

# Social Innovation as an Instrument for Productive and Self-reliant Ageing

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## Abstract

Ageing is characterised by number of physical, emotional, economic, and social changes that makes their life entirely different from others. Elderly period or late adulthood is considered as the second childhood of a person, which requires care and protection by the family and society, similar to the care they give to a child. Physical illness, social isolation, economic dependence, and loneliness are coming hand-in-hand with ageing. Since the elderly population of India crosses 104 million (Census, 2011), addressing their concerns are gaining momentum. Ensuring a healthy ageing by engaging with them, making their life economically, socially and culturally more productive with social innovation are introduced in the elderly care. These innovative ideas integrate the existing systems, services and resources with novel concepts, which are usually cost-effective in nature and easy to use, can make the life of elderly more secure and joyful. With the introduction of Information and Communication Technology (ICT) based services and products, creation of opportunities for better social interaction and social networks, economic and health care services, social innovation can play an important role to ensure a productive and self-reliant ageing.

**Key Words:** Elderly people, social innovation, productive life, self-reliant ageing, social interaction, ICT.

## Introduction

### Elderly population

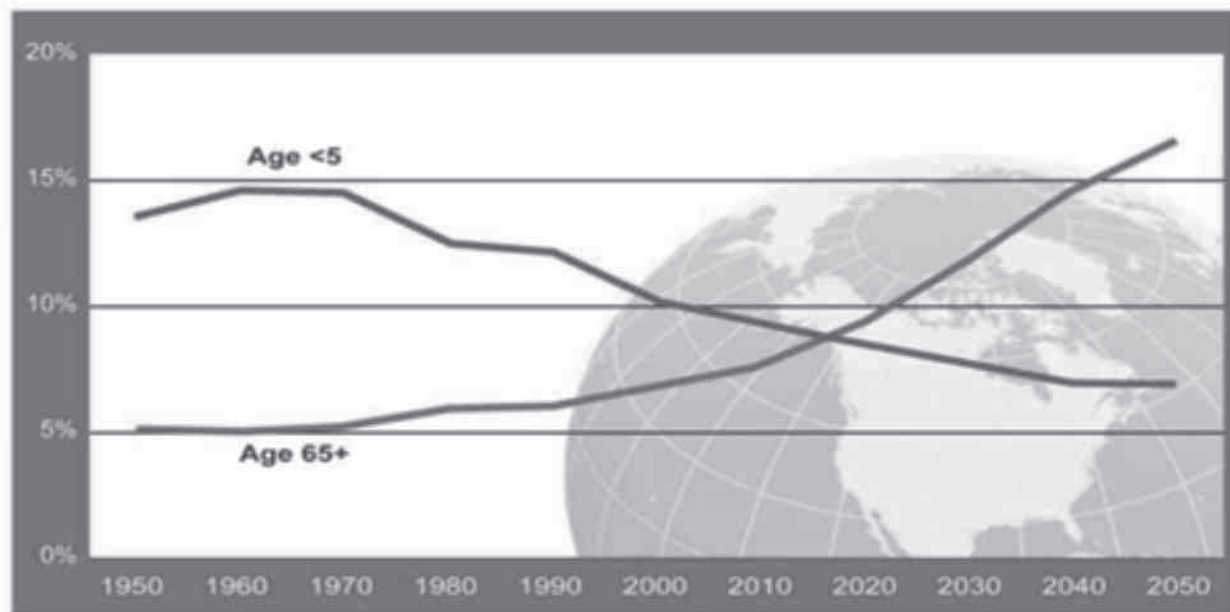
The increase in elderly population has become a matter of concern in the global level that attracts the national and international bodies to invest time and resources in elderly care. The improved medical and health care facilities impacted in the demographic data of the entire world. It characterises the elderly population in overtaking the general population trends. Increased life expectancy, advanced medical care facilities and reduced fertility rates are contributing to the ageing of population, which influenced in the population trends- a shift from youth to elders.

