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Just how non-clinical are so-called 'non-clinical community samples'

A practice common to psychology research is to take some measure - let's say amount of support from friends and family - and to compare people with mental health problems and people without mental health problems, on this measure. The trouble, according to Idia Thurston and her co-workers, is where to find people without mental health problems.

The tactic used by most researchers is to recruit from the wider community, for example by advertising in the local paper. But Thurston's team argue a large proportion of the general community actually have their own mental health problems, and many of them are receiving therapy, something many researchers fail to screen for. This means that what research papers describe as a "non-clinical community sample" may not be so "non-clinical" after all.

Thurston and her colleagues assessed 224 families recruited through adverts in local newspapers in south eastern USA as part of a larger study. They found 11 per cent of the teenagers, 20 per cent of the mothers and 13 per cent of the fathers met the diagnostic criteria for one or more psychiatric disorders. Moreover, 12 per cent of the teenagers, 20 per cent of the mothers and 11 per cent of the fathers were currently in therapy. These two groups didn't completely overlap - for instance, there were 25 mothers who met diagnostic criteria for a psychiatric disorder but who weren't in therapy.

Thurston's team said their findings have implications for research validity. Differences previously identified between clinical and so-called "non-clinical" groups may be caused by a factor other than the clinical status of the two groups.

Researchers should screen their community participants to find out if they are currently experiencing mental distress or participating in therapy, Thurston's team advised. But as regards whether such participants should then be excluded from research, Thurston and her colleagues said: "There is no perfect answer, but rather, researchers must weigh the costs and benefits of their exclusionary criteria in relation to the goals of the study."


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Are people with borderline personality really more empathic?

People with borderline personality disorder (BPD) are emotionally fragile, impulsive, suffer from low mood, have intense unstable personal relationships and - according to a handful of studies - they also have enhanced empathy.

But new research by Judith Flury and colleagues shows the idea that BPD patients have enhanced empathy is a spurious finding reflecting the methodological design of prior studies combined with the fact BPD patients are particularly difficult to read.

The 76 lowest and highest scorers on the Borderline Syndrome Index were selected from among 789 students. These 76 were then arranged into pairs of low and high borderline participants. The members of each pair were videoed chatting to each other for ten minutes, after which each person completed a personality questionnaire about themselves, and about how they thought their partner saw themselves. This latter part of the design mirrors the methodology of earlier studies that seemed to show BPD is associated with enhanced empathy.

As in the earlier studies, it turned out that the high borderline students were better than the low borderline students at predicting how their partners scored their own personalities - a sign of empathy, you'd think. But further analysis showed that this finding was caused by the fact that all the students tended to score their partners' personalities in a fairly stereotypical way. This tactic worked if a participant's partner was low borderline (with a less unusual personality profile), but not if they were high borderline with an unusual personality profile - hence the apparent finding that high borderline scorers are more empathic.

The students also watched the videos of themselves meeting their partners, and recorded the main thoughts and feelings they had experienced during the encounter. They then watched the video again and attempted to predict what their partner had reported thinking and feeling during the encounter. Again, the high borderline students scored better at this task, but as before, this simply reflected the fact that within each of the student pairs, it was the low borderline students who had the more predictable, less outlandish thoughts and feelings.

FLURY, J., ICKES, W., SCHWEINLE, W. (2008). The borderline empathy effect: Do high BPD individuals have greater empathic ability? Or are they just more difficult to "read"? Journal of Research in Personality, 42(2), 312-332. http://dx.doi.org/10.1016/j.jrp.2007.05.008

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Research Digest 116

Hearing music that isn't there

You've probably been tormented by a catchy song playing over and over in your head. Spare a thought then for those people for whom this phenomenon is taken to the next level: the song or songs sound real and they play round the clock. They have what's called 'musical hallucinosis'. Besides hearing music that isn't there, such people often have no other psychological complaints. Now Ramon Mocellin and colleagues have described three typical cases and proposed a tentative neurobiological account of why the condition occurs.

Case one was an 82-year-old patient who lived in a remote farm house. She reported loud music to the police and even sent her husband driving round the neighbourhood looking for the source. She eventually realised the music was a 'trick of her imagination'. Apart from deafness, the woman had no other neurological or psychiatric abnormalities.

Case two was a 62-year-old surfer. He heard the opening bars of Jimi Hendrix's Voodoo Child for six months, when there was really no sound there. This man had mild deafness and smoked cannabis but otherwise had no other relevant medical history.

The last case, a 78-year-old, was profoundly deaf, had Alzheimer's disease and lived in a care home. He heard hymns and songs that were popular in the 1940s and 50s. Although he had cognitive impairments associated with dementia, he had no other psychotic symptoms besides hearing music that wasn't there.

Ramon Mocellin and his colleagues explained that people with musical hallucinosis generally realise that their auditory experiences are a trick of the mind, thus distinguishing their symptoms from the hallucinations experienced by people with psychosis, who generally believe their unusual perceptions are real.

