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The built environment and well-being of children into the future

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Editorial

Cite this article: Lehmann J (2020). The built environment and well-being of children into the future. *Children Australia* **45**: 1–4. https://doi.org/10.1017/cha.2020.6

Welcome to 2020. We hope this year will see many positive changes for children, young people, their families and communities, but over recent months, wherever we have living, we have faced climate-related events – fires, floods, storms and other issues resulting from these. Australia, in particular, has been experiencing catastrophic fires which continue as I write this editorial. Such events are not only traumatic and leave many people without shelter and livelihood but also require long periods of recovery time for all concerned. I understand that there is no quick fix to any of these events, nor way of preventing them, but I have been thinking about how we provide for children, young people and their families with a basic liveable infrastructure and the kinds of places and spaces that will afford the greatest safety from the elements.

Many people have given attention to this topic. In Australia, back in 2011, the Commissioner for Children and Young People in Western Australia, Michelle Scott, was involved in developing a report on current and future needs in relation to places and spaces, and she stated: 'The built environment has a significant impact on children and young people's development, their quality of life and their experience and enjoyment of the world. Schools, houses, shops, walkways, railways, parks, recreational and community centres are all part of our built environment.' (Commissioner for Children and Young People WA, 2011, p.2). In this editorial, I have limited the scope of 'place' to homes and their immediate environment and raise concerns about the nature of dwellings currently experienced by people experiencing disadvantage and the houses that are being built in affluent, western countries, including those that replace burnt-out dwellings.

But first, let me reiterate some of the challenges that will come with our changing climate. These include increased temperature (Allen et al., 2018), changes to disease spread (Sriskantharajah, 2019), more violent weather events (Steffen, Dean, & Rice, 2019), rising sea levels, and water stress and droughts (Allen et al., 2018). In addition, the frequency with which some communities are being affected is of concern with places such as Looe, in Cornwall, UK, predicted to be subject to flooding some 60 times a year by 2050 (Wall, 2019) and possibly uninhabitable by that time. Many island nations are already petitioning other countries for assistance with funding and migration arrangements due to sea level rises which are affecting fresh water supplies, sewer infrastructure and dwellings (Cassella, 2019). Droughts are also impacting upon many countries causing food shortages, loss of income and, in some cases, abandonment of what were formerly viable agricultural pursuits.

These issues have health impacts for individuals and communities, with children considered more vulnerable due to the factors outlined by the World Health Organization (WHO, n.d.), these being:

- Children are constantly growing. They breathe more air, consume more food and drink more water than adults do, in proportion to their weight.
- Children's central nervous, immune, reproductive and digestive systems are still developing. At certain early stages of development, exposure to environmental toxicants can lead to irreversible damage.
- Children behave differently from adults and have different patterns of exposure. Young children crawl on the ground where they can be exposed to dust and chemicals that accumulate on floors and soils.
- Children have little control over their environment. Unlike adults, they may be both unaware of risks and unable to make choices to protect their health.

We often think of outdoor risks for children, but there are also health-related issues for children inside the home. In urban settings around the world, children are spending significant periods indoors with Lv et al. (2019) reporting that in city environments in China, up to 90% of time is being spent indoors. The exposure to indoor levels of 'physical, chemical, and microbial contaminants, such as particulate matter (PM), formaldehyde, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and fungi' can affect children's health (Lv et al., 2019, p.373) leading to respiratory and other conditions. The nature of PM, chemical pollutants, dust, damp and moulds, air quality and temperature, along with other issues, such as flammability of furnishings, pose significant, ongoing risks.

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For those of us living well in affluent nations, our homes are usually constructed to be safe, able to withstand weather within limits and provide adequate space for family life. However, there is a significant number of people living in substandard accommodation in Australia, UK and the USA and most other nations across the globe. And while there are standards and regulations for buildings, four out of five houses being built in Australia meet only the minimal standards which are well below those required in other comparable countries (Moore, Ambrose, & Berry, 2019). Kinnane, Grey, and Dyer (2017, p.250) of TrinityHaus Research Centre, Trinity College, in Dublin comment that 'the majority of buildings continue to be designed and constructed for specific use with little consideration of changing climate conditions or occupant future needs.'

