

Empirical Studies on Elderly Welfare Science and Technology Needs

Huang Lucheng^{1,2}, Zhang Ertao¹, Miao Hong¹

¹Beijing University of Technology, Department of Economics and Management, Beijing, PRC

²Capital Social Construction and Social Management Synergy Innovation Center, Beijing, PRC

Abstract--Aging population brings challenges and opportunities at the same time to the science and technology. Science and technology provides a broad market prospect for solving the problems of aging society, while analysis of the needs of older age groups has also drawn increasing attention to the market. Based on the plight of social welfare and access to livelihood technology in China's aging population, this paper analyzed the current situation confronted by elderly welfare science and carried out empirical study on old people's demand for elderly welfare science and technology in four areas of health, housing, communication, social participation, which contributes to identify market opportunities for the elderly. In accordance with the analysis and summaries, the paper elaborates how to develop market opportunities for the elderly from these aspects of welfare science and technology supply, policy development, the aged's participation in social activities. Finally this paper presents corresponding countermeasures and suggestions to promote the development of China's elderly welfare science and technology. This article presents us with an opportunity to capture the attention of decision makers and individuals to address the technology needs of an aging population today and of the boomers tomorrow, and thus deploy a theoretical and empirical understanding of science, technology and ageing that captures how later life co-evolves with the practices of technology use and design.

I. INTRODUCTION

As the second largest global economy, China currently houses the world's largest population of 1.4 billion and is rapidly transforming into an aging nation. In 2014, there were 137 million elderly aged 65+, among them 19.3 million were the oldest-old (aged 80+) [1]. It is predicted that in 2050 there will be a large explosion in the elderly population, with up to 500 million aged 65+ (35% of the total population), and then the population aging in China will be most serious in the world [2]. In addition, China's population aged 65+ accounted for 4.9% of the total population in 1982, which accounting for 5.6% in 1990, 7.1% in 2000, 8.9% in 2010, 10.1% in 2014. As can be seen from the above data, China's aging rate is on the rise.

In recent years, the rapid development and popularization of science and technology has dramatically changed the way people live. For elders with health, comfort, safety in daily living, how to use a variety of technology to develop products, systems, services, and even the living environment for older age groups has been one of important strategies to address aging society issues. The first international seminar of elderly welfare technology was held in the Netherlands and the meeting put forward the concept of gerontechnology which refers to electronic or digital products or services that can increase independent living and social participation of older

persons in good health, comfort, and safety [4].

Foreign scholars had paid much attention to the welfare science and technology needs in the elderly. Through literature review, older people mainly have gerontechnology needs in three areas, which was respectively the needs of daily life, social participation, health and security [3]. Although gerontechnology is supportive for daily life, older people do not show as much interest in adopting new technologies as the young, and there are all kinds of underlying reasons that might account for their use and non-use of gerontechnology [6]. Therefore, if older people actively participate in the welfare of technical project design process, it is helpful to analysis specific needs of the elderly population [5]. Because elderly welfare science and technology is still in its infancy in China and academic research involves less. Li Chen [7] explored the characteristics of elderly from the level of cultural needs and builded elderly welfare service system. Ma Junda et al. [8] put forward to build up the aging welfare of technological innovation system in China. Unfortunately, few studies focus on gerontechnology issues from the perspective of the elderly needs in China and the relevant empirical research is even rare. A thorough understanding of older people's perceptions, experiences relating to technology is needed. Therefore, this article employs questionnaire and interviews to explore older people's needs for gerontechnology in health, housing, communication and social participation and analyze practical significance of this study, which provides a reference for the government to make science and technology policy and promote the well-being of scientific and technological work. Specifically, this study was not limited to a specific technology but was concerned with a wide range of technologies in use in daily life.

A. Chinese elderly welfare technology development status

In recent years, the elderly welfare technology develops rapidly and the results are more significant. Internationally, the developed countries such as the United States, Japan pay attention to the absorption, transformation and integration of modern information technology and life science achievement, which get the advantage in the elderly welfare science and technology. EU, Germany, etc. have introduced the implementation of science and technology development strategy and human life technology strategy to accelerate technological innovation and product development for gerontechnology.

