

# Analysis on Smart Healthcare Monitoring Based on Compound Dimension

B. Vennilapriya<sup>\*,1</sup>, C. Bennila Thangammal<sup>2</sup>

<sup>1</sup>Department of Electronics and Communication, Meenakshi College of Engineering, India

<sup>2</sup>Department of Electronics and Communication, RMD Engineering College, India

## Abstract

**INTRODUCTION:** Life expectancy has steadily increased in the majority of countries over the last few decades as a result of vast improvements in medical care, public health initiatives, and individual, community hygiene practices as well.

**OBJECTIVES:** An effective and inexpensive alternative to institutional care was remote health surveillance, which relies on non-invasive and wearable sensors, actuators, and modern statement and information technology to allow the elderly to remain in their familiar homes.

**METHODS:** With the use of open-source software, widely accessible minimal chipsets, and remote data warehouses for storing, this study details the design and construction of e-health apparel for health monitoring.

**RESULTS:** By utilizing these devices, medical professionals will be able to track vital signs in real-time, evaluate patients' status, and provide feedback even when they are physically located in a different facility. The next step included creating a wearable system and the garment platform it would be used on.

**CONCLUSION:** More features were implemented in the form of a smartphone application. This research has potential application in broadening the scope of wearable healthcare systems by investigating the role of apparel in this area.

**Keywords:** Health jacket, e-Health Apparel, Wearable sensors, Remote health monitoring, vital signs, Smart fashion

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## 1. Introduction

The healthcare sector has seen substantial changes as a result of the development of information technology, most notably in the field of remote monitoring. [1]. Consistent post-discharge supervision of a people's physiological parameters at the workplace, at home, during sports matches, and so on, or in a medical setting was now possible thanks to wearable medical equipment (WHEs), a new tech that has the obvious benefit of abating embarrassment and prying with regular human pursuits [2]. In the late 1990s, the notion of personal medical systems emerged with the aim of engaging the distinct member at the center of the provision of nursing care, governing one's own

wellbeing, and interacting with healthcare professionals; this idea was colloquially known as "patient empowerment." Wearable Healthcare Devices (WHDs) are a part of this system. The objective was to get individuals thinking about their health conditions in order to improve care and make better use of technological advances. These tools encourage cooperation between many branches of science [3,4]. This includes biomedical engineering, micro and nanostructures, materials research, electrical engineering, and computer science. Nowadays, there has been a considerable increase in the number of intelligent systems and newly produced tools that are used for quick monitoring among patients and for controlling their diseases [5].

<sup>1</sup>Corresponding author. Email: [tovennilainbox@gmail.com](mailto:tovennilainbox@gmail.com)