For disadvantaged people, who mostly depend on public housing or private rental properties, housing standards are generally poor with affordable housing being virtually synonymous with poor-quality housing (Smith, 2018). This means the risks to health are much greater. In addition, targets for pollution and energy reduction are compromised and those in low socioeconomic groups are subject to either high energy costs for heating and cooling or are at risk from temperature extremes. Public housing, at least in Australia, does not have air-conditioning in spite of summer temperatures now often in the high 30 °C or low 40 °C (Hollingworth, 2019, n.p.; Victorian Public Tenants Association, 2019). Heat and cold extremes are known to cause health issues, and when houses become hot, there are known effects on mood, sleep and children's capacity to learn. Upgrading of residences occupied by people experiencing disadvantage is becoming an urgent issue and this can be achieved as shown by a small study in New Zealand which established that the retrofitting of houses with insulation improved the inside temperatures of the dwellings while at the same time improving the respiratory health of occupants (Howden-Chapman, Crane, Chapman, & Fougere, 2011). The conclusion indicated that relatively low-cost alterations can reduce health costs in the longer term.

There are a number of issues that can affect the health and well-being of children and young people in the home that are associated with location, nature of structure, furnishings and house contents that may be detrimental. Fashion trends and the tendency of commercial developers to provide cheap housing may also contribute to health issues. In the last couple of years, we have heard about the flammable cladding being used in high-rise apartments and other buildings that increase the risk of fire, but there are a range of other defects experienced by tenants and home owners that are attributable to building contractors doing substandard work and wanting to keep costs down, as well as the problem of regulatory complexities (Gibson, 2019).

In Australia, there are building fashion trends that are clearly unsuitable to the changing climate: black roofs, lack of eaves and verandahs, single glazed windows, hard surfaces (such as wide concrete driveways and paved patios) rather than green spaces around the home, avoidance of shade trees that shelter dwellings and high and low-rise dwellings that are cramped together without sufficient open green spaces in close proximity. As with apartment living, children and young people in such environments are less likely to be spending time out of doors and thus more likely to have exposure to indoor pollutants. However, there are also increased risks in city and urban locations of exposure to pollutants out of doors, particularly when dwellings are located on or adjacent to highways and industrial areas, or close to intensive agriculture. Of concern is the air quality, dust, ground, air and water pollutants (e.g. pesticides) and exposure to excessive noise. In addition, some rural locations such as where mining or spraying is taking place also pose health risks both in and around the home. As recently as 2018, Nancarrow (2018, para 1&2) reports concerns about spraying in South Australia stating that

> Biosecurity SA has confirmed a number of cases of spray drift in two of the state's most prominent wine regions, with five reported cases in the Riverland between mid-January to mid-February, and eight in the Clare Valley.
>
> Spray drift can see chemical particles travel away from its intended target site in certain weather, with some conditions, such as inversions, pushing spray drift up to 70 kilometres.

In fact, the impacts and frequency with which pesticides and other chemicals are found in food and air is alarming (Pesticide Concerns, n.d.), suggesting that a major re-think of the nature and location of residential housing is required. This is supported by Kinnane et al. (2017, p.250) who state: 'The phenomena of recent decades, including climate change, demographic change, unabated technological advancement, changes in work practices and family structure, all call for a radical shift to a more dynamic, diverse and adaptable design paradigm.' This will mean educating our children and young people, as well as the adult population, about the construction of sustainable housing and the retrofitting of dwellings that are in 'safe' locations.

Issues of proximity to industry and agriculture, to coastal zones and to forests will no doubt be debated, but it is going to be difficult to manage the costs of an increased burden of disease, together with the impacts of wildfire and flooding if we continue to reside in areas of high risk. People building in high-risk areas need strong encouragement, if not regulation, to ensure that dwellings are resistant to fire and flood. At present, very few adults who build, or have homes built for them, ensure that the construction of the dwelling is able to withstand flooding and/or fire, in spite of there being ways of protecting homes from devastation (Anthes, 2018; Olick, 2019). Architects and engineers in many countries have already found ways to virtually fireproof and floodproof homes. In India, for example, where cyclonic events, flooding and hazards of seismicity occur, Das and Mukhopadhyay (2018, p.943) propose 'a conceptual model of amphibious house of light-weight bamboo-based hybrid construction with a buoyant base'. Their work follows those of others in the USA and several European countries who have developed structures that are able to 'float' when flooding occurs. Similarly, work has already been done to ensure much greater resistance to fire with both non-profit groups such as the Bushfire Building Council of Australia providing assessments and advice and a range of architectural firms providing guidance about construction to minimise the risk of loss of homes in bushfire prone areas.

