

## **Vroom, vroom – How do children learn to drive powered wheelchairs?** Josephine Durkin Dip. COT

### **Background**

There is a paucity of literature in the area concerning children learning powered mobility skills and it is an area of neglect for research, particularly in the U.K. Children with multiple and complex disabilities have traditionally been excluded from research studies in this area.

### **The Study**

The research question was 'How does a child learn to use powered mobility to explore their environment?' A qualitative, constructivist research study has been carried out with children who were both disabled and non-disabled. The aims of the study were to: take a child-led approach to identify the learning stages and strategies for learning to use a powered wheelchair by disabled children; address the lack of knowledge of clinicians assessing children for powered mobility through provision of a clinical assessment tool based on a foundation of normal child development; challenge some of the current clinical attitudes adopted by NHS Wheelchair Services towards provision of powered mobility for children.

The methodology for the research design was constructivism. The research methods were: observational study of 22 children (11 non-disabled and 11 disabled children) using video; a series of focus groups with 7 disabled children, using the principles of the video interactive guidance approach; and focus groups with a total of 22 prescribing clinicians.

Grounded theory processes were used for analysis of the data. Management of the data included: the use of the computer package NVivo to conduct a line by line coding of the focus group data; cut and paste video editing to develop emerging themes from the observational video tapes.

### **Findings**

Have been presented within a paediatric developmental domain. The science of observational detail has been supported by the knowledge of the underlying principles within the literature, interwoven with the findings from the disabled children and peer professionals. The art of interaction between the child and clinician, in order to achieve the best motivation and performance, have emerged from the themes of 'play' and the core category of the 'responsive partner'. The art of interaction has also been set in context to the findings on the absence or presence of the medical restorative model, the child and family centred model and the social disability model.

A developmental constructional framework has been formed. This consists of: 6 levels of attention; 3 stages of learning; and 5 progressions along a continuum of learning from novice through to expert. Findings on the use of electronic mobility guidance systems also form part of this framework.