At present, China has transferred the focus of scientific and technological work to the gerontechnology. Based on the National Science and Technology Program, China has

developed the elderly health management, remote care, community service and other information systems, and launched pilot explorations of virtual nursing homes, intelligent pension housing. These efforts have made important achievements, which laid an important foundation for further development and promotion of the welfare of science and technology. However, due to the aging population in the situation of "old before getting rich" and "not prepared to old", and surge in the elderly population with low-income, disability, loss of independence and special difficulties, the elderly social welfare development is facing a severe test. On the one hand, social welfare services are governed. In addition to a great gap in pension bed, the shortfall of pension caregivers is nearly 10 million [9]. On the other hand, the elderly welfare needs are diverse. In addition to basic physiological and safety needs, old people also need the social conditions of service care, spiritual solace and health care.

Therefore, the establishment of social welfare pension system is not only facing social policy from person to security services, but also technology use from services to person. In the current historical conditions of comprehensive reform, China should take advantage of the opportunities taken by new technological revolution to establish new thinking, new ideas, new systems of "science and technology to help the old", and fully apply the scientific methods and technological achievements to the transformation process of an aging society. The core of elderly welfare technology is to meet the needs of the elderly population and the products or services should be determined according to the actual needs of the elderly. So, it is necessary to explore the welfare of science and technology needs for cognitive characteristics and behavior of the elderly to improve the quality of life of older people through science and technology, which has important social significance and market value to meet the challenges of aging.

II. METHODOLOGY

A. Investigation object

The object of investigation in this paper is university retirement teachers in Beijing over the age of 55. Because university teachers have a wealth of knowledge and a good reserve of quality research to help understand the contents of questionnaire about elderly welfare science and technology, which can get good feedback. In addition, the situation of aging is severe in Beijing. The household population of Beijing is 13 million in 2014, of which there are 3 million old people aged 60+, accounting for 22.6% (The people's Government of Beijing City, 2015).The international community generally view is that when the population aged 60 or older of a country or region accounted for 10% of the total population, or the population aged 65+ accounted for 7% of the total population, it means that this country is in an aging society. Thus, Beijing has entered the aging society. Taking into account the gerontechnology needs and use of the

elderly over 55 years to be more than young people, this questionnaire takes retired teachers over the age of 55 universities in Beijing as the investigation object, which can have a timely and accurate understand of the elderly preference demands.

B. Data source

This study depends on the data from the field survey within the Beijing university retirement teachers in August 2015. Research group distributed 200 questionnaires, recovered 178 valid questionnaires and the effective rate was 89%. In order to ensure the feasibility of the questionnaire, the first small-scale pre-investigation was carried out, and then revised and improved survey questionnaire according to survey results. Taking into account the physical condition of the elderly, this study adopted methods of "a question and answer" to complete the questionnaire and the duration of each questionnaire was about 40 to 60 minutes. The main content of formal questionnaire includes basic information of the elderly, health, housing, communication, as well as evaluation of elderly welfare science and technology.

C. Descriptive statistical analysis of sample

Statistical characteristics of the respondents are shown in Table 1. The sample of 178 older adults was 54% males and 46% females with ages ranging from 55 to 80+. A majority lived with a partner, their children or alone in homes they owned (71% , 20 and 33.1% respectively). Overall, the sample data are representative.

TABLE 1
DEMOGRAPHICS

Characteristic	Category	%
Gender	Man	54
	Woman	46
Age group	55-59	21
	60-64	25
	65-69	19
	70-74	18
	75-79	13
	80 and above	3
Monthly income	<4000RMB	31
	4000-6000RMB	31
	6000-8000RMB	20
	>8000RMB	18
Health status	Very good	16
	Good	31
	General	43
	Not good	7
	Sick	2
Living arrangements	Alone own home	17
	With a partner	71
	With adult children	20
	With a friend	1
	Other	0

III. DEMAND ANALYSIS

The purpose of gerontechnology is to meet the needs of the elderly population, so products or services they provide should be determined according to the actual needs of the elderly [11]. In this paper, the demand for technology within the elderly population are grouped into four areas, so that enterprises can learn about the special needs of aging population to discover market opportunities and provide solutions for their needs.

