

Science for Environment Policy

Rural inhabitants suffer mental distress under extended droughts

Long, unbroken periods of drought can be damaging to the mental health of people living in rural areas, new research suggests. An Australian study found that rural inhabitants who had experienced extensive drought periods over a seven-year period, combined with an unbroken spell for the year before they completed the survey had substantially higher distress scores than other participants.

The increased frequency and severity of drought under [climate change](#) may have many damaging effects for humans. Both water and food security may be threatened, for example, possibly leading to civil unrest or hunger. However, drought may also affect individuals' [health](#) and well-being. For instance, previous Australian research has linked reduced rainfall to a rise in local suicide rates.

In this study researchers investigated the effects of drought on mental health over a seven-year period. Uniquely, they also investigated whether the effects of the 'drought pattern' affected people in different ways. Drought pattern included the severity of the drought (relative to usual rainfall in the area) but also the duration and number of particularly dry periods within the on-going drought.

The researchers used data on mental health from a 2007–2008 survey of 5 012 Australians who had lived in the same area for the past seven years. Overall, 4 093 participants lived in [urban](#) areas and 919 in rural areas. The authors of the study linked the drought patterns that each respondent had experienced in the seven years before the survey to scores for mental distress, while accounting for other factors such as income, ethnicity and pre-existing mental illness.

The results showed that rural residents experienced a significant rise in mental distress if they had endured an extreme number of months in drought (defined as a total of 20–32 months over the seven years) combined with a period of dryness lasting a year or more in the time before they completed the survey. This may be because people who have endured numerous spells of dryness may begin to doubt their capacity to cope with on-going drought, the researchers say.

This group had a distress score 6.22% greater than other rural participants. This is a substantial difference, the researchers say, as illustrated by the fact that those with pre-existing mental illness had mental distress scores that were 15.59% higher than others.

These effects were not seen for urban dwellers, whose mental distress scores were not significantly influenced by drought. The researchers suggest that this may be because rural inhabitants are much more connected to the environment, both socially and economically. Drought in rural areas can mean starving livestock and failed crops, for instance, with damaging effects across the entire community.

These results are important, the study's authors say, not only because they provide the first quantitative evidence of the impacts of drought on mental health, but also because they show that it is not necessarily the intensity of the drought that is important to mental health, but the pattern. In particular, a combination of recurrent drought with long, unbroken periods is likely to be damaging, they conclude.



31 July 2014
Issue 383

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Source: O'Brien, L.V.,
Berry, H.L., Coleman, C. &
Hanigan, I.C. (2014).
Drought as a mental health
exposure. *Environmental
Research*. 13: 181–187.

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To cite this
article/service: "[Science
for Environment Policy](#)":
European Commission DG
Environment News Alert
Service, edited by
SCU, The University of the
West of England, Bristol.