

Which neighbourhood amenities mediate between depressive symptoms & older adults' psychosocial health?

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Aims

Ageing-in-place has attracted considerable policy interest due to fiscal and at times spatial necessity. One of its key underlying assumption is that older adults' health can be enhanced in and by their existing residential environment. However, this assumption is seldom tested.

This paper aims to test such assumptions to facilitate finding ways to intervene in the neighbourhood environment. Specifically, it examines *how* older people's everyday neighbourhood experience (OpenX; Gan, et al., forthcoming) correlates with their psychosocial instead of physical health, given that the former was found to be more closely related to one's neighbourhood environment (Gan, 2017).

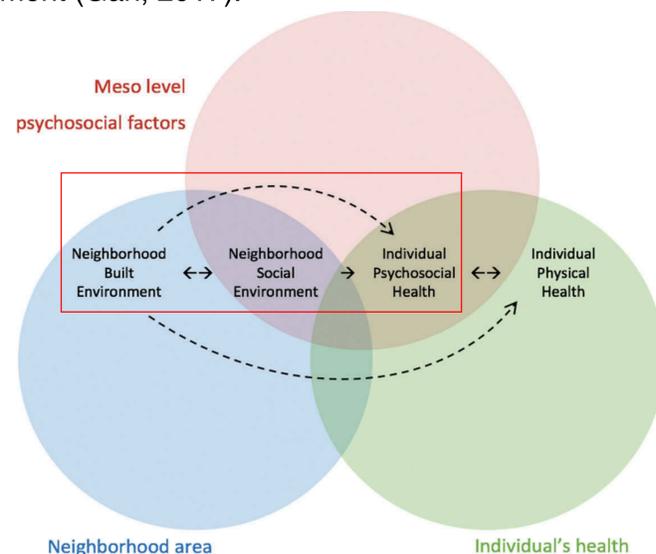


Fig 1. A tentative framework linking urban design and older adults' health at the micro level given general fulfilment of health prerequisites and older adults' health behaviours based on an integrative review of 51 multi-disciplinary articles. Source: Gan, 2017.

Methods

Using data collected from Phase 1 of GRP-CARE survey involving N=270 older adults aged 60 and above living in Singapore's public housing, multivariate linear regression found that older adults' neighbourhood experience is positively correlated with their psychosocial health (Gan, et al, forthcoming). By joining this dataset with GIS data, this paper examines which of a list of more than 20 residential amenities or features mediate between OpenX and older adults' psychosocial health.

Results

Multi-generational play area and affordable clinics partially mediate (explain) between the relationship between depressive symptoms (GDS) and positive mental health (RPMHI), a scale developed by the Institute of Mental Health, Singapore (Vaingankar, et al., 2011). The relationship between OpenX and RPMHI remain as significant (i.e., no mediating effect found).

Whereas proximity to multi-generational play areas reduces effect of depressive symptoms on positive mental health, living further away from affordable clinics reduces effect of depressive symptoms on positive mental health.

Positive mental health (RPMHI)	Model 1		Model 2	
	Standardised Coefficient	P-value	Standardised Coefficient	P-value
Depressive symptoms (GDS)	-0.25	0.001	-0.23	0.002
Everyday neighbourhood experience (OpenX)	0.32	0.000	0.35	0.000
Health-related low quality of life (SF12)	-0.01	0.888	-0.01	0.944
Minority race	0.14	0.016	0.14	0.015
Years in the neighbourhood	0.11	0.075	0.14	0.024
Age	0.06	0.507	0.06	0.520
Female	0.06	0.346	0.06	0.353
Living with spouse	-0.07	0.313	-0.06	0.323
Grandchildren live together or visit often	-0.01	0.877	-0.01	0.861
Household size	-0.01	0.904	0.00	0.981
Financial stress	-0.05	0.387	-0.06	0.347
Employed	0.04	0.527	0.06	0.363
Flat size	0.06	0.391	0.06	0.423
Ethnic concentration	-0.04	0.522	-0.04	0.482
% Population aged 0-19 in subzone	0.09	0.288	0.12	0.138
Ease of finding friends of same gender and age	0.17	0.041	0.17	0.032
Distances to kopitiams	-0.11	0.121	-0.13	0.056
Distances to communal gardening areas	0.03	0.643	0.06	0.309
Distances to libraries	-0.09	0.199	-0.11	0.108
Distances to sports and swimming complexes	-0.06	0.365	-0.08	0.265
Distances to fitness corners	0.00	0.971	0.15	0.126
Distances to quick and affordable medicines	0.12	0.055	-0.69	0.069
Distances to multi-generational play areas			-0.20	0.041
Distances to affordable clinics			0.82	0.031

Adj R-squared = 0.237 Adj R-squared = 0.256

Fig 2. Model 1 and 2 of regression on RPMHI showing mediation effect.

Discussion

Whereas anthropologist Thang (2015) had noted the possible significance of multi-generational play areas to older adults' wellbeing, the negative significance of clinics where payments can be paid via government subsidies, i.e., CHAS, is curious.

Conclusion

Some amenities partially mediate the relationship between one's depressive symptoms and psychosocial health, suggesting possible causal pathways helpful to guide urban design interventions.

No amenities were found to mediate the relationship between one's neighbourhood experience and psychosocial health, suggesting that neighbourhood quality (e.g., communal affordances, embeddedness) is much more closely related to psychosocial health than proximity to amenities.

Future Work

More qualitative research is needed to understand the role of these identified amenities. Longitudinal research is needed to study causal directions.

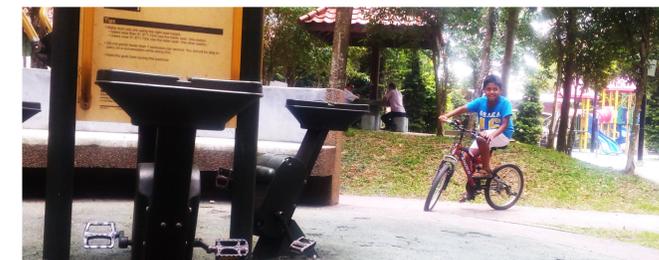


Fig 3. Multi-generational play area at Jurong West Street 41 where qualitative study on pathways to older adults' wellbeing is being conducted. Source: author's.

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