

Happy Homes – the Relationship between Homes and Mental Wellbeing: a Review of the Literature



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Abstract

Purpose: This paper set out to uncover the advice available to help people take effective action within our home to improve mental health. The literature and professions are virtually silent on the issue. The professional advice is often the opposite suggesting we should get out of our homes - go for a walk, exercise, play sport, go to the cinema, meet friends, socialise and don't isolate yourself. There is nary any advice about what we can do to our homes to help maintain our mental health. Our home - the physical space where we spend large amounts of energy and time is largely an empty shell for the mental health industry. The message currently presented appears to be "remember to close the door as you leave ... to get better". Safe and secure housing is a fundamental pillar of an inclusive and productive society. Yet we don't know for sure what safe, secure, or good housing looks like.

Approach: This paper will begin that dialogue with a comprehensive literature review. The approach adopted to investigate this literature focussed on thinking about what a policy official might experience if they were tasked to develop guidance on steps to improve housings' impact on mental health. Such an individual would not necessarily be aware of the extent of the literature, or of academic disciplines. This approach both made the literature review problematic, but also in some ways also produces a useful insight.

Key findings: The paper concludes that there are three issues that should shape future research: first is the need for transdisciplinary translational research; second is to focus initially on the needs of the resident before the bricks and mortar; third is to endeavour to include the social pillar of sustainable development alongside the economic and environmental.

Originality: This paper is original as it seeks to start a conversation about what self-help measures people can adopt within their homes to protect or enhance their mental wellbeing

Keywords: mental wellbeing, mental health, housing, homes, transdisciplinary research, translational research



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1. Introduction

The prevalence of mental health issues in the community is a concern. Australia suffers from 8 suicides per day with a disproportionate representation in the Aboriginal community. Society’s response has been evolving. Mental health is now a topic for public debate. However, the role of the space where people live - the home - has received relatively little attention. The self-help advice that is available routinely refers to the importance of socialising, taking up a hobby and generally getting outside (eg BeyondBlue, 2014, or Better Health Victoria, 2016). Unlike the environmental and economic pillars of sustainable development, and unless you are in the care of the state, there is little to help builders, renovators, landlords, tenants, carers or home owners to take actions to improve the potential for their living space to either prevent a slide down the mental health continuum or just to enjoy better mental well-being.

Table 1: Mental health continuum (developed from Bridging the Distance (2016) and Mental Health Commission of Canada (2016)).

Self-care and social support		Intervention by health care sector	
Healthy	Reacting	Injured	Ill
Normal functioning	Common and reversible	Significant functional impairment	Clinical disorder Severe and persistent functional impairment
Normal mood fluctuations. Takes things in stride. Consistent performance. Normal sleep patterns. Physically & socially active. Usual self-confidence Comfortable with others	Irritable/Impatient Nervousness, sadness, increased worrying. Procrastination, forgetfulness. Trouble falling asleep Lowered energy. Difficulty in relaxing. Intrusive thoughts. Decreased social activity	Anger, anxiety. Lingered sadness, tearfulness, hopelessness, worthlessness. Preoccupation. Decreased performance at school or work. Significantly disturbed sleep (falling asleep and staying asleep). Avoidance of social situations Withdrawal	Significant difficulty with emotions, thinking High level of anxiety, Panic attacks. Depressed mood, feeling overwhelmed Constant fatigue. Disturbed contact with reality Significant disturbances in thinking Suicidal thoughts/intent/behaviour

Possible actions to take at each stage			
Focus on the task at hand	Recognise limits	Identify and understand own signs of distress	Seek consultation as needed
Break problems into manageable chunks	Get adequate sleep, food and exercise	Talk with someone	Follow health care provider recommendations
Identify and nurture support systems	Engage in helpful coping strategies	Seek help	Regain physical and mental health
Maintain healthy lifestyles	Identify and minimise stressors	Seek social support instead of withdrawing	

2. Background

There is longstanding acknowledgement that a person's physical and mental health can be impacted by the place where they live (Chapin, 1951; Novick, 1971). Since human's earliest history those who developed good interventions to keep the unwanted out (hungry animals, weather, enemies) and the wanted in (warmth, family, food, community) survived.

Without good housing people have little chance of maintaining meaningful activities and supportive relationships (Browne & Hemsley, 2010). Housing gives people a physical and cultural space in society and can influence how, and what, they contribute to society (Bendiner-Viani & Saegert, 2007).

3. Methodology

The approach adopted to conduct this literature focussed on providing support for a policy official if they had been tasked to develop guidance on possible steps to improve the houses' impact on the occupants' mental health. Such an individual would not necessarily be aware of the extent of the literature, or the academic disciplines. This approach both made the literature review problematic, and in some ways also produces a useful insight.

Papers were selected through a search of the literature using Web of Science with the terms "housing" and "mental health" (and variants) searching both paper title and content. Not surprisingly this produced a large number of papers. Only those papers that illuminated the relationship between housing and mental wellbeing were selected for deeper analysis.

'Relevant papers' were defined as those that demonstrated an evidenced link between action by a party (e.g. decision maker, policy maker, designer, carer, home owner, or occupier) and the impact on the person living in the house's mental wellbeing. This meant that the issues defined as 'self-care' and 'social support' could be interrogated as well as 'intervention by health care sector' (see Table 1).

These papers came from a range of disciplines largely within the health, planning and built environment sectors. For the purposes of this paper 'housing' was broadly defined so as not to limit by physical structure or tenure and refers to a physical built space designed for human habitation.

