



CampusEngage

Network for the Promotion
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in Irish Higher Education

Engaged Research Case Study Template

Health and wellbeing

<p>Project Title (8 words max)</p>	<p>Pesky gNATs: Designing Custom Built Computer Games and Apps to Support Mental Health in Young People and Adults with an Intellectual Disability</p>
<p>Project synopsis (100 words max) Please give a very short description of the societal challenge, the action taken, and the intended/ achieved result.</p>	<p>Depression and anxiety are the most common psychological problems experienced by children and adults. Untreated, they have a significant impact on the lives of individuals, families and communities in our society. Cognitive Behaviour Therapy (CBT) is the psychological intervention of choice for adults. However, CBT for children or adults with an Intellectual Disability (ID) is difficult because it in part it requires thinking in quite abstract ways about the experience of anxiety or low mood.</p> <p><i>Pesky gNATs</i> uses technology to deliver Cognitive Behaviour Therapy to children (aged 7-15 years), or adults with an Intellectual Disability (ID) who have Anxiety or Depression. It uniquely combines three components (1) on-line video-based training for therapists, (2) computer games therapists play with young people during therapy sessions, (3) smartphone apps supporting the transfer of therapy skills to home, school and community life.</p> <p>The "gNATs" of the Pesky gNAT's title is a play on the CBT concept of NATs (Negative Automatic Thoughts). Our aim in designing Pesky gNATs computer games and apps is to:</p> <ul style="list-style-type: none"> • Use our understanding of developmental psychology, clinical psychology, learning theory and computer science to make CBT, mindfulness and emotional self-regulation skills more concrete and developmentally appropriate for children or adults with an ID. • Provide children and adults with an ID with a positive de-stigmatising experience of managing their mental health difficulty in a way they find fun, empowering and engaging.



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	<ul style="list-style-type: none"> • Provide mental health professionals with on-line training in how to use our computer games and apps with their clients. • Evaluate the effectiveness of our technology through high-quality peer reviewed research studies. • Make our technology accessible for free or on a not-for-profit basis.
<p>Higher Education Institution:</p>	<p>University College Dublin</p>
<p>Engaged Research Partners (civic, civil society organisations, Social enterprises, public or professional service or product users, policy makers, members of the public).</p>	<p>All of our computer games and apps are owned by Handaxe Community Interest Company (CIC) which makes them available to suitably qualified mental health professionals for free or on a not-for-profit basis. Handaxe CIC was co-founded by Prof O' Reilly & Dr Coyle for this purpose.</p> <p>Is this engaged research?</p>
<p>Engagement (research method or activity) (100 words max)</p>	<p>We are continuously engaged in various on-going evaluations of the technology based mental health programmes we develop. This began with pilot studies that demonstrate that children with clinically significant anxiety or low mood attending public mental health services, or in educational settings working with school psychologists, benefit from our programmes. We have also conducted research to demonstrate that children learn mindfulness and relaxation skills from using our technology. Most recently we reported a randomised control trial (RCT) of our version of Pesky gNATs for adults with an Intellectual Disability who have clinically significant anxiety. This study demonstrated post-intervention clinically significant improvement in the <i>Pesky gNATs</i> treated group, that was then maintained and increased at three month follow-up compared to a psychiatric treatment as usual comparison group.</p>
<p>Project outputs and outcomes: (600 words max) Please describe briefly the target audience and activities that occurred and short terms results. This information could include:</p> <ul style="list-style-type: none"> • who you worked with; • issue to be addressed • what actions you took; • the geographical location; • any shorter-term outcomes or changes in local situation and circumstances, knowledge and skills 	<p>The outputs are as follows:</p> <p>General Mental Health: A CBT Workbook for Children and Adolescents. Available in English, Arabic, Polish, Slovakian, Slovenian, German and Spanish. To-date our most popular workbook is "A CBT Workbook for Children and Adolescents", which we have distributed for free to over 20,000 mental health professionals worldwide. Each professional also has our permission to share the workbook with colleagues.</p>



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attitudes or behaviour, policy, practice, organisational development etc, decision-making.

Anxiety and Depression for Children.

The Pesky gNATs CBT Computer Game.

The Pesky gNATs App.

The Pesky gNATs Workbook.

The Pesky gNATs Training Videos for mental health professionals.

www.PeskyGnats.com.

Mindfulness and Relaxation Skills Training for Children.

The Mindful Gnats Computer Game.

The Mindful Gnats App.

The Mindful Gnats Workbook.

www.MindfulGnats.com.

Our most popular piece of technology is the Mindful Gnats App which is available for free on iTunes and Google Play Stores. It has been downloaded by over 11,000 young people and adults worldwide. The top 5 downloading countries are 1. USA 2. China. 3. UK. 4. Ireland and 5. Australia.

Trauma & PTSD

The Pesky gNATs Trauma Recovery Island Computer Game.

Anxiety and Depression for Adults with an Intellectual Disability.

The Pesky Gnats: The Feel Good Island Computer Game.

The Pesky gNATs: Feel Good Island Workbook.

The outcomes are as follows:

- Evidence-based mental health interventions that are delivered through the accessible and de-stigmatising medium of high-quality computer games and apps, that we make available for free or on a not-for-profit basis.
- We recently partnered with the NHS Humberside Trust who piloted the introduction of the Pesky gNATs CBT computer game in a "Saturday Club", where young people with clinically significant anxiety and low mood were selected from their waiting list and offered weekly



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	<p>appointments where they used the programme with suitably qualified mental health professional. NHS Humberside evaluated the outcomes, which included very positive feedback from young people, their parents and professionals.</p>
<p>Longer term anticipated areas for Impact (Choose from below): Economic Policy & Public Service Societal Engagement Health & Wellbeing Professional services Environmental New knowledge Human Capacity</p>	<p>Public Service Societal Engagement Health & Wellbeing Professional services New knowledge Human Capacity</p>
<p>Funding source:</p>	<p>We were funded by The Small Business Research Initiative (SBRI). This is a NHS England initiative to accelerate the development of new technologies to meet the needs of the NHS</p>
<p>For more information contact:</p>	<p>Professor Gary O' Reilly (UCD School of Psychology) and Dr David Coyle (UCD School of Computer Science).</p>