International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Digital Literacy and its Use by the Elderly in Maharashtra

Dr Vinod Shah[1], Dr Subhash Salunke[2], Dr Deepak Phalgune[3], Dr B T Lawani[4], Riya Shah[5]

[1]Chairman, Janaseva Foundation, Pune
[2]Former Director General, Health Services, Govt of Maharashtra
[3]Research Consultant & Coordinator, DNB Teaching Program, Poona Hospital & Research Centre, Pune
[4]Research Director, Janaseva Foundation, Pune
[5]Virginia Tech, Undergraduate Student, Janaseva Foundation Intern, Pune

Abstract
As technology increasingly becomes a part of our everyday lives, it is important to understand how the elderly generation is adapting to digital changes. This study digs into how comfortable the elder population with using digital technologies and devices on a daily basis – specifically in Pune, Maharashtra. The researchers employed a combination of surveys and interviews to comprehensively assess the current situation. Their findings revealed that older adults exhibit varying levels of comfort with digital technologies, encounter diverse challenges, and perceive distinct benefits from their use.

Keywords: Digital literacy, Elderly, Pune, Maharashtra, Digital technology, Utilization.

Introduction:

In today's fast-paced world, technology has become a part of our everyday lives, shaping how we communicate, work, and access information. For many, being digitally savvy is essential, however there is a drastic gap amongst older adults and young adults. This study aims to explore their digital skills and how they use technology. Pune, a city known for its rich culture, reflects broader Indian societal trends as it rapidly urbanizes, resulting in a state of, traditional values meeting modern advancements. This makes Pune an ideal place to study how older adults embrace technology, not just for the city itself but also to learn lessons applicable nationwide. Older adults, aged 60 and above, make up a significant portion of Pune's population. Yet, they face unique challenges with technology. Factors such as a lack of technology growing up, cognitive changes, financial limitations, and cultural differences contribute to this gap.

The COVID-19 pandemic highlighted the importance of digital skills for older adults. Lockdowns pushed them to rely on technology for essentials and social connections. This crisis emphasized the need to bridge the digital gap for inclusivity and resilience. This research uses surveys, interviews, and group discussions to understand the digital landscape for the elderly population in Pune. It aims to uncover their current digital skills, the hurdles they face, and what helps or hinders them from using technology. Additionally, the study explores how older adults in Pune use technology – from staying in touch to managing their health. By understanding their digital habits and barriers, we can design better programs to bridge the digital divide and empower them. By identifying challenges and opportunities, we can create policies, co-

mmunity initiatives, and educational programs to improve the lives of older adults in cities.

Aims and Objectives:

To investigate the level of digital skills among elderly residents in Pune and explore strategies for enhancing their digital literacy to bridge the generation gap in technology adoption.

- To study the current digital skills proficiency among elderly individuals in Pune through surveys and interviews.

Review of Literature:

Building on prior research by Jones and Brown (2019), who explored the factors influencing older adults' adoption of digital technologies, the current study seeks to delve deeper into understanding the specific challenges faced by elderly individuals in Pune regarding digital literacy. By examining the unique socio-cultural context of Pune, this research aims to contribute valuable insights into designing targeted strategies to empower older generations with essential digital skills, thereby fostering greater inclusivity in the digital era."

Recent studies by Chang and Lee (2020) have highlighted the positive impact of digital literacy programs tailored to the needs of elderly populations, demonstrating significant improvements in their digital skills and overall well-being. Drawing from these findings, the current research endeavours to assess the efficacy of existing digital literacy initiatives in Pune and identify potential areas for enhancement. By synthesizing such literature, this study aims to provide evidence-based recommendations for policymakers and community organizations to better support the digital inclusion of Pune's elderly residents.

Drawing inspiration from the framework proposed by Kumar et al. (2016) for promoting digital literacy among marginalized communities, this study seeks to adapt and apply similar principles to the context of Pune's elderly population. By adopting a holistic approach that considers not only technical proficiency but also socio-cultural factors influencing digital adoption, this research aims to provide a comprehensive understanding of the digital skills landscape among older adults in Pune. Through such interdisciplinary insights, this study aspires to pave the way for more inclusive and equitable digital empowerment initiatives in the region.

Methodology:

The study's population comprised 3500 individuals, from which 2000 respondents were selected for participation. Those unwilling to participate were excluded, while those willing were included in the study. A Purposive sampling method was employed to select respondents. A structured questionnaire was utilized for primary data collection. An exploratory research design was adopted, and therefore the study did not include hypothesis. The geographical scope of the study encompasses the entire state of Maharashtra, while its analytical scope includes the demographic characteristics of the elderly, their awareness of digital literacy, and their usage of digital technologies. The study also examines the types of social applications used by the elderly and the gadgets they possess.

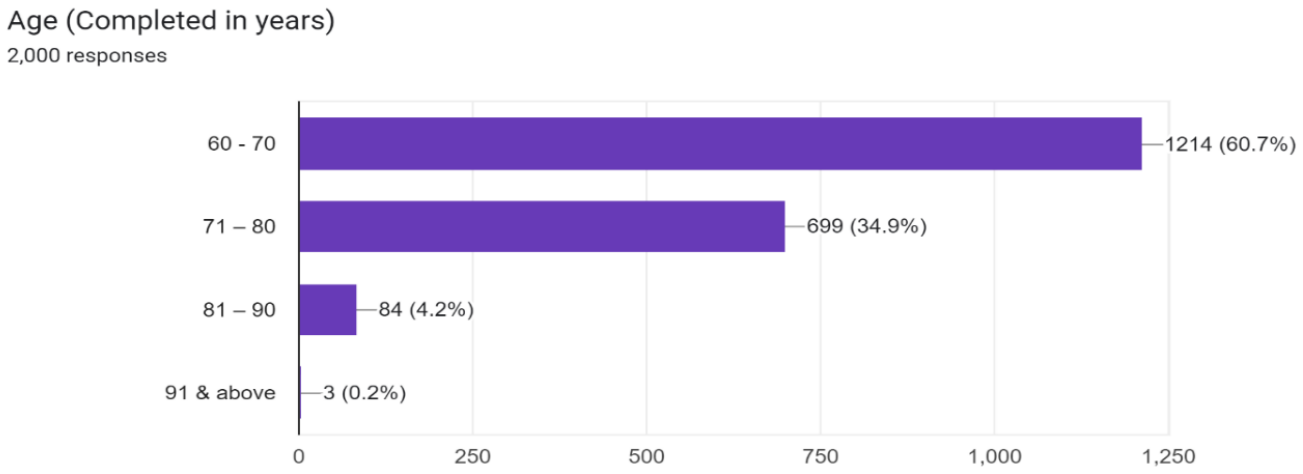
Results & Discussion:

1. Demographic Background of Elders:

Age:

It is seen that 61% of the elderly in the study were aged 60-70 years, with around 35% in the 71-80 age

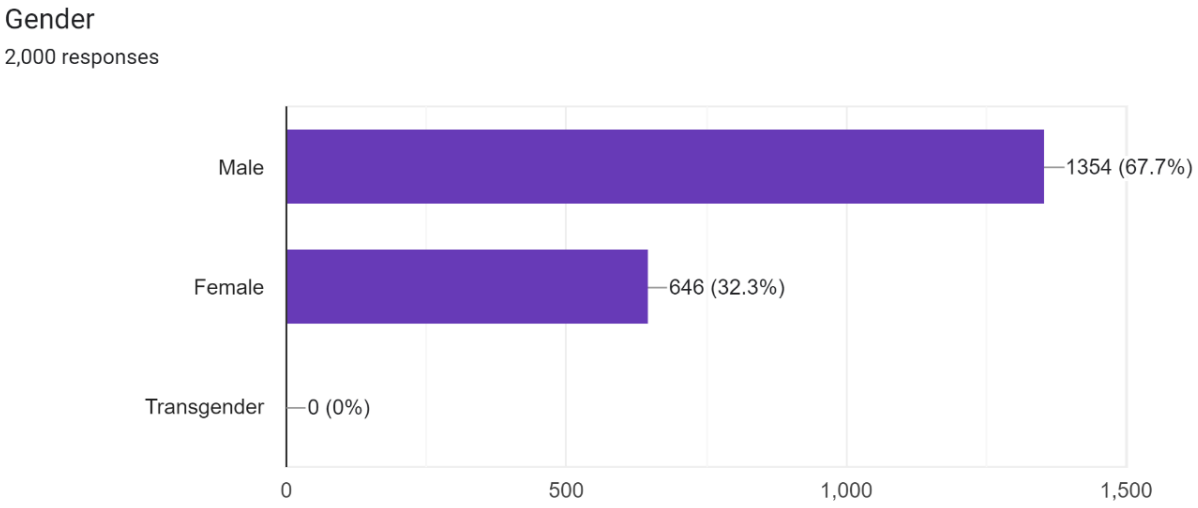
bracket, 4% between 81-90 years, and less than 1% above 91 years. This data indicates a predominance of the young-old, under 70 years, with very few surpassing 91 years. Consequently, the older age groups exhibit decreased mobility and accessibility for study participation.



