International Journal of Humanities and Social Science Invention (IJHSSI)
ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714
www.ijhssi.org ||Volume 9 Issue 7 Ser. II || July 2020 || PP 28-34

The awareness and the usage of digital devices among senior citizens- A study with special reference to Kerala in India

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ABSTRACT: *The Digital India programme focuses transforming India into a digitally empowered society. Today, Indians are confronted with a plethora of technological services and digital devices. Such services offered on digital platforms not only enhance intellectual engagement and provide increased safety but also expedite tedious processes such as money transfers thereby bettering the quality of life. This transformation process is challenging in a country like India, where more than 300 million citizens do not possess credit / debit cards or smart phones and are also not financially literate enough to handle PINs, passwords etc. and their implied securities Although the introduction of these services hold great promise for all, older adults find it difficult to adapt to these new techniques. Seniors often lack knowledge about the usage of new technologies and so are unable to benefit from several government schemes that are easily accessed through digital means. Thus, it becomes imperative to understand the level of awareness they possess regarding the usage of devices. This study aims to identify the relevance of the utilization of digital devices and the challenges faced by senior citizens in technology usage among senior citizens.*

KEYWORDS: *Ageing well, Dependency ratio, Digital Revolution, E-literate, Digital literacy, Digital India, Digital Devices, Senior Citizen.*

Date of Submission: 14-07-2020 Date of Acceptance: 29-07-2020

I. INTRODUCTION

According to a report by the United Nations Population Fund and Help Age India , India had 90 million elderly person in 2011, with the number expected to grow to 173 million by 2026[1]. Among the total population nearly one third can be classified as senior citizens. As adults age, they respond more slowly to simple stimuli and take longer to learn new material, thus potentially decreasing their ability to adapt to changes. As they age their vision, speech, and hearing can become compromised. In addition, they often exhibit larger temporal variations in sensory, motor and abstract cognitive abilities than younger and middle-aged adults [2]. Until recently, technology could not address most of these decline in potential adaptability. However, as computers become powerful and easily embedded in other objects and processes, they provide the opportunity to construct technology that can greatly augment the adaptability and functionality of the older adult user. The utilisation of digital technologies and services offer opportunities for the delivery of broad, flexible interventions with older adults. The information providing capacity of modern technologies allows the elderly to handle the issues of modern life with ease.

II. OBJECTIVE

One of the biggest barriers of the implementation of the Digital India programme is the lack of familiarity of technology usage. Government services, benefits and schemes would not reach intended beneficiaries, due to lack of information awareness and accessibility. Hence the Government of India introduced Aadhaar, the first initiative worldwide that provides identity through effective use of biometric technology. The Key feature of Aadhaar is the online authenticable digital cradle-to-grave portable identity. This has led to improved technological services through increased transparency. Clear accountability and transparent monitoring have significantly improved access and quality of services for all citizens.

Citizens who are older and less affluent, quite often tend to have significant issues with health or disability and are also largely disconnected from the world of digital tools and services, both physically and psychologically. Knowledge is power, and speakers of languages other than English face a range of challenges in accessing information. Cultural competency is another important factor. Idioms and word meanings can vary regionally. Field testing and community feedback is the best way to ensure your content is both linguistically

accurate and culturally competent for your target community. While Google Translate might be great for tourists and casual use, the quality of the translation is unreliable, and language access experts generally advise against it. Remote assistance can be especially effective for rural communities, where in-language assistance may more be difficult to come by. Online resources and technology-enabled initiatives will have the most impact when interwoven with offline strategies and involvement from trusted local community partners [3]

The study determines the pattern of usage of digital devices among senior citizens, so that it may open up avenues of research, to identify technologies that will enable seniors to confidently use the digital platform thereby enabling them to age well.

III. AGEING POPULATION – LITERATURE SURVEY

The term ageing of the population refers to a relative increase in the number of aged persons. Studies show that, once seniors join the online world, digital technology often becomes an integral part of their daily lives.Our lives increasingly rely on accessing the internet-mobile phone to perform on-line transactions such as paying bills, booking appointments/tickets. However, people who have the greatest need often lack the basic digital literacy skills and resources to complete online transaction. So it is imperative to identify technologies that will enable seniors to confidently use the digital platform to enhance their lives [4].

