

Researchers find link between rape and long-term breathing problems

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Rape and sexual trauma may have long-lasting consequences for physical health as well as mental health, University of Otago researchers have found.

The team of researchers, led by respiratory specialist Professor Bob Hancox and sexual health specialist Dr. Jane Morgan from Waikato DHB, found a history of [rape](#) is associated with "dysfunctional breathing" in both women and men, and with late-onset asthma diagnosis in women.

"Dysfunctional breathing," which is also known as hyperventilation syndrome, involves breathing too deeply or too rapidly. People can present with [chest pain](#) and a tingling sensation in the fingertips and around the mouth and it may accompany a panic attack.

While previous studies have found that a history of adverse events and [psychological trauma](#), including [sexual trauma](#), are associated with self-reported asthma, links with other respiratory problems have not been examined. Professor Hancox explains the team set out to assess whether the experience of being raped—an extreme form of psychological trauma—was associated with dysfunctional breathing among participants in the Dunedin Multidisciplinary Health and Development Study.

This world-renowned study is a longitudinal investigation of health and behaviour in a group of 1037 people born in Dunedin in 1972 or 1973 and followed regularly throughout their lives.

Nearly 20 percent of women and 4 percent of men in the study reported being raped at some stage throughout their life. Both men and women who had reported being raped were more likely to have dysfunctional breathing at 38 years of age.

Rape was also associated with self-reported diagnoses of asthma and symptoms of wheeze among women, but not men.

"If this is a true cause-and-effect association, these analyses indicate that 23 percent of all asthma among women at 38 years of age, or nearly a third of adult-onset asthma could be attributed to rape."

While both rape and the outcome of dysfunctional breathing were less common among men, the association between rape and hyperventilation syndrome was equally strong—or even stronger—among men who reported rape.

The Otago researchers believe this is the first epidemiological study to investigate the possible origins of hyperventilation syndrome.

"The findings indicate that dysfunctional breathing may be a consequence of severe psychological trauma and are consistent with case reports of sexual abuse in patients with other patterns of breathing difficulty," Professor Hancox explains.

"Health professionals should recognise the possibility of prior traumatic experiences triggering either dysfunctional breathing or late-onset asthma and consider whether psychological counselling or other forms of therapy would help their patients," he says.

The researchers focused on rape because it is a particularly traumatic experience that can be clearly defined, but Professor Hancox says it is likely that other forms of sexual and non-sexual abuse may have similar

effects.

"We need to investigate whether other forms of sexual, physical and psychological [trauma](#) are also associated with [breathing](#) pattern disorders."

The research was recently published in the *European Respiratory Journal*.

More information: Robert J. Hancox et al. Rape, asthma and dysfunctional breathing, *European Respiratory Journal* (2020). [DOI: 10.1183/13993003.02455-2019](#)

Provided by University of Otago

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