ABSTRACT

A physical system for providing training and assessment of physiatrics based therapy is provided. The physical system includes (i) a mannequin arranged as a physical model of anatomical structure of a human body, where the mannequin is calibrated with values associated with tension, rotation limitation, rigidity, flexibility, and range of motion to correspond to a physical condition of a subject, (ii) a physical part arranged in a cavity in the mannequin that simulates the physical condition of the subject, wherein the physical part is selected based on (a) the physical condition of the subject and (b) a procedure of physiatrics based therapy associated with the physical condition, (iii) synthetic skin layer arranged over the mannequin and (d) an array of sensors positioned at different locations below the synthetic skin to obtain a temporal sequence of different pressures applied by a user on the mannequin at the different locations over time.

Fig. 1