Chapter 10
Enhancing Emotional Intelligence in Healthcare:
The Impact of Sentient Applications

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ABSTRACT

The healthcare sector is demanding, often leading to stress, mental fatigue, and burnout among healthcare providers (HCPs) like physicians, nurses, and psychologists. Emotional intelligence (EQ) is vital in managing these challenges, though EQ levels vary, with nurses being particularly vulnerable to burnout due to high emotional demands. Technological advancements such as AI, VR, AR, and mobile health apps offer promising solutions by streamlining workflows, improving accessibility, and creating a more positive work environment. Examples include the HANDS app for autism, BlueStar for diabetes, and Pit-a-Pit for Parkinson's. Human-machine collaboration has the potential to enhance HCPs' Emotional Intelligence and foster "artificial compassion" in machines, thereby humanizing technology. This chapter delves into how sentient healthcare applications can aid in reducing Stress among HCPs and how technology can be leveraged to humanize healthcare by fostering improved emotional intelligence.

INTRODUCTION

Health care services are an occupation that is naturally demanding and involves the high levels of stress, the exhaustion and the possibility of burn out of the workers. This is compounded by competing role demands, resultant of clinical work, patients, and the emotive nature of many of the caregiving roles. It is with reference to these challenges that emotional intelligence (EI) has come out as a strong tool

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that can facilitate proper handling of emotional issues among healthcare professionals hence ensuring they improve on their conduct and thus improved patient care besides minimizing on the effects of job burnout (Cao et al., 2022; Năstasă & Fărcaş, 2015). The most recent studies focus on the relationship that exists between the level of emotional intelligence and job burnout among the healthcare workers, especially those who were victims of workplace violence. Healthcare workers in six tertiary public hospitals in China completed self-reported questionnaires, a cross-sectional survey which reveal that higher emotional intelligence was linked with lower job burnout measured by emotional exhaustion and depersonalization. On the same note, the study shows that on workplace violence partially moderates the emotional intelligence and burn out relationship, thereby showing that implementing ways of enhancing on the aspects of emotional intelligence may be helpful in the reduction of the adverse effects caused by workplace violence (Cao et al., 2022).

This chapter aims at giving an insight of the various roles of emotional intelligence in the healthcare sector, especially focusing on health technology which include Virtual and Augmented Reality (VR/AR) and Artificial Intelligence (AI) in enhancing challenge and endorsement of emotional intelligence among health workers. The combination of new technologies with the enhancement of emotional intelligence reveals the overall prospects in reducing psychological consequences affecting the healthcare field workers (Lie et al., 2023; Linton et al., 2022). The emerging technology of Virtual and Augmented Reality has been incorporated in healthcare delivery systems not only to support clinical practice but also as methods of improving individual's emotional intelligence quotient. For example, a study about using augmented reality in healthcare proposed a system for concerning negative feelings, for example, stress or anxiety, which was based on biological sensors and AR in order to create well interactive environments for facing with negative feeling, physical and emotional health (Funderskov et al., 2019). An example of AR application realized in this system was a breathing control application, which proved its ability to lower stress levels among participants and hence AR can be used in the context of maintain emotional health among health care givers (Tivatansakul et al.).

Side by side to the growth in the implementation of Virtual Reality and Augmented Reality, Artificial Intelligence is transforming healthcare. Artificial intelligence tools are being developed to measure and improve the level of emotional intelligence presenting a set of recommendations when it is needed to solve arising emotional issues for healthcare consumer and employees (Russell et al., 2023). Artificial Intelligence and the Emotional Intelligence training can be viewed as an avenue of possibilities to rewrite and enhance the existing methods of improving resilience, the skills of regulating own emotions as well as interpersonal skills for HCP (Bohr & Memarzadeh, 2020) . However, telemedicine especially in the area of palliative care, has presented a major challenge of dealing with patients without physically meeting them and therefore the necessity of emotional intelligence. Since service delivery has shifted to online platforms more emphasis has to be placed on delivering empathy, support and handling of bad news online (Ebneter et al., 2022; Rogante et al., 2016). This chapter will also explore how it has changed or modified the aspects of emotional requirement in healthcare and how it can be best managed by Emotional Intelligence for telemedicine professionals to continue to deliver emotional empathy as they provide care via technology. Based on this understanding, it will be useful to assess the given technological experiences and their impact on the subject of the examined chapter, namely, emotional intelligence in healthcare. Through reviewing the existing literature and presenting practical cases, we will discuss how such technologies as VR, AR, AI, and telemedicine contribute to the formation of emotionally intelligent healthcare professionals and ultimately, improve patient care and decrease