

<b>Institution:</b> Leeds Beckett University (LBU)		
<b>Unit of Assessment:</b> 24 – Sport and Exercise Science, Leisure and Tourism		
<b>Title of case study:</b> Battle Back - Significantly and sustainably improving the physical and mental well-being of wounded, injured and sick UK military personnel		
<b>Period when the underpinning research was undertaken:</b> 2012-2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s):</b>	<b>Period(s) employed by submitting HEI:</b>
Prof. Carlton Cooke	Professor	1990 - 2015; 2020 – present
Prof. Jim McKenna	Professor	2005 - present
Prof. David Carless	Professor	2006 - 2019
Dr Christopher Kay	Senior Research Fellow	2016 - present
Dr Suzanne Peacock	Senior Lecturer	2010 - present
Dr John Allan	Senior Lecturer	2002 - present
Dr Mariana Kaiseler	Senior Lecturer	2014 - present
<b>Period when the claimed impact occurred:</b> Aug 2013-2020		
<b>Is this case study continued from a case study submitted in 2014?</b> No		
<b>1. Summary of the impact</b>		
<p>Research conducted by Leeds Beckett University (LBU) drove the design and delivery of a residential recovery course for wounded, injured and sick (WIS) serving military personnel, producing significant and sustained improvements in positive mental health and well-being. Over 4000 WIS personnel have benefitted from attendance. Research evidence provided by LBU also underpinned the decision of The Royal British Legion (TRBL) to invest £27 million to fund this recovery course for 10 years and elicited policy changes in the British Army and Royal Air Force to mandate attendance of the Battle Back course for their WIS populations. Impacts are now evident beyond serving personnel (e.g., military veterans, junior soldiers and spinal cord and brain injured rugby union players, their families and carers).</p>		
<b>2. Underpinning research</b>		
<p>In 2009, the UK Ministry of Defence (MoD) was experiencing an increase in the number of personnel requiring recovery support due to physical wounds, injuries or mental ill-health. Specifically, those so severely affected were downgraded from their current military job role due to their injury or illness and were placed in the MoD recovery pathway.</p> <p>In reaction to the increased need of the MoD to provide additional support to their recovering personnel, TRBL commissioned LBU to research and design a supportive recovery programme in the form of a residential Multi Activity Course (MAC), utilising the concept of adaptive adventurous activities and health and well-being coaching. It involved consultations with expert practitioners and academics as well as a review of existing literature. This research provided extensive insight into the considerations needed around the key elements of an experience that could create the opportunity for effort-driven, custom built challenges which may facilitate personal development and growth. It documented important considerations around: the activities &amp; sports, physical connectedness, the environment, the staff and importantly the opportunity to process meaning from the experience [1]. This research created the blueprint for the pilot courses at TRBL's Battle Back Centre.</p> <p>Since then, research from LBU has contributed key information regarding the design, development and effectiveness of recovery provision for these individuals. Since the start of the audit period in August 2013, this work has directly impacted the availability, quality and effectiveness of a five-day residential recovery programme for over 4,000 WIS armed forces serving personnel.</p> <p>Eleven pilots were completed with 76 participants. Each course had a research process built into it. Information was gathered from consenting participants and staff to inform the development of subsequent courses, one week to the next. The consolidation report of the evaluation of the pilot courses provided recommendations for future courses, including how an intentional theoretical underpinning could be used to guide the delivery of courses, specifically to help facilitate participants achieve meaningful, authentic and healthy outcomes [2]. The introduction of self-</p>		

report quantitative scales for participants regarding their mental well-being and psychological needs were also recommended and subsequently introduced. This facilitated an assessment of changes in scores between the start and end of the course. Use of these scales in pilots 10 and 11 showed, on average, a 25% improvement in the cohort's mental health and well-being [2]. Collecting quantitative measures of participants' mental well-being was routinely implemented after completion of the evaluation of the pilot courses. Evidence-based impact on positive mental health and well-being has therefore been provided for 24 courses per year with a capacity of up to 24 WIS participants from August 2013 until the end of 2020.

Between 2012-2015, 971 participants showed an average significant increase of 15.9% in positive mental well-being over the duration of the course [3]. More individualised, qualitative research was also conducted during this period. The courses were found to stimulate a balance of present- and future-oriented psychosocial outcomes for the participants, through which they rediscovered aspects of themselves that had been lost through their injury or illness and helped them move forward with their lives, adopting new, future-oriented activities [4]. LBU's narrative inquiry research evidenced a prominent transformation of participants' personal narrative during the courses. These transformations included positive consequences for the health and well-being of those participants [5]. Findings suggested that, in the short-term, involvement in the course had numerous individual positive outcomes which improved the psychological well-being and development of the participants.

