The Selection of Wheel Chair by Using The Analytic Hierarchy Process (AHP) Technique

游文宏、宋明弘 ; 蕭育如

E-mail: 9808775@mail.dyu.edu.tw

ABSTRACT

In the end of 2001, the physically and mentally disabled citizens in Taiwan area had been over 754,084 representing a growth rate of 5.7% as compared to a previous year. As regard of the proportion of the numbers of physically and mentally disabled citizens to the total number of disabled citizens in Taiwan area, where limbs handicapped ranked the most(42.9%). Most of devices that the disabled citizens used are wheel chairs, but there are too many kinds to choose in the present market. The prototype model is developed by the interview of expert, field investigation, and questionnaires to find out the requirements of the disabled citizen. The input of the user ’ s demand are analyzed by the Analytic Hierarchy Process (AHP). Then, a computerized model is set up to meet those requirements and is come up with the most suitable suggestion. The findings of the research are as follows：the major requirements are function, safety, comfort, price, and these factors can be reference of the design, manufacturing, and innovation. Finally, the system proved to be an effective tool which is satified by more than 80 percent of the users.

Keywords : AHP ; Assistive Devices ; Wheel Chairs

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