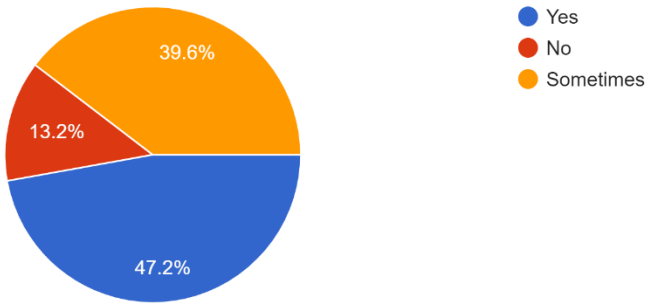


Figure 20 represents the willingness of senior citizens to seek support when facing technological challenges, offering valuable insights into their coping mechanisms and the availability of support networks. The dataset comprises responses from 59 participants. A significant portion, consisting of 25 respondents 42.4% , indicated that they actively seek support when confronted with technological challenges. This emphasizes the importance of a supportive environment and access to resources for addressing issues related to technology use. Conversely, 7 participants 11.9% reported not seeking support when facing technological challenges. The category Sometimes was selected by 21 respondents 35.6%, representing those who seek support intermittently. This nuanced response indicates a varied approach to seeking assistance, possibly influenced by the nature and complexity of the technological challenges encountered.

Challenges with Technology for socializing

Figure 21: Distribution showing challenges faced by senior citizens in Technology for socializing

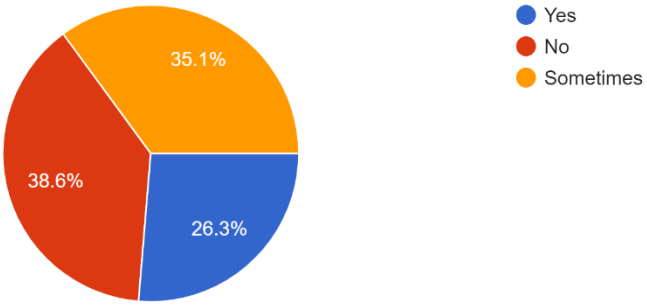


Figure 21 represents data on the challenges faced by senior citizens with technology. When it comes to socializing, providing valuable insights into the impact of technology on interpersonal connections within the surveyed population. The dataset includes responses from 59 participants. Among the respondents, 15 individuals 25.4% acknowledged facing challenges with technology for socializing, highlighting potential barriers that may impact their ability to connect with others using technological platforms. Additionally, 22 participants 37.3% reported not experiencing challenges with technology for socializing. This suggests a degree of ease or comfort in utilizing technology for social interactions among a significant portion of the surveyed population. For 20 respondents (33.9%), the response was Sometimes, indicating a nuanced and varied experience with challenges in technology-enabled socialization.

Technological challenges by respondents in Health-care

Figure 22: Distribution of Technological challenges by senior citizens in Health-care

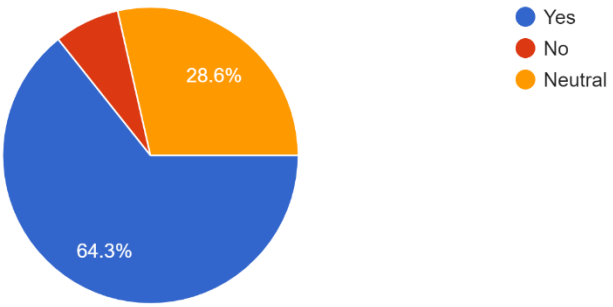


Figure 22 represents insights into the technological challenges senior citizens encounter in the realm of healthcare, offering valuable information on the intersection of technology and health within the surveyed population. The dataset includes responses from 59 participants. Among the respondents, 15 individuals 25.4% reported facing challenges with technology in the healthcare context. This suggests potential barriers that may impact individuals' experiences with healthcare technologies, ranging from electronic health records to telemedicine platforms. Additionally, 22 participants 37.3% indicated not experiencing technological challenges in the healthcare domain. This reflects a significant portion of the surveyed population in healthcare technologies accessible and user-friendly. For 20 respondents 33.9% , the response was Sometimes, indicating a nuanced and varied experience with technological challenges in healthcare.

Impact of technology integration on the well-being of senior citizens

The integration of technology has a profound impact on the well-being of senior citizens, positively influencing various aspects of their lives. By facilitating easier communication with loved ones, technology helps reduce feelings of loneliness and isolation, promoting mental and emotional well-being. Health-tracking devices and applications empower seniors to manage their health proactively, leading to improved physical well-being and a better quality of life. Additionally, access to information and entertainment through technology enhances cognitive function and provides avenues for learning and personal growth, contributing to overall well-being. Understanding these impacts is essential for harnessing the full potential of technology to enhance the lives of senior citizens.

Technological impact on quality of life of the Respondents

Figure 23 : Distribution showing Technological impact on quality of life of Senior citizens

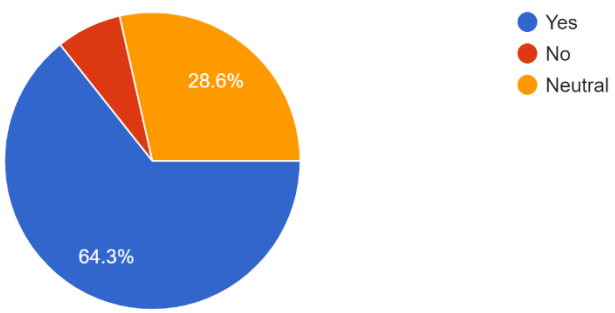


Figure 23 provides insights into the perceived impact of technology on the quality of life among the surveyed senior citizens, offering valuable information on how technology influences their overall well-being. The dataset includes responses from 59 participants. A significant majority, comprising 36 respondents 61.0% , reported a positive impact of technology on their quality of life. This suggests that a substantial portion of the surveyed population perceives technology as enhancing various aspects of their daily lives, from communication and convenience to access to information and services. Additionally, 4 participants 6.8% indicated that technology does not impact their quality of life. This may suggest a degree of detachment from or neutrality towards technological advancements among a smaller subset of the surveyed population. For 16 respondents 27.1% , the response was Sometimes, indicating a varied experience with the impact of technology on quality of life

Technological impact on well-being

Figure 24: Distribution showing the Technological impact on well-being of Senior citizens

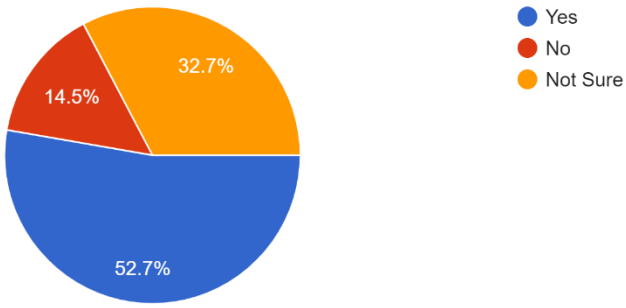


Figure 24 represents findings from a survey investigating the perceived impact of technology on well-being among senior citizens. Among the 55 participants, 49.2% indicated a positive influence of technology on their well-being, while 13.6% expressed a negative viewpoint. Notably, 30.5% were unsure about the impact. These results reflect a clear understanding of opinions on the technological impact on well-being, highlighting the need for further exploration and consideration of diverse perspectives in the context of the thesis.