Ageing can be explained as the people above 60 years old. Since there is no standardized definition to define the ageing, the UN uses 60 and above as the cutting age to define elderly people. In India also the same criterion is been followed, i.e., persons having the age of 60 or above are considered as elderly (National Policy for Older Persons, 1999).

The statistics reveals that the total population of elderly people is around 962 million in the world (UN, 2017) and 104 million in India (Population Census of India, 2011). In 2000 the life expectancy of Indians were 62.9 (Census, 2011) and in 2017 it has reached to 68.8 (World Health Statistics, 2018). It is estimated that, by 2050 the population of elderly is going to increase by 2.1 billion and

it will overtake the 2.0 billion expected population of adolescents and youth of 10-24-year-old (UN, 2017). The given below graph (UN, 2010) shows the estimated global population trends for the year 2050 with a comparison of the population of children.

Figure 1: Young children and older adults as a percentage of global population: 1950-2050



Source: united Nations, World Population Prospectus: The 2010 revision

Along with the positive results of increased life expectancy and reduced morbidity that results in high number of elderly population, it has created new challenges to the world. Since the ageing population is characterized with number of physiological, psychological, social and economic aspects (Mane, 2016), addressing these situations are the biggest challenge. The age, health status, socio-cultural and economic statuses are to be taken care to address the problems of elderly people (Mane, 2016). Lack of social interaction, loneliness, retirement from the organised job sector, economic dependency is seen in the ageing population. Since India is the home for more than 104 million elderly people, without addressing their problems and issues we cannot move forward. From time immemorial, the national and international bodies are investing on the elderly care in the form of welfare programs and policies; but they are not reaching to the beneficiaries properly or it remains unaddressed (Bartwal J, Rawat CS & Awasthi S, 2016).

Here in this paper the researchers try to analyse how the concept of Social innovation (SI) can be linked with effective delivery of services and thereby considering the

needs and concerns of elderly people.

### Social innovation (SI)

Innovation talks about something new- it can be either product or services introduced in the market. Innovation started in the market economy by introducing new products or strategies to reduce the workload or for more effective service delivery. It has made the life, working culture and working conditions more easy and friendly. Apart from the market oriented concept, recently, innovation has gained the attention and new interpretations has come up with different characteristic features (Kesselring, A, Blasy, C. and Scoppetta, A, 2014). According to them innovation includes social interactions which results in the extension of commercial products to non-commercial products and services. When innovation has started to address the societal issues, which are unable to address by the commercial market, and then it was started to call as social innovation. The concept of social innovation is similar to Innovation- that deals with new idea or product or services; but the crux is the orientation of social innovation is towards social issues rather than moneymaking.

Social innovation is the concept of a new idea or practice that adopted to bring changes and address some social concerns or issues. The definition given by Rogers (1995) says “an idea, practice, or object that is perceived as new by an individual or other unit of adoption”. Here the people who behind the innovative idea or the 'Social Innovator' tries to address a social issue by putting forward much easiest, simple, finest and accessible solution to the target population and doing so it can reduce the efforts of people which they had used to do. The very idea of social innovation is to reduce the human efforts by the introduction of new technological and human competencies to address the needs and demands in the society in general and weaker sections in specific. The innovative idea can be technological or non-technological, the business model can be commercial or non-commercial, and finally public, private, or civil society actors can drive the management.

### **Productive and self-reliant ageing**

With the increase of life expectancy, the questions on productivity of elderly people also raises. The concept of productive ageing is related to the contribution of elderly towards their own lives and to their society where they live and interact. It was Robert Butler who used the concept first in the year 1982 to give a positive idea on population ageing. Until that time, the word ageing was perceived and explained as a negative connotation associated with dependency to others. Productive ageing can be explained as the diverse activities that an elderly person engaged to make efforts to maintain their own health, make contribution to their families, to their communities and to the society where they live and interact (Butler, 2002). The Productivity Commission in Australia (2004) has opined that the productivity declines when the people gets old. One of the reasons is ageing is associated with number of physical and psychological mal-adjustments. Therefore, they may not be able to practice the economic activity as similar to which they previously doing. Here this situation become a challenge and opportunity for the policy makers as India is having more than 104 million (Census, 2011) population of elderly. At a time, the focus should be given to address the elderly people's concerns over productivity and utilise the human resources of elderly population.

