

Short Communication

Airborne Infection Control as Right to Life in the Indian Constitution: How Indian Polity is Paving the Way for the Future

<u>Raja Singh</u>

¹Visiting Faculty, Department of Architecture, School of Planning and Architecture, New Delhi, India. ²Advisor, ISAC Centre for Built Environment Policy, New Delhi, India. ³Built Environment and Public Health Research Fellow, Tathatara Foundation, India. **DOI:** https://doi.org/10.24321/2455.7048.202304

INFO

E-mail Id:

dr.rajasingh@proton.me Orcid Id: https://orcid.org/0000-0002-3203-1755 How to cite this article:

Singh R. Airborne Infection Control as Right to

Life in the Indian Constitution: How Indian Polity is Paving the Way for the Future. Epidem Int. 2023;8(1):11-13.

Date of Submission: 2023-01-28 Date of Acceptance: 2023-03-26

India is the world's largest democracy. This has two implications: firstly, it means that India's population is huge in number and so are the challenges associated with it, and secondly, it implies that ordinary citizens have the power to form the government and each one of them has civil rights. The Indian constitution guarantees fundamental rights to the citizens and this has been time and again guarded by the Indian judiciary, which has not only upheld these rights but has used judicial creativity to extend these rights beyond mere definitions.^{1,2} This means that the judiciary can play an important governing role by allowing citizens to file Public Interest Litigations that raise important civic matters that the courts then direct the executive wing of the government to follow and implement. The right to life, guaranteed by the Article 21 of the Indian constitution, has been interpreted beyond just simple definition, to include the enjoyment of life, safety of life, right to information, right to privacy, right to education, a life free from air pollution, and life having good quality air and water. This interpretation has been particularly used by the judiciary during the COVID-19 pandemic to include airborne infection control in buildings through dilution ventilation and other ways, for the safety and wellbeing of the inhabitants and to decrease the probability of infection spread in enclosed, air-conditioned spaces. The first step was in the Delhi High Court which took suo moto cognizance of the spread of COVID-19 in the court's own built spaces and set up a committee to relook at the air conditioning systems and affected changes in this regard.³ This was a key step that led to the revamping of the whole Delhi High Court heating, ventilation, and air conditioning system and included multiple measures for dilution ventilation. In simplification, this means that fresh air is to be allowed indoors so that it 'flushes' the inside air which may be recirculating. This recirculating air may not only have increased gaseous and pollutant concentrations but may also have a higher effect on the chance of indoor airborne disease spread. This is all the more crucial for spaces that remain enclosed and are supplied with air from the air conditioning system.

Epidemiology International (ISSN: 2455-7048)

Copyright (c) 2023: Author(s). Published by Advanced Research Publications



The author then filed a public interest litigation to extend measures for the prevention of COVID-19 through the airborne route in enclosed buildings and public transport. The Delhi High Court Division Bench lauded the petition and gave orders to the government agencies to treat it as a representation.⁴ This led to notices being issued to various regulating agencies and implementing bodies. A notable fact that exists is that major public buildings, which may be considered as buildings belonging to Indian power centres, had certain issues with respect to the settings of the Heat Ventilation and Air Conditioning (HVAC) system.⁵ When recirculation-based systems were used, there were concerns about infection control. In other cases, when fresh air was supplied into the buildings through the air handling units of the HVAC systems, there was concern regarding the polluted ambient air being pumped into the building as the filters may not be appropriate to filter out PM2.5. This fact was later used as a part of the pleadings to include indoor air into the mandate of the Air (Prevention and Control of Pollution) Act, 1981 which otherwise considered only ambient air under its purview. This interpretation of the law actually happened when the Delhi High Court order was served upon Delhi Pollution Control Committee. The Delhi Pollution Control Board stated in a reply to the Court order that indoor air is not under the purview of the Air (Prevention and Control of Pollution) Act, 1981. They were pointing towards the fact that the convention till now was only focussing on ambient air and ambient air quality issues, though the preamble of the said act states that it has been enacted for the preservation of the air quality.⁶ There was no distinction made between the ambient and the indoor air, as such. This issue was a substantial question of the law and the author moved the National Green Tribunal, the guardian of the environmental laws in India. The Tribunal, led by Chairperson Justice AK Goel, along with five members, agreed and stated that there is 'a need for regulation of indoor air quality in public spaces'.7 The three ministries of the Union India government, the Ministry of Health, Environment and Urban Affairs have to formulate a joint committee coordinated by the Central Pollution Control Board and create enforceable regulations for indoor air quality within public spaces, especially the ones that may be enclosed and air-conditioned.

