Contribution ID: **72** Type: **Paper**

Combining map-based questionnaire, GEMA, and vocal biomarkers to investigate the environmental determinants of stress: The FragMent study protocol and pilot

Monday, July 15, 2024 3:20 PM (20 minutes)

Background:
Stress is a major public health concern, and a risk factor for 75-90% of diseases. An individual's daily activities take the form of a series of (im)mobilities (e.g., movements and places of activity) in various environments. According to the stress-restorative theory, exposure to everyday environments can contribute to stress or have restorative qualities. Yet the combination of these momentary effects on stress over the course of a day remains largely unknown. FragMent aims to assess the extent to which the spatial and temporal fragmentation of exposure to everyday environments, influences physiological and psychological stress, as well as social inequalities in stress.

Methods:
FragMent develops an observational study using both self-reported measures of psychological stress and physiological measures based on vocal biomarkers of stress. It includes adults (18-65 y.) residing in the country of Luxembourg, and combines:
i) An online survey with a map-based questionnaire, aiming at investigating regular mobility and exposure patterns with chronic stress (N=2000).
ii) A mobile survey, over 15 days, combining ecological momentary assessment, a GPS and vocal samples based on 6 vocal tasks, in order to investigate the environmental correlates of momentary and daily stress (N=200 out the 2000 participants)

Results:
Results from the pilot study will inform of the feasibility, acceptability and compliance to the study protocol. FragMent will assess the effect of numerous environmental factors on stress in order to identify effective environmental levers for reducing stress in public space.

FragMent was funded by the EU, under the Horizon ERC Starting grant program.

Keywords: stress; vocal biomarkers; daily mobility; dynamic exposure; ecological momentary assessment

Primary author: PERCHOUX, Camille (Luxembourg Institute of Socio-Economic Research (LISER))

Co-authors: Dr THARREY, Marion (Luxembourg Institute of Socio-Economic Research (LISER); Luxembourg Institute of Health (LIH)); TOPALIAN, Noémie (Luxembourg Institute of Socio-Economic Research (LISER)); Dr GERBER, Philippe (Luxembourg Institute of Socio-Economic Research (LISER)); Dr KLEIN, Olivier (Luxembourg Institute of Socio-Economic Research (LISER)); Dr KLEIN, Sylvain (Luxembourg Institute of Socio-Economic Research (LISER)); Dr RÖCKE, Christina (Universität Zürich - ZH); Dr CHAIX, Basile (Institut National de la Santé et de la Recherche Médicale (Inserm)); Prof. DIJST, Martin (Luxembourg Institute of Socio-Economic Research (LISER)); Prof. FAGHERAZZI, Guy (Luxembourg Institute of Health (LIH))

Presenter: PERCHOUX, Camille (Luxembourg Institute of Socio-Economic Research (LISER))

Session Classification: Paper Presentations

Track Classification: Innovation in Methods: Longitudinal Analysis