Bar Graph – 1

Gender:

Although the female population in Pune is almost equal to the male population, their mobility is less than the males. Therefore, the study had covered 68% of the elder males and 32% of elder females.

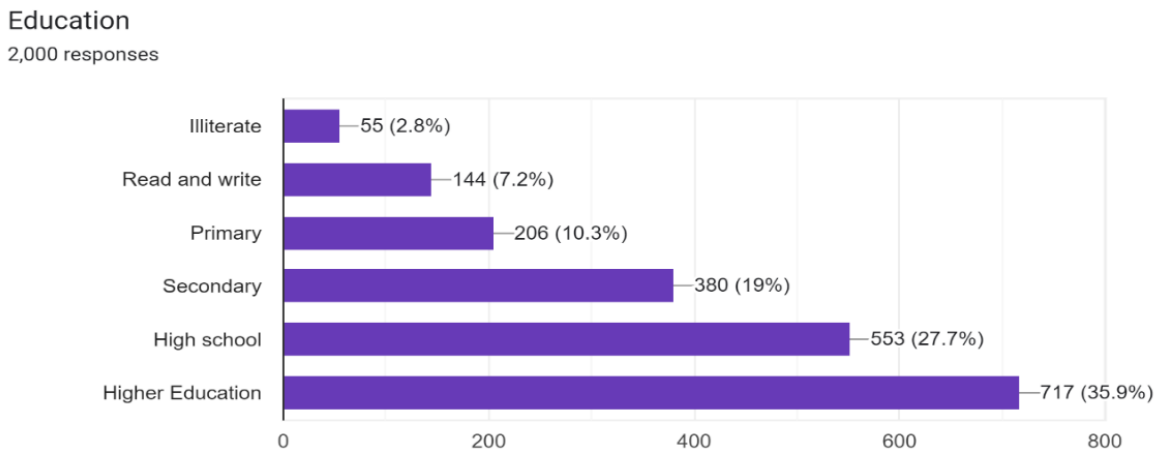


Bar Graph – 2

Education:

In regards to the education, it is found that 35% of participants had a higher education following high school, while 28% of participants only completed their high school. Exactly 19% had completed secondary level education and 10% were in the category of primary education. A little more than 7% of participants

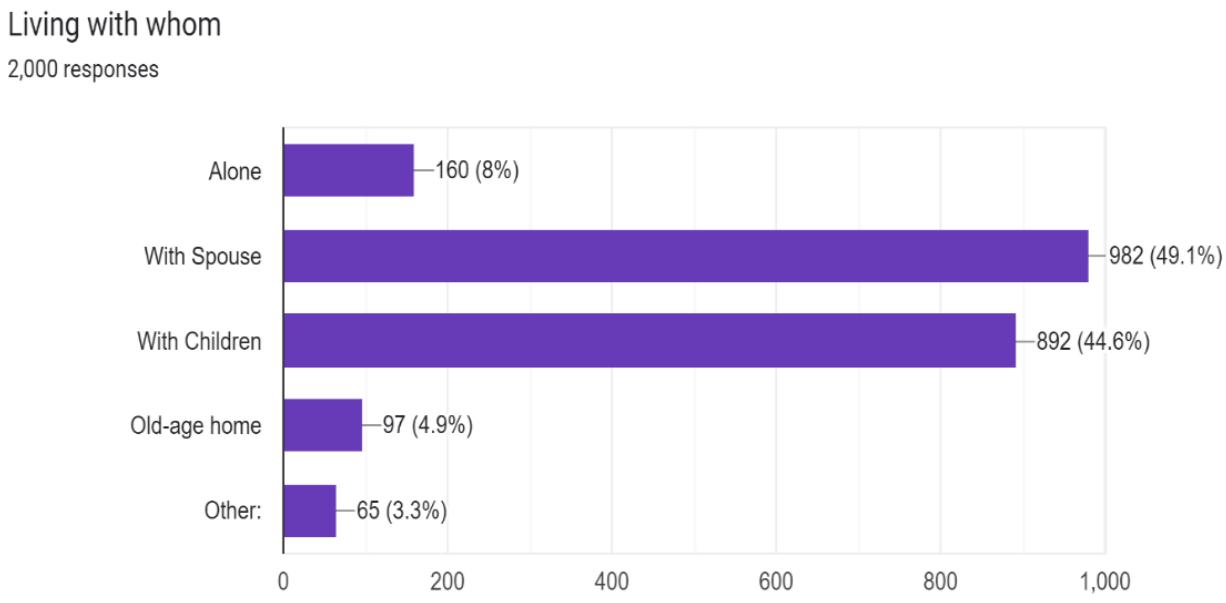
knew just reading and writing, while 3% were totally illiterate. It can be concluded that a great majority of the respondent elderly were moderately to highly educated.



Bar Graph – 3

Living Status:

The present graph shows the living status of the elderly under the study. It is seen from the graph that 49% means a little less than half of the elderly live with their spouses followed by 45% of the elderly who live with their children. Around 5% elderly live in the old-age homes, while 8% live alone.

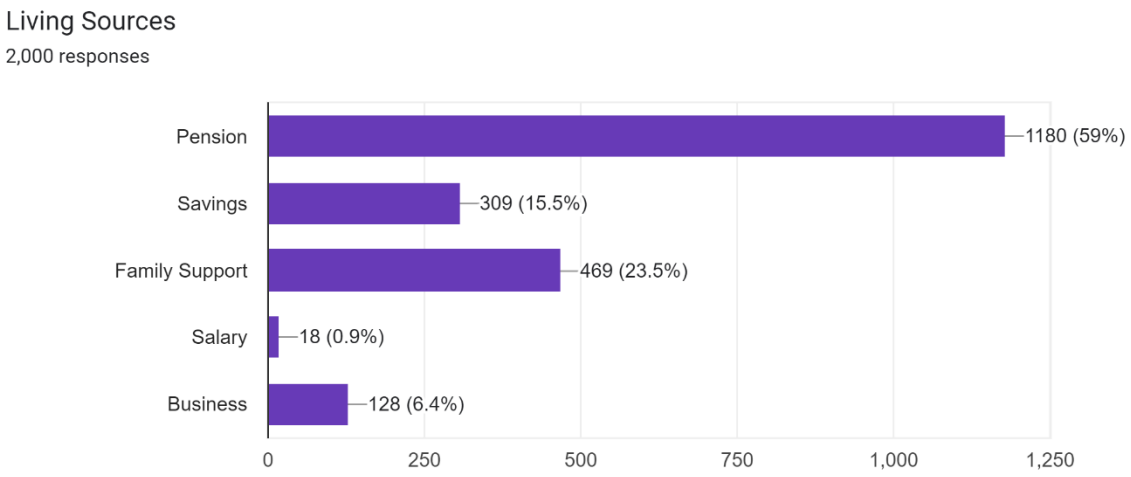


Bar Graph – 4

Living Sources of the Elders:

The graph shows sources of income for the elderly in the study. Majority rely on pensions, followed by 24% living with family support. About 16% use lifetime savings, while 6% run businesses. Less than 1%

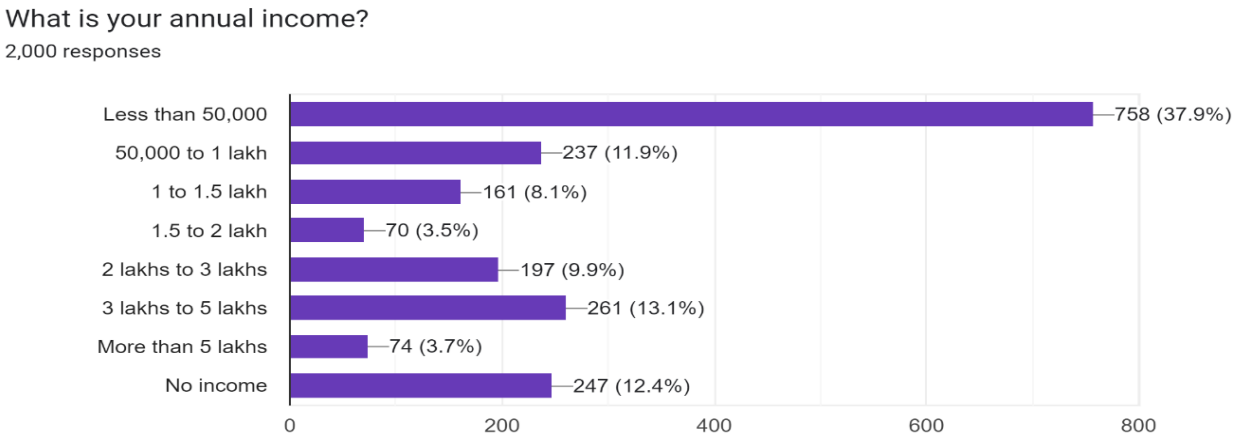
depend on salary. In conclusion, pensions are the main income source for most elderly, with few running businesses in old age.



