

## Abstract

There is a significant societal change in the world with the growth in the ageing population. Older adults are likely to accumulate some health sternness with age, often leading to the functional disability with time. Assistive devices are an excellent resource in such cases, but independence is compromised to some extent. However, prevention is better than cure; if disabilities in older age can be prevented, assuring freedom, one can enhance the essence of living irrespective of any generation. With proper maintenance of physical fitness and psychological well-being, it is possible to eradicate the sufferings associated with older age. Also, adequate health care before even hitting the older age ensures healthy ageing.

Physical activity has been considered an essential health factor. Monitoring and promoting physical activity in day-to-day life can tremendously improve health outcomes. There is a significant positive effect on physical and cognitive health in people irrespective of age. Studies have revealed that despite the age stereotypes, the benefits of exercise are brilliant even in very old age. Nowadays, young people are pretty conscious about health and fitness, but older adults often do not indulge in physical activity; a more considerable fraction of the more ageing adult population involves them in sedentary lifestyles with the negative stereotype of ageing. However, wearable fitness trackers play a significant role in motivating people to indulge in a healthy lifestyle. With the increase in health awareness among people, the use of fitness devices has significantly increased. Wearable Fitness Technology is an innovative technology that has already established its benchmark in the world market. There are various categories of people intending to avail of this facility. These devices positively motivate users to indulge in fitness regimes and derive health benefits. Also, these devices can provide basic information regarding the vital physiological changes in the body, which might require professional attention. These devices are already motivating the younger users to indulge in fitness regimes and hence derive health benefits; the ageing population is the most challenging group to be encouraged into the fitness regime. Although wearable fitness trackers' sales are significant, it faces challenges in their sustainable usage. Reports say

users tend to abandon wearable devices in less than six months. The market survey of these wearables reveals a gradual increase in their sales. However, the sustainable engagement and adherence to these products diminish with time. With the advancement in Wearable Technology, researchers have received opportunities with a new wave of research. However, most research has focused on establishing these devices' reliability and accuracy; very little research focuses on providing adoption and acceptance interventions.

The existing technology acceptance models have been studied and analysed to understand the underlying cause of lack of adherence and unsustainability in their usage. It has been observed that there lie some gaps and missing links in the existing models while studying people's perception towards the Wearable Fitness Trackers. In order to fill those voids, respective models have been developed which incorporates the micro-determinants that can assist in the development of a modified version of such devices to ensure sustainable engagement towards these devices. This study also includes the design development of the conceptualised model of Wearable Fitness Trackers that may include the exclusiveness within the scope of inclusiveness to ensure the customer engagement that too on a wide range of people.