Smart textiles project improved anxiety in mental health patients

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Dr Kettley with the research team. Credit: Nottingham Trent University

A smart textiles research project which involved people with mental health conditions in the design process found it helped participants experience lower levels of anxiety.

The research - led by Dr Sarah Kettley, a reader in product design at Nottingham Trent University, in collaboration with the mental health charity Mind – aimed to help ensure that people with mental illnesses are not designed out of new technologies.

The £333,000 project used a psychological method of engaging with people; the person centred approach. Instead of treating an individual from the perspective of having a disease or deficit, the person centred

approach takes the standpoint of placing trust in the patient to know themselves, shows them empathy, unconditional positive regard, and treats them genuinely.

Participants in the Nottingham Trent University study said that by taking part in smart textiles workshops – during which they learned to create their own smart textile garments – experienced better concentration, improved confidence in a group setting, and reduced levels of anxiety.

Two members were empowered to such an extent that they were able to co-deliver an e-textile workshop at the university to international researchers and felt confident enough to attend a national Crafts Council conference in Manchester.

The research helped people with mental health conditions. Credit: Nottingham Trent University

Dr Kettley, a smart textiles expert of the university's School of

Architecture, Design and the Built Environment, said: "The aim of the research was to raise new questions about how e-textiles can be personalised and how they can empower people and help them express their creativity.

"In undertaking the research through the person centred approach, we were able to see how participants experienced fewer symptoms of anxiety which also enabled them to become more involved in the project.

"We were very pleased with the results as it's imperative that people with mental health issues are more empowered in the development of new technologies, particularly when you consider that one of four of us will at some point in our lives experience a mental illness."

The project was funded by a grant from the Engineering and Physical Sciences Research Council and was run in conjunction with Nottinghamshire Mind Network in consultation with up to 20 people who use the charity's services.

Participants made a range of smart textile devices. Credit: Nottingham Trent University

Technology explored included fabric tilt switches which sense orientation; embroidered fabric sensors which complete an electrical circuit when stroked; and fabric push-button switches. Participants produced smart concepts such as light-up gloves, pocket anxiety monitoring devices, and a large sculptural display of Mind members' levels of wellbeing.

Nic Roberts, of the Notts Mind Network, said: "Many people with mental health issues get overlooked when opportunities like this arise. Being involved in the project has empowered, increased the confidence and developed the skills of people accessing Mind services.

"The programme has enabled those taking part to be co-researchers in a subject they had very little knowledge of and ensured that their voices were heard and their experiences valued.

"Mind strongly values the benefits of being involved in programmes that support social inclusion and build peer relationships and this has been no exception."

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