Bar Graph – 5

Annual Income of the Elders:

An attempt was made to understand the income of the elderly covered under this study. The graph shows that 38% of elderly had less than 50,000 rupee annual incomes, with 13% earning between 3 to 5 lakhs, and around 12% earning less than one lakh. Approximately 4% had incomes between 1.5 to 2 lakhs, while another 4% had incomes exceeding 5 lakhs. Notably, 12% had no income at all. In summary, a significant portion (38%) received less than 50,000 rupees annually, while only a small fraction (less than 4%) earned over 5 lakhs.

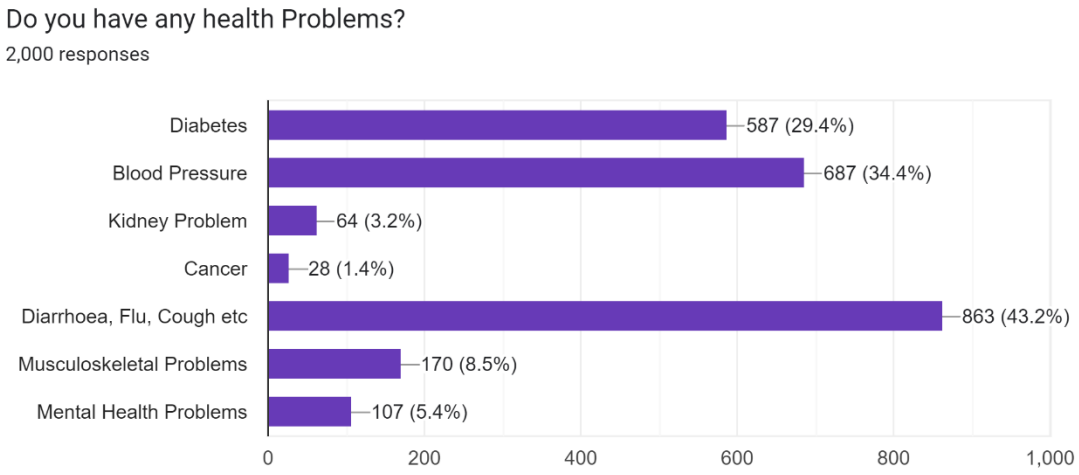


Bar Graph – 6

Health Status of the Elders:

The study aimed to assess elder health. Findings: 43% had ailments like diarrhoea, flu, and cough, 35% had lifestyle diseases (Diabetes 29%, Hypertension 34%), and other issues: musculoskeletal (9%), Kidney (3%), Cancer (1%). Mental health problems affected 5%+. Notably, 63%+ had lifestyle diseases, primarily

Diabetes and Hypertension. Additionally, 5%+ had mental health issues. Hence, it is concluded that the elderly covered under the study were having health issues which need to be addressed seriously as a matter of public health concern.



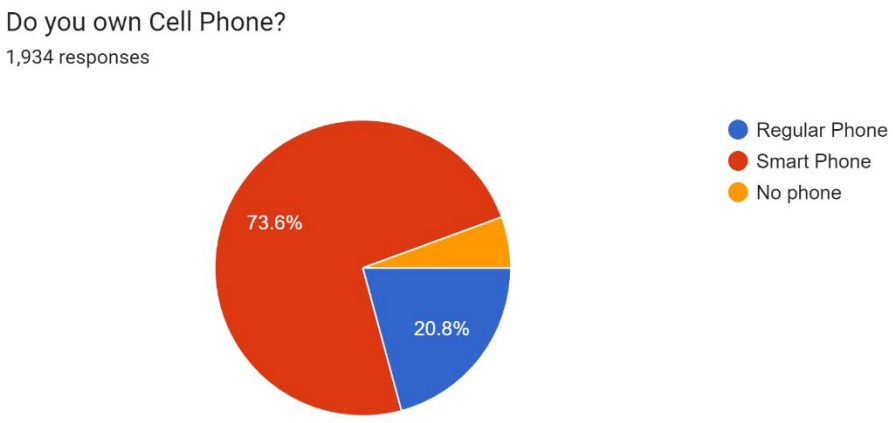
Bar Graph – 7

2. II: Status of the Digital Literacy of the Elders:

The second part of the report deals with the main objective of the current study: Understanding the digital literacy among the elders and its use by them. Hence, this section deals with the status of the digital literacy of the elders and its use by them.

Cell Phones Owned by the Elders:

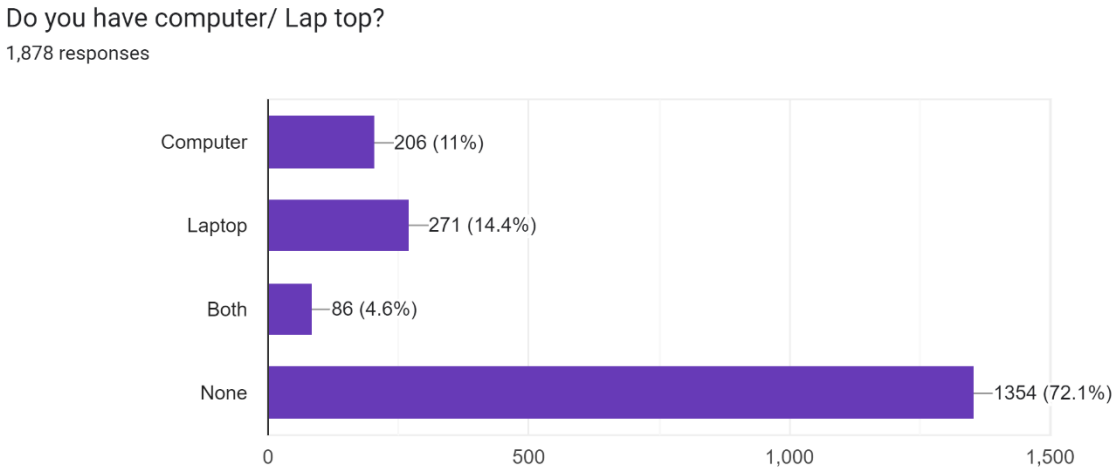
It can be seen from the below diagram that 94% of the elders were having the cell phones – 21% owned regular phone and 73% owned smart phones. It is also seen that only 6% of the elderly had no cell phones Therefore, it can be concluded that the vast majority of senior citizens use cell phones, with a significant majority utilizing smartphone. This indicates that many elderly individuals are adopting smartphones, which aids them in staying updated with daily information and maintaining smooth communication with family and friends."



Pie Chart -1

Computer/ Laptop owned by the Elders:

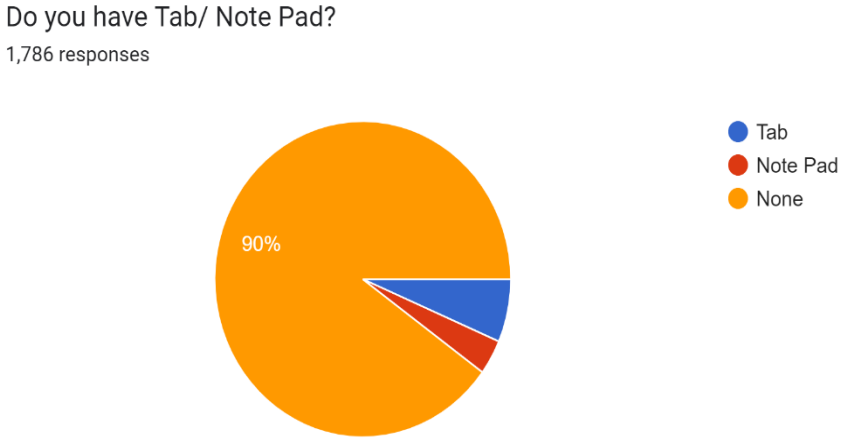
The below graph depicts the status of the computers and/or laptops owned by the elderly. A great majority of them have not owned neither computers nor laptops. However, 11% of them possessed computers and 14% possessed laptops. A small percent of participants, around 5%, owned both computers and laptops. It is observed and concluded that most of the elderly don't need the computes and laptops since they are retired and most own a phone.