### 3. References to the research

All outputs are original and were conducted by LBU, with all but one published in journals that reflect the specific foci of the research and are peer reviewed by experts. All published outputs were endorsed by the MoD and TRBL, who have funded all of the research presented.

- [1] Allan, J. F., McKenna, J., Hind, K. (2012). Brain resilience: Shedding light into the black box of adventure processes. *Australian Journal of Outdoor Education* 16, 3-14. doi:10.1007/BF03400934
- [2] Peacock, S., Carless, D., McKenna, J., & Cooke, C. (2012). Executive Summaries of The Royal British Legion's Inclusive Sport and Adventurous Training Battle Back Programme: Pilots 1 – 11
- [3] Peacock, S. M., McKenna, J., Carless, D., & Cooke, C. (2019). Outcomes from a One-Week Adapted Sport and Adapted Adventure Recovery Programme for Military Personnel. *Sports* 7(6), 135. doi: 10.3390/sports7060135
- [4] Carless, D. (2014). Narrative Transformation Among Military Personnel on an Adventurous Training and Sport Course. *Qualitative Health Research*. 24(10):1440-1450. doi:10.1177/1049732314548596
- [5] Carless, D., Peacock, S., McKenna, J., & Cooke, C. (2013). Psychosocial outcomes of an inclusive adapted sport and adventurous training course for military personnel. *Disability and Rehabilitation*, 35:24, 2081-2088, doi: 10.3109/09638288.2013.802376

### 4. Details of the impact

#### 4.1 Sustainably improving the mental well-being of recovering armed forces personnel

The primary impact evidenced in LBU's research is the positive influence the recovery courses have had on the mental well-being of the 4,142 national and international WIS participants. There is a complex and wide range of health issues amongst the attendees. As such, it is considered that all participants may be 'adults at risk who are unable to safeguard their own wellbeing', as defined in the 2014 Care Act. Many nationalities serve in the UK armed forces. The courses have supported recovering WIS personnel of British, Nepali, Canadian, US, Ghanaian, Irish, South African and Fijian nationality.

In 2016, LBU began a longitudinal study into the long-term impact of the courses on the participants mental well-being and their health-related behaviours. Participants are invited to contribute research data at four time points over the 12 months after attending a course (2 weeks, then 3, 6 & 12 months). Between 2017-2018, 759 participants reported an average increase of 33% in their mental well-being scores by the end of the course [A]. This was an 83% greater relative increase than seen in participants between 2012-2015 (18%). This indicates that not only

have the courses been consistently beneficial but that the significant impact on well-being has increased over the period of the study. The repeated well-being measures provided by participants showed a statistically significant and sustainable improvement in their scores in the 12 months following the course. The average mental well-being scores of the contributing participants was significantly higher at every time point after attending a course than the average score before the course [A]. An increase in a person's well-being score of at least 3 scale points represents a meaningful change for an individual. The average increase over 12 months for course participants is 5.2.

The attribution of the course to these improvements in mental well-being was considered through additional research questioning; 89% of respondents indicated that the personal impact of the MAC was "Positive or Mostly Positive" 12 months after attending. 75% reported making "changes in their day-to-day life since attending 12 months ago" [A]. 40% of these changes related to improvements in having a "negative mindset", "worrying about things out of their control", "bottling things up", "being hard" on themselves or "avoiding thoughts and feelings". 15% had stopped "finding excuses" and were now "taking responsibility for their recovery", "stopped isolating themselves" and/or "feeling less self-pity" [A].

LBU have also shown the long-term impact of the course on participants' ability to make changes in their day-to-day life through the lens of psychological well-being [B]. This research identified that elements of the course satisfy the participants basic psychological needs of competence, relatedness and autonomy. The behaviour changes reported by 97 participants six months after the course were predominantly aligned with improved psychological well-being [B]. This meaningful change in mental well-being and positive behaviour is exemplified in these example quotes from participants, 12 months after attending a course:

*"The Battle Back course has probably saved my life. What I have been through in the last 18 months is probably hard to believe."*

*"I cannot express adequately, how the experience helped me. It literally saved my life. This was down to the amazing people who run the course, I'll always be grateful to them, thank you."*

*"Please keep encouraging WIS to go - it was the most enjoyable and influential part of my recovery journey"*