Similar to productive ageing, making the elderly self-reliant is another challenge to the country. The term productive ageing was only dealing with the economic aspects; but the self-reliance has some more areas to discuss. Helping themselves is the crux of the concept of self-reliance. Taking care of their day-to-day activities such as bathing, brushing, dressing, cooking, consulting doctor, going to market, maintaining a good life etc. are being

discussed under the term self-reliance of elderly (Johns Hopkins School of Nursing, 2015). Hence ageing is associated with number of health problems, self-reliance become difficult to the elderly people. Making them self-reliant is the biggest challenge that a developing country like India has to face. For the effective utilisation of human resource of elderly, integration of modern technologies and innovative ideas are very important.

### **Ageing and Social Innovation**

The advancements in technology, better health care services, and treatment modalities have made an impact in the ageing and longevity of the population. Around 11 % Indian population are elderly people (Census, 2011). As we all know that ageing is connected with number of health related needs and issues, it is high time to analyse and study how new innovative ideas, especially social innovative ideas can be interlinked to the delivery of services and products to elderly. The study conducted by WHO (2017) on Mental health of older adults shows that people with dementia are in need of support from health, social, financial and legal systems for the effective delivery of elderly care. The innovations for ageing population is intended for restructuring the existing the services- care, housing, mobility and other important aspects of life- for an elder friendly environment (Howaldt and Schwarz, 2010). The insights from the OECD-GCOA Expert Consultation (2015) talks about how the information and communication technologies (ICT) and internet can be utilised for an active, healthy and productive ageing. The given below table (Knowinno-Innoserv Project, 2012) shows the clear picture of social innovation and how it can be linked with social and health care services to the elderly population.

Table No.1 Social innovation and health care of elderly

Form of innovation	Definition	Example
<b>New service</b>	New or improved product of the scheme or process	Highly personalised instead of generic service
<b>New form of delivery</b>	New or improved means by which the outcome is achieved	Self-help, peer group or social enterprise instead of government agency
<b>New form of governance</b>	New or improved way the scheme or process is managed and where it draws authority from	Co-operative or user managed service instead of public service
<b>New form of resourcing</b>	New or improved financial human or physical inputs to the scheme or process	Grant funded service; service delivered by employees or volunteers; service purchased directly through personal budget
<b>New way of evaluating</b>	New or improved parameters by which success is judged	User assessment of effectiveness instead of professional determined criteria; assessments focused on long term preventative impact rather than short term results

The framework talks about five types of innovations namely new services, new way of delivery, governance, resourcing and evaluation.

In this paper, we try to understand and analyse how the social innovative ideas can be connected with elderly people with a view to help and support them for effective delivery of services and thereby ensuring productive and independent ageing. In compliance with the report of WHO (2017) which noted down the areas of intervention required for active and healthy ageing, the idea of social innovation for elders can be given in the given areas:-