Bar Graph – 8

Tab/Note Pad Owned by the Elders:

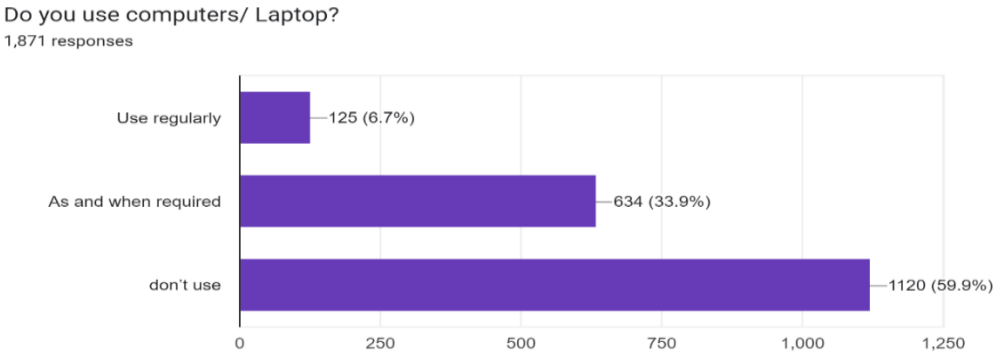
It is seen from the below diagram that an overwhelming majority i.e., 90% of the elderly did not have Tabs or Note Pads. The remaining 10% had either a Tab or Note Pad. It is concluded that the elderly were not using the Tabs and Note Pads. Of course, since they are retired and away of day-today business and jobs they do not need these things. Further, it is also seen that these elderly are having the smart phones. Hence, they never thought of owning the Tabs or Note Pads which are not the regular features of the gadgets.



Pie Chart -2

Use of Computers by the Elders:

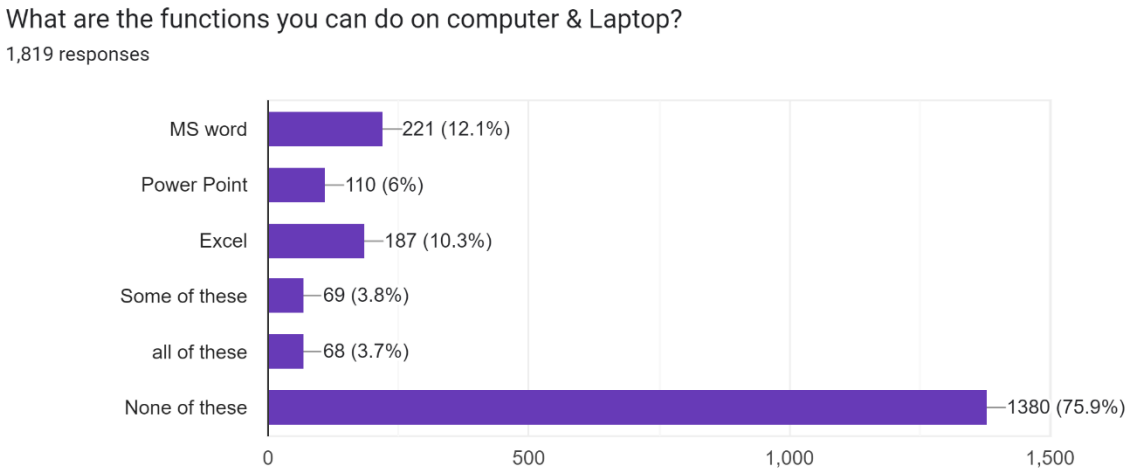
This graph shows the usage of the computers that the previously discussed portion of the elderly population owns. It is seen that a great majority – about 60% - of them do not use the computers whereas 34 percent use them when needed. But 7% of them use the computers regularly. It can be concluded that a little more than 40% of the elderly use the computers for their official and personal purposes while a significant percent of them do not use the computers.



Bar Graph – 9

Functions Operated on Computer/ Laptop by the Elders:

The graph below depicts the use of the different programs by the elderly on their computers. It is seen that 12% use Microsoft Word, 6% Power Point, and 10% Excel. Around 4% each of them uses alternatively these functions as per their requirements. It is concluded that those elderly use their computers they use the different programmes as per their requirements. It is a good symbol that the elderly are using the computers and using different programmes.

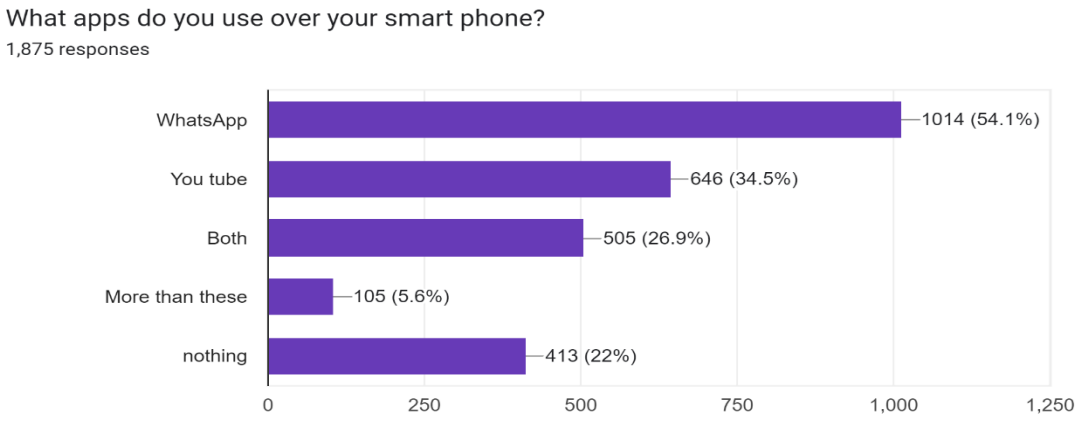


Bar Graph – 10

Use of Apps in Smart Phone by the Elders:

The present graph depicts the use of the different software Apps in Smart Phones by the elders. It is seen that 54% of them use WhatsApp followed by 35% who used YouTube. Around 27% of the population

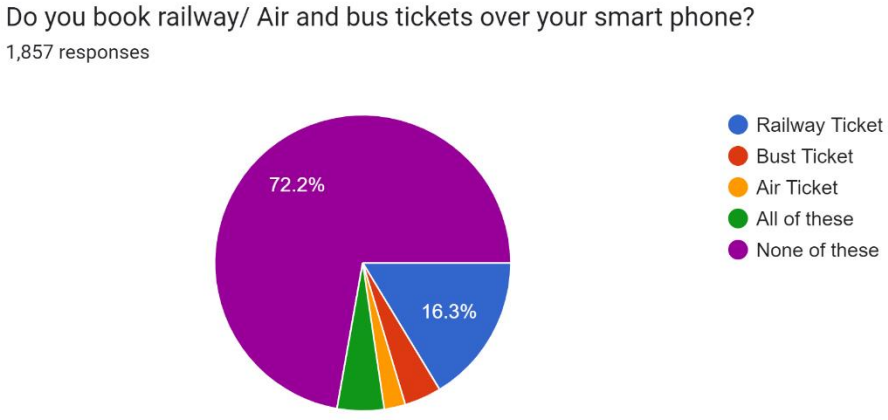
were using both WhatsApp and YouTube. It is interesting to note that around 7% of the elderly were using more than these apps. But it is also matter of the concern that 25% were not using any type of apps which is due to the fact that they don't own smartphones. It is concluded that everyone who owned the smart phones were invariably using different apps for different purposes.



Bar Graph – 11

Booking of Air/ Rail Tickets over Smart Phones by the Elders:

The below diagram shows the status of the booking of the Air/Rail tickets over the smart phones by the elders. It is seen that 72% of the elderly do not know how to book the Air/Rail tickets over the smart phones. Among the remaining 28% of participants, only 16% can book the railway tickets over their smart phones. It is concluded that a great majority of the elderly do not know how to book the travel tickets for their journeys. It is a matter of serious concern that the elderly are deprived of these services due to digital illiteracy and depend on family members for assistance.

