



# User Evaluation of the Neater Uni-Wheelchair in the Home Environment



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## Aim

The aim of the study was to evaluate user's experiences of using the Neater Uni-wheelchair in the home environment.

## Introduction

The Neater Uni-wheelchair was designed as an alternative to powered wheelchairs, lever drive and dual handrim wheelchairs for hemiplegic users. The Neater Uni-wheelchair is a standard Action 3 chair to which a kit has been attached which enables users to self propel and steer independently of attendants. A differential in the rear wheel enables both wheels to be driven through one pushrim and a novel steering mechanism attached to the foot plate permits self directed steering. Earlier work by Mandy et al (2009;2007) indicated that the Neater Uni-wheelchair was more ergonomically efficient and preferred by users.

## Methods

A group of 12 hemiplegic male and female subjects who had participated in the earlier studies by Mandy et al (2009) that investigated ergonomic efficiency of the Neater Uni-wheelchair were invited to use the wheelchair in their own homes for a period of one month. Experiences were recorded using either a digital recorder or in a diary. The data was transcribe or reviewed for thematic analysis.

## Results

The following 4 themes were identified from the users' evaluations:

Theme	Evidence
Increased independence.	<ul style="list-style-type: none"> <li>• 'I am able to take myself to the computer room when I feel like it'</li> <li>• 'My husband was able to browse the shops on his own (I kept losing him!). It also meant that I was able to browse on my own too'.</li> <li>• 'Freedom!'</li> <li>• 'I am able to take myself to the bathroom when I need to'.</li> </ul>
Improved manoeuvrability and ease of use within the home environment	<ul style="list-style-type: none"> <li>• 'I liked the turning circle and being able to move in confined spaces'.</li> <li>• 'The steering is very sensitive and responsive, it is a great improvement over standard wheelchairs'.</li> <li>• 'It can be easily stored'.</li> </ul>
Easier to drive	<ul style="list-style-type: none"> <li>• 'I don't have to think about using two handrims to propel myself'.</li> <li>• 'It is easy and intuitive to use'.</li> </ul>
Use	<ul style="list-style-type: none"> <li>• I didn't think I would use but having had one it is a fine piece of work and I am very pleased with it'.</li> </ul>

## Conclusions:

The Neater Uni-wheelchair is a viable alternative to those that are currently available to hemiplegic users. There are no storage issues and it is also a cheaper option than a powered wheelchair.

## Keywords:

Assistive technology, independence, manoeuvrability

## References

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