KERALA

Among the Indian States, Kerala has the highest proportion of literate persons. The e literacy rate is 93.91 % as per Census 2011. In Kerala, 96.02 % men and 91.98 % of women are literate as against 82.14 % of men and 65.46 % of women at national level.

In the state of Kerala, the 60 plus population was found to be 5.1 % of the total in 1961 and was just below the national 5.6 %. Since 1980, Kerala has overtaken the rest. In 2001 comparatively it is 10.5 % to 7.5 % [5]. Around 13 % of the population is already past 60 years by 2011. According to a study (Centre for Development Studies, 2013 "A survey on ageing scenario in Kerala"), the State's elderly population is growing at a perpetual rate of 2.3 % [6]. Among the elderly aged 70 or 80 and above the growth rate is high. Currently 42 lakh people of Kerala are above 60 years and 13 % of them are 80 years and above, the fastest growing group among the old.

ELDERLY & TECHNOLOGY

Digital technology can support senior citizens in performing their day to day tasks and promote ageing gracefully. The mobile phones, television, security systems and other communication devices are now becoming more integrated with computer network resources as they provide faster and more powerful interactive services. To function independently and successfully tackle their environment, people of all ages need to interact with some form of technology [7].

There seems to be a discrepancy between digital technologies that are developed and what older adults require. The inclusion of older adults in the design process and research of digital technology is essential if technology is to fulfil the promise of improved well-being. Programmers and research scholars must make every effort to ensure the involvement of older adults in the design process of digital technology. For this an assessment of their current level of usage needs to be recorded and their problems with current technology usage must be identified [8].

Disparity in technology access was found between the English-speaking population and natives of indigenous languages. Poor provision of information and communication technologies in low/middle-income countries represents a concern for effective use of new technologies. A lot of linguistic and cultural hurdles are experienced by users whose first language is not English. Linguistic and social choices have already been suggested as elements that shape how corporations and governments make strategic choices about website developments, thus transforming access and use [9].

The elderly are called upon to adapt to digital technology and the demands of modern digital era. It is widely accepted that elder individuals find it difficult to adapt to the advent of new technologies when compared to younger generations. Furthermore, in their efforts to embrace new technologies, they usually face many difficulties deriving from demographic and linguistic characteristics as well as difficulties related to the complexity of new technology. Thus, by understanding the difficulties that the elderly experience, researchers can attempt to significantly contribute to the improvement of their quality of life by suggesting alternatives [10].

IV. SCOPE OF THE WORK

The study aims at identifying the requirements and usage of digital devices among senior citizens with reference to Kerala.

EMPHASIS ON KERALA

Kerala is ageing fastest among the states of India. The move in the age composition in favour of old age has implications on Kerala's socio-economic situation. In traditional Indian culture and joint family arrangements, the extended family provided adequate social and financial security. However, this has almost eroded with the emergent nuclear family with very poor arrangements for taking care of the elderly. As Kerala has a large Non-Resident Indian population, with the youth leaving the country for greener pastures abroad, the elderly are left alone without much family support.

Dependency ratio is defined as the ratio of the dependent population to that of the working age population and is an important indicator of the economic burden carried by each worker. The ratio of persons aged 60 years and above to the working age population is defined as Old age dependency. The 'Old' Dependency Ratio of India as per 2011 census is 142 and in Kerala it is 196 due to higher life expectancy at birth [6].

SOCIAL CAUSE

Indian Government's Role in Welfare of Aged

The Government of India has been committed to supporting the elderly in our society with certain welfare methods. The Government of India has approved the National Policy for Older Persons on January 13, 1999 to step up welfare measures for aging well [11].

Schemes of the Kerala State for elderly

Kerala was one of the earliest States to introduce a policy for senior citizens. The first policy document emerged in 2006. The Old Age Policy of 2006 has been bettered as the State Old Age Policy 2013. The aim of the policy is to ensure maximum welfare facilities to all aged people in the State [11].

Age Friendly Panchayat: - The objective of this programme is to transform all the Panchayats in the State into age-friendly Panchayats thereby ensuring good health, social participation, and a better quality of life for Senior Citizens.

