

## How computer-based therapy might help overcome thinking difficulties

Mental health problems can make people's memory, concentration and planning skills become muddled and less effective than they were before an illness developed. This is particularly true for people who have a diagnosis of schizophrenia.

Cognitive remediation therapy (CRT) sets out to help people become aware of particular thinking difficulties that may hinder them in their everyday lives, then work out and repeatedly practice strategies to help them overcome any problems.

'If you know you are not very good at remembering, and you are aware that there are some situations in which your memory may need particular help, CRT can help you find a strategy to deal with that,' says researcher Dr Vyv Huddy.

'If you are going shopping, and have problems remembering, particularly in busy places, you could, for example, use an acronym made up of the first letter of each item you want to buy. The strategy ultimately depends on a person's thinking style – whether they prefer visual or verbal material, for example.'

Dr Huddy is part of a research team based at the Institute of Psychiatry (IoP), King's College London, that is testing CIRCUITS, a brand new computer-based version of CRT designed to make this sort of training more widely accessible to people, and to specifically tackle the thinking problems associated with schizophrenia.

The content of CIRCUITS has been developed by psychologists Dr Clare Reeder and Professor Til Wykes, both based at the IoP, who have teamed up with software and website developers, designers and IT specialists. The development of the programme has been financially supported by the Garfield Weston Foundation and the Medical Research Council.

Now, 60 people with a diagnosis of schizophrenia or schizoaffective disorder will test drive CIRCUITS and give information at the end of the programme to allow researchers to compare their thinking abilities and daily activities with those of 60 other people recruited to the trial but not undertaking the programme. The research team is hoping that those who have completed CIRCUITS will have a greater ability and more confidence to get on with their lives, go out and potentially seek work, volunteer or study, for example.

Vyv Huddy, who is coordinating the research, says CIRCUITS is very different from, but has similarities to, brain training software. 'The difference is that CRT is about carrying out tasks that help people make links between their thinking problems, strategies they can use to help them, and situations where they can use those strategies,' he says.

CIRCUITS transforms paper and pencil-based CRT into 40 hour-long on-screen sessions, using everyday situations and activities as scenarios for the tasks. The programme encourages people to practise tasks repeatedly, and to try out different strategies to find the one that works best for them. After practising as much as they want at home, people then put the strategies they have learned into practice in real life. CIRCUITS is web-based, but it can also be made available as a programme on a lap top that can be taken to people's homes if they have no computer or internet access.

In traditional CRT, a therapist will work on a one-to-one basis with each individual for every session. For the computerised version, therapists will still be involved, but the amount of time they spend with each individual will vary.

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People with schizophrenia are often socially excluded and may not use computers, let alone have one,' says Dr Huddy. 'So the first step may be for therapists to help people become familiar with a computer and the actions necessary to complete the CIRCUITS sessions.

The amount of therapist input will depend on the needs of each individual, and the trial will help us learn how to best enable clients to work independently. Therapists will remain involved until we are confident each individual can work alone.'

People with experience of schizophrenia and schizoaffective disorder have helped make sure CIRCUITS is tailored to their needs, feeding back on the content and advising to ensure the tasks included in the training sessions are relevant to their lives. They also tested the programme to help iron out any hiccoughs before the trial started.

The research team will continue to collect feedback about the content and useability of CIRCUITS as the trial progresses. The trial, supported by the National Institute for Health Research Research for Patient Benefit fund, runs until 2012.

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