A. Needs for health

Among the elderly, the physical function decline and the risk increases. Health disorders, including diabetes and hypertension, are a type of major disorders in the Chinese elderly. Findings of this article consistent with the actual situation, the survey showed that 52% of the elderly said their own health condition is in general, and when asked about the technical services concerned, 46% of respondents chose the cardiovascular health. To further understand the health care needs of the elderly, we ask the question "What health monitoring method are you using?". The results show that 96% of the elderly is to go to a regular hospital examination and only 16%, 10% select the self-monitoring device and remote medical monitoring. In addition, 58% of older people chose to accept telemedicine technology and 65% indicated that they had the need for medical services. With the decline in operational capacity of the elderly and the development of science and technology, the elderly will increasingly seek medical devices to remotely monitor the status of their disease. Assuming the responder has the same level of chronic disease as the population at large, the Survey highlights a need for greater awareness and testing of seniors to both verify they have these conditions and are receiving the appropriate monitoring and treatment. Thus, this demand will bring opportunities to enterprises for identification of market opportunities to develop welfare technology related telemedicine.

B. Needs for housing

The survey found that the majority of older people did not tend to live together with their children, instead of living with a spouse. However, reaction to external things within the elderly become dull, and electrical equipment, stairs, ground, and so may bring potential risks to home life of the elderly. So, the seniors showed the greatest level of interest within the category of smart home system, particularly family warning systems (73%), medical alert systems (56%), automatic power-off system (49%) and indoor action monitoring system (20%). Most families don't have one of these smart home systems through interviews. When an accident occurs in daily life of older age groups, they cannot effectively seek help. Respondents expressed the need for home equipment to assist their daily lives, and security monitoring, remote control, environmental monitoring in smart home can meet the security needs of the elderly, assisted living and other aspects.

Therefore, in response to this demand, enterprises should take the elderly as the center of smart home design to tap the market potential of smart home technology.

C. Needs for information communication

The elderly showed the greatest level of ownership within the category of communication technologies, particularly PCs (55%) and cell phones (61%). The benefits and uses of communication technologies are apparent to the majority of responders, with the largest percentage (66%) viewing them as a way to connect with long-distance relatives, followed by learning more about the society (53%). Now, the development of information science and technology and population aging maintained parallel, people including elderly people will inevitably have to use a variety of information technology products in their daily lives. However, as products increasingly rich and more powerful, its use for the elderly has undoubtedly been a huge challenge. We learned the difficulties in the using information technology products the elderly encountered through questionnaires, particularly too many product features (61%), complex operation (31%), and product design is not suitable for the elderly (12%). Therefore, the design and development of user-friendly IT older products is a good business opportunity to open up the old market for older age groups perceiving usefulness and ease of use of the product.

D. Needs for social participation

For most old people after retirement, the participation and activity of social activities often significantly decreased [12]. At the same time, the elderly lack of entertainment due to the physical condition and the retirement life is monotonous, which will significantly affect the mental health of the elderly. In this question "What you are willing to participate in post-retirement activities?", the top five answers are: travel, fitness exercise, party, entertainment and learning. This shows that with the continuous improvement of living standards of society, the elderly will increasingly seek spiritual solace to keep social activity and contacts. Responders prefer human relationships as the way to learn about new technology. They were not impressed with searching the Internet to find news or information about new technology, nor were they excited about videos explaining its use. Instead, they prefer human relationships. The communication with others, not families, ranked highest as a source of guidance. Older age groups in the study and use of new technologies will need help and the elderly after retirement tend to have a sense of loneliness. Therefore, on the development of older products, it will be a good market opportunity for enterprises to develop products taking into consideration emotional needs of the elderly.

IV. PRACTICAL SIGNIFICANCE

Internationally, gerontechnology develops rapidly and developed countries continue to conduct technological

innovation and product development for the development of elderly welfare science and technology, achieving remarkable results [13]. Although China deals with aging as a priority area by the development and implementation of technology strategy in recent years. But there are many gaps between the overall development of gerontechnology and the actual needs for technology. Older age groups have different service needs, the value of elderly welfare science and technology depends on whether it meets the expectations of products and services for the elderly. The government and social well-being of science and technology organizations need to understand the needs of the elderly [14]. In order to give more consideration to relevant factors in policy development and service delivery, it is necessary to learn the needs for technology to improve the quality of life of the elderly. Therefore, conducting empirical research about the welfare of science and technology is needed to analyze elderly population demands.