Technological impact on daily independence

Figure 25: Distribution showing the Technological impact on daily independence of Senior citizens.

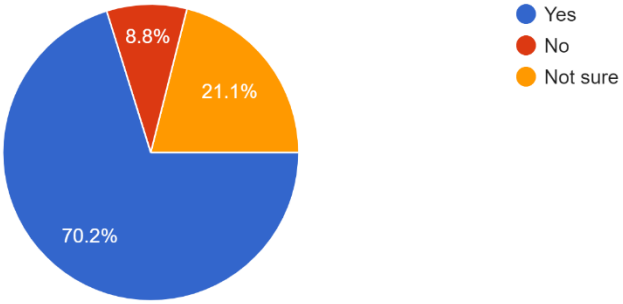


Figure 25 represents findings from a study examining the perceived technological impact on daily independence among senior citizens. Participants were queried about whether they believe technology influences their daily independence positively, negatively, or if they were uncertain about the impact. The pie chart is organized into three categories: Yes, indicating a positive impact; No, representing a negative impact; and Not sure, reflecting uncertainty. Out of the total respondents N=57 , a significant majority of 67.8% reported a positive influence of technology on their daily independence. In contrast, a smaller proportion of 8.5% felt that technology has a negative impact, and 20.3% were unsure. These results emphasize the varying perspectives on the role of technology in shaping daily independence.

Convenience of Senior citizens in Health-care access

Figure 26: Distribution showing the convenience of senior citizens in Health-care access

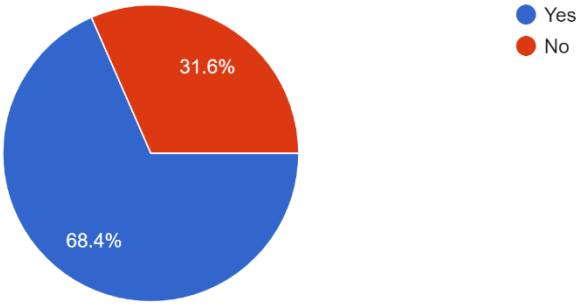


Figure 26 encapsulates insights from a survey regarding the perceived convenience in healthcare access among senior citizens. The participants were asked whether they find healthcare access convenient, with responses categorized into Yes for those affirming convenience, and No for those expressing dissatisfaction. The data displays that out of the total respondents a substantial majority of 66.1% reported finding healthcare access convenient. Additionally, 30.5% indicated a lack of convenience in healthcare access. This information

underscores the importance of understanding the factors contributing to perceived convenience in healthcare access.

Impacts of Health monitoring apps on Health management

Figure 27: Distribution showing the Impacts of Health monitoring apps on Health management among senior citizens.

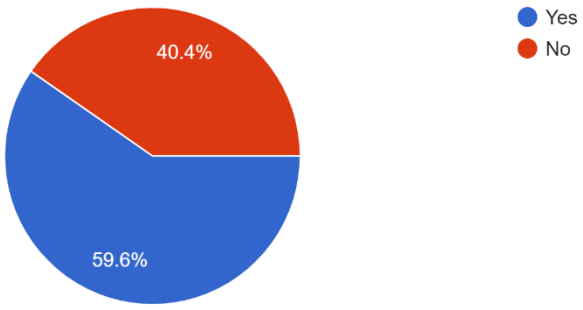


Figure 27 represents data obtained from a study exploring the perceived impacts of health monitoring apps on health management among senior citizens. Participants were asked whether they believed health monitoring apps have had positive effects on their health management, and responses were categorized as Yes for those affirming positive impacts and No for those reporting no positive effects. The data reveals that among the total respondents, 57.6% acknowledged positive impacts of health monitoring apps on health management, while 39.0% expressed a contrary opinion.

Technological impact on security and independence

Figure 28: Distribution showing Technological impact on security and independence of Senior citizens.

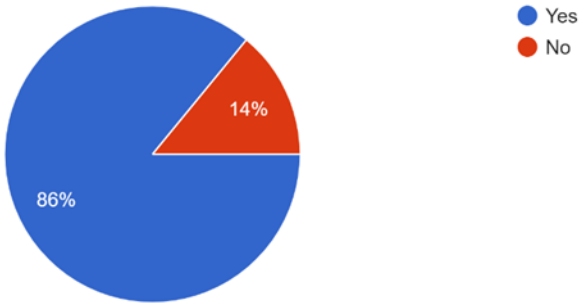


Figure 28 provides insights into the perceived technological impact on security and independence, as reported by senior citizens. Participants were asked whether they believe technology has influenced their security and independence positively, with responses categorized as Yes for those affirming a positive impact and No for those reporting no positive effects. The results indicate that a substantial majority of respondents 83.1% acknowledge a positive technological impact on their security and independence, while a smaller proportion 13.6% holds a contrary view.

Technological impact on communication with family and friends

Figure 29: Distribution showing Technological impact on communication with family and friends of Senior citizens.

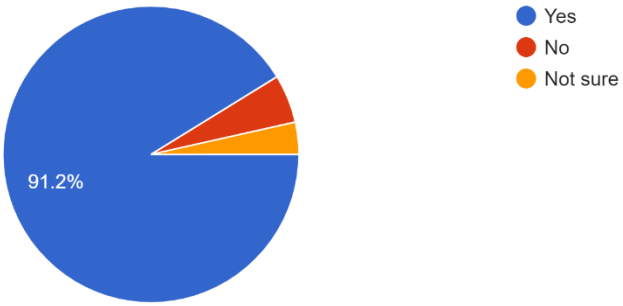


Figure 29 encapsulates findings from a survey assessing the perceived technological impact on communication with family and friends among senior citizens. Participants were asked to express whether they believe technology has positively influenced their communication with loved ones, with responses categorized as Yes for those affirming positive impacts, No for those indicating negative effects, and Not sure for those uncertain about the impact. The results

show a significant majority 88.1% acknowledging a positive technological impact on communication with family and friends, underscoring the role of technology in enhancing interpersonal connections. A minority 5.1% reported a negative impact, while a smaller proportion 3.4% expressed uncertainty.

Advice seeking frequency related to Technology

Figure 30: Distribution showing the Advice seeking frequency related to Technology by Senior citizens

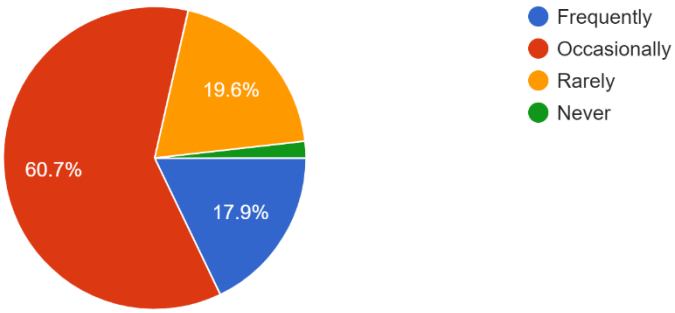


Figure 30 provides insights into the frequency of seeking advice related to technology among senior citizens. Participants were asked to specify how often they seek advice on technological matters, and the responses were categorized into Frequently, Occasionally, Rarely, and Never.The results indicate that a substantial portion of respondents seek advice on technology occasionally, constituting 57.6% of the total sample. Additionally, 16.9% reported seeking advice frequently, 18.6% rarely seek advice, and a small percentage 1.7% indicated never seeking advice in this domain understanding of individuals' engagement with and reliance on technological advice.