The materials from which houses are constructed are an essential component for fire-proofing homes, but the manner in which dwellings 'breathe' is also an important consideration. The current dangers from fire in many countries experiencing drought suggest we need to alter substantially or upgrade our regulatory frameworks to achieve low flammability of housing materials, but also to ensure that the local environment has low flammability – for instance, it may need to be predominantly cut grass, deciduous trees and be clearly separated from forest areas. However, there are also countries where cold can pose health issues, and in these situations, consideration of housing may need both fire resistance as well as having adequate heat sources and thermal insulation. The ways in which air circulates in and around dwellings is important, together with the orientation of the home

https://doi.org/10.1017/cha.2020.6 Published online by Cambridge University Press

that makes optimum use of winter sun and protects from western sun in summer – something that has long been recognised, but is often not acted upon.

Finally, children and young people need to be able to access a balance of indoor and outdoor activity and to move through their neighbourhood with as little exposure to adverse health impacts as possible. These issues and others have been identified by Steemers (2019) who makes clear recommendations about design taking account of physical and psychological well-being of children and young people. The Professor of Sustainable Design at the University of Cambridge, Steemers addresses design elements such as colour, space (both private and communal) and dimensions, windows and lighting, and learning optimisation. He concludes:

> Designing for well-being and health includes a plethora of opportunities and a range of criteria. The strategy is that designs are good enough to meet the quantitative health measures but are also adaptable to and integrated with a broader set of principles to support well-being.... One of the opportunities of architecture is that, through the design of form, space and materiality, it can order our relationships with each other and our environment by creating interactive settings for life. It can do this in such a way as to provide opportunities to improve our sense of well-being, enrich our lives, make our lives healthier and more pleasurable. (Steemers, 2019, n.p.)

Our March issue spans several topics and we have introduced what we hope will be an ongoing section titled 'International Round-up' in which we hope to bring you regular commentaries on issues that have international significance or provide information on a country's policies and practices. We begin this Issue with the new section – International Round-up – and hope that readers will find these commentaries interesting. You are welcome to submit opinion and commentary material for this section which is aimed at focussing on developments, policies and practices from around the globe. In this Issue, Nicole Atwood, one of our editorial consultants from New Zealand, has written about child protection and family violence, and some of the research and changes that are taking place.

Our International Round-Up section is followed by another commentary, this one by Patricia Hansen and Frank Ainsworth who have written a paper concerning child protection practice in New South Wales which addresses issues concerning non-accidental injury and the principle of strict liability. Their particular concern is with the process of investigation, the reliance on one medical opinion in a context where the parents or caregivers are not in a financial position to obtain a second opinion, the failure to observe the rules of evidence when considering medical opinion and the manner of substantiation of the non-accidental injury. Six clear recommendations are made to ensure that both children and caregivers involved have the benefit of improved investigator practices and up to date knowledge in order to achieve optimal outcomes.

Philip Mendes, Marcia Pinskier, Samone McCurdy and Rachel Averbukh have collaborated on developing a paper that draws on a case study of two ultra-orthodox Jewish organisations from the recent Australian Royal Commission into Institutional Responses to Child Sexual Abuse (RC) to examine the religious and cultural factors that may inform Jewish communal responses to CSA. Attention is drawn to factors that render ultra-orthodox communities vulnerable to large-scale child sexual abuse, religious laws and beliefs that may influence the reporting of abuse to secular authorities and the communal structures that may lead to victims rather than offenders being subjected to personal attacks and exclusion from the community. Commonalities are identified between ultra-orthodox Jews and other faith-based communities and reforms suggested to improve child safety across religious groups.

