Background and Aims: Many megacities in developing countries are undergoing rapid economic growth, with direct effects on their air quality, particularly particulate matter (PM). In Delhi, reductions in PM levels after 2001, when all modes of Public Transport (PT) in Delhi were converted to compressed natural gas (CNG), have since been outweighed by the increase in car ownership. Average annual Delhi PM levels: in 1994, before PT ran on CNG, around 275μg/m³; in 2001 when all PT was converted to CNG, around 125μg/m³; levels in 2010, around 225μg/m³. A previous study investigated indoor and outdoor PM levels (Kulshreshtha), however, there are no studies of personal exposure. This study aims to quantify PM levels in women with different individual and area characteristics of socio-economic status (SES). This pilot study aims to inform future, large-scale investigations.

Methods:
- Shadowing 6 women (2 with high personal SES living in rich areas, 2 from low SES living in rich areas, and 2 from low SES living in poor areas), and recording their personal PM exposure using a ‘Sidepak’ monitor for 6 hours (10am to 4pm), on 3 days.
- Time Activity Diary filled every 15 minutes during recording period.
- Systematic neighbourhood observation using proforma.

Results: Personal and Ambient PM exposure affected by residential location, and socioeconomic status. Time activity diary, proforma reveal when and why personal PM levels vary throughout the study period.

Conclusions: This study contributes to the observation of the relative impact of economic growth, socioeconomic status, and residential location on personal PM exposure, emphasising the need for continued vigilance, and larger scale studies on the topic. Also, perhaps studies need to be done at different seasons. Seasonal differences in indoor and outdoor PM levels we recorded in previous studies.

References:
Kulshreshtha P and Khare M 2010, Indoor Air Pollution and Health, Vdm Verlag, Germany.

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