A. Based on demand, improving the supply of gerontechnology

A consequence of the substantial demographic change is a surge in the prevalence and incidence of age-associated diseases encompassing cancer, chronic non-communicable diseases, and mental health disorders. At the same time, it also brings new market opportunities. During 2014 to 2050, the consumption potential of China's elderly population will increase from about 4 trillion yuan to 106 trillion yuan accounting for GDP from 8% to 33 % [15]. Currently, market development services for the elderly is not yet mature, and many corporates have positioning error when developing technology products, leading to a mismatch of supply and actual demand. Therefore, through the survey of elderly welfare science and technology, companies can learn about the special needs of aging populations and fully tap the opportunities inherent and for the needs, providing unique products and services for the elderly and community, which can show the value of gerontechnology. Known as Gerontechnology's Five Ways, gerontechnology offers five key approaches to assist elders in continuing to lead healthy, active lives: prevention, enhancement, compensation, care, and research [16]. Table 2 provides examples of gerontechnology applications designed to accomplish each of the ways that gerontechnology addresses aging challenges in the

areas of health, housing, communication. Compensation and assistance currently constitute by far the most common approach used in gerontechnology. Enterprises can combine activities field of older age groups with the above four ways to find gerontechnology supply policy. As shown in Table 2, each cell in the matrix represents a potential opportunity and enterprises should consider how to provide welfare technology to prevent, strengthen, complement and care for the activity areas of elderly.

TABLE 2
GERONTECHNOLOGY IMPACT MATRIX

Purpose	Life Domain			
	Health	Housing	communication	Social participation
Enhancement & Satisfaction	Telemedicine	Wireless/remote	GPS navigation	Communication Platform
Prevention & Engagement	Home trainer	Smart ventil	Car automation	Digital Cameras
Compensation & Assistance	Passive alarms	Smart IADL	Rollator/walker	Robot
Care support & Organisation	Smart intake	Electronic keys	Powered lifting	Social network

B. Establishing protective policy system

First, the government should develop and improve relevant science and technology policies to address the needs of the elderly, thus and constantly improve the living standards of the elderly. Second, establishing an environment for fair competition between governmental and non-governmental elder care systems. Society organizations is from civil and social services it provides, highly targeted and effective, can effectively meet the needs of the elderly, thus promoting the development of the market. Finally, it is necessary to strengthen the social policy to strive for the needs of the elderly technology products and services into the scope of social insurance policies, which You can reduce the burden on the elderly and enhance the level of the elderly living.

C. Playing the main advantages of the elderly

Because of capacity constraints between the government and social organizations, we requires broad participation of all social forces. As an important resource for society, older persons can make the best use and involved itself in social production and social development. So, on the one hand, the government needs to expand the social participation approach for older persons to guide, organize elderly creating a good environment to enable them to actively participate in social life. On the other hand, the elderly can make suggestions and recommendations to help the development of aging from their own personalized services to improve social participation, and participate in the technology products to improve the quality of life of older people with the government and social organizations.

V. CONCLUSIONS AND PERSPECTIVES

China has a fast growing elderly population, which brings and will continue to bring a series of socioeconomical challenges to the society. This article presents us with an opportunity to capture the attention of decision makers and individuals to address the technology needs of an aging population today and of the boomers tomorrow, and thus deploy a theoretical and empirical understanding of science, technology and ageing that captures how later life co-evolves with the practices of technology use and design. Other socioeconomical topics to address among the aging issues in China include pension benefits and retirement policy.

A longitudinal perspective calls for an attention to disease burden in the young population when implementing a healthcare policy in the elders. Close collaboration among researchers on different aspects of the Chinese aging studies, the government, international research institutions, research-funding agencies, and other associated health care sections is pivotal and should be encouraged. Increased allocation in research funding for aging studies in China should be given consideration of the top priority.