### **Social Innovative Services**

Health services

Social and cultural support

Economic support

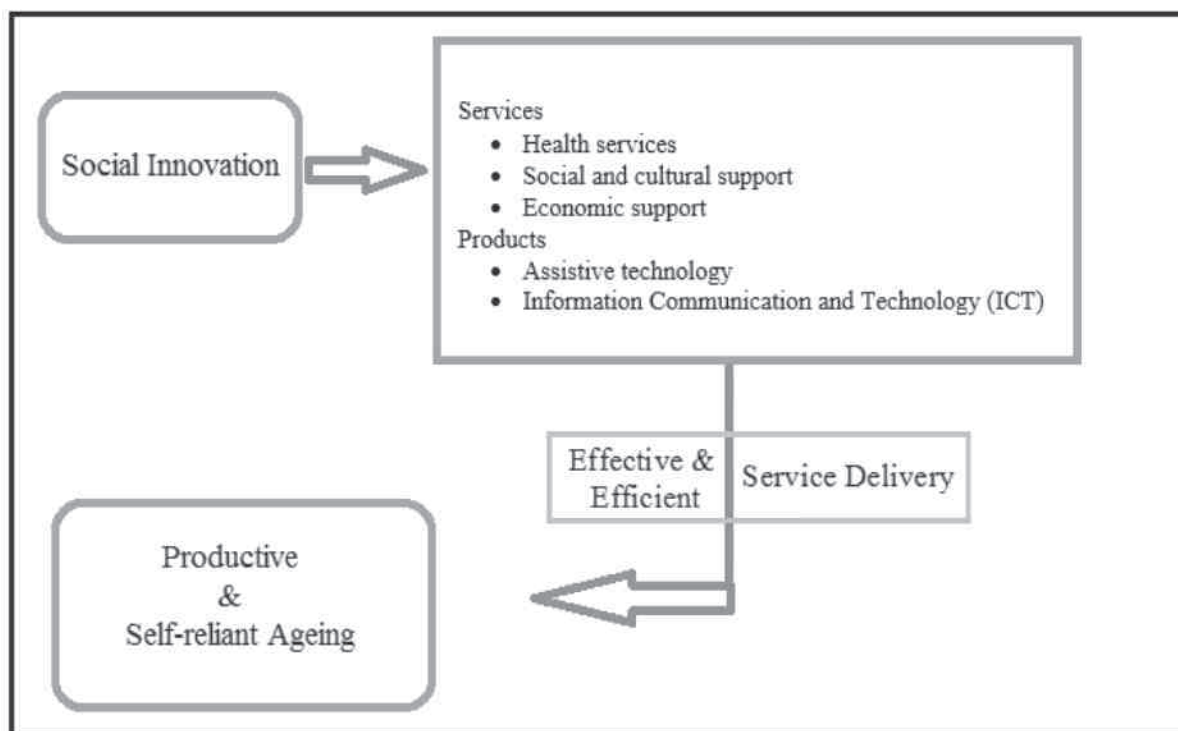
### **Social Innovative Products**

Assistive technology

Information Communication and Technology (ICT)

### **Conceptual framework**

Figure 2: Social Innovation to assist the elderly population



### Social Innovative Services to Elderly

This section discusses important social innovation services that facilitate elderly wellbeing and productivity. They are efficient and effective health care delivery, providing social, cultural and economic services. Also, the reader here is encouraged to adopt an entrepreneurial lens to critically analyse and understand the embedded business lacunas these services provide. Innovation for value creation (Munshi, N. V. 2010) is widely discussed in social business clusters and globally. Product innovations targeting for elderly or financing elderly to promote start-up culture are raising areas which needs exploration.

Health services are the most important areas to be taken care for elderly people. In health care, social innovation can be referred as the concept that features cost-effective delivery of health services and insightful use of ICT. The focus of the innovation is to get convenient, effective, and low cost delivery of health care services to the people (Herzlinger, 2006). Thus, here health innovations are dealing with a new idea and their implementations that can improve the quality of services which previously existing or new and ensure minimum expenditure for the same. For this, the effective utilisation of technology is much important (Goodman, 2014). Residential care (e.g., Social Geriatric Centre “Protection”- ISED-T-RAS, House of

Michele -LAMA (SI-Drive, 2016).), Palliative care services (India), mobile hospital services (e.g., Smile on Wheels, India) are some of the examples of health sector social innovation for elderly people. Through health care service innovations, the elders are supposed to get education on nutrition, ageing, and its health, physical activity, physical and psychosocial well-being.

### Social and cultural support

The concept of Social participation is dealing with the socialisation of elderly with their immediate environment. 'Commitment 2 of the UNECE strategy on ageing: to ensure full integration and participation of older persons in society' talks about the importance of connecting the elders with the social and cultural services (UNECE Policy Brief on Ageing, 2009). The main aim is to ensure the participation of older persons in political and economic life and to improve their access to transport, appropriate housing, and cultural activities. The very basic idea is lies in the importance of “balanced intergenerational relationships” (UNECE, 2009) which can mould the present situation to a more convenient and elder friendly. The volunteerism by youth and elders (themselves for their peer groups) will have a potential to have a finest socialisation opportunities. Healthy and productive ageing have a direct connection with the socialisation of people.