Vayomithram: - For the elderly above the age of 65 years residing at Corporation/Municipal Areas, Kerala Social Security Mission implements the Vayomithram project which provides them health care and support.

Vayo Amrutham: - Under this scheme, Ayurvedic treatment is provided to the Inmates inmates belonging to all the government old age homes functioning under Social Justice Department.

Mandahasam: - is an initiative by the Social Justice Department that delivers free dental care for the senior citizens.

Sayamprabha:- Home project is a new initiative of the Social Justice Department that provides day care facilities for elders.

KERALA E-STATISTICS

Kerala has emerged as the state with the highest smartphone penetration in the country, according to the data released by CyberMedia Research, a market intelligence firm tracking the technology sector [12].

CMR's data also reveals that on a pan-India level, about 47% of the mobile phone users in India are on smartphones, with the remaining 53% still on feature phones. Kerala led the charts with a penetration of 65%, followed by Gujarat at close to 60% and Punjab at about 59%.

Kerala has the highest mobile penetration with a rapid increase in the usage of smart phones. It also has high Internet penetration. Kerala is among the top five states if tele density is concerned (95.70 persons with telephone connections for every 100 individuals). The other e-statistics are as follows: 34.71 Internet subscriptions per 100 population, 12.31 million Internet subscriptions, 2.68 million wireline subscriber base of which 65 per cent is rural and 31.13 million wireless subscribers [13].

This study used the triangulation approach of both qualitative and quantitative methods. A survey was used to collect quantitative data from media users. Structured interviews were conducted with newspaper editors to collect qualitative data which provided detailed information on the current situation of newspapers in the face of digital platforms. Interviews allowed the researcher to gather in-depth data that questionnaires could not produce. The research population was the entire Namibian newspaper industry. The sample for this study was made up of editors from each of the two newspapers, The Namibian and New Era which were selected purposively using non-probability sampling techniques. Stratified random sampling was used to distribute 60 questionnaires to Windhoek residents of which 53 were answered and returned. Both qualitative and quantitative data analysis methods were used, content analysis was used to analyze the interviews and statistical tests in SPSS were used to analyse the survey data.

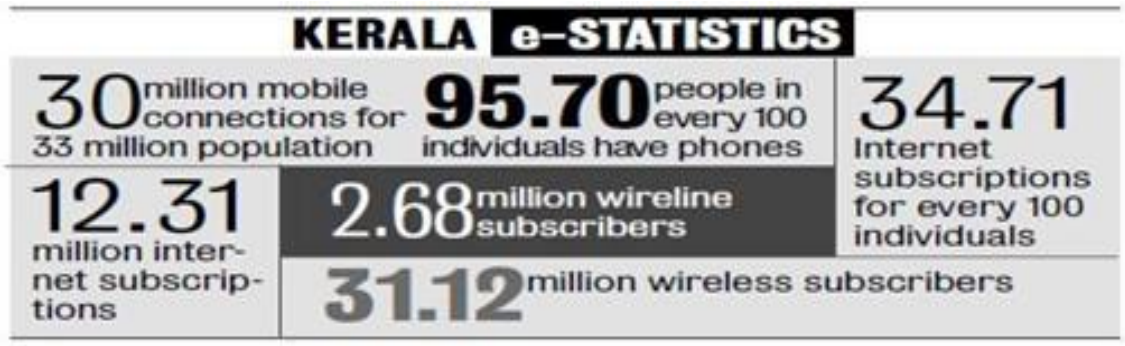

Fig1 -Kerala e-Statistics

In Kerala 20% of households have Internet penetration through broadband and 15% of households access the Internet through mobile phones. Kerala is also the first state to complete the National Optic Fibre Network Project, by providing high-speed Internet to all gram panchayats and remote areas.Malappuram became India's first fully e-literate district over a decade ago. "This region arguably buys the most number of smart gadgets in Kerala, thanks to the remittances from West Asia," explains Muneer Valappil, who teaches communication and journalism at EMEA College Kondotty [14].

