

以智慧型手錶診斷注意力不集中併過動症

Diagnosis of Attention-Deficit / Hyperactivity Disorder by Smart Watch

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技術內容 Technical Introduction

ADHD是一種常見的兒童神經精神疾患，患者一般俗稱「過動兒」，根據精神疾病診斷及統計手冊ADHD的正式名稱為「注意力不集中併過動疾患」。由於ADHD兒童常在動作模式上與正常兒童有明顯的不同，本產品將智慧手錶中的陀螺儀和加速度計中的數據用於分析ADHD兒童的動作，將個案活動強度及頻率以科學化的數據呈現，並與正常兒童做比較，所建立的ADHD客觀的診斷與療效評估系統。

ADHD is a common neuropsychiatric disorder in children. Patients are generally called "hyperactive children". According to the Diagnostic and Statistical Manual of Mental Disorders, the official name of ADHD is "Attention-Deficit Hyperactivity Disorder". Since ADHD children often have significantly different action patterns from normal children, this product uses the data from the gyroscope and accelerometer in the smart watch to analyze the actions of ADHD children, and uses scientific data to analyze the activity intensity and frequency of individual cases. Presented, and compared with normal children, established an objective diagnosis and curative effect evaluation system for ADHD.

技術特色 Technical Advantages

本作品使用的智慧型手錶內建陀螺儀及加速度計設備。這些偵測器可以擷取智慧型手錶在三維X、Y和Z方向上的運動，該個案的活動細節可以在智慧型手錶上感知和記錄。本作品並設計操作網頁，使得隨身攜帶的手機可以進行操作、監視及資料獲取與傳輸。

The smart watch used in this work has built-in gyroscope and accelerometer devices. These sensors can capture the movement of the smart watch in the three-dimensional X, Y and Z directions, and the details of the activity in this case can be sensed and recorded on the smart watch. This work also designs the webpage, so that the portable mobile phone can be operated, monitored, and data acquisition and transmission.

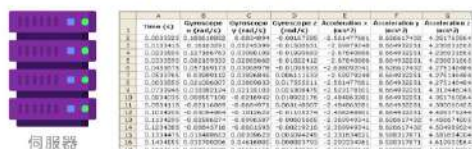
配戴智慧型手錶並下載本產品APP



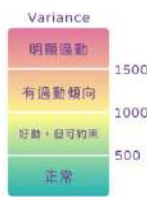
家長或老師上傳數據資料



透過技術科學驗證數據進行演算評估



醫師進行診療判斷及病情追蹤



相關專利 Patent

· 中華民國專利(TW) : I764558

應用範圍 Application

應用於過動症兒童的篩檢、或療效追蹤，將來可以由醫療機構推廣到教育機構或家庭中。