Here socialisation means fruitful interaction with the family, peer group, society and other stakeholders and systems. Studies suggest that there is a chance of increasing number of elderly people who experiences loneliness due to lack of opportunities for socialisation due to retirement, death of family members, friends or some close relatives or poor health (British Columbia Ministry of Health, 2004). As per the statistics based on the 2011 Census data of India, in the age group of 60-64 around 22% are widowed (The Hindu Business Line, 2018). In this regard, the scope of innovative ideas for social and cultural support gains momentum. Voluntary care for Elderly people, Day care centres, library facilities, voluntary groups, and clubs are some of the innovative ideas, which will be helpful to the elderly people to be engaged. Participation in various socio-cultural activities helps the people for an active and productive life. Thus, here innovative ideas can have an important role.

### Economic services

Participation of elderly in economic activities is an inevitable thing that can help them for a productive ageing. They had been engaging with number of livelihood opportunities in all these years and capitalising those experiences will give them a feeling of being productive which definitely will make a positive thinking on their perspective on ageing. In addition, obviously the workplace gives income and opportunities of social networks that can take into another level of socialisation. The study conducted by the Indo-German Social Security Programme on “impact of elderly self-help groups on quality of life of elders in Bihar” shows that after engaging with SHG there is a positive change in their economic status, status in the family and peer group networks. The given below table shows how SHG helped the elderly to become more productive in economic terms.

Table 2: Impact of loan in case villages: ESHG vs. Non-ESHG Members

Respondent Category	What impact did the loans have on your financial condition?		
	Supported livelihood	Increased financial liability	Created debt trap
ESHG Members	83.6	12.0	3.8
NESHG Members	45.5	43.6	10.9

\*Source: Indo-German Social Security Papers- Paper II (2015)

India have a 100 million population of elderly people (Census, 2011) of which 66% of elderly men and 28% of elderly women in rural areas and 46% among elderly men and about 11% of elderly women in urban areas were economically active (MoSPI, 2016). These data are showing a great scope for a well-equipped social innovative idea to utilise this human resource would help the country in general and the aged population in specific, which can cater the economic and social, needs and demands of the community. Start-ups for engaging in agricultural activities, entrepreneurial activities, SHGs, and Co-op societies would be helpful in this regard.

### Social innovative products

#### Assistive technologies (AT) for elderly

The technologies nowadays have made the life easier by introducing innovative concepts to assist the people in general and in particularly for the elders. Assistive technology is defined as “equipment that can be

personalized and that can maintain or improve the capacities of a person with medical problems...” (Gamberini et. al, 2006). By ensuring access to technology and information, the basic concept of AT is to make an elder friendly environment by assisting them in their daily life. It helps the elders to maintain independence, assists in healthcare services, manage the loneliness, make healthy environment in own house, access to information, helps in increased social interaction, etc. (Gamberini et. al, 2006).

Gamberini et. al (2006) explains the different sets of ideas linked to technology and elderly care. It starts with tele-health care that can be useful to get health care advices and maintain a contact with the elderly person and the health care specialist. Next one is about the deliberate use of sensors to constantly collect the information of the location and the activities he/she does which will be very useful to cognitive and physical supervision by the experts. In developed countries already, they have introduced robots that can detect the person in need and communicate it to the

relatives or care givers. This will be beneficial to those who stay alone in their house, for an example, if they fall down the robot can detect it and inform caregivers by sending alarm (Cesta, A et. al, 2007).