Free digital devices for the economically weaker to access e-governance services is one of the highlights of the Kerala's IT policy. The policy envisage steps for scaling up digital services not only in governance but also in areas affecting the daily life as well as in commercial sectors. Promoting Internet of Things, a green protocol for e-waste, giving priority to free and Open Source Software and digital tendering process are other components of the policy [15].

V. RESEARCH METHODOLOGY AND FINDINGS

Sampling: The data was collected from selected citizens in Kerala. The researcher collected 75 samples through simple random sampling technique for the study.

Tools for data collection: A questionnaire consisting of 18 objective type questions and 2 open ended questions was used. Data was collected and analysed extensively using R Statistical software.

Period of Study: The reference period was from Jan 2020 to March 2020.

Age: Age wise distribution of respondents was as follows: 50% of the respondents belong to 60 to 80 age group, 34% of the respondents belongs to 40 to 60 years, remaining 16% of the respondents were more than 80 years old.

Education: 37% of the respondents had studied up to the Undergraduate level, 37% till PUC/12, 20% were below secondary school level, 3% finished diploma and 3% were post graduate.

According to the study, 95% of the elderly current own a mobile phone.

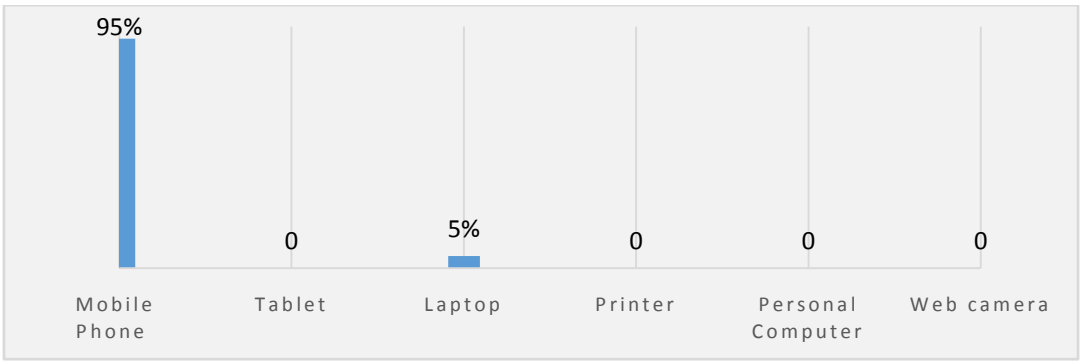

Fig2 Digital devices currently owned

71% preferred traditional mode of transactions.

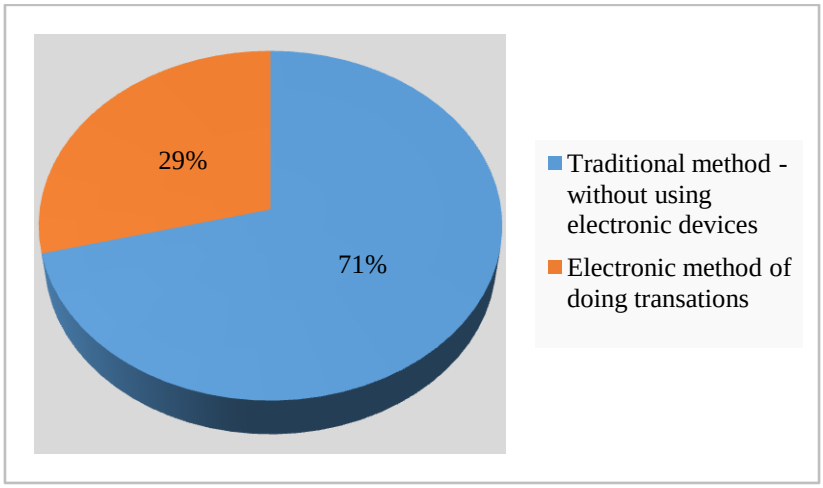

Fig3 Preferred mode of transaction

The most common digital service used by most of the senior citizens was ATM transactions. It accounted for 55% of all digital services.