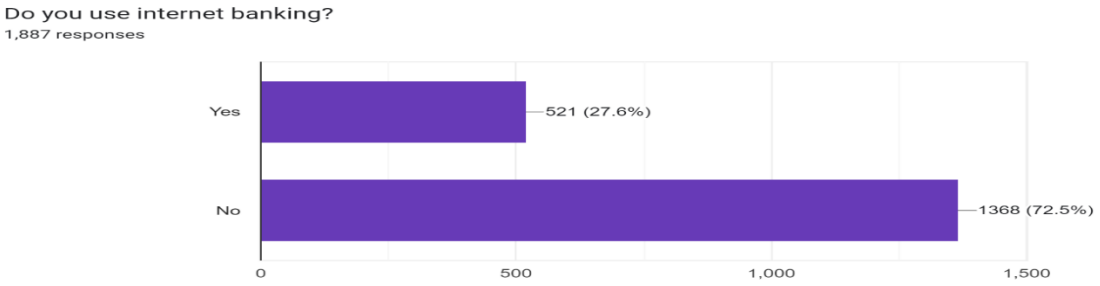


Pie Chart -3

Use of Internet Banking by the Elders:

One of the important aspects covered under the study was to know and understand the status of the use of the internet banking by the elders. It is seen from the below graph that more than 72% do not use the internet banking, while 27% of them use internet banking. Internet banking is one of the most important

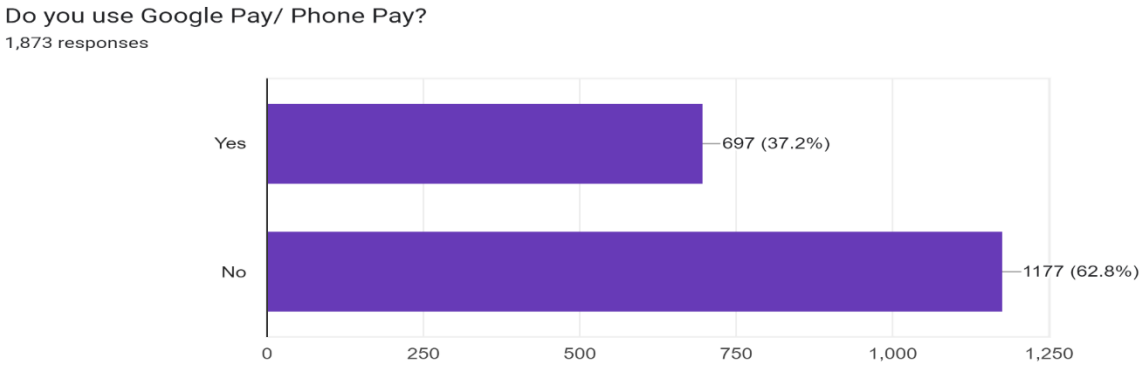
concerns for the elderly, especially those who handle their banking business independently. It is therefore concluded that a great majority of the elderly do not use the internet banking. This is a concern, because manual banking can become strenuous on the elderly population.



Bar Graph – 12

Use of Google Pay/ Phone Pay by the Elders:

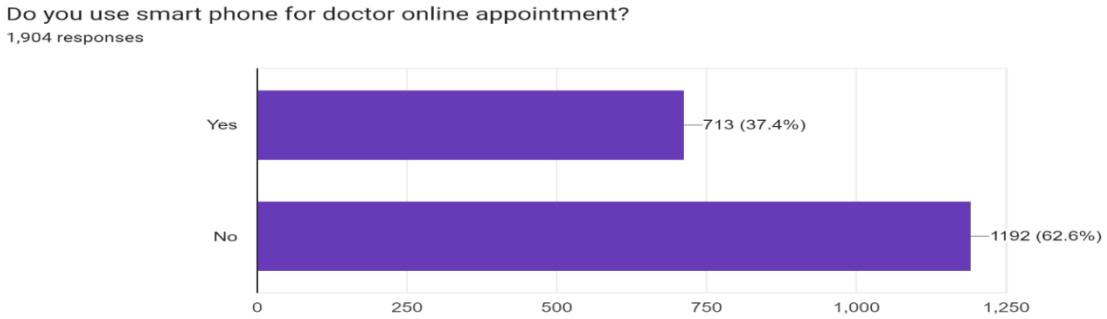
In regards to the operating the Google Pay it is seen from the below graph that nearly about 63% of the elderly do not use Google Pay for their day-today transactions. While only 37% of them use the app for their transactions. It is a matter of concern that the seniors are not using google pay. Today we are heavily leaning towards the digitalization of our banking services and no cash approach is followed. It is in this context it is again suggested that these elderly should be given digital literacy training through which they can learn to use the google pay.



Bar Graph – 13

Use of Smart Phone for Doctor Online Appointment by the Elders:

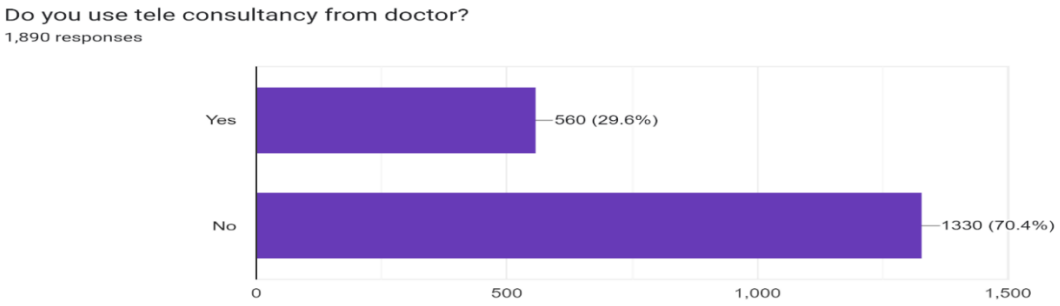
The graph below shows he use of smart phones for online appointment with doctors for their consultations. It can be seen from the graph that more than 62% of them are unable to use their smart phones for the online appointment of the doctors while near about 38% of the elderly are comfortable with this practice. It is concluded that a majority of the elderly are not using their smart phones for the online appointment with the doctors for their consultancy. Hence, it is suggested and the attention of the government and non-government organizations is drawn towards organising the digital literacy programmes which would ease the elderly for getting the appointments of the doctors sitting at their homes itself.



Bar Graph – 14

Use of Tele Consultancy from Doctors by the Elders:

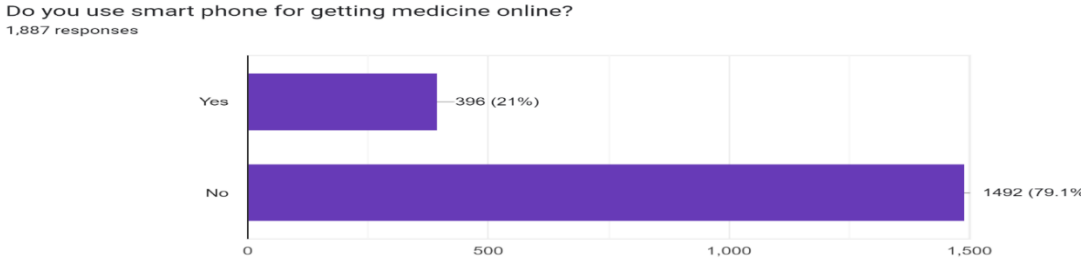
The current graph also depicts the status of the elderly to avail the tele consultancy services from the Doctors. It is seen from the graph that 70% of them are unable to get the tele consultancy for their medical services. Hence, it is suggested to the concerned government to make the provisions for training these elderly to avail the facilities of the tele consultancy from the doctors. Digital literacy training would solve these problems.



Bar Graph – 15

Use of Smart Phone for Getting Medicine Online by the Elders:

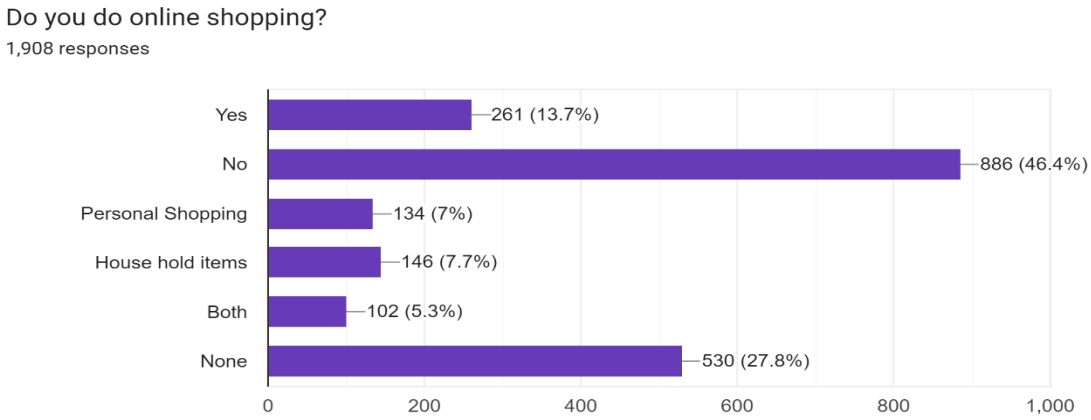
The present chart explains about getting online medicines by the elderly with the help of the smart phones. The study revealed that 79% of respondents did not use smartphones to purchase medicines online, while only 21% did. This suggests that most elderly individuals do not utilize smartphones for online medicine purchases. Hence, it is suggested that the government and the non-government organizations working in the field of geriatric care shout organize the digital literacy classes for these elderly population which would make their life easy and comfortable.



