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Analyzing the relationship between climate change and wellbeing: A case study from urban Pakistan

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ABSTRACT

Due to rapid industrialization and urbanization all around the world, large cities are facing traffic congestion and transportation issues. Drawing on pooled survey data for the years 2022 and 2023 for urban Pakistan the present study aims to explain the complex mechanisms by which Carbon dioxide (Co2) emission or traffic congestion affect subjective wellbeing (SWB). The data comprise of the provincial capital cities. The sample size of 400 residents was determined by the Yamane method for each time period. The data was collected by using purposive sampling technique. Moreover, non-random quota sampling of sex ratio = 1.04 has been used. The inclusion criteria include residents who commute through various means of transportation on daily basis. Second, the age of the respondents ranged between 15-64 years. Using traffic congestion or Co2 emission as proxy for climate change, we apply structural equation modeling to identify the differences in the roles of different mediating variables between satisfaction with climate change and SWB. We find that Co2 emission or traffic congestion are negatively and significantly associated with residents' SWB, satisfaction with climate change and satisfaction with quality of life particularly in terms of physical and mental health, such that physical and mental health are the main ways through which Co2 emission or traffic congestion affects residents' SWB.

Keywords: Sustainability and development; Subjective wellbeing; Quality of Life; Climate change; Urban Pakistan