AB038. Neighbourhood health niche and well-being related behaviour change after coronavirus disease (COVID-19) pandemic

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Background: The quality of open space within the neighbourhood becomes crucial post- coronavirus disease (COVID-19) pandemic. This paper enriches the concept of health niche (Sarkar *et al.*, 2014) by relating well-being-related behaviour with small neighbourhood open space configuration.

Methods: The dataset is 216 hours of video observation of elderly' activities in 9 different open spaces of resettlement neighbourhoods. The baseline was in October of 2019 and follow-up was in October 2020. The sampling of sites has two levels: density and location. The Wilcoxon signed-rank test was used to compare the total number of older adults observed per hour pre- and post-COVID-19, by five well-being-related behaviours: walking, connecting, vigorous exercise, taking notice, and sedentary activities (Benton *et al.* 2018).

Results: There was a decrease in the total number of elderly people observed per hour from pre COVID-19 (median =14.5, IQR =21.5) to post COVID-19 (median =12.5, IQR =21.5). The Wilcoxon signed rank test showed that these differences were significant (Z=–2.774, P=0.006). For high density neighbourhoods, the Wilcoxon signed rank test showed that these differences were only significant in sedentary (Z=–3.073, P=0.002) and vigorous (Z=–2.625, P=0.009) activities, and insignificant in the total counts. The decreases were not significant for the medium density neighbourhood (Z=–0.394, P=0.694), except for taking notice activity (Z=–2.867, P=0.004). In terms of location, decreases of elderly people were mainly significant at the open spaces near doorway of buildings of low density neighbourhoods, with significant decreases in total elderly (Z=–2.23, P=0.026) and sedentary (Z=–2.67, P=0.008), walking (Z=–2.949, P=0.003) and vigorous (Z=–3.064, P=0.002) activities. The decrease was also significant for sedentary activities occurred at the doorway of high-rise buildings (Z=–2.732, P=0.006).

Conclusions: The study found an absolute decline in elderly outdoor activities within resettlement neighbourhoods, but only significant for low density neighbourhoods. The health niche being affected the most by the COVID-19 pandemic is open space at the doorway. The main change in the built environment is the government's prohibition of informal self-made sitting furniture, as a social distancing control measure. This measure should be revisited to restore the health niche for the elderly.

Keywords: Elderly; built environment configuration; density; health niche; resettlement

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The research ethics approval was granted by Xi'an Jiaotong-Liverpool University Ethics Committee (EXT-19-06).

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