#### **4.2 Informing The Royal British Legion's strategic approach to funding recovery support for WIS armed forces personnel**

LBU's research into the design and delivery of supportive programmes for recovering military personnel gave TRBL an academically informed design to work from in the delivery of the first pilot courses and, working with the WIS personnel, MoD and coaching staff, an evidence-based refinement of the course was co-produced. Antony Baines, Executive Director of Operations at The Royal British Legion explained *"the kind of research that went into the initial pilot to establish the courses and then the evaluation of the subsequent pilots were both critical in terms of the Legion committing long term funding"* [C]. The evaluation of the 11 pilot courses identified the initial effectiveness of positively influencing the recovery of the participants and led to TRBL committing £27 million to the Battle Back Centre [C]. This commitment created 5,760 places for beneficiaries to participate in recovery courses over 10 years.

LBU's ongoing longitudinal research on the recovery course continues to feed into TRBL's annual strategic decisions to support the armed forces in funding the Battle Back Centre. Like many commissioning organisations, evidence of efficacy and value for money are important to TRBL to confirm if something is worthy of continual investment and helps them to make informed decisions on future spending priorities. Antony Baines, Executive Director of Operations at The Royal British Legion corroborates: *"When you look at Battle Back over a period of eight years, it actually makes quite an impact having all that evidence. [LBU's] research gives you a real solid base to be able to make funding decisions from and it feeds into the way in which we strategically review our services [and] into the long-term strategy of the Legion in terms of where it spends its money and where I think it's going to get the most impact"* [C].

### 4.3 Informing policy change in UK armed forces recovery pathways

When the courses first became available for WIS army personnel, attendance was optional. Personnel Recovery Units - who manage the recovery of the WIS personnel - identified when attending may benefit an individual's recovery and encouraged attendance. Research into the positive impact the pilot courses had on the participants was made available to the Army Recovery Capability. This is the department that manages all UK Army WIS personnel. In 2012, they mandated attendance on the MAC course at The Battle Back Centre for all Army WIS personnel. The Commanding Officer at the time of the policy change explained that *"Evaluation and research information from Battle Back about the positive effects that these MACs had on participants was made available to the ARC, and informed the ARC's decision to mandate the course. This resulted in a formal policy change for ARC personnel in 2012: The MAC was then made an integral part of the Army's "Recovery Pathway" for all serving WIS and moved to 'full operational capacity': 24 one-week MACs annually for up to 24 participants on each course"* [D]. As a result of compulsory attendance for army WIS (the largest population of the armed forces), the reach of the significant impact on WIS personnel was increased for the audit period due to larger cohorts regularly attending the course.

The impact of LBU research on UK armed forces recovery policy is further evidenced in the decision of the RAF to mandate the course for their WIS in 2017, which at the time had 238 personnel in recovery; the number of WIS personnel in the RAF had increased every year since 2014 and had more than doubled since 2010. This decision further increased the reach of the impact to all individuals in another WIS population. Wing Commander Mike Bowditch explained how LBU research informed that decision. *"In my role when I am making decisions about how we are going to direct and implement policy the existence of evidence plays a key role. We used the research studies from Leeds Beckett University at the time as a key reason for us mandating the requirement to attend the Battle Back course. The evidence in the studies confirmed the anecdotal evidence we had from talking to our Service People who attended the course that it had a substantial impact on their outlook on life, reframing their negative perceptions of their injuries to be more positive and resulted in massive improvements to their mental health and wellbeing."* [E].

### 4.4 Impact beyond in-service military personnel

#### **Policy change at TRBL to start funding veterans' courses and the positive impact they have on attendees**

Impact on policy - Until 2017, recovery support was only delivered to those WIS personnel who were still in-service. Considering the future potential for supportive courses, TRBL decided to commission the delivery of bespoke courses for military veterans. Explaining the rationale behind that decision, Antony Baines said *"The consistency of the research has helped the Legion carry on funding MACs but it also gives confidence to look at expanding the remit into things like veterans' courses"* [C]. LBU research from the initial veteran courses gave the Legion the *"assurance to agree funding and carry on"* [C].

Impact for veteran participants – On average, the veteran participants' mental well-being scores were below the national average upon arrival to the course. Data from 105 participants showed an average increase of 49% in their positive mental well-being by the end of the course, bringing this average up to 11% higher than national average as a result of attending the Battle Back course. Since May 2019, veterans have been invited to take part in a long-term follow up study to understand the impact the course has had on their life since attending. To date, 34 veteran participants have contributed to this follow up research which has identified a sustained increase of 24% in their mental well-being scores three months later.

