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REHABILITATION GLOVE DEVICE DESIGN

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Abstract

In hand rehabilitation, physical therapy is applied to the hands and fingers regionally. In the treatment of hand rehabilitation, it is aimed to restore the hand function, to facilitate hand movements and to restore movement. Hand rehabilitation is not only the fulfillment of the hand function, but also the pain and seizures that occur at the same time. For the rehabilitation of the hand in work, each time the rehabilitation center or the hand movement provider instead of the different cost devices designed wearable rehabilitation gloves. It is aimed to rehabilitate the hand by making finger joint measurements of the person to be used, producing rings from the three-dimensional printer on the gloves, connecting the kevlar yarn to the servo motors, and opening and closing the fingers. The device is person-specific, portable and easy to manufacture and low cost. This feature allows the person to perform the rehabilitation of the hand wherever he is without going anywhere.

Keywords: rehabilitation, robotic glove, hand rehabilitation

1. Introduction

In the treatment of hand rehabilitation, it is aimed to gain the ability to grasp the fingers, to restore the hand function, to facilitate hand movements and to restore movement. Hand rehabilitation is not only the fulfillment of hand function, but also achieved resulting aches and pains will be eliminated. When studies on hand rehabilitation are examined; Mousavi Hondari et. al. Features a Spatial augmented reality system for rehabilitation of hand and arm movement [1]. Mulas et. al. designed an emg controlled exoskeleton for hand rehabilitation[2]. Luo et.al. made an integration of augmented reality and assistive devices for post-stroke hand opening rehabilitation [3]. Boian et. al made a virtual reality- based post stroke hand rehabilitation [4]. Adamovich et. al. designed a virtual reality-based exercise system for hand rehabilitation post-stroke. They presented preliminary results from a virtual reality based system for hand rehabilitation that uses a CyberGlove and Rutgers Master II-ND haptic glove[5]. Balasubramanian et.al. designe a robot assisted rehabilitation of hand function [6]. Fischer

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