Type of training received regarding Technology

Figure 31: Distribution of type of training received by senior citizens regarding Technology

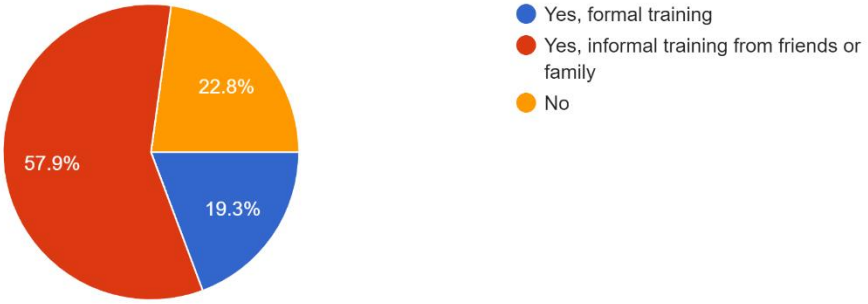
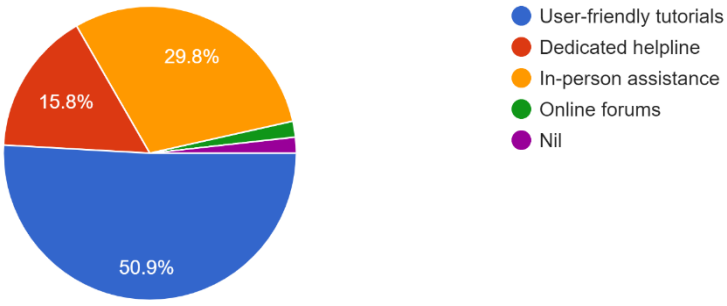


Figure 31 outlines the types of training received by senior citizens regarding technology. Participants were queried about whether they had received formal training, informal training from family and friends, or no training at all. The results indicate that 18.6% of respondents received formal training, while a larger portion 55.9% acquired informal training from family and friends. On the other hand, 22.0% reported receiving no training in technology.So the majority acquired informal training through various resources.

Kind of support encourage to use Technology

Figure 32: Distribution showing Kind of support that encourage senior citizens to use Technology



Figures 32 outlines the types of support that encourage senior citizens to use technology. Participants were asked to specify the kind of support they find helpful, and the responses were categorized into user-friendly tutorials, dedicated helpline, in-person assistance, and online forums. The results indicate that a significant proportion of respondents 49.2% find user-friendly tutorials to be supportive in encouraging technology use. Additionally, 15.3% prefer a dedicated helpline, and 28.8% opt for in-person assistance. A smaller percentage 3.4% highlighted the importance of online forums in providing support for technology use**.**

Confidence in using Technology for Online shopping/managing financial transactions

Figure 33: Distribution showing confidence of senior citizens in using Technology for Online shopping/managing financial transactions by senior citizens

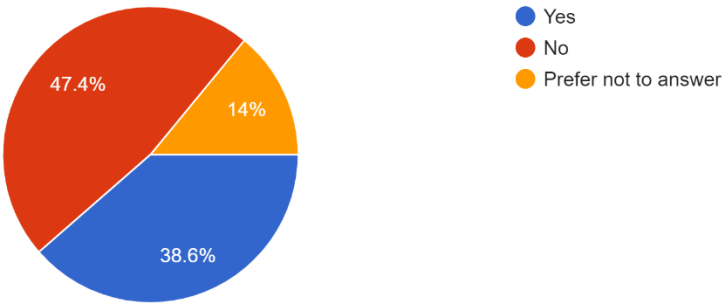


Figure 33 reflects senior citizens' confidence in using technology for online shopping and managing financial transactions. Participants were asked to express whether they feel confident in utilizing technology for these purposes, with response options including Yes, No, and Prefer not to say. The results show that 37.3% of respondents express confidence in using technology for online shopping and financial transactions. 45.8% indicates a lack of confidence in these technological activities, while 13.6% prefer not to disclose their confidence level. It indicates majority of them lack confidence in using technology for online shopping and financial transations.

Concern about privacy in Technology usage

Figure 34: Distribution showing concern of senior citizens privacy in Technology usage

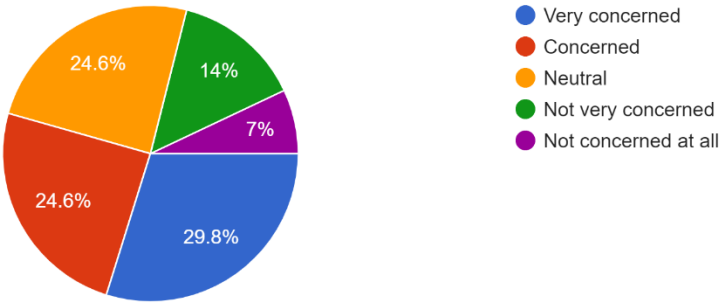


Figure 34 delineates the levels of concern about privacy in technology usage among senior citizens. Participants were asked to specify their degree of concern, and the responses were categorized into five levels: Very concerned, Concerned, Neutral, Not very concerned, and Not

concerned at all. The results indicate that a substantial portion of respondents 28.8% are very concerned about privacy in technology usage, while 23.7% express general concern and an equal percentage 23.7% adopt a neutral stance. A smaller proportion 13.6% reports being not very concerned, and 6.8% assert not being concerned at all. It indicates that majority were very concerned the privacy in technology usage.

Security Measures of senior citizens

Figure 35: Distribution showing Security measures of senior citizens

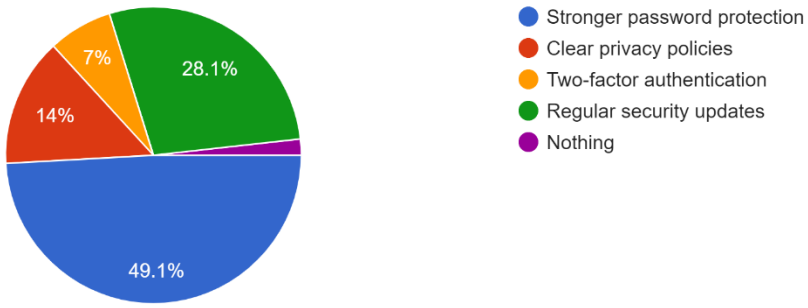


Figure 35 elucidates the security measures adopted by senior citizens in their technological practices. Participants were asked to specify the security measures they employ, and the responses were categorized into five options: Stronger password protection, Clear privacy policies, Two-factor authentication,Regular security updates, and Nothing. The results reveal that a significant proportion 47.5% of respondents prioritize stronger password protection as a security measure. Additionally, 27.1% emphasize the importance of regular security updates, while 14.0% value clear privacy policies. A smaller percentage 7.0% opt for two-factor authentication, and a minimal proportion 1.8% indicated not adopting any specific security measures. It indicates that most of them were adopted stronger password protection as their security measure.

