

## Natural disasters take a toll on unborn babies—we need to support pregnant moms after Cyclone Gabrielle, says researcher

April 5 2023, by Mia Mclean



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The Auckland Anniversary floods and Cyclone Gabrielle have put the spotlight on how communities recover in the aftermath of widespread



devastation. But future-proofing communities against the impact of these disasters needs to include measures to protect some of our most vulnerable people—pregnant women and their unborn babies.

What happens during pregnancy lays the <u>foundation for child health and</u> <u>development</u>. Exposure to a <u>natural disaster</u> is no exception.

Years after the Christchurch earthquakes, <u>teachers reported</u> behavior and sleep difficulties in children who had experienced the devastation, including those who weren't yet born on February 22, 2011. <u>Research</u> <u>supports</u> these anecdotal reports: children exposed at a younger age and in-utero to the earthquakes displayed greater behavior problems.

I was part of a <u>team examining</u> maternal and child well-being following the <u>2011 Queensland floods</u>. My <u>research</u> found toddlers whose mothers experienced greater hardship while pregnant due to the flooding tended to be more reactive and display <u>emotional distress</u>.

What's more, these early behaviors were related to increased <u>symptoms</u> of anxiety at preschool age. These children also displayed <u>poorer</u> <u>cognitive development</u> as toddlers and <u>motor difficulties</u> through preschool.

Research on <u>tropical cyclones</u> in Australia and <u>hurricanes</u> in North America shows similar findings.

Babies in-utero at the time of <u>Hurricane Sandy</u> in the US had a five-fold increased risk of anxiety disorders, as well as greater likelihood of depression and attention behavioral disorders, when compared with babies who were not exposed to the disaster.

## The unseen cost of Cyclone Gabrielle



These findings should not be ignored. During Cyclone Gabrielle, many New Zealanders including <u>pregnant women</u>, faced hardship—namely property damage and loss, and financial difficulties. Some pregnant women were left in <u>life-threatening situations</u> or <u>without easy access to</u> <u>antenatal care</u>. None expected to be hit by the disaster.

For the most part, the more hardship pregnant women face, the greater the immediate and post-traumatic <u>stress-like</u> symptoms they experience. The <u>fetal brain</u> and <u>stress systems</u> may be particularly susceptible to pregnancy stress. It can also affect <u>maternal mood</u> for <u>years to come</u>.

Yet, even when a woman reports low levels of distress in the face of a disaster, exposure to hardship can <u>affect child development</u>. Changes to <u>nutrition</u>, <u>exercise</u>, <u>stress hormones</u>, <u>placental function</u> and <u>the immune</u> <u>system</u> may "get under the skin" of the unborn child.

## Support now and in the future

Now that the silt has settled after Cyclone Gabrielle, pregnant women and their unborn children must not be forgotten.

Pregnant women should be encouraged and supported to engage in <u>emotion-focused coping strategies</u>. These can include the positive reframing of the situation, acceptance, humor and finding <u>emotional</u> <u>support</u> from others. This should then move to strategies focused on problem solving—such as actively planning for the future, taking action to clean up, and seeking help from government and non-governmental agencies.

Trying to find the <u>positives</u> from the situation can help lower a woman's distress. But <u>writing</u> out deep thoughts and feelings about what has happened may not help and, at the very least, should be <u>supported by</u> <u>clinicians</u>.



We should also mobilize existing infrastructure to help the pregnant women to better "weather the storm" of enduring hardship and distress in the months and years to come.

## Support for midwives

In New Zealand <u>nearly all women have a midwife</u> as their lead maternity caregiver from pregnancy through the postnatal period. Receiving maternity care from the same midwifery team across the perinatal period benefits a mother's <u>postnatal well-being</u> and their <u>infant's</u> <u>neurodevelopment</u> in the face of a disaster by providing continued <u>social</u> <u>support</u>.

During Cyclone Gabrielle, midwives went <u>above and beyond</u> to continue to provide support for women, no matter how remotely they lived. But we shouldn't be relying on midwives putting themselves <u>in danger</u> to help those in need.

Midwives need to be <u>supported</u> in identifying, supporting and referring at-risk women. We also simply <u>need more midwives</u>.

Pregnant <u>women</u> need to be <u>screened</u> and monitored for post-traumatic symptoms, anxiety and depression across the perinatal period. Those experiencing continued distress need <u>equitable</u> access to appropriate mental health services.

Early childhood, a period of incredible brain maturation, also offers opportunities for improving child outcomes. Positive parent <u>mental</u> <u>health</u> and sensitive, structured parenting behaviors have been shown to improve child <u>cognition, language</u>, and <u>behavior</u>.

A possible next step is the targeted delivery of <u>parent-led interventions</u> that promote such behaviors through existing services including <u>Plunket</u>.



<u>Government support</u> for child mental health initiatives, like that provided following the earthquakes, is needed in areas hit by the cyclone.

With New Zealand <u>predicted</u> to experience an <u>increasing number of</u> <u>extreme weather events</u> in the <u>next decade</u>, it is critical we take stock, listen and act on this research—not just for those exposed to Cyclone Gabrielle, but for those who will inevitably be affected when the next disaster strikes.

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