

Noise survey highlights flaws in existing methods to assess and mitigate airport noise impacts

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Low-flying aircraft can lead to noisy and unhealthy neighborhoods, and a pioneering survey can help track their impact around Canadian airports. Credit: Julia Jovanovic

The COVID-19 pandemic changed life in many ways, including stopping nearly all commercial flights. At the Toronto Pearson International Airport, airplane traffic dropped by 80% in the first few months of lockdown. For a nearby group of researchers, this presented a unique opportunity.

Julia Jovanovic presented the results of a survey conducted on aircraft noise and annoyance during the pandemic era at a joint meeting of the [Acoustical Society of America and the Canadian Acoustical Association](#), running May 13–17 at the Shaw Center located in downtown Ottawa, Ontario, Canada.

"For many years, researchers like me have looked to assess the impacts of aircraft noise on communities surrounding airports, particularly in terms of annoyance," said Jovanovic. "The [travel restrictions](#) due to COVID and the resulting sustained reductions in noise gave us an unprecedented opportunity to test the correlation between noise and annoyance."

In early 2020, the NVH-SQ Research Group out of the University of Windsor surveyed residents living around the airport to gauge how their annoyance levels changed with the reduction in noise. A follow-up survey in 2021 provided even more data for the researchers, and according to Jovanovic, they highlight flaws in the tools authorities use to assess and manage the impacts of aircraft noise on communities.

"The industry has, for too long, erroneously relied on noise complaints as a proxy measure for annoyance," said Jovanovic. "These surveys show that complaints and annoyance are different phenomena, triggered by different mechanisms. Only annoyance has a proven correlation to overall noise levels."

According to their data, while noise complaints dropped overall during

the pandemic, many of the people sending those complaints continued to do so, and some areas even saw an increase in complaints. This demonstrates the need for collecting [survey data](#) on annoyance specifically, something Canadian authorities overseeing air transport have been reluctant to do.

"Even though the [annoyance](#) metric draws much criticism due to its subjective nature, it is still indicative of the overall effect of aircraft noise on individuals and the resulting possible long-term health impacts," said Jovanovic. "These types of surveys are conducted in most developed nations on a regular basis. To the best of our knowledge, we are unaware of any similar efforts in any other Canadian airport."

Jovanovic and her colleagues hope these results will spur [regulatory agencies](#) to collect better data and use it to develop more updated standards and guidelines for protecting the public from aircraft noise and protecting the future of [airport](#) operations from continuous residential encroachment.

"The survey should be repeated around all of our nation's airports to get an accurate representation of the effects of aircraft noise on Canadian communities and update Transport Canada's severely outdated guidelines for the management of [aircraft noise](#)," said Jovanovic.

More information: Technical program:
<https://eppro02.ativ.me/src/EventPilot/php/express/web/planner.php?id=ASASPRING24>

Provided by Acoustical Society of America

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