Openness to New Technologies

Figure 36: Distribution showing Openness to New Technologies

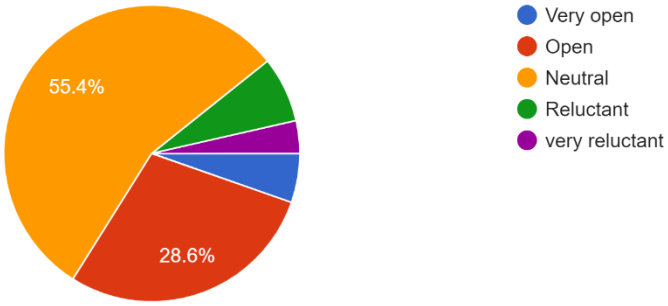


Figure 36 provides insights into senior citizens' openness to new technology. Participants were asked to express their level of openness, with response options ranging from Very open to Very reluctant. The results indicate that a small percentage 5.4% are very open to new technology, while a larger proportion 27.1% consider themselves open. The majority of respondents 52.5% adopt a neutral stance toward new technology, suggesting a balanced perspective. Additionally, 6.8% express reluctance, and 3.4% are very reluctant to embrace new technology.

Specific features or adaptations that enhance accessibility

Figure 37: Distribution of specific features or adaptations that enhance accessibility

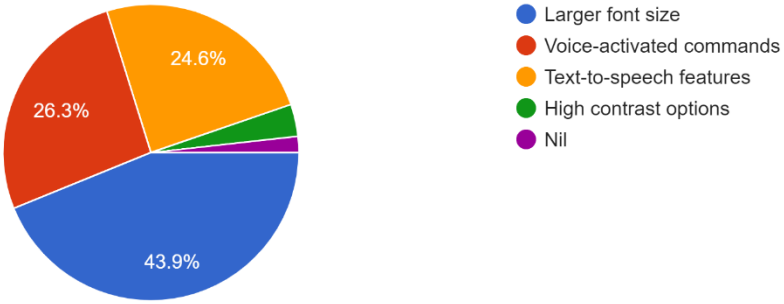


Figure 37 elucidates the specific features or adaptations that senior citizens find helpful in enhancing accessibility. Participants were asked to identify features that contribute to improved accessibility, and the responses were categorized into five options: Larger font size,Voice-activated commands, Text-to-speech features, High contrast options, and Nil for those indicating no specific adaptations. The results reveal that a significant portion 42.4%values larger font size for enhanced accessibility. Voice-activated commands are deemed useful by 25.4% of respondents, while 23.7% appreciate text-to-speech features. A smaller percentage

3.4% highlighted the importance of high contrast options, and 1.7% indicated no specific adaptations.

Preferred information format to receive information about new Technologies

Figure 38: Distribution of preferred information format to receive information about new Technologies

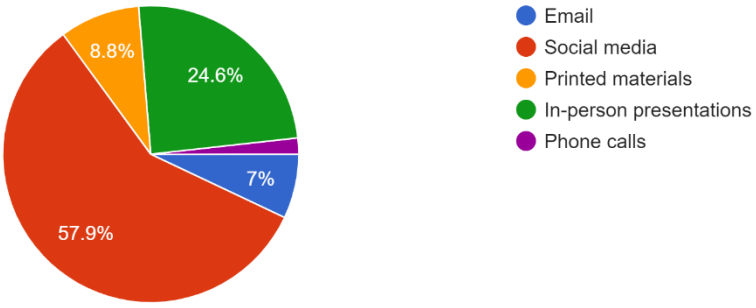


Figure 38 represents the preferred information format for receiving information about new technologies among senior citizens. Participants were asked to indicate their favoured format, and the responses were categorized into five options: Email, Social Media, Printed materials, In-person presentations, and Phone calls. The results indicate that the majority of respondents 55.9% prefer to receive information through social media channels. Additionally, 24.6% find in-person presentations to be their preferred format, while smaller percentages favour email 7.0% or printed materials 8.8%. Only 1.8% of respondents prefer receiving information through phone calls.

Comfort with seeking online help

Figure 39: Distribution showing comfort of senior citizens for seeking online help

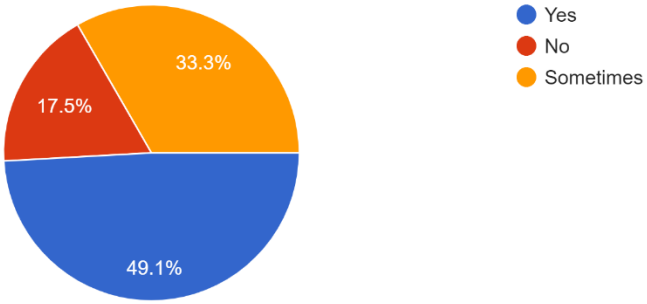


Figure 39 provides insights into senior citizens' comfort levels with seeking online help. Participants were asked to express their comfort level, and the responses were categorized into three options Yes for those comfortable with seeking online help, No for those uncomfortable, and Sometimes for those with a mixed or occasional level of comfort. The results show that a plurality of respondents 47.5% are comfortable with seeking online help, while 16.9% are not comfortable. Additionally, 32.2% of respondents indicated feeling comfortable seeking online help sometimes. It Indicates Most of them were comfortable with seeking online help .

Specific applications or devices enjoy using

Figure 40: Distribution of specific applications or devices enjoy using

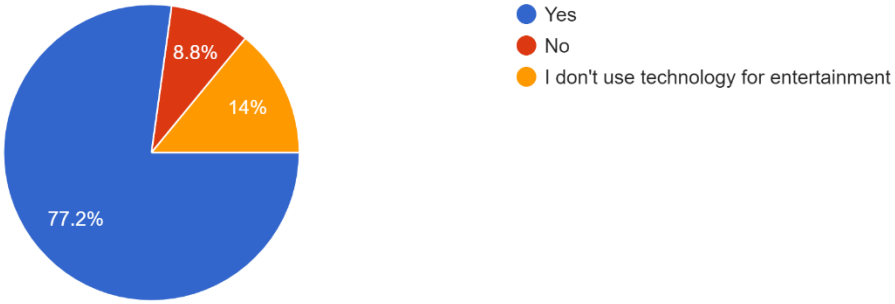


Figure 40 outlines senior citizens' preferences regarding specific applications or devices they enjoy using for entertainment purposes. Participants were asked whether they have specific applications or devices that bring them enjoyment, with response options including Yes, No, and I don't use technology for entertainment. The results indicate that a substantial majority 74.6% enjoy using specific applications or devices for entertainment. In contrast, a smaller proportion 8.5% does not have specific preferences, and 13.6% reported not using technology for entertainment purposes.