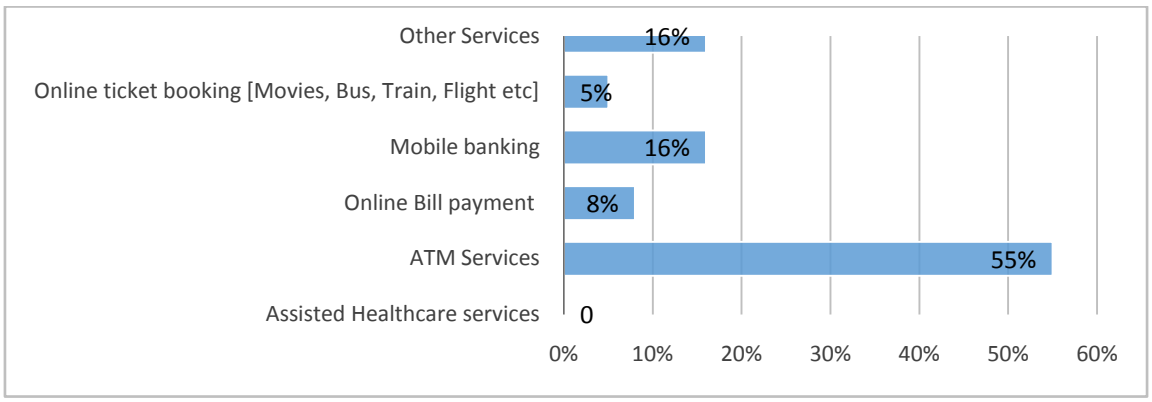

Fig4 digital services preferred

25% of the elderly are always willing to learn and 55% of the elderly are willing to learn new technologies if needed.

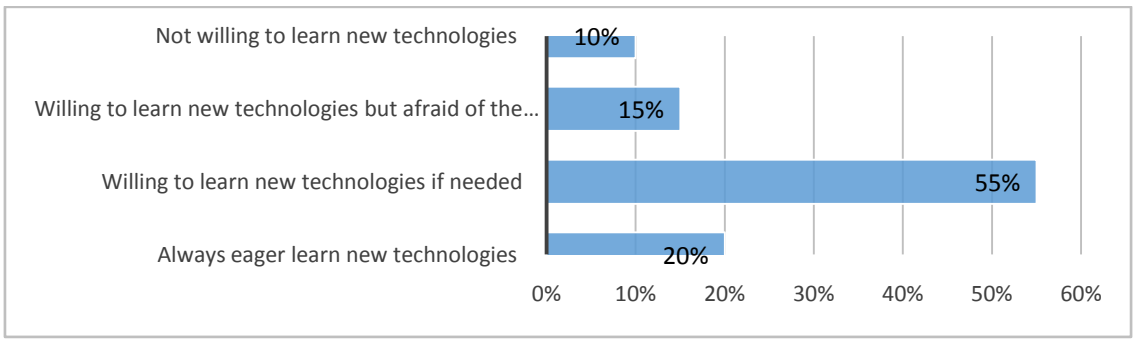

Fig5 willingness to learn new technologies

The study found that 90% of the respondents had no idea about the Government schemes and services offered through digital mode.

