


## Chapter 16

# Impact of Post–Use Satisfaction on Re–Purchase Intentions for AI–Driven Healthcare Smart Wearables


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### **ABSTRACT**

*The chapter examines the factors influencing the long-term use of smart wearables among users in Northern India. It integrates the Expectation-Confirmation Theory (ECT) and the Latent Variable Model to understand what drives users to continue using these devices. The study, involving 678 participants, employs Structural Equation Modeling (Smart PLS4) to analyze the effects of satisfaction, willingness to pay a premium, and accuracy of health information on the sustained use of smart wearables. The findings underscore that user satisfaction, precise health information, and the readiness to pay more significantly affect users' intentions to repurchase and keep using these devices. This research is particularly beneficial for smartwatch manufacturers and designers. By highlighting the importance of satisfaction, accurate health information, and price factors, it provides crucial insights for improving the design and marketing of smart wearables. These insights are key to fostering user loyalty and ensuring long-term engagement with these technologies.*

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## INTRODUCTION

In recent years, wearable computing devices have witnessed an astounding surge in popularity, captivating the attention of consumers, researchers, and technology enthusiasts alike. Smartwatches are a remarkable subclass of wearable technology among these innovative gadgets. In essence, a smartwatch is no ordinary wristwatch; it possesses computational capabilities that enable it to establish connections with various devices through short-range wireless communication, deliver timely alert messages, amass and store personal data from an array of sensors while serving as a reliable timekeeping device. Smartwatches, in their multifaceted functionality, offer users the unprecedented convenience of accessing their digital information seamlessly while on the move. The allure of these smart wearables has transformed them from mere gadgets into powerful tools with the potential to reshape how we interact with technology in our daily lives (Melumad et al., 2020). The convergence of cellular connectivity, intricate electrical engineering, and autonomous processing capabilities, all within the confines of a compact, body-worn device, has marked a significant milestone in the evolution of wearable technology (Saraswat et al., 2022). This convergence has made technology more personal and user-friendly than ever before, blurring the lines between the digital and physical realms. Consequently, with their ever-expanding features and capabilities, smart wearable devices have sparked a wave of interest and intrigue among researchers, innovators, and consumers alike.

At the heart of this flourishing fascination reclines the potential for continuous and precise data collection. Smartwatches, in particular, have emerged as powerful tools for capturing extensive personal data, from health and fitness metrics to communication prototypes and location information (Allioui et al., 2023). This wealth of data provides valuable insights into our daily lives and opens up a realm of possibilities for enhancing human capabilities in previously unimagined ways. As we embark on this exploration of wearable technology, with a special emphasis on the smartwatch, we examine the intricate interplay between humans and machines, dissecting how these devices collect, process, and present data and pondering the many ways in which this technology might augment human experiences (Y. Kumar et al., 2022).

The adoption of smartwatches, a fascinating genre of wearable technology, can be motivated by many factors, including the allure of novelty, the influence of peers, persuasive marketing strategies, or the innate drive to be an early adopter (Morozova, 2021). A remarkable facet of these devices is that the more frequently users engage with them, the more intuitive and integral they become in daily life. While the industry may introduce new smartwatch models annually, grasping the broader context of app sales is imperative to appreciate the paramount importance of continuous user engagement (Dehghani, 2018). In 2023, the global shipment of smartwatches is anticipated to reach a staggering 109.2 million units, underscoring the relentless demand from consumers (Allioui et al., 2023). Apple currently commands the largest market share in the smartwatch arena, with Samsung closely trailing behind. Furthermore, app development has witnessed exponential growth, with revenues in 2020 reaching nearly \$643 billion, representing a remarkable 24 percent year-over-year increase in billings and sales (M. Gupta, Taneja, et al., 2023; V. Kumar, 2023). The longer a customer engages with their smartwatch, the greater the likelihood of them exploring and purchasing additional applications, thereby augmenting revenue streams.

Smart wearables in healthcare have many applications, leveraging advanced technologies to monitor various health parameters and assist in disease management (Bayoumy et al., 2021a; X. Wang et al., 2023).

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