Preferred applications

Figure 41: Distribution showing Preferred applications by Senior citizens

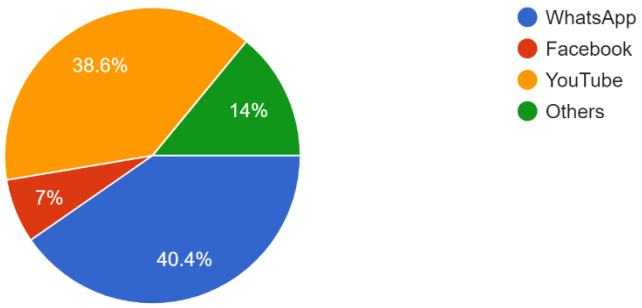


Figure 41 represents senior citizens' preferred applications, focusing on the specific applications they favour. Participants were asked to specify their preferences, and the responses were categorized into three options: WhatsApp, Facebook, and YouTube. The results reveal that a notable portion of respondents 50.8% prefer using YouTube. Additionally, 40.4% favour WhatsApp, while a smaller percentage 7.0% indicated Facebook as their preferred application.

Overall comfort and satisfaction with the integration of technology as a senior citizen

Figure 42: Distribution of Overall comfort and satisfaction with the integration of technology as a senior citizen

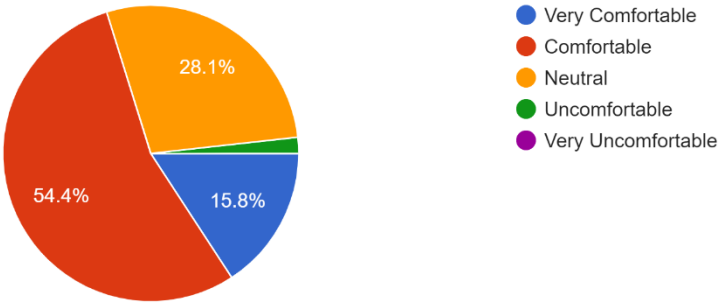


Figure 42 provides insights into the overall comfort and satisfaction of senior citizens with the integration of technology into their lives. Participants were asked to express their level of comfort, with responses categorized into four options: Very comfortable, Comfortable, Neutral, and Uncomfortable. The results indicate that a notable proportion 52.5% of senior citizens consider themselves comfortable with the integration of technology. Additionally, 15.3% feel very comfortable, while 27.1% express a neutral stance. Only a small percentage 1.8% reported feeling uncomfortable with technology integration.

Table 1 – Relation between Age of the respondents and Technology impact on expected quality of life

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.128	6	.166
Likelihood Ratio	7.890	6	.246
Linear-by-Linear Assoc.	2.899	1	.089

The above table shows the relation between Age of the respondents and Technology impact on expected quality of life. It mentions that 8 cells (66.7%) have expected counts less than 5, with the minimum expected count being .07. This is important because it alerts the reader about potential issues with small expected counts, which may affect the reliability of the Chi-Square test results. When expected counts are too small, the validity of the Chi-Square test results may be compromised, and alternative methods might be necessary.

8 cells (66.7%) have expected count less than 5. The minimum expected count is .07.

Table 2 – Relation between Age and Gender of the respondents

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	0.381	3	0.944
Likelihood Ratio	0.634	3	0.889
Linear-by-Linear Assoc.	0.127	1	0.721

The above table shows the relation between Age and Gender of the respondents. It mentions that 4 cells (50.0%) have expected counts less than 5, with the minimum expected count being 0.26.

Table 3 – Relation between Age of the respondents and type of residence

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	3.134	6	0.792
Likelihood Ratio	4.433	6	0.618
Linear-by-Linear Association	0.519	1	0.471

The table indicates relation between Age and type of residence of the respondents. The 8 cells (66.7%) have expected counts less than 5, and the minimum expected count is .05. This is relevant because it suggests a potential issue with the validity of the Chi-Square test due to low expected counts in some cells, which can affect the reliability of the test results.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.05.

Table 4 – Relation between Age of the respondents and Employment status

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	8.930	6	0.178
Likelihood Ratio	9.624	6	0.141
Linear-by-Linear Association	1.284	1	0.257

The above table indicates the relation between Age and Employment status of the respondents. It measures the extent of the discrepancy between observed and expected frequencies of the categorical variables. The Pearson Chi-Square value is 8.930 with 6 degrees of freedom. The p-value associated with this test is 0.178, which suggests that there is no statistically significant association between the variables at the conventional significance level (alpha = 0.05).

In summary, based on the results and associated p-values of the Chi-Square tests, there is no significant evidence to reject the null hypothesis of independence between the categorical variables being tested. The note provided indicates that 8 cells have expected counts less than 5, which may raise concerns about the reliability of the Chi-Square tests due to the small expected counts in some cells.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.18.

Table 5 – Relation between Age of respondents and monthly income

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	11.305	12	0.503
Likelihood Ratio	10.374	12	0.583
Linear-by-Linear Association	0.158	1	0.691

The above table shows the relation between Age and Monthly income of the respondents. It mentions that 16 cells (80.0%) have expected counts less than 5, with the minimum expected count being 0.04. This might raise concerns about the reliability of the Chi-Square tests due to

the presence of low expected counts in some cells. It's important to interpret the results with caution, particularly considering the potential impact of low expected counts on the validity of the tests.

16 cells (80.0%) have expected count less than 5. The minimum expected count is 0.04.

Table 6 – Relation between Age and Level of education of respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	16.285	12	0.179
Likelihood Ratio	14.501	12	0.270
Linear-by-Linear Association	0.210	1	0.646

The above table shows the relation between Age and Level of education of respondents. It mentions that 16 cells (80.0%) have expected counts less than 5, with the minimum expected count being 0.12. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

16 cells (80.0%) have expected counts less than 5. The minimum expected count is 0.12.

Table 7 – Relation between Age and Current Technology device usage of the respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	0.928	3	0.819
Likelihood Ratio	0.986	3	0.805
Linear-by-Linear Association	0.356	1	0.551

The above table shows the relation between Age and Current Technology device usage. It mentions that 5 cells (62.5%) have expected counts less than 5, with the minimum expected count being 0.09. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

5 cells (62.5%) have expected counts less than 5. The minimum expected count is 0.09.

Table 8 – Relation between Age and Hours spend by respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	13.666	9	0.135
Likelihood Ratio	13.253	9	0.151
Linear-by-Linear Association	1.628	1	0.202

The above table shows the relation between Age and Hours spend by the respondents. It mentions that 11 cells (68.8%) have expected counts less than 5, with the minimum expected count being 0.16. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

11 cells (68.8%) have expected counts less than 5. The minimum expected count is 0.16.

Table 9 – Relation between Age and Purpose of using devices by the respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	53.670	36	0.029
Likelihood Ratio	34.110	36	0.559
Linear-by-Linear Association	0.715	1	0.398

The above table shows the relation between Age and Purpose of using devices by the respondents. It mentions that 49 cells (94.2%) have expected counts less than 5, with the minimum expected count being 0.02. This indicates potential concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in many cells. It's essential to interpret the results cautiously, considering the impact of low expected counts on the validity of the tests.

49 cells (94.2%) have expected counts less than 5. The minimum expected count is 0.02.

Table 10 – Relation between Age and Health-related information of the respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	20.262	6	0.002
Likelihood Ratio	21.470	6	0.002
Linear-by-Linear Association	7.871	1	0.005

The above table shows the relation between Age and Health-related information of the respondents. It mentions that 7 cells (58.3%) have expected counts less than 5, with the minimum expected count being 0.18. This indicates potential concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's essential to interpret the results cautiously, considering the impact of low expected counts on the validity of the tests.