While the Joint Committee has organised multiple meetings for the formulation of the standards, the author also submitted, in the meanwhile, another Original Application before the Hon'ble National Green Tribunal in New Delhi (O.A. 468/2022).

The application prayed for three specific prayers:

1. Directions to public authorities for having carbondioxide level monitoring of indoor spaces, as a surrogate measure for the level of ventilation in enclosed indoor air-conditioned spaces, to prevent chances of airborne infection spread.⁸⁻¹¹

- 2. Preventing the use of recirculation-based air conditioners like split air conditioners, especially in public assembly spaces where there is no fresh air intake.¹² Alternatively, some innovation can be included in the use of split air conditioners.
- 3. Having specific window design measures included in the building bye-laws such as window openability,^{13,14} wire mesh and other essential requirements in a window design.

This application was referred to the same Joint Committee and is awaiting action from the Central Pollution Control Board.

This is a victory for the millions of Indians who use enclosed, air-conditioned public spaces. Their health and well-being have been heard in the world's largest democracy. The Indian Constitution has been tested again and has stood for the right of the man walking on the street, who has the right to breathe healthy air, whether inside or outside. One also can now be protected under the sanction of the law against airborne diseases like TB and COVID-19 which spread indoors in enclosed environments. This is in line with India's multi-disciplinary effort of eradicating TB by 2025 while fighting COVID-19.

Special thanks are extended to Prof Dr Anil Dewan, Prof Dr Jugal Kishore, Prof Dr Nirupam Madaan, Advocate KC Mittal, Advocate Yugansh Mittal, Advocate Amit Shahi, and Advocate Keshav P Singh. Thanks are also due to the School of Planning and Architecture, New Delhi - all staff and students.

Source of Funding: None

Conflict of Interest: None

References

- Rai UR. Fundamental rights and their enforcement. Eastern Economy Edition. New Delhi: PHI Learning; 2011. [Google Scholar]
- Alva RJ. Liberty after freedom: a history of Article 21, due process and the Constitution of India. UK: HarperCollins Publishers Ltd; 2022.
- Singh R, Dewan A. Bioaerosol spread of COVID-19 and TB in air conditioned spaces: how the court spearheaded the movement in India. J Commun Dis. 2022;Special Issue-COVID-19 & Other Communicable Diseases:30-5. [Google Scholar]
- 4. Singh R, Dewan A. Using global research on ventilation and airborne infection control for impacting public policy through the Indian Judiciary. Indoor Built Environ. 2022;23;31(5). [Google Scholar]

- 13
- Singh R, Dewan A. Air conditioners, airborne infection prevention and air pollution in buildings in New Delhi. Int J Tuberc Lung Dis. 2022;26(3):288-90. [PubMed] [Google Scholar]
- 6. Republic of India. The Air (Prevention and Control of Pollution) Act, 1981. 14 of 1981.
- Singh R, Dewan A. Progress on indoor air quality regulation in India. Int J Tuberc Lung Dis. 2022;1;26(8):801b-802. [PubMed] [Google Scholar]
- Singh R. India's steps towards carbon dioxide monitoring in public assembly spaces for ventilation measurement for airborne infection control and other factors. Qeios [Preprint]. 2022 Oct [cited 2023 Jan 20]. Available from: https://www.qeios.com/read/SQ03IV [Google Scholar]
- Huang Q, Marzouk T, Cirligeanu R, Malmstrom H, Eliav E, Ren YF. Ventilation assessment by carbon dioxide levels in dental treatment rooms. J Dent Res. 2021;100(8):810-16. [PubMed] [Google Scholar]
- Burridge HC, Fan S, Jones RL, Noakes CJ, Linden PF. Predictive and retrospective modelling of airborne infection risk using monitored carbon dioxide. Indoor Built Environ. 2022;1;31(5):1363-80. [Google Scholar]
- Rudnick SN, Milton DK. Risk of indoor airborne infection transmission estimated from carbon dioxide concentration. Indoor Air. 2003;13(3):237-45. [PubMed] [Google Scholar]
- Singh R, Dewan A. Rethinking use of individual room air-conditioners in view of COVID 19. Creat Space. 2020;8(1):15-20. [Google Scholar]
- 13. Singh R, Dewan A. Openability of windows and presence of wire mesh in residences in a New Delhi neighbourhood as a factor of dilution ventilation required for prevention of airborne diseases and vector borne diseases. Cities Health. 2022:1-8. [Google Scholar]
- 14. Singh R, Madaan N, Kumar A, Kishore J, Kaipilyawar S, Singh G, Mathur M, Grant M, Dewan A. Mosquito control interventions in the built environment: how the Delhi High Court supported the first step towards the wire mesh policy. Cities Health. 2022;1:1-4. [Google Scholar]