The facilitators and barriers to physical activity in lower limb amputees: a qualitative approach

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Introduction
It has been shown that participating in physical activity is beneficial for individuals with an amputation (Legro et al., 2001, Journal of rehabilitation research and development, 38(3), 319-326). However, studies have shown participation in physical activity by lower limb amputees are limited and little UK research exists to explore the reasons why (Deans et al., 2012, Prosthetics and Orthotics International, 36(3), 260-269, Bragaru et al., 2013. PloS one, 8(3), e59881).
The purpose of this study was to explore the perceived facilitators and barriers to participating in physical activity in individuals with lower limb amputation in the UK to provide evidence to support physiotherapists practice.

Methodology
A qualitative phenomenological approach using semi-structured telephone interviews on the topic of participants physical activity habits were used alongside a researcher’s report of an amputee games event. Participants were recruited by voluntary response to an advertisement on a closed group social media page of a UK amputee charity. A purposeful sample of 8 English speaking adults with lower limb amputations of various aetiologies. Interviews were transcribed and analysed by thematic analysis.

Results
The facilitators and barriers to physical activity for lower limb amputees highlighted 4 distinct categories: Physical, Psychological, Social and Environmental factors.

Table 1 displays the emergent themes

<table>
<thead>
<tr>
<th>Facilitators</th>
<th>Barriers</th>
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<tbody>
<tr>
<td>Protection of body, reduced phantom limb pain, fitness improvement, weight maintenance and recommended by health professional</td>
<td>Age, comorbidity, stump pain, phantom limb pain, increased organisation and planning, inconsistency of symptoms and influence on mood</td>
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<td>Goal achievements, intrinsic motivation, change (the acceptance of), wellbeing and enjoyment</td>
<td>Mind and body (worry, anxiety and embarrassment), low internal motivation and inability to accept change</td>
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<td>Social support, role models and group support from amputees and family friendships.</td>
<td>Social influences, negative experiences, mentoring (lack of) and occupation</td>
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<td>Facilities nearby and low cost, extrinsic motivators and amputee charity (opportunities, camaraderie, wellbeing)</td>
<td>Lack of physical activity encouragement, less professional encouragement, lack of information given and negative rehabilitation (short and basic)</td>
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</tbody>
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Summary & Conclusion
• The facilitators and barriers to physical activity for lower limb amputees are multifactorial.
• Occupation is considered meaningful to lower limb amputee’s.
• 88% of participants named cycling as their chosen physical activity.
• Previous physical activity participation can be a facilitator to physical activity, as can poor participation prior to amputation.
• Perceived amount of physical activity compared to pre-amputation was largely the ‘Same’ or ‘less’.
• Social and mentoring systems should be encouraged.
• Findings suggest a potential review of the lower limb amputee physiotherapy rehabilitation experience, with an emphasis to be put upon increasing physical activity participation for all stages.
• Rehabilitation must be individualised to the lower limb amputees’ interests with a view to long term needs.