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Geronsafety

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ABSTRACT

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Introduction

Today the elderly population is increasing, and the increasing population affects the social, economic and legal fields. Aging research is increasing due to the increasing elderly population and these studies are socially prominent. The negative effects of biological and physical factors on aging have been replaced by social, psychological and psychosocial factors [1-4]. This is due to developing technology and innovations brought by the digital age. The change in technology has brought digital technology with it. Digital technology provides important convenience in today's World [2]. Some of these facilities are online shopping, online communication, social group membership, online health control, online home care without leaving the house via the internet. The most important innovation brought by the digital world is the Internet. Social communication and interaction has become easier thanks to the Internet. Apart from the many innovations brought about by the Internet, significant risks have also arisen. Safety is the most important of these risks [2-5]. Safety is crucial on adaptation of elderly individuals to their environment, their ability to carry out their daily activities, monitoring elderly individuals closely. Studies conducted in the literature ignore the safety risk regarding elderly individuals in the face of the innovations brought by the digital world. In this study, safety factor which is an important risk factor in gerontology is discussed. In this review study, the concept of "geronsafety" is introduced to the literature for the first time.

Conceptual Framework

Geronsafety is a sub-branch of gerontology that makes life and daily activities of older people safe and easy, offering safe quality of life to individuals, relating to the research, development, presentation and evaluation of products and social services which improve physical, mental, health, social capacity and situations in terms of personal safety.[1-2]. Geronsafety associates with elderly care, drug use, use of technology, home care services, production and design, medical field. Safety includes the protection of the environment against harmful effects of the technological devices with which elderly people communicate [4-6]. Harmful effects are divided into two as external and individual effects. External factors are city traffic, public transport, traffic lights, public spaces, parks and gardens, digital advertising platforms. The external environment is divided into physical and digital environments. The physical external environment is the environment outside the internet and digital devices in which the individual interacts physically (Table 1). The digital environment is the cash machine, payment systems, public digital systems, and internet platforms that municipalities allocate to society. These examples can be varied. Factors originating from the individual are vision, hearing, perception, touch, reflex, memory, sensuality, consciousness. Many devices have been developed for the declines of individuals due to aging. Some of them are as follows: freedom grip bed handle to get up by getting support from the bed, activator poles that provides individual balance, buttoning aid hook which enables buttoning of buttons, jobar long reach comfort wipe designed for hygiene and ergonomics, lively wearable by Great Call which provides help in case of emergency, reminder rosie recordable alarm clock for reminding, uplift seat assist for comfortable sitting. These devices are important assistive devices for the elderly designed for the safety of the elderly.

Table 1: Factors affecting geronsafety and prevention methods.

Factors	Prevention Methods
Environmental effects (Physical)	Development of parks, gardens, pedestrian crossings, nursing homes in a way that is suitable and safety for the physical decline of the elderly. They should be designed in accordance with the risks of theft, fraud and falls.
Environmental effects (Digital)	Protection of computers, internet-connected devices against spyware, debt payment systems specially developed for the elderly, and intelligent traffic lights developed by considering the physical, mental and psychological decline of the elderly.
Vision	Visual weakness causes significant problems in the digital interaction of the individual. Smartphones need to be designed to match the visual weakness of the elderly adaptly. In addition, voice warning applications should be integrated into smart phones about how many medicines should be consumed by individuals taking continuous medication.
Hearing	Devices and applications that enable them to understand with visual and touch senses should be developed for elderly individuals with hearing problems.
Perception / Memory weakness / Amnesia	Applications with repeated reminder functions should be developed due to the perception decline of elderly individuals. Especially in smart homes this application should be implemented.
Touch	Audible warning systems should be adapted to the devices to be used for individuals who have problems with touch and feel. If the elderly person cannot use a digital or technological device by touching it with his / her hands, he / she should be able to activate it with an audible warning. However, in order to protect against risks, attention should be paid not to use the words frequently used in daily speech.
Reflex	The functions of the instruments to be used for reflex weaknesses of the elderly should be designed to match this weakness. For instance, slow opening cabinets should be preferred instead of suddenly opening cabinets when touched.
Sensuality	Security measures should be taken against the possibility of fraud in the digital world against fraudulent acts of elderly individuals. Especially updated software for cyber crime should be developed.
Consciousness	The consciousness is about awareness. The necessary applications for the continuous training of the elderly should be integrated into the digital devices.

Discussion and Conclusion

This study focuses on insufficiently addressing the safety issues associated with assistive devices for older individuals. Lack of study on geronsafety in the literature reveals the strengths of the study. The limitation of the study is that it does not provide an empirical study. Active participation of elderly individuals in life is possible with safety aging. Devices designed for older individuals are not yet fully compatible with digital programs. The remote management of these devices is important for the safety of the elderly. These devices should be improved with internet and digital programs. It is important that these devices, developed for home care services and elderly people living in nursing homes, can be controlled by a third party and keep a historical record, in order to control the actions of the individual. Traffic lights should be improved considering the physical, mental, perceptual declines of elderly individuals. For instance, audio and visual lighting is not enough. A special system should be developed for elderly individuals with weak perception and reflex. I recommend a special button for the elderly just under the lights. When the elderly person presses this button, the traffic lights should light for a longer time considering the weakness of the reflex. On the other hand, in case the medical devices and equipment are applied to the elderly individual, an informative audio and visual information system should be developed. Elderly person should be able to obtain information about treatment. Especially in-home care services, it is important for the individual to have information about his / her own treatment. In addition, the ergonomic products developed for the elderly should be developed considering their personal safety and should be compatible with internet applications.

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