An Iranian-based article by Saeid Mirzaei, Sajad Khosravi and Nadia Oroomiei on children of sex workers in Iran discusses a range of concerns about what happens to these children in a context that severely limits opportunities for development. These children are very vulnerable and are at constant risk from birth to adolescence. Risks include a lack of security, harassment, forced sex and rape threatening the children's health, well-being and safety. They conclude that, as a marginalised group, these children must be given much greater consideration by the Iranian healthcare policy-makers.

Rachel Mograbi, Liana le Roux and Herna Hall of the Department of Social Work and Criminology, University of Pretoria in South Africa report on a study undertaken in the Gauteng province in South Africa. The study population included the main cultural groups that live in the province, namely the Zulu, Xhosa, Sotho, White, Coloured and Indian/Asian populations, and the topic of the investigation concerned the role of culture in attachment and maternal behaviours. The authors found variations in culture-based conceptions of good parenting and of the ideal child and showed that the caregiving behaviours described in attachment theory and attachment literature were not relevant to all the cultural groups in this study. They conclude that consideration of variations in cultural models of virtue and the influence thereof on caregiving practices can offer a greater understanding of attachment and maternal attachment behaviours in different sociocultural contexts, without seeing such differences as inferior. In addition, it is suggested that a greater focus on training on attachment within the South African context is needed, given the substantial effect of the quality of attachment on children's developmental outcomes and brain development, with the inclusion of culturally based caregiving practices that enhance attachment and promote sensitivity within culturally diverse contexts.

Clair Scrine, Brad Farrant, Carol Michie, Carrington Shepherd and Michael Wright have collaborated on a project that also addresses cultural values and priorities concerning child rearing and development. Their paper examines findings from a 5 year (2016–2020) participatory action research project that is working with the Nyoongar community of Perth, Western Australia, to establish robust evidence based on the values and priorities regarding Aboriginal child rearing and early childhood development. Their findings from the project's community consultations processes provide important insights into specific Nyoongar/Aboriginal values and priorities about early child care and development.

Lauren Hansen from Deakin University undertook a qualitative study in Melbourne, Australia, in which she explored mother's experiences of the transition to motherhood and women incorporated the role of mother into their self-concept. She found four subthemes relating to the emergence of the maternal self: becoming a mother as a journey of self-discovery, the biological imperatives of becoming a mother, remothering and the continued challenges of the emerging mother role, which she explores in some detail. Hansen also highlights some of the challenges associated with mothering and discusses some possible connections these have to social norms and expectations.

An article by luke gaspard on adolescents' use of digital technology, in particular the Internet, is drawn from a study being carried out internationally in which Australia is one of the areas of research. The paper reports on the results of adolescents attending schools in Melbourne and highlights that, despite the commonality

https://doi.org/10.1017/cha.2020.6 Published online by Cambridge University Press

of the online youth experience, this is far from uniform. Gender continues to play an essential role in understanding the relationship boys and girls have with the Internet. This study found that boys and girls tended to find the Internet opportunistic and problematic for similar reasons, but the rates at which this occurred varied widely. Given the overall rates of concern, however, the findings of this study signalled that these Australian youth experienced the Internet as bothersome at some of the highest levels of youth anywhere in the world. While this is likely to reflect the highly connected nature of Australian youth, it is essential to reconcile this with how risk is symptomatic of adolescence and our moment in history. One conclusion is that, while youth face an increased weight of self-actualisation, unencountered by youth in previous generations, the desire to challenge and test boundaries continues to be essential and inevitable during this period in the life-course. Virtual space is an extension, rather than a replacement, of a young person's offline world and, as a consequence, more holistic education approaches and policy interventions that possess a higher likelihood of creating real change in the lives of youth are needed.

Finally, we have a review of a recently released text titled *Reassessing attachment theory in child welfare* written by White, Gibson, Wastell, & Walsh (2020). Dr Frank Ainsworth, Senior Principal Research Fellow (Adjunct) of the School of Social Work and Human Services at James Cook University (Townsville campus) in Queensland, and one of this journal's longstanding consultants, has reviewed this text and believes it a timely and important read for all those involved in doing child and family assessment work.

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