Posture & Pressure Management: Social Psychological Explanations for Compliance with use of Clinically Prescribed Seating Functions

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Introduction: Posture alignment and pressure relief are of paramount importance to the quality of life, well-being and health of those using both powered and manual wheelchairs. **The use of additional features on powered wheelchairs to support these goals has increased however users do not always comply with them** and relevant literature has called for greater understanding of the reasons behind this non-compliance (Schofield, Porter-Armstrong & Stinson, 2013).

Research on user perceptions of other types of technology (e.g. Yoo & Chen, 2016) has indicated key roles for "Perceived Usefulness" and "Perceived Ease of Use" while social psychological research on health behaviour demonstrates that psychological factors predict a range of health behaviours (e.g. van Agt et al., 2014; Kelly et al., 2016), The prototype willingness model (see e.g. Todd, Kothe, Mullan & Monds, 2016 for a meta-analysis) highlights the importance of providing prototypes of people willing to engage in such behaviours while recent social identity research (e.g. Greenaway et al., 2015) demonstrates that group identification can increase adherence to health positive behaviours.

Therefore the current study explores social psychological processes which might explain non-compliance in powered wheelchair users. This study is an exploratory one which aims to gain insight into user perceptions of their powered wheelchairs, the roles of social groups/salient others and user attitudes towards/beliefs about utility.

Method: A total of 12 powered wheelchair users were interviewed for this project (6M; 6F), all UK powered wheelchair users. Questions were asked about knowledge of the feature(s), barriers and facilitating factors, motivation and perceptions of support as well as background information of the user. Interviews ranged between 10 minutes and 1 hour in length.

Results & Discussion: The thematic analysis revealed *two very distinct patterns of responding.* **The first was related to the reasons for complying with wheelchair use, understanding of clinical features and convergence on appropriate behaviour.** This was conceptualised as a process which began with the engagement of the user in discussions around the chair's features, the clinical need for each one and the degree to which they perceived they had been involved in the decision-making. Requesting features to be fitted to the chair linked to higher perceived utility . Similarly, a clear understanding of the medical or clinical benefits also contributed positively to perceived utility. In contrast, participants who reported initially feeling highly uncertain or experiencing high levels of ambiguity did not report the same feelings that features were useful, **unless their use was beneficial to help resolve uncertainty.** If a feature was quickly able to be "understood" or helped a participant to "ground themselves" in an uncertain situation, this contributed positive to perceived utility.

Judgements of perceived utility (consistent with the Technology Acceptance Model, Yoo & Chen, 2016) were reported by participants as being linked to expected outcomes (e.g. Satisfaction) AND to consensus belief about other wheelchair users' perceptions; put simply if participants perceived utility of their own chair's features, they believed that others would understand and use features on their chairs too. However perceived utility was constructed by participants as being "situationally dependent" and if a feature did not help in a particular situation, they would work around it; either by not engaging in a behaviour which would require the feature to be used, by adapting the feature to fit their lifestyle or by using another feature or form of support to meet a particular challenge.

Figure 1: Process of constructing compliance and satisfaction
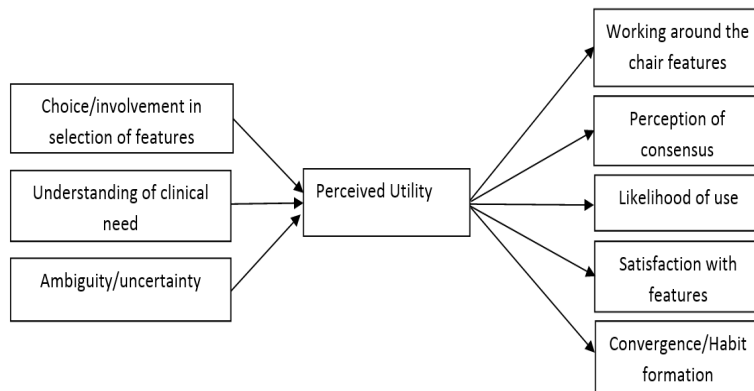
The second pattern of responding referred to participants' self-definitions or otherwise as wheelchair users. This was a theme which some participants chose not to explore and those who did showed a full range of acceptance or rejection of the identity status. For some participants, use of a wheelchair defined who they were, enabled them to establish affiliations with others and distinctiveness from able-bodied individuals. However this was, at least for our participants, rarely chosen as a preferred identity. Participants instead seemed to prefer to define ways in which they affiliated to other groups, had other interests or hobbies or were "more" than their wheelchairs. This might reflect a categorisation threat for these participants and it would be interesting to explore the understanding that participants have of the category "wheelchair user" and how this impacts on their identification.   In the current study, some participants highlighted online support and this would be a fruitful direction for future research..

Figure 2: Self-identification with wheelchair use
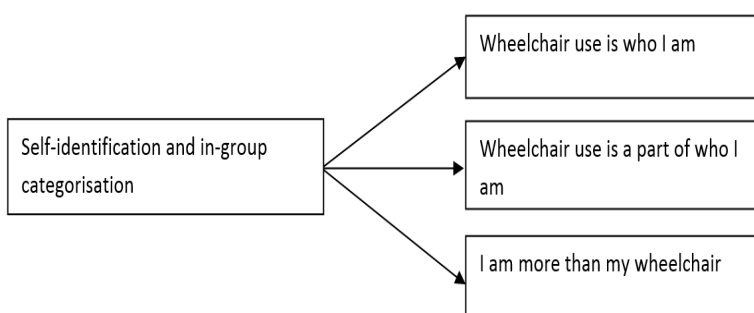
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