Marasinghe KM, et al. (2015) has listed out the assistive

technologies widely used for elders in six different countries. They are as follows:-

Table 3: Different assistive technologies used in different countries

Sl. No.	Countries	Assistive technologies
1.	Brazil	Canes, wheelchairs, walkers, bath chairs, toilet chairs, hearing aids, 'Geriatric' software, activity board, calendar, routine organiser, cane tips to detect puddles, Android application to access social media websites (ie. Twitter), capacitive touch switches, home automation systems with web interface, augmentative and alternative communication devices (AAC) and digitally creating video audio descriptions, Braille display, button mouse, audio transmitter, capacitive driver, cane tip for water detection
2.	Cambodia	AT for locomotor disabilities, weaving kits, bamboo walking canes, wheelchairs, crutches, tricycles, prostheses, artificial limbs, knee joints, double gripping hook/bowl attachments for prosthetic arm, carved wooden carrying yokes, chairs with an attached trays, wooden bathing benches with rails at each end, metal/rubber bathing benches, wheelchair jump seats, wooden toilet seats with handrails on each side, wheelchair toilet seats and soft plastic washing devices to clean self after toilet use and different forms of seating
3.	Egypt	Egypt-Japan Assistive Device (EJAD), a low-cost AT designed to help elders in walking and sit-to-stand activities. EJAD imitates the caregiver's motion during a support task, which helps maintain the stability of the users at any situation, Tablet PCs powered by Android systems containing Quran in large font, cooking recipes, and old songs and Cellular phones with large buttons.
4.	India	Security alarms, raised seat, grab bars, video intercom, medicine dispenser/cabinet, Jar opener/closer, talking alarm clock/watch, magnifying toenail clipper, lap desk with book holder, back scrubber with hand loops on each end, kitchen finger protector, utensils with finger bump grips or hand strap, adjustable height bed, bed rail, Velcro fastenings shoes, Velcro clothing, pressure modification stockings, cordless speaker phone with pre-set memory-dial, large buttons and numbers, mobile phone with one touch call to family members, friends, helplines, doctors, security, eye glasses/magnifiers, 'E-Netra' reads text and converts into voice, hearing aids, visual alerting systems, memory games, walking stick, walkers, wheelchair, spinal braces, stair glide, handrails, prosthesis-artificial limbs, height adjustable/tilting chairs/stool/tables/desks, CDs on traditions, historic movements, pilgrimage and tourist places, folk songs, wheelchair and head movement-based assist system
5.	Turkey	Reading pens, screen readers for cell phones, and computers, locators, laser canes, modified appliances, talking watches, walking sticks, crutches, walkers and wheelchairs
6.	Zimbabwe	Wheelchairs, walking sticks, crutches, standing frame, white cane, eye glasses, magnifying glasses, hearing aids, Braille, portable writer and enlarged print, bath and shower seats, commode chairs, toilet seat raisers, safety rails and eating aids, aids for opening containers, flashing light on doorbell, vibrating alarm clock and amplified telephone

Source: Marasinghe KM, et al. (2015)

### Information and Communication Technology

The Information and Communication Technology (ICT) have made momentum in the societies and especially in the health care sector by providing new ways of assistance to the needy people with the advanced means of communication systems. The ICT have defined as "the instruments and procedures that allow the acquisition, production, treatment, communication, registry, and

presentation of information in the form of voice, images, and data contained in acoustic, optical or electromagnetic signals (While A, & Dewsbury G, 2011)). When analysing delivery of health services to the elderly, the communication technologies become inevitable in these years. For an instance, there are some technologies, which uses sensors which attached with garments that is designed to communicate with smartphones to monitor and assess the information of the elderly patients (Ozdalga E, Ozdalga

A, Ahuja N, 2012). Thompson et. al (2011) In their study explained about the technology based service, “the tele-health kiosk” in Canada how the technology helps to gather information on health record of elderly. The kiosk includes a blood pressure and heart beat monitor, glucometer, and weighting scale. It uses internet services to record and keep the data. In India under the National Rural Health Mission (NRHM) scheme, the community health workers or ASHA workers were provided with Blood Pressure Monitor to help the people in the villages. This is a kind of social innovation with less- free of cost service provided at the

doorstep of needy people. The studies suggest that (Sayago, Forbes & Blat, 2012; Ray, 2009) the use of ICT by elders became like a daily routine and it has become an important part in delivery of health care services to elders. And the recent trends in the digitalised economy, with the support of internet and smart phones, the elders feel much independent in using e-services like banking, shopping and connect with social and health services (Keränen et.al (2017).

