

Disaster, disadvantage and remoteness impact on resilience of children: a spatial analysis

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BACKGROUND

In response to the 2019/2020 Black Summer bushfires in regions of New South Wales, UNICEF Australia and Royal Far West partnered to design and deliver a program to support the health and wellbeing of young children and to reduce the likelihood of long-term adverse effects. The program was delivered to children in 34 communities impacted by the bushfires and was evaluated by a team of researchers from Charles Sturt University.

AIM

To determine whether there is a relationship between the resilience of children, and the characteristics of where they live / attend school, as well as of the children themselves

METHOD

Three spatial and two school-level indices were used:

1. Disaster Index [left], combining data on drought, fires, floods, storms, cyclones, Covid-19 cases and pandemic-related job losses [1];
2. Index of Relative Socio-economic Advantage and Disadvantage (IRSAD);
3. Remoteness index;
4. School size; and
5. Index of Community Socio-educational Advantage (ICSEA).

Resilience data, as well as age and gender, was obtained for children who participated in the program at eight schools using the Resilience Scale for Children [2]

A binomial generalised linear model was developed to test the relationship between resilience and the variables listed above.

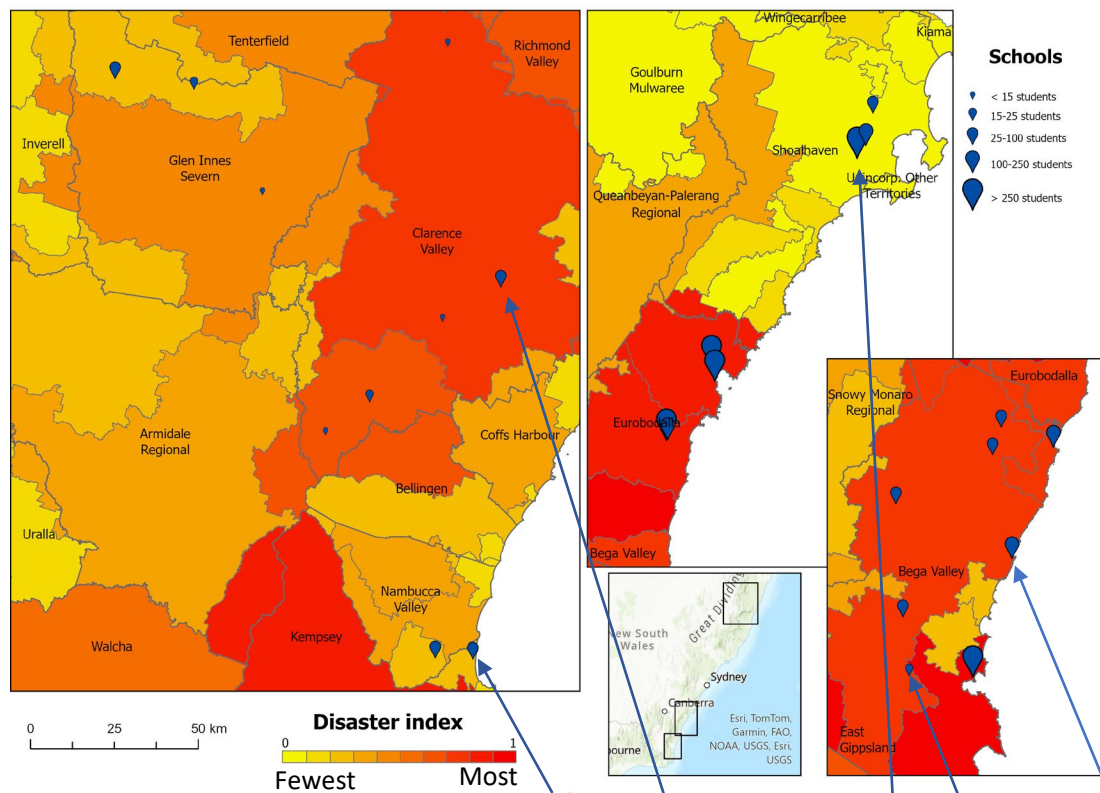
CONCLUSIONS

Young children and those in the lowest developmental stage of resilience are more likely to require support following a disaster.

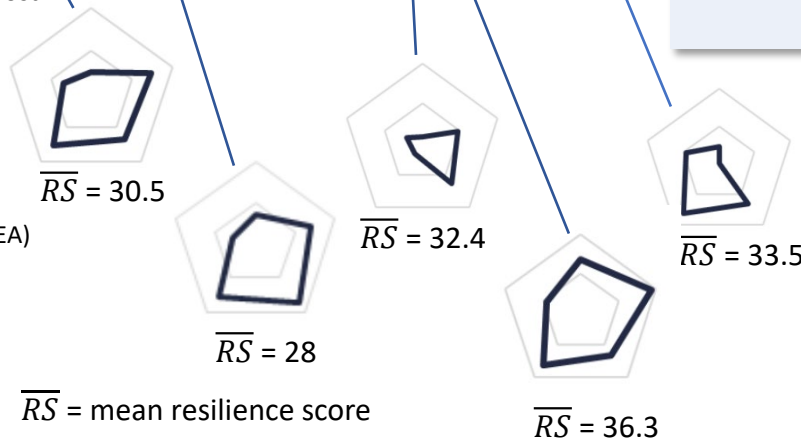
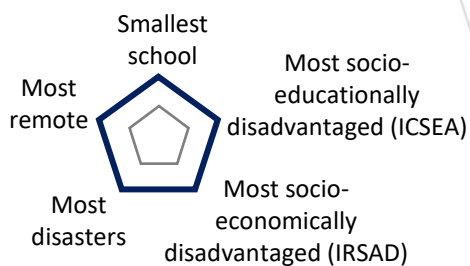
Children in places with more disasters had lower resilience scores overall, but higher self-reliance.

Children in more remote, smaller schools were no less resilient but are likely to have unique support needs following disasters.

Health and wellbeing outcomes of children impacted by disasters can be usefully analysed through spatial modelling.



Visual representation of variables - examples



RESULTS

- ↗ - positive relationship
- - no relationship
- ↘ - negative relationship
- Bold = statistically significant**

	Sense of Purpose and Meaning	Authenticity	Equanimity	Self-Reliance	Perseverance	Total Resilience
Age (older)	↗	→	↗	→	→	↗
Gender (female)	↗	→	↗	↘	→	↗
Remoteness (more remote)	↗	↗	↗	→	↗	↗
Disasters (fewer disasters)	→	↗	↗	↘	↗	↗
School size (smaller)	↗	→	↗	→	↗	↗

References

- [1] Josh Nicholas and Nick Evershed (2020). Interactive map: which areas of Australia were hit by multiple disasters in 2020? The Guardian 22 Dec 2020. <https://www.theguardian.com/news/datablog/2020/dec/22/interactive-map-which-areas-of-australia-were-hit-by-multiple-disasters-in-2020>
- [2] The Resilience Scale for Children (RS10) - <https://www.resiliencecenter.com/products/resilience-scales-and-tools-for-research/the-resilience-scale-for-children-rs10/>