REFERENCES

- [1] China National Bureau of Statistics. Statistical Communique of The People's Republic of China on the 2014 National Economic and Social Development [J].http://www.stats.gov.cn/tjsj/zxfb/201502/t20150226_2015
- [2] Zeng, Y., George, L.K., 2010. Population aging and old-age care in China. In: Dannefer, D., Phillipson, C. (Eds.), Sage Handbook of Social Gerontology. Sage publications, Thousand Oaks/CA/USA, pp.420–429
- [3] Lauriks S, Reinersmann A, Van der Roest H G, et al. Review of ICT-based services for identified unmet needs in people with dementia [J]. Ageing research reviews, 2007, 6(3): 223-246
- [4] Harrington T L, Harrington M K. GERONTECHNOLOGY Why and How [J]. Eye, 1998, 12 (pt 6):976–982.
- [5] Demiris G, Hensel B K. Technologies for an aging society: a systematic review of “smart home” applications [J]. Yearb Med Inform, 2008, 3: 33-40
- [6] Claes V, Devriendt E, Tournoy J, et al. Attitudes and perceptions of adults of 60 years and older towards in-home monitoring of the activities of daily living with contactless sensors: An explorative study [J]. International journal of nursing studies, 2015, 52(1): 134-148
- [7] LI Chen. A research on service design based on the well being and cultural Demand of the elderly [J]. Design, 2014 (1): 162-164
- [8] MA Junda, LIU Guannan, SHEN Xiaojun. Research on China Elderly Welfare Science and Technology and its Evolution on the Perspective of Social Welfare [J]. China Science and Technology Forum, 2014 (5): 130-136
- [9] Ministry of Civil Affairs Planning and Finance Division. China Civil Affairs Statistical Yearbook (2013) [M]. Beijing: China Statistics Press, 2013
- [10] Beijing Municipal People's Government. Beijing's 2014 annual report on the health and population health status [M]. Beijing: People's Medical Publishing House, 2015
- [11] Peine A, Rollwagen I, Neven L. The rise of the “innosumer”—rethinking older technology users [J]. Technological Forecasting and Social Change, 2014, 82: 199-214
- [12] LUAN Qingming, XIE Chuange et al. Quality of Life and Mental State of Those Retired [J]. Chinese Mental Health Journal, 2002, 16(3): 177-178
- [13] Taipale V T. Preventive policies, politics, profit and gerontechnology [J]. Gerontechnology, 2014, 13(2): 139
- [14] JING Yuejun, LI Yuan. Analysis on the Make-up of China's Disabled Seniors and the Demand for Long-term Care [J]. Population Journal, 2014, 36(2): 55-63
- [15] JIN Bangqiu. The development of the service sector to deal with the aging population [C] // Shanghai retired workers Management Research 2013 Outstanding Paper Selection. 2014
- [16] Bouma H, Graafmans J A M. Gerontechnology [M]. IOS Press, 1992

APPENDICES

Questionnaire for College Teachers Aged 60 years and above

Hello, in order to meet the relevant needs of university teachers aged 60 and above, and provide policy advice for the relevant departments, we especially carryout this investigation. Thank you for taking the time to fill out this questionnaire.

Explanation:

- (1) Do you think the options in line with the situation on the painting "√". Under no special instructions, the only one.**
- (2) To illustrate the authenticity of the questionnaire filled, please leave your contact information (phone number, phone number or social security number).**

一、 Basic Situation

1. What is your gender?

- A. male
- B. female

2. Your Age:

- A.55-59 years
- B.60-64 years
- C.65-69 years
- D.70-74 years
- E.75-79 years
- F.over 80 years

3. Your average monthly income (including government subsidies, pensions, etc.):

- A.600\$
- B.600\$ ~900\$
- C.900\$ ~1200\$

D.above 1200\$

4. Your income expenditure areas are:

- A. everyday life
- B. tourism
- C. medical
- D. health supplies
- E. suitable for the elderly new products or services
- F. cultural and recreation goods
- G. subsidized child
- H. improve living
- I. transportation and Communications
- J. other

5. Your areas of expertise are:

- A. polytechnic
- B. administered
- C. humanities and social sciences
- D. other

6. Your Education:

- A. Ph.D.
- B. Master
- C. Undergraduate
- D. Other

二、 Health

1. Your current physical health:

- A. very good
- B. good
- C. general
- D. poor
- E. Very poor

2. You exercise mainly in:

- A. Indoor
- B. Outdoor

3. You think the current applicable fitness equipment:

- A. Few
- B. No
- C. rich
- D. expensive
- E. cheap

4. If the price is right, are you willing to hire health counselors ?

- A. yes
- B. no
- C. uncertain

5. You're willing to use the way of health monitoring :

- A. regular checkups
- B. telemedicine
- C. self-monitoring equipment

6. You learn about new technologies and services from:

- A. medical monitoring equipment
- B. species dental technology
- C. Care robot
- D. driverless car
- E. telemedicine
- F. household robots
- G. home security system