#### **Policy change at the British Army Foundation College to run two Multi Activity Courses per year as part of junior soldier training**

Having read LBU's research, as well as witnessing the impact of the courses during his time at Army Recovery Capability, the now Commanding Officer of the British Army Foundation College, Lieutenant Colonel Richard Hall, believed junior soldiers may also benefit from this type of course. He used LBU's research evidence to gain permission from Army Regional Command for such courses for junior soldiers to be delivered. *"The previous (LBU) research that I read was very*

*influential in my decision to try and support courses for junior soldiers because I thought I can sell the argument, not just based on my recommendation, but actually pointing to facts and figures”.*

**[F]** The impact of the pilot course on the twenty-one 16–18 years-old junior soldiers was researched by LBU. The soldiers reported an average increase of 19% in their mental well-being scores. One soldier said *“I now feel 100% ready to seek out things I’m not confident in, do them, gain confidence in that and move on to the next thing for me to develop”*. 6 months later, another said *“For those that are sceptical about it all, all I have to say is that I am proof that it works!”*

Lieutenant Colonel Richard Hall further corroborated the impact of LBU research: *“Your report came in and it added objectivity to what we hoped and suspected would be a really worthwhile course. That then allowed me to go back to my Chain of Command as well as Commander of The Initial Training Group and say, I think we’ve proved it, you can’t argue with the objective nature of the report, we’d like to get this established on a permanent footing, expand it and find the time within training to send them on it.”* **[F]**. Two courses per year have now been agreed in perpetuity, allowing 48 junior soldiers to benefit annually; a decision based on LBU research.

Follow up research evidenced that fewer junior soldiers who had attended the course were considering leaving the army. The financial impact that has on the MoD was explained by Lieutenant Colonel Richard Hall, *“the greatest impact you could have on the Army’s quality and quantity would be to retain a Harrogate junior soldier and that’s what your research has contributed to. Given that costs for training can be up to £90k per head, a reduction in wastage of 11 recruits equates to a financial saving of just under £1 million. For the first course we expected to lose 60% of that cohort and I think in the end we only lost less than 20%. The only difference between that cohort and the previous cohort was that they had been through the Battle Back course, so you can link the two together”* **[F]**.

### **Supporting spinal cord and brain injured participants, their families and carers**

The Rugby Football Union’s Injured Players Foundation (IPF) is a charity serving those who have been catastrophically injured playing rugby. Their welfare officer was aware of the positive impact the recovery courses have for WIS military personnel and felt that their clients could benefit from similar supportive courses. LBU’s experience in researching the courses showed the IPF they could gain an understanding of the effects a course may have on their client’s well-being. Dr Karen Hood, Director of the IPF said *“If the previous research had shown there was no measurable improvement in individuals’ self-esteem, mental wellbeing, quality of life, then it would have been inappropriate for us to progress”* **[G]**. Karen went on to explain that LBU research from the pilot IPF course *“immediately gave us proof of concept, the fact that this is a type of programme that we should be continuing with and that in itself is hugely valuable”* **[G]**. The IPF have decided to fund a course every year since the first in 2017. To date, 27 spinal cord and brain injured participants, members of their family and carers have benefited.

### **5. Sources to corroborate the impact**

- [A]** Kay, C., & McKenna, J. (2020). The enduring well-being impacts of attending the Battle Back Multi Activity Course for the lives of recovering UK armed forces personnel. Submitted to Military Psychology
- [B]** Kaiseler, M., Kay, C., & McKenna, J. (2019). The Impact of an Outdoor and Adventure Sports Course on the Wellbeing of Recovering UK Military Personnel: An Exploratory Study. *Sports* 7(5). doi:10.3390/sports7050112
- [C]** Testimonial from Antony Baines, Executive Director of Operations at The Royal British Legion.
- [D]** Testimonial from Giles Stibbe OBE, Director of the Household Cavalry Foundation, Commanding Officer of Battle Back (2010-2013).
- [E]** Testimonial from Wing Commander Mike Bowditch, Staff Officer 1 in Welfare Development of the Royal Air Force, Head Quarters Air Command.
- [F]** Testimonial from Lieutenant Colonel Richard Hall, Staff Officer 1 of Service Inquiry Lessons, Commanding Officer of the Army Foundation College (2017-2020)
- [G]** Testimonial from Karen Hood PhD, Director of The Rugby Football Union’s Injured Players Foundation.