As demonstrated by the above cases, musical hallucinosis is often associated with deafness and Mocellin's team think the condition may reflect the spontaneous, aberrant firing of those brain cells whose job is to process music, if there were any to be heard. Higher brain levels then seek to make sense of this spontaneous firing, often drawing on musical memories in the process - hence the common experience of perceiving music from previous eras.


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Space is compressed by a fast turn of your head

The raw immediacy of our waking lives leaves us feeling as though our five senses give us a true, undistorted perception of the world. But a catalogue of psychology experiments has shown this sense of experiencing the world "as it is" couldn't be further from the truth. Now with the latest demonstration of the tricks our minds play, Johahn Leung and colleagues have reported that moving our heads fast has the effect of compressing auditory space - that is, sounds emitted just before a head turn are sucked perceptually towards the target of the head movement.

Participants held their bodies still while shifting their heads as fast as possible to a light that appeared either 30 degrees to the left or right. Just before the start of their head turn, a sound was emitted from a mobile speaker that could be located a range of distances beyond or nearer than the light. Judged against a second comparison sound, the participants consistently mislocated the first sound as being nearer the target of their head turn than it really was. It's as though auditory space was compressed towards the light at the moment just before they moved their heads.

The finding replicates a similar spatial compression effect that occurs just before people make fast saccadic eye movements. In this case, experts think the compression is caused by brain cells adjusting their receptive fields in anticipation of where the eyes are going to be pointing after they've finished moving. Leung and colleagues said a similar process probably explains the current findings.

In a final twist, the compression of auditory space didn't occur if participants indicated the location of the sound by pointing their nose in its direction. Indicating the sound location in this way (rather than by perceptual comparison with a second sound) probably relies on the brain's action pathway, which is known to be less affected by perceptual illusions.


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It matters how much blood video games have in them

Hype surrounding the global release of the gangster-themed video game Grand Theft Auto IV has renewed the long-standing debate over whether violent games make players more aggressive. Now Christopher Barlett and colleagues have provided a fresh angle on the issue by specifically testing whether the amount of blood in a game makes any difference to its effects on aggression.

The researchers took advantage of the fact that the game Mortal Combat: Deadly Alliance allows players to select one of four blood levels, from none to maximum (in which copious amounts of blood spurts everywhere and gets trodden by characters around the playing area).

Of 74 students who played the Mortal Combat game for 15 minutes, those who played on the maximum blood level experienced larger increases in hostility after playing (as judged by their agreement with statements like "I feel furious") and larger increases in arousal as measured by their heart rate, than did the players on the lower or zero blood levels.

Those students who played the game with blood also showed higher levels of aggression, compared with those who played without blood, as indicated by their greater use of their character's weapon in the game, which they'd been told would inflict more damage on their opponents.

A second experiment with 31 students showed that playing Mortal Combat on the maximum blood level, as compared with the no blood level, activated more aggression related thoughts, as measured by participants' choice of how to complete ambiguous word stems like KI-- (e.g. KILL vs. KISS).

"...[T]he violence, plus the high amount of blood, primes more aggressive thoughts in memory compared with just playing the violent game without the blood," the researchers said.

Link to the recently published Byron review on the risks to children from exposure to potentially harmful or inappropriate material on the internet and in video games.
Link to related Digest item: Violent video games slow our processing of faces.
Link to blog dedicated to discussing the psychological effects of video games.


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The price of thinking 'It would have been worse under Saddam'

After news broke that US soldiers had mistreated their prisoners at the Abu Ghraib jail in Iraq, a common reaction among pro-war politicians was to remind the public that: "It would have been worse under Saddam". Whatever the truth of this claim, new research suggests that comparing a current situation with an even worse atrocity comes with a price - it desensitises our judgment of future moral violations.

Forty student participants read an account of the atrocities committed by US troops at Abu Ghraib. A random subset of these students then read about the torture and executions that took place at the prison during Saddam Hussein's regime. Regardless of their own beliefs, they then had to compose an argument for how conditions at the prison would have been worse under Saddam's control. Other students, instead of reading about the prison under Saddam, read about an Iraqi prison run by Danish guards where captives were treated ethically. These students then had to compose an argument for how the standards of the Danish guards were better than the US guards. A control group of students just read about the US troop atrocities.

After all this, the students reported their own views on the US troop atrocities and they answered questions about how US troops should treat prisoners in the future - for example, by stating whether or not they agreed with the use of torture to gain enemy information.

It turned out that the students who'd been asked to compare US-controlled Abu Ghraib conditions with conditions when under Saddam Hussein's control subsequently reported more lenient views of the atrocities by US troops and, most crucially, expressed lower ethical standards regarding how US troops should treat prisoners in the future, than did the control students and the students who compared US with Danish prison standards.

Keith Markman and colleagues who conducted the research said: "Our point is to question the usefulness of drawing a comparison between Abu Ghraib under American control and Abu Ghraib under Saddam's control...[I]t appears that the contemplation of such a comparison lowers personal standards toward the very comparison standard against which one is seeking to contrast."


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