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Introduction
An ankle-foot orthosis (AFO) is an externally applied device that encompasses the joints of the ankle and foot, used to modify the structural and functional characteristics of the neuromuscular and skeletal systems (ISO, 1988, a & b). AFOs are prescribed for people who have a loss of function affecting their mobility, experienced in a wide range of conditions such as stroke, poliomyelitis, cerebral palsy, spina bifida and osteoarthritis.

Most of the research focuses on positive effects of AFOs on gait, such as increased walking speed and step length (Lehmann, Condon & De Lateur, 1987), and improved clearance of the foot as the leg swings through (Fatone and Hansen 2007). However there is a dearth of research on the extent to which patients actually use their AFOs, why they might reject AFOs, and the effect of AFOs on Quality of Life (QoL) and psychological well-being.

Psychological models, such as the Theory of Planned Behaviour (Ajzen, 1991), provide an opportunity to understand cognitive processes that may determine use of AFOs. Cognitive processes, particularly perceptions of control are of particular interest because they offer opportunities to develop interventions that can increase uptake and use of AFOs.

Aims of PhD
- To investigate if a relationship exists between AFO use and QoL and psychological well-being
- To investigate if the Theory of Planned Behaviour (TPB, Ajzen, 1991) is a useful model in understanding adherence to a physical rehabilitation programme, including AFO use
- To identify cognitive variables that can predict use of AFOs
- To develop and test a psychological intervention designed to increase use of AFOs

Study 1 continued....
Design and Procedure
A Cross sectional survey will be sent by post to the selected sample in order to measure parameters of AFO use, and various measures of quality of life and psychological well being. Hager and Orbell (2003) in their meta-analytic review used content analysis to identify six categories of health outcomes by which people perceive their illness. Five of these 6 health outcomes have therefore been selected for the proposed questionnaire seen in Table 1.

Table 1: Key measures used for Study 1

<table>
<thead>
<tr>
<th>Health Outcome Category</th>
<th>Measure Used</th>
<th>Description of Measure</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Functioning</td>
<td>9HGS</td>
<td>Anxiety, Depression</td>
<td></td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>POMA-S</td>
<td>Positive Affect</td>
<td></td>
</tr>
<tr>
<td>Psychological Well being</td>
<td>WHO-QOL 51</td>
<td>Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Role Functioning</td>
<td>WHO-FC</td>
<td>Role Functioning</td>
<td></td>
</tr>
</tbody>
</table>

Outline of other studies
Study 2: A meta-analysis of Theory of Planned Behaviour (Ajzen 1991) studies that predict adherence to health interventions. This will help to gauge whether the model might be useful in identifying potentially changeable predictors of AFO use that could be targeted in interventions.

![Figure 5: Theory of Planned behaviour (Ajzen 1991)](image)

Study 3: On the assumption that the TPB is found to be a useful framework for predicting adherence to health regimes (in the previous proposed study), Study 3 will directly apply the TPB to the specific behavior of AFO use in order to identify cognitions that are likely to be useful targets for subsequent interventions.

Study 4: Development and testing of a psychological intervention to effect control cognitions that can impact on AFO use

References:

Outline of Study 1:
Research Questions:
1. To what extent are AFOs used by people in Scotland, with a range of conditions?
2. Is there a relationship between AFO use and QoL?
3. Is there a relationship between AFO use and psychological well-being?

Participants
N=200 adults, over age of 18 yrs, who have been prescribed AFOs in the last 3 years, living in Scotland.

Sample
A random sample of AFO users throughout Scotland. Participants will be identified by records held by orthotic departments and contractors working in Scotland.