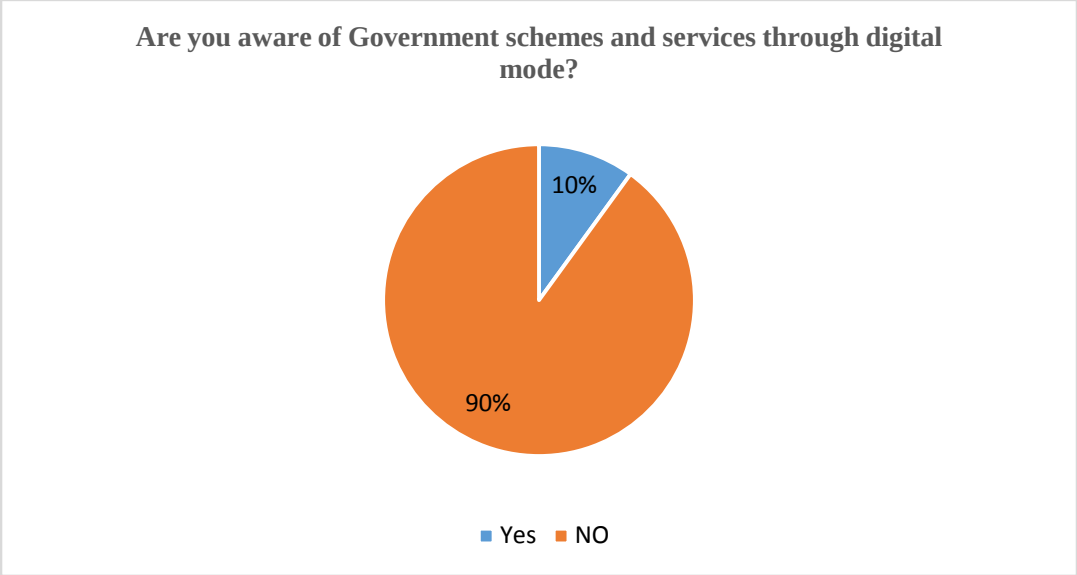

Fig6 Awareness of Government Schemes

It was found that 90% of the senior citizens had sought help to use electronic devices and services and 71% elderly are in favour of Digital India, though they lack awareness of the complete benefits.

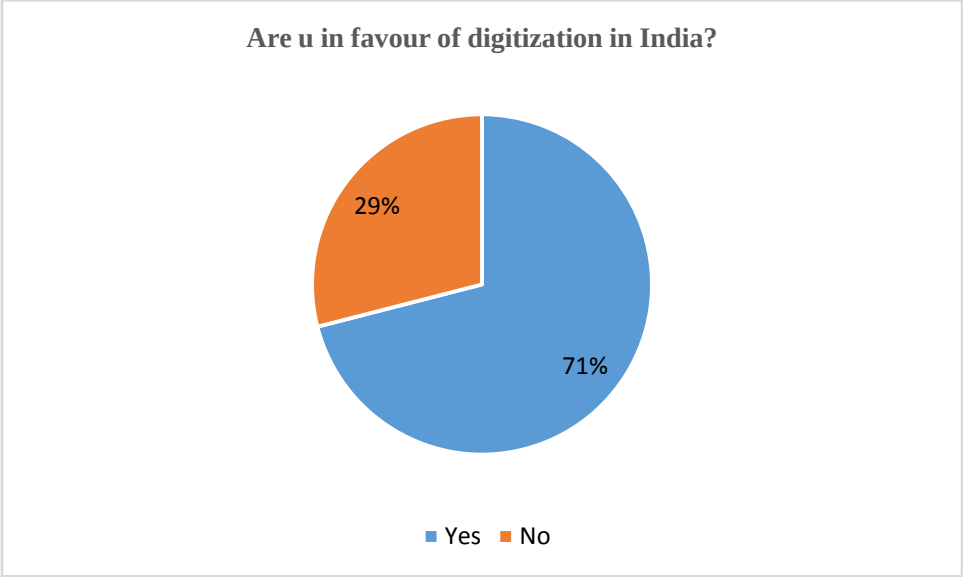

Fig7 Digitization in India

While most of senior citizens are keen to use smartphones, computers, laptops, and other modern gadgets, they seldom get support from family members, relatives, or society due to the latter's hectic lifestyle among other factors. Despite enormous benefits of digital device usage available for senior citizens on one side, they find it difficult to use the devices on the other. Also, there is a keen desire among the elderly to get connected with the outside world and to learn new technologies. The study suggests that the ease of use of technological devices allows the elderly to a lead a better social life in the modern digital era.

VI. CONCLUSION

Kerala state has the highest proportion of literate persons. The study shows that senior citizens are willing to learn new technologies and they accept digitization. It also shows they are not aware of beneficial schemes provided by government. So, this study paves way for research and study regarding digital devices possessed by senior citizens and access to digital devices. Thus, digital divide can be reduced among the citizens. Along with that ease of use of digital devices should be given priority so that elderly can use them for their benefits.