Some of the innovative ideas in ICT for elders are given below.

**Table 4: Different ICTs for elders**

Sl. No.	Innovative ICT Services	Features
1.	Patient portal	<ul style="list-style-type: none"> <li>• Communicate with your doctor or a nurse.</li> <li>• Request prescription refills.</li> <li>• Review test results and summaries of previous visits.</li> <li>• Schedule appointments or request appointment reminders.</li> </ul>
2.	Virtual appointments	<ul style="list-style-type: none"> <li>• Web-based "visits" with a doctor or nurse practitioner</li> <li>• These services are generally for minor illnesses,</li> <li>• Call centre</li> </ul>
3.	Remote monitoring	<ul style="list-style-type: none"> <li>• Web-based or mobile apps for uploading information, such as blood glucose readings, to your doctor or health care team</li> <li>• Devices that measure and wirelessly transmit information, such as blood pressure, blood glucose or lung function</li> <li>• Wearable devices that automatically record and transmit information, such as heart rate, blood glucose, gait, posture control, tremors, physical activity or sleep patterns</li> <li>• Home monitoring devices for older people or people with dementia that detect changes in normal activities such as falls</li> </ul>
4.	Doctors talking to doctors	<ul style="list-style-type: none"> <li>• Virtual consultation that allows primary care doctors to get input from specialists when they have questions about the diagnosis or treatment.</li> <li>• The primary care doctor sends exam notes, history, test results, X-rays or other images to the specialist to review.</li> <li>• The specialist may respond electronically, conduct a virtual appointment with the patient at doctor's office, or request a face-to-face meeting.</li> </ul>
5.	Personal health apps	<ul style="list-style-type: none"> <li>• Store personal health information.</li> <li>• Record vital signs.</li> <li>• Calculate and track caloric intake.</li> <li>• Schedule reminders for taking medicine.</li> <li>• Record physical activity, such as your daily step count</li> </ul>
6.	Personal health records	<ul style="list-style-type: none"> <li>• This is a collection of information about the persons' health</li> <li>• An app is accessible to you anytime via a web-enabled device, such as your computer, laptop, tablet or smartphone.</li> <li>• In an emergency, a personal health record can quickly give emergency personnel vital information, such as current diagnoses, medications, drug allergies and your doctor's contact information.</li> </ul>

Source: Adapted from the website of Mayo clinic-<https://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/telehealth/art-20044878>



Being productive and securing economic returns at the elderly age is expected to contribute to the mental health and well being. The above discussed service models of social innovation substantiate the possibility of promoting entrepreneurship culture as a means for it. Integration of technology to the livelihood seems to have eased up the process of venturing and opens the doors for elderly people (Terjesen, S. 2005) to design own business models.

### Conclusion

Due to the improvements in health and social care sectors, the life expectancy has increased to 65 as per the Census 2011 of India. At the same time, the demographic changes have created new needs and priorities. Ensuring social security, issues related to physical and mental health, economic insecurity, elderly abuse, and social isolation are the new challenges to the nation that concerned with elderly population. To address these challenges the Government has introduced number of programs, policies, and legislations. These policies and programs has a coverage of a good portion of the elderly people and ensure social security measures, health provisions, and social assistance.

The integration of social innovation to facilitate effective delivery of services is a new approach in elderly care. When we discuss on elderly, Productive and self-reliant ageing are unavoidable. The effective use of information and communication technologies has paved a culture of effective and efficient service delivery, which will lead the elderly population to a productive and self-reliant life. E-health systems, mobile applications, social robots, and provisions for socio-cultural engagements are good examples of social innovative ideas to cater the needs of elderly people. Making them capable of independent and help themselves will have to be the focus of the policies and programmes intended for elderly people. If the nation becomes efficient in catalysing the experience and expertise of elderly, it will make a larger impact in the life of elderly as well as in nation building. Ensuring support and care to the elderly is the need of the hour that will help them for an active, healthy and productive ageing.

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