7 cells (58.3%) have expected counts less than 5. The minimum expected count is 0.18.

Table 11 – Relation between Age and Participation in virtual activities of the respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	11.328	6	0.079
Likelihood Ratio	12.480	6	0.052
Linear-by-Linear Association	7.490	1	0.006

The above table shows the relation between Age and Participation in virtual activities of the respondents. It mentions that 8 cells (66.7%) have expected counts less than 5, with the minimum expected count being 0.18. This indicates potential concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's essential to interpret the results cautiously, considering the impact of low expected counts on the validity of the tests.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.18.

Table 12 – Relation between Age and Capacity to stay updated of respondents

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	8.920	6	0.178

Test	Value	Degrees of Freedom	Significance (2-sided)
Likelihood Ratio	8.188	6	0.225
Linear-by-Linear Association	6.542	1	0.011

The above table shows the relation between Age and capacity to stay updated of respondents. It states that 8 cells (66.7%) have expected counts less than 5, with the minimum expected count being 0.11. This suggests potential concerns about the reliability of the Chi-Square tests due to low expected counts in some cells. When expected counts are low, the chi-square statistic may not follow the chi-square distribution, which could affect the validity of the tests. It's important to interpret the results with caution, considering the impact of low expected counts on the reliability of the tests.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.11.

Table 13 – Relation between Age and Benefits of Technology usage among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	49.123	39	0.128
Likelihood Ratio	30.068	39	0.847
Linear-by-Linear Association	0.004	1	0.952

The above table shows the relation between Age and Benefits of Technology usage among Senior citizens. It mentions that 53 cells (94.6%) have expected counts less than 5, with the minimum expected count being 0.02. This raises concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in many cells. It's essential to interpret the results cautiously, considering the impact of low expected counts on the validity of the tests.

53 cells (94.6%) have expected counts less than 5. The minimum expected count is 0.02.

Table 14 – Relation between Age and Factors contributing to Technology adoption among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	3.682	9	0.931
Likelihood Ratio	4.433	9	0.881

Test	Value	Degrees of Freedom	Significance (2-sided)
Linear-by-Linear Association	0.210	1	0.646

The above table shows the relation between Age and Factors contributing to Technology adoption among Senior citizens. It mentions that 12 cells (75.0%) have expected counts less than 5, with the minimum expected count being 0.02. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

12 cells (75.0%) have expected counts less than 5. The minimum expected count is 0.02.

Table 15 – Relation between Age and challenges in adopting and using Technology among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	3.481	6	0.747
Likelihood Ratio	3.803	6	0.703
Linear-by-Linear Association	0.982	1	0.322

The above table shows the relation between Age and challenges in adopting and using Technology among Senior citizens. It mentions that 9 cells (75.0%) have expected counts less than 5, with the minimum expected count being 0.09. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

9 cells (75.0%) have expected counts less than 5. The minimum expected count is 0.09.

Table 16 – Relation between Age and Specific challenges in using Technology among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	8.230	6	0.222
Likelihood Ratio	7.670	6	0.263
Linear-by-Linear Association	0.294	1	0.588

The above table shows the relation between Age and specific challenges in using Technology among Senior citizens. It mentions that 8 cells (66.7%) have expected counts less than 5, with the minimum expected count being 0.12. This might raise concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.12.

Table 17 – Relation between Age and reluctance to adopt new Technology among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	14.473	9	0.106
Likelihood Ratio	12.227	9	0.201
Linear-by-Linear Association	1.544	1	0.214

The above table shows the relation between Age and reluctance to adopt new Technology among Senior citizens. It mentions that 13 cells (81.3%) have expected counts less than 5, with the minimum expected count being 0.02. This raises concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

13 cells (81.3%) have expected counts less than 5. The minimum expected count is 0.02.

Table 18 – Relation between Age and Seeking support for Technology challenges among Senior citizens

Test	Value	Degrees of Freedom	Significance (2-sided)
Pearson Chi-Square	7.971	6	0.240
Likelihood Ratio	7.328	6	0.292
Linear-by-Linear Association	0.205	1	0.651

The above table shows the relation note provided mentions that 8 cells (66.7%) have expected counts less than 5, with the minimum expected count being 0.13. This raises concerns about the reliability of the Chi-Square tests due to the presence of low expected counts in some cells. It's important to interpret the results with caution, especially considering the potential impact of low expected counts on the validity of the tests.

8 cells (66.7%) have expected counts less than 5. The minimum expected count is 0.13.

Table 19 – Relation between Age and Technological impact on well-being of the respondents

Test	**Test Value**	**Significance (2-sided)**
Pearson Chi-Square	7.971	0.240
Likelihood Ratio	7.328	0.292
Linear-by-Linear Assoc.	**0.205**	**0.651**
Number of Valid Cases: 53		

Additionally, there is a note indicating that 9 cells (75.0%) have expected counts less than 5, and the minimum expected count is 0.15. This information is relevant because having too many cells with expected counts less than 5 can affect the reliability of the chi-square test.

Overall, the p-values for both the Pearson Chi-Square and Likelihood Ratio tests are above the conventional significance level of 0.05, suggesting that there is no significant association between the variables being tested. However, the Linear-by-Linear Association test has a p-value of 0.010, which is below 0.05, indicating a significant linear association.

66.7% of cells have expected counts less than 5. The minimum expected count is 0.13.

CHAPTER -5

FINDINGS AND CONCLUSIONS

The findings and conclusions outlines the results of the study as well as key conclusions drawn from those findings. Technology integration and usage patterns among senior citizens aims at discovering factors influencing their adoption, utilization, and experiences with various technological tools. This study focuses on providing insights into how the technology can be enhance the lives of senior citizens and address the potential barriers to adoption. Moreover, this study emphasize on the importance of the continued research to ensure that technological advancements are equitable and conductive for the wellbeing of senior citizens in this current scenario.

Socio-Economic Background

The socio-economic profile of senior citizens in Kochi city significantly influences their adoption and usage of technology. Among the respondents, 26.3% were male, while 73.7% were female. This gender distribution indicates a higher participation of females in the study, highlighting the need for gender-specific considerations in technology adoption strategies.

Regarding employment status, 26.3% of respondents were employed, 16.9% were retired, and the majority, 54.2%, were unemployed. This distribution suggests that a significant portion of senior citizens in Kochi city are either retired or unemployed, which could impact their access to and use of technology.

In terms of residence type, 68.4% of respondents lived in nuclear families, 25.4% in joint families, and 5.1% in retirement homes. This breakdown provides insights into the living arrangements of senior citizens in the city, which could influence their technology adoption behaviors.

Regarding monthly income, 40.4% of respondents reported a monthly income of less than 5000, 30.5% had an income between 5000 and 10000, 17.5% earned between 10000 and 30000, 7% between 30000 and 50000, and 4.6% had an income of 50000 and above. These income levels reflect the economic diversity among senior citizens in Kochi city, with a significant portion having lower incomes.