Funding: This paper is part of an ongoing funded project by the IMPRESS [Impactful Policy Research in Social Science] - (Project),Computer Centre, Indian Council of Social Science Research (ICSSR), Ministry of Human Resource Development (MHRD), JNU Institutional Area, Aruna Asaf Ali Marg, New Delhi - 110067

REFERENCES

[1]. India Ageing Report – 2017 (Final version pdf). https://india.unfpa.org/sites/default/files/pub-pdf/India%20Ageing%20Report%20-%202017%20%28Final%20Version%29.pdf
[2]. Stern PC, Carstensen LL, editors. E-Book: The Aging Mind; Washington (DC): National Academies Press (US); 2000. https://www.ncbi.nlm.nih.gov/books/NBK44840/, Reference to Appendix D -Cognitive Aging and Adaptive Technologies by Donald L. Fisher.
[3]. Nonprofit Technology Conference - Breaking Through Language Barriers with Technology - By: Liz KeithLiz, Program Director,Pro Bono Net.
[4]. Zelezny-Green, Ronda Vosloo, Steven Conole, Gráinne , Pearson, UNESDOC Digital Library, doc. Code - ED/PLS/YLS/2017/22, 2018 - Digital inclusion for low-skilled and low-literate people: a landscape review.
[5]. http://mospi.nic.in/sites/default/files/publication_reports/ElderlyinIndia_2016.pdf.
[6]. State Planning Board–Economic Review 2017. http://spb.kerala.gov.in/ER2017/web_e/ch414.php?id=41&ch=414 Chapter –Social Services- Human Resources – Ageing document of SPB, Thiruvananthapuram, Kerala, India.
[7]. Czaja, Sara & Lee, Chin. (2007). The impact of aging on access to technology. Universal Access in the Information Society. 5. 341-349. 10.1145/1102187.1102189.
[8]. Ittay Mannheim, Ella Schwartz, Wanyu Xi, Sandra C. Buttigieg, Mary McDonnell-Naughton, Eveline J. M. Wouters, Yvonne van Zaalen - Inclusion of Older Adults in the Research and Design of Digital Technology - Environ Res Public Health. 2019 Oct; 16(19): 3718. Published online 2019 Oct 2. doi: 10.3390/ijerph16193718.
[9]. Louise M. Bezuidenhout, Sabina Leonelli, Ann H. Kelly, Brian Rappert, Beyond the digital divide: Towards a situated approach to open data, Science and Public Policy, Volume 44, Issue 4, August 2017, Pages 464–475, https://doi.org/10.1093/scipol/scw036
[10]. Zoe Roupa, Marios Nikas, Elena Gerasimou, Vasiliki Zafeiri4 Lamprini Giasyrani5 Eunomia Kazitori, Pinelopi Sotiropoulou7 - The use of technology by the elderly –the health science journal,volume 4, isuue 2 pp:118-126 E-ISSN:1791-809X
[11]. Social Justice Department, care protection and empowerment, beneficiary – Senior citizen http://swd.kerala.gov.in/beneficiary-info.php?benef_sl=Mw==
[12]. Featured Editorial published on June 23rd, 2018, https://www.medianews4u.com/smartphone-penetration-india-reaches-47-kerala-tops-charts-65-penetration-cybermedia-research/
[13]. The New Indian Express article Titled "Data Shows Kerala is Well Ahead of Other States in e-matters " http://www.newindianexpress.com/states/kerala/2015/aug/08/Data-Shows-Kerala-is-Well-Ahead-of-Other-States-in-e-matters-796453.html, by Rajesh Abraham and published on August 8th, 2015.
[14]. The Hindu Business Line Article "Apps for appupens and ammummas". https://www.thehindubusinessline.com/blink/cover/apps-for-appupens-and-ammummas/article22297858.ece1, by Jinoy Jose P , Updated on March 10, 2018 and published on November 24th, 2017.
[15]. Deccan Chronicle Article - Free digital devices for the economically weaker to access e-governance services. https://www.deccanchronicle.com/nation/current-affairs/060117/kerala-poor-to-get-free-digital-devices.html by Arjun Raghunath 0n Jan 6th, 2017.

Dr. Indu Nair, et. al. "An Analysis of "The awareness and the usage of digital devices among senior citizens- A study with special reference to Kerala in India." *International Journal of Humanities and Social Science Invention (IJHSSI)*, vol. 09(7), 2020, pp 28-34. Journal DOI-10.35629/7722