

9.C. Workshop: Building Resilience and promoting Well being

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Places have an impact on mental health. Buildings might contribute to resilience and to well-being. Yet, much less is known about features of buildings which support mental health and which mechanisms might be critical. In this workshop we will first investigate research data on place and

mental health based on a historical cohort study (Jamie Pearce, Edinburgh, UK). This presentation will be followed by a recent study which investigates mechanisms on how places have an impact on mental health. (Catharine Ward Thompson, Edinburgh, UK). This presentation will be followed by an overview on the EC funded project MINDMAP which investigates the data from available cohort studies on the impact of place and mental health. (Marielle Beenackers,

Rotterdam, The Netherlands). Finally, we will discuss the methodological challenges and novel approaches to studying place and mental health.

Key messages:

- Green space in the residential environment is associated with improved mental health and resilience
- Novel methods are needed to better understand the impact of space and place on mental health

Woodland improvements in deprived urban communities: how does this build resilience?

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Background

Green space in the residential environment is associated with a range of health benefits but there are few longitudinal studies on the impacts of environmental interventions in nearby green space. This paper focuses on interventions to improve woodlands near to deprived urban communities in central Scotland, UK.

Methods

The study focuses on the Woods In and Around Town (WIAT) programme, which aims to increase local residents' contact with woodlands, thus enhancing wellbeing and quality of life. The interventions involve two stages: first, making changes to the physical woodland environment designed to facilitate greater use; second, undertaking community social engagement activities to advertise and promote woodland use.

The study involved repeat, cross-sectional surveys of the community residents within 1.5km of the local woodlands: pre- intervention; post physical environment intervention and post woodland promotion social intervention. The main outcomes (self-report) were perceived stress, mental wellbeing, changes in physical activity, general health, perception and use of the woodlands, connectedness to nature, and social connectedness. An environmental audit evaluated the physical changes over time.

Results

The intervention was associated with greater levels of green space visits and physical activity levels compared with control sites, but only after both physical and social interventions were completed. We did not detect a beneficial intervention effect on stress levels, although the pattern of stress levels is complex and may have been influenced by other, extraneous influences.

Conclusions

It appears that environmental interventions in deprived urban locations can positively impact on green space use patterns and levels of physical activity. Associations with enhanced mental health were not apparent 6 months after interventions were completed. Longer timeframes may be needed for interventions to be effective in enhancing mental health.

Environments, resilience and mental health over the life course: findings from the UK

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Background

Many studies have demonstrated that individual circumstances throughout life influence subsequent health and well-being outcomes. Life course epidemiology emphasises that health is affected by the accumulation of social and economic advantages over an individual's life but, importantly, that there are also critical periods (e.g. in utero or adolescence) during which exposure can affect subsequent health. Yet researchers interested in the relationships between health and the environment have been slow to incorporate a life course perspective, and we have

been left with a poor understanding of how environmental factors during different life stages influence health later in life.

Methods

We examined how environmental factors across the life course can build resilience and enhance mental health outcomes later in life. We combined historical and contemporary place-based information on a range of environmental features (e.g. green space, area deprivation) with UK birth cohort data (Lothian Birth Cohort 1936) and analysed mental health and cognitive.

Results

Environmental characteristics early in childhood and in adulthood were both important in explaining mental health outcomes and the change in cognitive function in later life.

Discussion

A 'life course of place' approach can enhance our understanding of the connections between environments, health and resilience. Results: The local provision of park space in childhood and adulthood were both important in explaining the change in cognitive function in later life. The association between childhood and adulthood park availability and change in the Moray House Test Score from age 70 to 76 was strongest for women, those without an APOE ε4 allele (a genetic risk factor), and those in the lowest socioeconomic groups.

Conclusions

Greater neighbourhood provision of public parks in adulthood and particularly childhood may help to slow down the rate of cognitive decline in later life.

Promoting mental well-being in the ageing urban population: determinants, interventions and policies in European cities (MINDMAP)

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Background

Buildings offer opportunities for the design of policies, clinical and public health interventions that promote mental health. The overall aim of the MINDMAP project is to identify the opportunities offered by the urban environment for the promotion of mental well-being and cognitive function of older individuals in Europe. It is the aim of this presentation to describe the aims and methods of this Horizon2020 funded project.

Methods

MINDMAP starts with the development of a conceptual model that links theories of mental health to theories of urban environmental influences on health. Subsequently, a data platform of 10 international harmonized longitudinal urban cohorts of ageing covering 16 cities in Europe, Canada and the US will be linked to an innovative database of urban characteristics and policies. Pathways linking the urban environment to mental health and cognition via lifestyle behaviour, social influences and mobility patterns in the built environment will be investigated. An integrative agent-based model will be used to simulate policies and prevention strategies on mental health in urban environments.

Results

Results from literature reviews and expert consultation about the development of the conceptual model will be described. Retrospective harmonisation of cohort data, and the collection and linkage of harmonised urban environmental characteristics allows cross-city comparative analyses. Agent-based models are a promising complementary tool to assess the impact of urban policies on mental well-being.

Discussion

Variation in environmental exposure is crucial for understanding mental health in the urban context, and international comparative research is therefore essential. MINDMAP aims at making progress in the identification of relevant urban characteristics influencing mental health, how these factors

‘get under the skin’, and in the assessment of the impact of urban policies for well-being of older European residents.

Building places and mental health – methodological challenges

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Background

Places affect recovery from stress, behavior, and, ultimately, our mental health. Understanding how our surroundings influence mental health is central to creating healthy cities. However, novel methods are needed to better understand the impact of place on mental health.

Methods

We discuss the strengths and weaknesses of different methodological approaches with respect to (1) defining the

most relevant scale and characteristics of place, (2) disentangling the effects of place from the effects of individuals’ prior health, and (3) generalizing causal effects beyond the study setting. Further methods might be, randomizing places to change, or investigating place changes which might be “natural experiments” systematically.

Results

Promising alternative strategies include creating many small-scale randomized place-based trials, and using fluctuations in the changes in our surroundings to better understand how surroundings influence mood, behavior, and mental health.

Discussion

Improving existing research strategies will require interdisciplinary partnerships between those specialized in mental health, those advancing new methods for place effects on health, architects and urban planners.