In terms of educational attainment, 38.6% of respondents had completed primary education, 15.8% had completed high school, 21.1% had an SSLC qualification, 12.3% had completed pre-degree, and 12.3% had a degree. These educational levels indicate varying degrees of digital literacy among senior citizens, which could impact their technology adoption.

Overall, the socio-economic profile of senior citizens in Kochi city reveals a diverse group with varying access to technology, digital literacy levels, and living arrangements. Understanding these factors is crucial for designing effective strategies to promote technology adoption and integration among this demographic.

Factors influencing Willingness to adopt Technology

The findings reveal a positive perception among senior citizens regarding the usefulness of technology devices for accessing health-related information, with a significant majority (64.9%) affirming their usefulness. This suggests that technology plays a crucial role in

facilitating access to health information for this demographic. However, it's noteworthy that a notable portion (17.5%) of respondents do not find these devices helpful, indicating potential barriers or challenges that need to be addressed to ensure inclusivity and accessibility in health information dissemination.

In terms of virtual social activities, the data indicates a mixed level of engagement among seniors. While 28.8% of respondents participate in virtual social activities, a majority (50.8%) do not engage in such activities, and 16.9% express a lack of interest. This suggests that while some seniors are actively participating in virtual social interactions, a significant portion remains disconnected or uninterested. This highlights the importance of understanding individual preferences and providing diverse options for social engagement among seniors.

Regarding staying updated, a significant majority (67.8%) of seniors reported the ability to stay updated, while 10.2% indicated a lack of capacity, and 18.6% were uncertain. This indicates that while a majority of seniors feel capable of staying informed, a notable portion is unsure or feels unable to do so. This underscores the need for tailored approaches to information dissemination and awareness-building, ensuring that all seniors have the opportunity to stay updated and engaged with current affairs and developments.

Patterns of Technology Usage among Senior Citizens

The findings from the study indicate a high prevalence of technology adoption among the surveyed senior citizens in Kochi city, with 91.2% of respondents actively using technology devices. This suggests a strong inclination towards technological engagement within the sample group.

Moreover, the data reveals that the majority of respondents (77.2%) use technology devices on a daily basis, highlighting a significant integration of technology into their daily lives. This finding underscores the importance of technology in the lives of senior citizens in Kochi, indicating a regular and frequent use of devices.

Conversely, a smaller proportion of respondents (8.8%) do not use technology devices, indicating a digital divide within the population. However, this group represents a minority, suggesting that the overall trend leans towards active technology usage among senior citizens in Kochi.

The data on the number of hours spent by senior citizens in Kochi city on technology usage per day reveals a spectrum of digital engagement levels within the surveyed population. A significant portion, 40.4%, spends less than 1 hour per day on technology, indicating a group with limited digital interaction. In contrast, 28.1% dedicate 1 to 2 hours daily, suggesting a moderate level of digital engagement. Interestingly, 15.8% spend 2 to 4 hours per day, and an equal proportion spends 4 to 6 hours, indicating a notable segment with a more substantial daily commitment to digital activities. These findings underscore the diverse range of digital engagement levels among senior citizens in Kochi, highlighting the need for tailored approaches to support digital literacy and access to technology across different segments of the population.

In conclusion, the study reveals a high prevalence of technology adoption among senior citizens in Kochi city, with 91.2% actively using technology devices. The majority of respondents use technology on a daily basis (77.2%), indicating its significant integration into their lives. While a minority (8.8%) does not use technology, most seniors spend varying amounts of time on digital activities, highlighting diverse levels of engagement. Tailored approaches are needed to support digital literacy and access to technology among senior citizens in Kochi, considering the varied digital engagement levels across the population.

Benefits and challenges of technology integration from the perspective of senior citizens

Benefits

The data reveals that 64.9% of senior citizens find technology devices useful for accessing health-related information, indicating a positive perception. However, 17.5% report not finding devices helpful, suggesting potential barriers to technology adoption in this context. Regarding virtual social activities, 28.8% of seniors participate, while 50.8% do not engage in such activities, and 16.9% express disinterest. This highlights varying levels of engagement, emphasizing the need for diverse social engagement options. Additionally, 67.8% of seniors feel capable of staying updated, but 10.2% lack this capacity, and 18.6% are unsure, indicating potential challenges in information awareness.

The reported benefits of technology use among seniors include improved communication with family and friends (44.1%), showcasing its social value. Factors contributing to technology adoption include comfort with technology (39.0%) and financial considerations (45.8%), highlighting the importance of affordability and user-friendliness in driving adoption. These findings underscore the diverse advantages and motivations shaping seniors' engagement with technology, informing strategies to enhance its accessibility and relevance for this demographic.

Challenges

The data indicates that a majority (59.3%) of senior citizens face challenges in adopting and using technology. This highlights the need for strategies to enhance technology accessibility and usability for this demographic. The most prevalent challenge identified is limited technical knowledge (69.5%), emphasizing the importance of addressing knowledge gaps to improve technology literacy. Other notable challenges include small font size (15.3%) and difficulty navigating interfaces (11.9%), underscoring the need for accessible design considerations to accommodate seniors with visual impairments or difficulties in using technology interfaces.

Factors contributing to seniors' reluctance to adopt new technology include difficulty in learning or using new technology (76.3%), financial constraints and affordability issues (8.5%), and concerns about potential risks or negative consequences (10.2%). These findings highlight the importance of addressing usability, affordability, and safety concerns to promote technology acceptance among seniors. Despite these challenges, a significant portion (42.4%) of seniors actively seek support when facing technological challenges, indicating the importance of supportive environments and access to resources in overcoming barriers to technology use.

Impact of technology integration on the well-being of senior citizens

The findings from the survey highlight a predominantly positive perception of technology among senior citizens, with 61.0% reporting a positive impact on their quality of life. This suggests that technology plays a significant role in enhancing various aspects of daily life, such as communication, convenience, and access to information and services. Additionally, a minority of 6.8% expressed neutrality or detachment from technological advancements, indicating a diverse range of perspectives within the surveyed population.

Regarding well-being, the survey revealed that 49.2% of participants perceived technology as having a positive influence. However, a notable portion of 30.5% were unsure about the impact, suggesting a need for further exploration and consideration of diverse viewpoints. This underscores the complexity of how technology is perceived in relation to well-being among senior citizens, highlighting the importance of understanding these nuances for effective integration and support.

In terms of daily independence, the majority of respondents (67.8%) reported a positive influence of technology. This indicates that technology plays a crucial role in empowering senior citizens to maintain their independence, although a significant proportion (20.3%) expressed uncertainty about this impact. This underscores the need for tailored approaches to technology adoption that address individual concerns and preferences.

Regarding communication with family and friends, the survey showed that an overwhelming majority (88.1%) acknowledged a positive impact of technology. This emphasizes the importance of technology in facilitating and enhancing interpersonal connections among senior citizens. However, a small percentage (5.1%) reported a negative impact, highlighting the need for continued support and education to maximize the benefits of technology for this demographic.