Bar Graph - 16

Use of Online Shopping by the Elders:

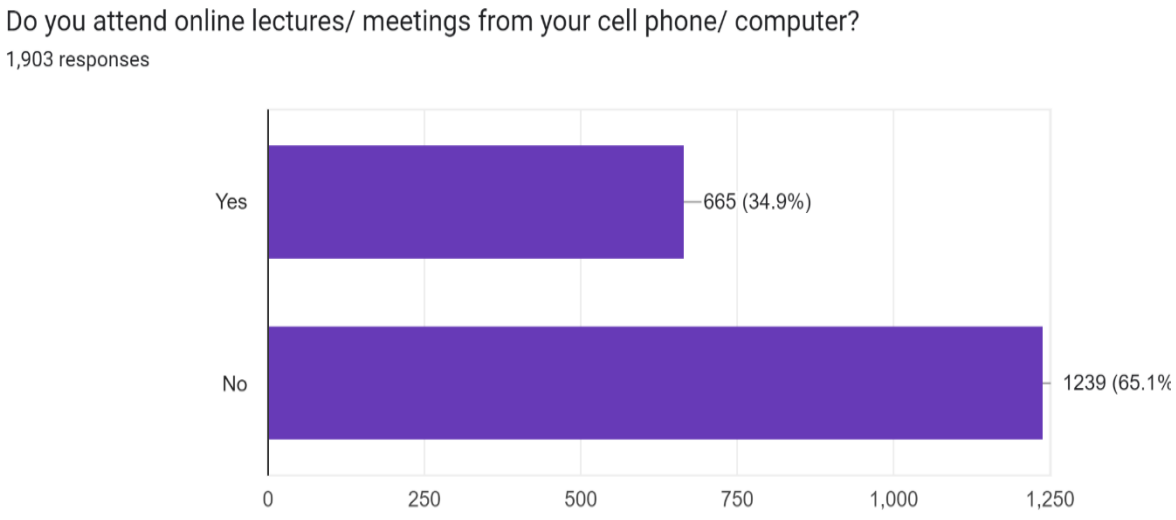
Shopping is one of the most important concerns for the elderly as they need many things at their residences. It is seen that only more than 13% of them were using online shopping methods while remaining majority of them were not using. Further it is seen that those who used online shopping were doing this online shopping for personal shopping and buying household items. It is suggested that these elderly should be given opportunity to learn the use of smart phones for their purchases online.



Bar Graph - 17

Attending Online Lectures/ Meetings from Cell Phone by the Elders:

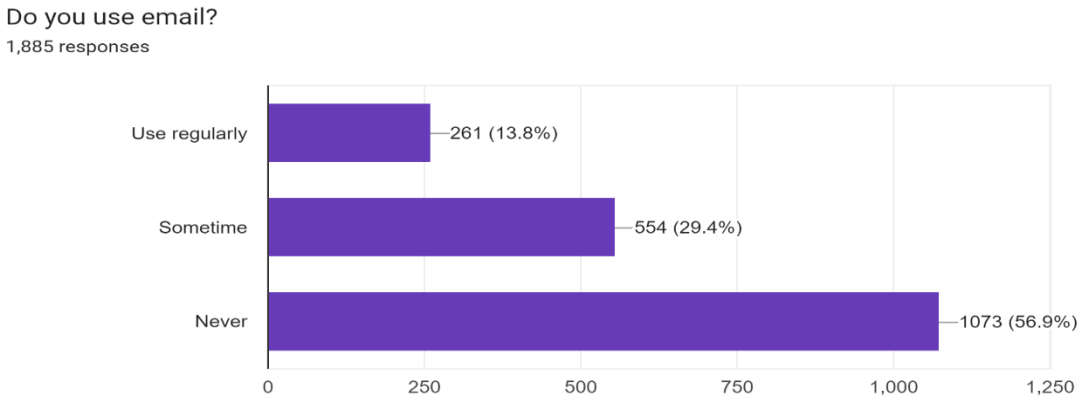
A question had been asked to know and understand whether the elderly attend lectures and meetings online through their cell phones. It is seen from the chart that 65% of the elderly were not attending the lectures and meetings online using their cell phones while the remaining 35% were attending online. It may be the fact that they may not be required to attend such lectures and meetings or some of them might have needed it, but unable to do it. It is concluded that a great majoring of the elderlies were not attending any lectures and meetings online.



Bar Graph - 18

Use of Email by the Elders:

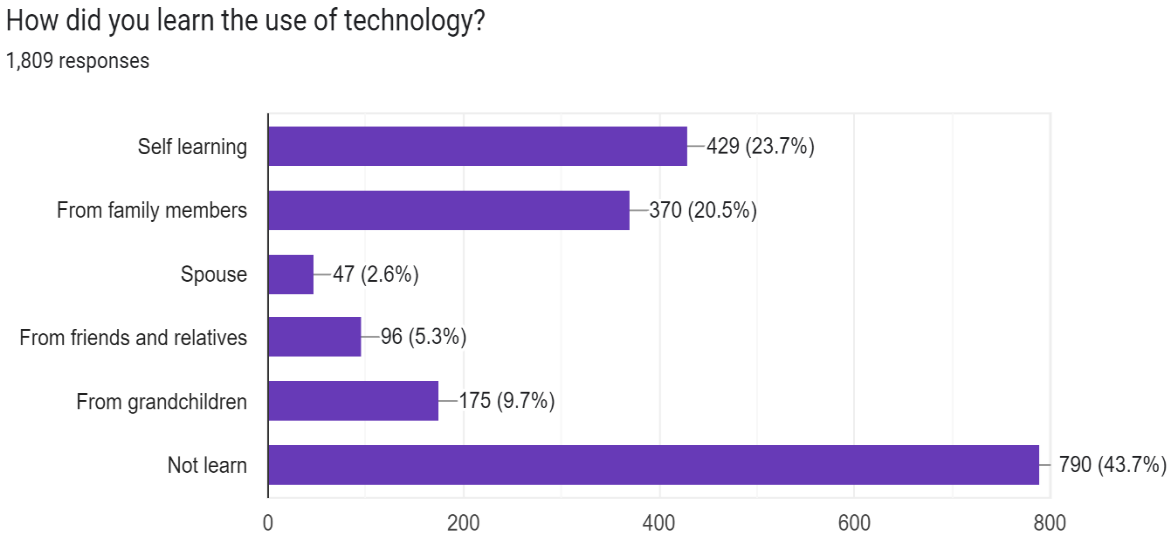
The below chart shows the status of emails used by the elderly. Around 57% were not using emails for their communications, while 29% use emails sometimes and around 14% use emails regularly. It is a good sign that 43% percent of the participants were using the emails even after their retirement. The remaining might not be in need of emails, hence, not using.



Bar Graph - 19

Sources of Learning Use of Technology by the Elders:

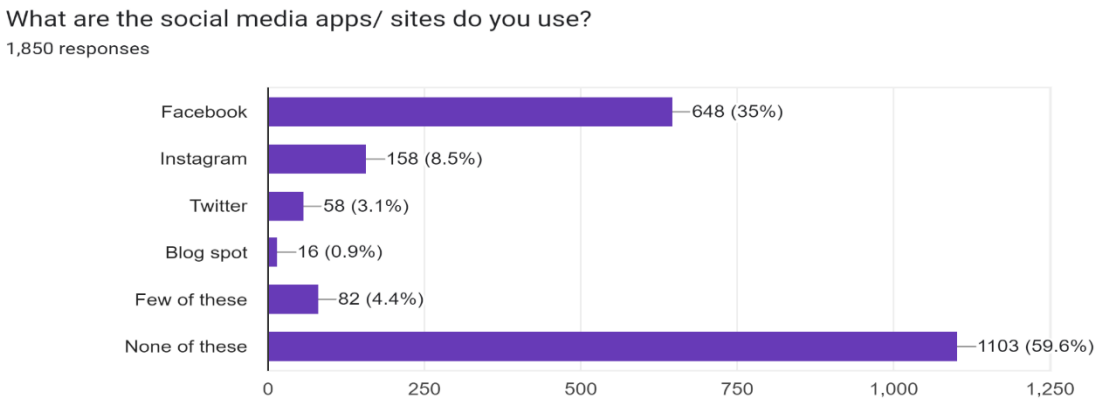
An attempt had been made to know and understand how and by whom the elderly learnt the use of technology. The chart reveals that roughly 48% of seniors haven't embraced digital technology. The remaining 52% have made varying attempts to learn, with over 20% learning from family, 10% from grandchildren, 3% from spouses, and 5% from friends or relatives. Surprisingly, about 24% of elders learned independently, showcasing their keen learning interest and self-sufficiency. It is concluded that a majority of the elderly tried to learn the digital technology and still there a need of conducting the digital classes for the remaining elderlies.