7. Your attitude towards telemedicine technology is :

- A. accepted
- B. opposition
- C. uncertain

8. Do you think what are the main factors affecting health in Beijing?

- A. water Pollution
- B. food Contamination
- C. air Pollution
- D. radioactive contamination
- E. noise pollution
- F. other

9. Do your family have health monitoring devices ?

- A. one
- B. two or more
- C. no

10. You think healthy living means :

- A. health
- B. mental health
- C. independent Living
- D. social interaction
- E. self-management
- F. other

11. When burst unwell you choose :

- A. Call emergency telephone
- B. Doctors call Community
- C. Ask a neighbor for help
- D. Phoning children

三、 Live

1. Your way of living:

- A. alone
- B. living with spouse
- C. and children living
- D. nursing home
- E. live with relatives
- F. other

2. Do you tend to live together with their children?

- A. Yes
- B. No

3. Are you satisfied with their existing housing

- A. Yes
- B. No

4. Which areas is not convenient in your housing ?

- A. the interior layout is unreasonable (eg, highly inappropriate kitchen cause reduced mobility)
- B. indoor facilities layout is unreasonable (for example, the floor is not slippery, small bathroom handrails, high switching position)
- C. indoor environmental control systems are imperfect (eg, ventilation sunshine, air temperature and humidity,)
- D. lack of an emergency call device
- E. other

5. Do you know the "smart home"?

- A. yes
- B. no

6. What smart home system are you interested in ?

- A. Automatic power-off system
- B. Family Early Warning system
- C. Medical Warning system
- D. Action indoor monitoring system

7. what brings you the potential risk in home life?

- A. furniture
- B. ground
- C. kitchen
- D. bathroom
- E. appliances
- F. stairs (elevator)
- G. other

四、 Activity Needs after Retirement

1. After retirement you are willing to participate in:

- A. fitness
- B. party
- C. tourism
- D. scientific and technological activities
- E. learning
- F. recreation
- G. other

2. You think the best way to "active aging" is:

- A. guiding innovation and entrepreneurship
- B. teaching
- C. technical advisory
- D. academic study
- E. enterprises to go
- F. other

3. You think the current "active aging" environment:

- A. good
- B. General
- C. poor

4. Which would you prefer to choose learn in the following ways?

- A. online Learning
- B. watch the video
- C. communicate with others
- D. classroom learning

- E. one training
- F. other methods

5. You think the best retirement state is :

- A. optimistic, confident, cheerful
- B. health, move freely
- C. a friend Not Alone
- D. life, health, safe and secure

6. What services do you think the elderly need ?

- A. housekeeping
- B. medical Services
- C. emergency assistance
- D. catering services
- F. social Services
- G. mental Health Services
- H. cultural and recreational services
- I. no need for service

五、 Information and Communication

1. Your daily online time is:

- A. Within one hour
- B. one hour
- C. two hours
- D. more than two hours

2. The purpose of your Internet access is:

- A. contact with family and friends
- B. entertainment
- C. learning
- D. dating
- E. learn society
- F. other

3. What digital products you often use ?

- A. PC
- B. phone
- C. digital cameras
- D. tablet
- E. e-reader
- F. other

4. When using a digital product, is there any problem for you?

- A. designs inappropriate
- B. operation complex, difficult to learn
- C. too many features, and some useless
- D. show interface confusing, difficult to understand
- E. other

5. You learn healthcare information from:

- A. TV Ads
- B. network platform
- C. children
- D. friends and neighbors

六、 Gerontechnology

1. What is your attitude to Gerontechnology?:
 - A. accepted
 - B. opposition

2. The reason you are receiving Gerontechnology is:
 - A. ease and convenience
 - B. adapt to modern society
 - C. advanced and useful
 - D. communication Easy
 - E. save money
 - F. personal interest and pleasure
 - G. Other

3. The reasons you do not accept for Gerontechnology are:
 - A. personal factors (such as memory loss, physical decline, etc.)
 - B. health risks
 - C. afraid develop dependence
 - D. fear and social isolation
 - E. information unsafe / lack of privacy
 - F. lack of help
 - G. enough time
 - H. costs
 - I. updated frequently
 - J. complex operation
 - K. did not understand
 - L. Other

4. Which method is helpful for the elderly to accept Gerontechnology?
 - A. training
 - B. help
 - C. adaptive design
 - D. encouraged
 - E. related equipment purchased by family members
 - F. personal positive attitude
 - G. other

Thank you for your participation