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APPENDIX

ASSESSING TECHNOLOGY INTEGRATION AND USAGE PATTERNS AMONG SENIOR CITIZENS IN KERALA

We, final year B.A Sociology students of St. Teresa's College, Ernakulam are conducting a research study on " Assessing Technology integration and usage patterns among Senior citizens in Kerala" among the senior citizens residing in the state of Kerala who are above 60 years old under the guidance of Ms. Elizabeth Abraham, Asst. Professor, St. Teresa's College Ernakulam. We would like to get relevant data from you in this regard. Kindly go through the form and fill it. We assure you that the data collected shall be used only for academic purposes ensuring utmost confidentiality. No information revealing your identity shall be collected for this study.

* Indicates required question

1. Name

2. 1. What is your age ? *

Mark only one oval.

- 60-69
- 70-79
- 80-89
- 90+

3 2 What is your gender ? *

ark only one oval.

- Male
- Female
- Prefer not to say
- Other: _____

4. 3. Type of Residence ? *

Mark only one oval.

- Nuclear family
- Joint family
- Assisted living
- Retirement home

5. 4. Current Employment status: *

Mark only one oval.

- Employed
- Retired
- Unemployed

6 5 Monthly income in Retirement (estimate): *

ark only one oval.

- Less than 5000
- 5000 - 10000
- 10000 - 30000
- 30000 - 50000
- 50000 and above

7. 6. Level of education: *

Mark only one oval.

- Primary
- High School
- SSLC
- Pre Degree
- Degree

8. 7. Are you currently using any technology devices ? *

Mark only one oval.

- Yes
- No

9 8 How often do you use these devices ? *

ark only one oval.

- Daily
- Weekly
- Monthly

10. 9.How many hours do you spend in using these devices ? *

Mark only one oval.

- Less than 1 hour per day
- 1-2 hours per day
- 2-4 hours per day
- 4-6 hours per day

11. 10. which devices do you use regularly ? *

Check all that apply.

- Smartphone
- Laptop
- Tablet
- Desktop Computer

2 1 What do you mainly use these dev ces for ? *

Check all that apply.

- [ ] Communication (eg., calls, messages)
- [ ] Internet browsing
- [ ] Social media
- [ ] Entertainment (eg., streaming, gaming)
- [ ] Online shopping
- [ ] Learning/education
- [ ] Other: _____

*

13. 12. Do you find technology helpful for accessing health-related information or monitoring your well-being ?

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Occasionally

14. 13. Have you participated in virtual social activities or events using technology ?

Mark only one oval.

- Yes
- No
- Not interested

5 4 Does technology enhance your abi ity to stay informed about current events ? *

a k only one oval.

- Yes
- No
- Not sure
- Other: _____

16. 15. Have you experienced any of the following benefits due to technology use ? *

Check all that apply.

- [ ] Improved communication with family and friends
- [ ] Access to health information and apps
- [ ] Entertainment (eg., streaming services, games)
- [ ] Online shopping
- [ ] Learning new skills through online platforms
- [ ] Other: _____

17. 16. What factors contribute to the willingness to adopt technology ? *

Mark only one oval.

- ◯ Comfort with technology in general
- ◯ Ease of learning and using the technology
- ◯ Influence from friends or family members
- ◯ Financial considerations and affordability
- ◯ Other: _____

8 7 Have you faced challenges or barr ers in adopting and using technology ? *

a k only one oval.

- Yes
- No
- ◯ Not applicable

19. 18. What specific challenges do you face when using technology ? *

Mark only one oval.

- ◯ limited technical knoeledge
- ◯ Small font size
- ◯ Difficulty navigating interfaces
- ◯ Other: _____

20. 19. What factors contribute to your reluctance to adopt new technology ? *

Mark only one oval.

- ◯ Difficulty in learning or using new technology
- ◯ Negative influences from friends or family members
- ◯ Financial constraints and affordability issues
- ◯ Concerns about potential risks or negative consequences
- ◯ Other: _____

1 0 Did you se k resources or support to overcome technological challenges ?

k only one oval.

Yes

No

Sometimes

22. 21. Have you faced challenges in using technology for socializing ?

Mark only one oval.

Yes

No

Sometimes

23. 22. Have you experienced challenges in using technology for healthcare ?

Mark only one oval.

Yes

No

Sometimes

24. 23. Has technology positively impacted your overall quality of life ?

Mark only one oval.

- Yes
- No
- Neutral

5 4 Do you beli ve technology has improved your cognitive abilities or mental well-being ?

Mark only one oval.

- Yes
- No
- Not Sure

26. 25. Do you believe technology has increased your independence in daily activities ? *

Mark only one oval.

- Yes
- No
- Not sure

27. 26. Has technology made accessing healthcare services more convenient for you ? *

Mark only one oval.

- Yes
- No

28. 27. Have health monitoring apps or devices positively impacted your health management ?

Mark only one oval.

- Yes
- No

9 8 Have thes techn logies enhanced your sense of security and independence ? *

Mark only one oval.

- Yes
- No

30. 29. Has technology significantly improved your communication with family and friends ? *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Not sure

31. 30. How often do you seek advice from others regarding technology ?

Mark only one oval.

- ◯ Frequently
- ◯ Occasionally
- ◯ Rarely
- ◯ Never

32. 31. Have you received any training on using technology ? *

Mark only one oval.

- ◯ Yes, formal training
- ◯ Yes, informal training from friends or family
- ◯ No

3 2 What kind of supp rt would encourage you to use technology more ? *

a k onl one oval.

User-friendly tutorials

Dedicated helpline

- [ ] In-person assistance
- [ ] Online forums
- [ ] Other: _____

*

34. 33. Are you confident in using technology for online shopping or managing financial transactions ?

Mark only one oval.

- [ ] Yes
- [ ] No
- [ ] Prefer not to answer

35. 34. How concerned are you about your privacy when using technology ? *

Mark only one oval.

- Very concerned
- Concerned
- Neutral
- Not very concerned
- Not concerned at all

6 5 What measures w uld make you feel more secure using technology ? *

a k onl one oval.

- Stronger password protection
- Clear privacy policies
- Two-factor authentication
- Regular security updates
- Other: _____

37. 36. How open are you to trying new technologies ?

Mark only one oval.

- ◯ Very open
- ◯ Open
- ◯ Neutral
- ◯ Reluctant
- ◯ very reluctant

38. 37. Are there specific features or adaptations that would make technology more accessible for you ? *

Mark only one oval.

- ◯ Larger font size
- ◯ Voice-activated commands
- ◯ Text-to-speech features
- ◯ High contrast options
- ◯ Other: _____

9 8 How do you prefer to receive information about new technologies ? *

a k onl one oval.

Email

Social media

- ◯ Printed materials
- ◯ In-person presentations
- ◯ Other: _____

40. 39. Do you feel comfortable seeking help online for technology-related issues ?

Mark only one oval.

- Yes
- No
- Sometimes

41. 40. Are there specific applications or devices you enjoy using ? *

Mark only one oval.

- Yes
- No
- I don't use technology for entertainment

42 41 If yes, which are they *

Ma k only one oval.

WhatsApp

Facebook

YouTube

Others

43. 42. How would you rate overall comfort and satisfaction with the integration of technology in your daily life as a Senior citizen

Mark only one oval.

Very Comfortable

Comfortable

Neutral

Uncomfortable

Very Uncomfortable

44. Is there any suggestions for improvement