Bar Graph - 20

Social Media Apps/ Sites Used by the Elders:

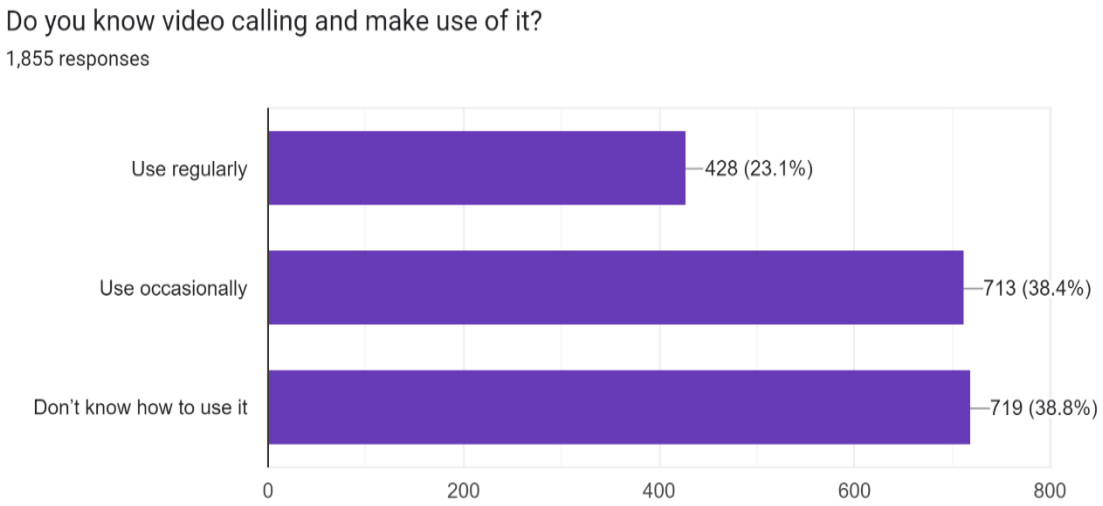
The following chart shows that around 60% of the elders under the study were not using any social apps such as Facebook, Instagram etc. While the remaining were using only one social app. Approximately 35% used Facebook, about 9% used Instagram, 3% used Twitter, and less than 1% used Blogspot. Additionally, over 4% used multiple platforms. Around 40% of seniors used some form of social media, a positive trend. However, it's concerning that 60% did not use any social media apps. Hence, it is suggested that there is a scope for conducting the digital classes for these elderlies.



Bar Graph – 21

Use of Video Calling by the Elders:

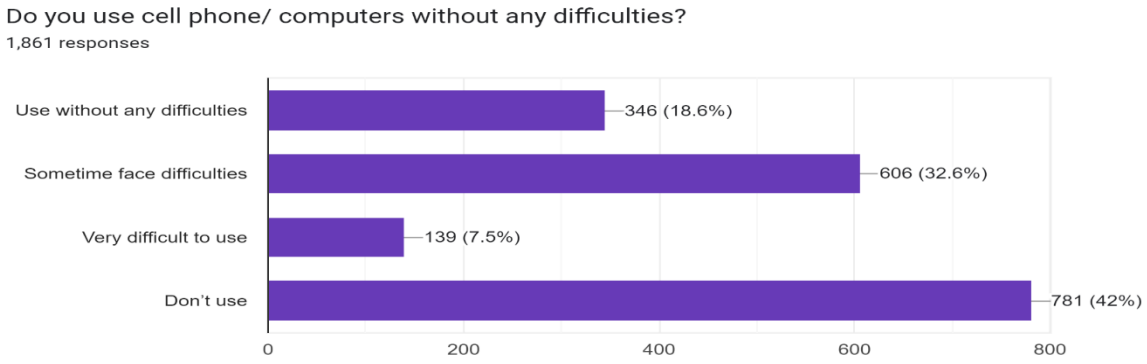
The chart below shows the status of the use of the video calling by the elders for different purposes and more importantly to talk to their loved ones. It can be seen from the chart that only 23% of the elderly uses the video calling regularly where as 38% use this facility occasionally. But more than 38% of them do not use the video calling totally. It is found that more than one third of the elderly covered under the study do not use the video calling to their loved ones. It is therefore found and suggested that there is a need of conducting the digital literacy classes to the elderlies.



Bar Graph - 22

Difficulties in using Cell Phones/ Computers by the Elderly:

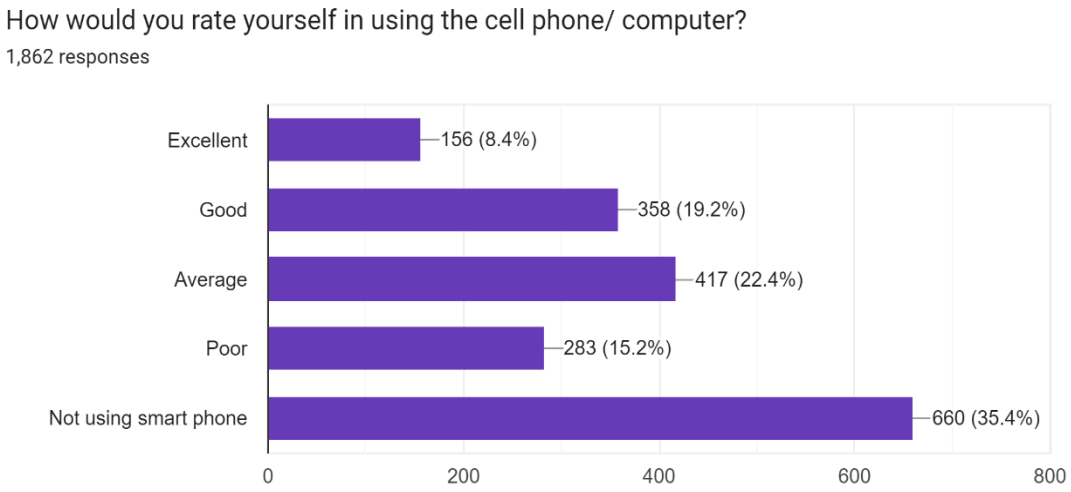
Another attempt was made to know and understand the difficulties faced by the elderlies while using their cell phones. It is noticed from the chart below that 42% do not use the smart phones. Among those who use smart phones expressed that it is very difficult to use the smart phones (7.5%), sometimes face difficulties (32.6%). Only around 19% use their smart phones for different purposes without any difficulties. It is concluded that a majority of the elderlies those using smart phones faced difficulties in one or the other ways. Hence, it is suggested that they should be given opportunities to learn the use of the smart phones without any hurdles.



Bar Graph – 23

Self-rating for Use of Cell Phones/ Computers by the Elderly:

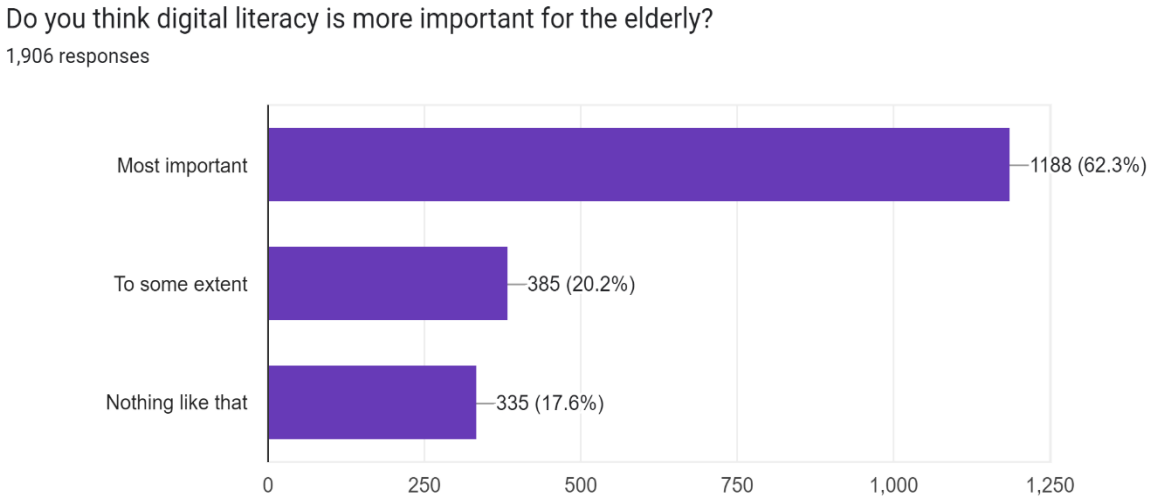
It is attempted to express themselves by the elderlies as regards to the use of cell phones by rating themselves. It is seen that 8% of them rated themselves that they use phones excellently, 19% expressed that they are using in a good way, 22% expressed that their rating would be average and remaining 15% rated themselves that they are poor in using the smart phones. Self-assessment is the best assessment. It is noticed that the elderlies had honestly expressed about their performance of using the smart phones.



Bar Graph – 24

Opinion of the Elders as regards to the Importance of Digital Literacy for the Elders:

It was questioned to the participants on whether digital literacy and its education is important for the elders 62% expressed that it is most important. A little more than 20% expressed it required to some extent. Remaining 18% expressed that it is nothing like that. It is found that the elderlies expressed that digital literacy is most important for the elderly. Based on the expression of the senior citizens it would be better to organize the digital literacy classes to make the elderly digitally literate.



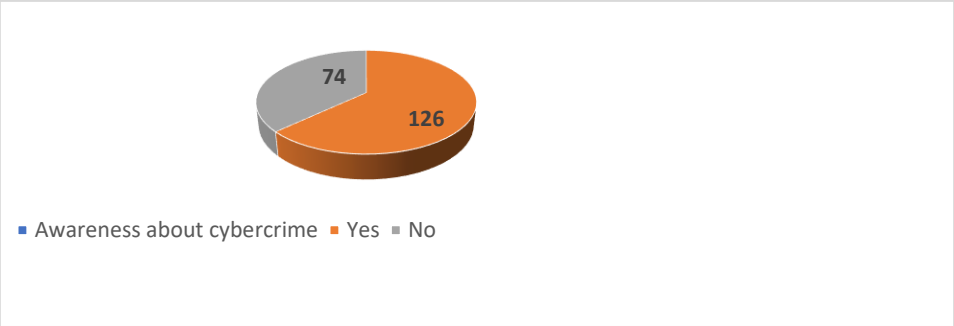
Bar Graph - 25

Cyber Crime against Elderly: (n-200)

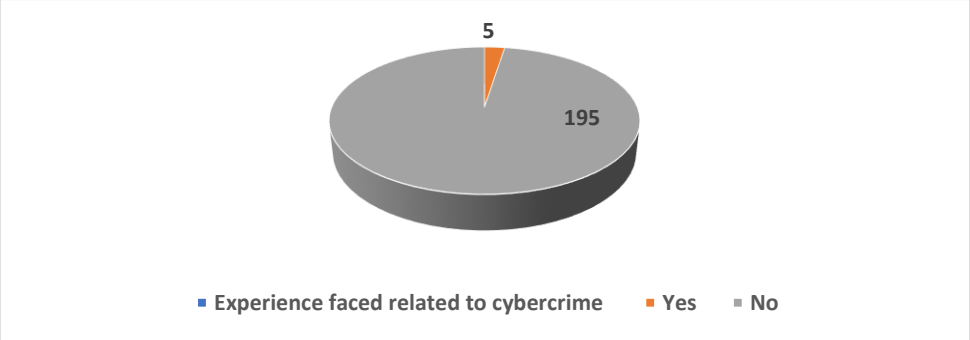
During this survey the two other questions related to the awareness and issues related to cybercrime were administered to the participants for getting an understanding about the proportion of cybercrime experienced in the selected population.

Q1. Are you aware about cybercrime?

Q2. Did any of you face or experience instance of cybercrime?



It is observed that among the total population 126 individuals were aware about cybercrime. Whereas 74 reported that they were unaware about it. It is recorded that 60% of the elderly were aware about the cyber- crimes.



From the above chart it is seen that from the total population only 5 individuals mentioned about experiencing cyber-crime issues for which type or the severity is not specified. We can corelate the question 1 and 2 as major study group was aware about cybercrime or digital abuse and that can be one of the reasons that only few members from the study population experienced digital abuse.

Elder Abuse Cases Handled by Elder line:

Elder Abuse Cases Handled by Elder line 14567 during Apr'24 to Jun'24 Elderly abuse is a single or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to the older person. Elderly abuse is referring to the term referring to any knowing intentional or negligent act by a care giver or any other person that causes harm or a serious risk of harm to a vulnerable adult. Physical abuse, Emotional Abuse, Financial Abuse, Sexual abuse Verbal Abuse etc….

Elderly people and anyone who wants to help elderly, can make use of the service of elder line by simply dialling the toll-free number 14567. The initial set of services with which the elder line has been rolled out include speaking with the elderly and counselling them, providing information pertaining to elderly care, guidance on legal and pension related issues, providing emotional support.

Elder line had received 44 calls for abuse related issues during the 1st quarter of the year (Apr-Jun 2024). Following is the graphical format of Gender Related and Type of Abuse Related Analysis for the 1st quarter. It has been observed that the maximum number of calls received by Male 34 and 9 by Female.

Findings and Suggestions:

The study on digital literacy among the elderly population in Pune, Maharashtra revealed several significant insights. Firstly, it was observed that a vast majority of the elderly participants were educated, with only a minimal 3 percent being illiterate. Additionally, the living arrangements of the elderly were analysed, showing that nearly half of them resided with their spouses, while a significant portion lived with their children. A noteworthy finding was the prevalence of pension as the primary source of income among the elderly, with a considerable proportion having minimal annual incomes. Health issues among the elderly emerged as a critical concern requiring urgent attention.

Regarding technology usage, it was evident that smartphones were widely adopted among the elderly, enabling them to stay connected and informed. However, there was a notable lack of utilization of other devices such as computers, laptops, tablets, and note pads. Despite owning smartphones, a considerable portion of the elderly were not proficient in using various applications and online services, including internet banking, online shopping, and Google Pay. Moreover, there was a reluctance among them to

embrace digital platforms for medical consultations, appointments, and purchasing medicines online. Email usage and video calling also appeared to be underutilized among the elderly population.

Based on the findings, several recommendations can be made to enhance digital literacy among the elderly in Pune, Maharashtra. Firstly, there is a need for targeted digital literacy programs tailored to the specific needs and challenges faced by the elderly population. These programs should focus on imparting essential skills for using smartphones, accessing online services, and navigating digital platforms effectively. Government and non-governmental organizations should collaborate to organize such initiatives and provide adequate resources and support.

Additionally, efforts should be made to increase awareness and promote the benefits of digital literacy among the elderly. This can be achieved through community workshops, educational campaigns, and outreach programs aimed at dispelling myths and addressing concerns related to technology usage. Furthermore, the role of family members and caregivers in supporting elderly individuals in their digital learning journey should not be underestimated. Encouraging intergenerational learning experiences and providing ongoing assistance and encouragement can significantly enhance the adoption and utilization of digital technologies among the elderly population.

Conclusion:

In conclusion, the study on digital literacy among the elderly population in Pune, Maharashtra has shed light on crucial insights that underscore the need for targeted interventions to enhance digital literacy among this demographic. Despite the widespread adoption of smartphones, there remains a notable gap in utilizing other digital devices and services, highlighting the urgency for tailored digital literacy programs. Recommendations include the development of targeted initiatives, increasing awareness, fostering partnerships with healthcare providers, and recognizing the pivotal role of family support in facilitating digital learning. Addressing these recommendations can pave the way for empowering the elderly with essential digital skills, thereby improving their quality of life, and ensuring their active participation in the digital age.

References:

1. Jones, R., & Brown, S. (2019). Understanding the Factors Influencing Older Adults' Adoption of Digital Technologies: A Pune Perspective. Journal of Elderly Studies, 12(4), 321-335.
2. Chang, L., & Lee, K. (2020). Enhancing Digital Literacy Among Elderly Populations: Lessons from Effective Programs. Digital Inclusion Journal, 8(3), 210-225.
3. Kumar, S., Gupta, R., Singh, P., & Mishra, A. (2016). Promoting Digital Literacy among Marginalized Communities: A Framework for Action. International Journal of Digital Equity, 3(2), 87-104.