'Mental health' has been similarly broadly defined to capture the impacts of interventions across the mental health continuum (see Table 1) that help people move away from treatment and intervention with a particular focus on the self-care and social support end of the spectrum

A total of 96 papers were analysed in detail with findings listed and analysed. Three categories of findings emerged from the analysis relating to the impact of housing on an occupant's mental health. The categories were: scope of influence over own life; quality of the home (both build and use) and quality of the neighbourhood.

Topics such as homelessness, alcohol, drugs and their impact on housing and mental health were not included in this review (despite the volume in the literature). Interestingly the large corpus of work on biophilics was only covered tangentially by this literature review in spite of the long established and positive link between impacts of nature on mental health (Sodelund & Newman, 2015).

4. Discussion

There is little in the literature about what healthy people can do within their homes to protect and improve their mental wellbeing (either in new, or existing homes). The main focus of the literature with regard to housing and mental health was:

1. Focus on those marginalised in society (be they at the 'intervention' end of the mental health continuum or in need of housing assistance);
2. The issues that can trigger a decline in physical and/or mental health of home dwellers; and
3. Descriptive research (i.e. we did this and that happened) rather than translational research (i.e. translating the evidence into policy advice).

There is a pervading tendency in the literature of viewing the house as primarily a tool for delivering policy (e.g. meeting carbon targets for the benefit of society). As such much of the discourse is about how to use the home to deliver benefits to a non-static combination of the individual, community and wider society.

In many ways this is what joined-up, or co-ordinated, Government is about – using the most effective tools to deliver policy outcomes. However it also means that the interests of the individual are not subjugated to the interest of the community or wider society. Somehow all interest need to be met – this is why policy making is not simple.

There was no unity in the review about the definition of what a quality house or local neighbourhood looked like, with the majority of the papers focussing on 'poor quality'. However, there are issues identified that are associated with a positive impact on mental health which should therefore be **embraced** by society. There are also issues identified that negatively impact mental health (which should therefore be **avoided** in future). There was a final set of issues identified that were currently too **complex** to be set into a binary function of embrace/avoid and require further work. Under each section we have included a table with a very brief summary of each paper which have been accordingly categorised as 'embrace', 'avoid' or 'complexity'.

This review revealed that there is not a single 'thing' that can be defined as good housing in terms of promoting mental health. Rather it is the result of three interconnected evidenced categories where intervention could be effective in helping to improve an individual's mental health.

These go wider than the simple fabric of the house and the categories are:

- the extent of an individual's influence over their own lives;

- the quality of the individual's housing (which subdivides into both quality of build and of use); and
- the quality of the local neighbourhood.

This is illustrated in Figure 1 which suggests that from the perspective of the individual 'good' housing does not exist in isolation, but is probably better described as a combination of influence, location and quality. Categories may be mutually compensatory (ie. a good neighbourhood may mask a poor dwelling). However, importantly the extent of this compensation is unclear. Policy makers might not have a similar view of good housing – and therein lies the heart of problem. A Commonwealth policy maker with responsibilities for delivering climate change outcomes may view 'good' differently from a care worker at shire level.

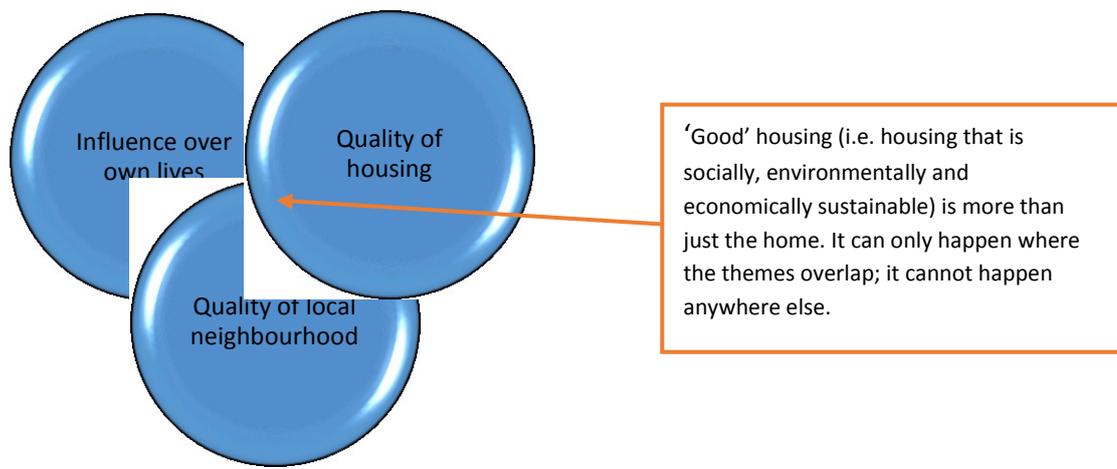


Figure 1: Categories influencing a person's mental health

Category 1: Influence over decisions

Several studies pointed towards the importance of helping people take control over their lives. This was as true for those suffering from drug and alcohol dependence (Allen, 2003) as to the management and maintenance of a residential complex (Mridha, 2015). Control over one's destiny is one of the keys to self-actualisation (Henwood et al., 2015) and papers that focussed on the issue pointed towards the importance of involving residents in the decision making process. However, this is not just about residents and includes involvement of a wider network of stakeholders (Connellan et al., 2013), and further the process of involvement should not be seen as a tick box exercise but rather a continuous endeavour as its impact is additive (Shenassa, 2007). In the leadership literature this is typically referred to as empowerment, but empowerment means that someone still has the power to withdraw authority; Marquet (2012) speaks of emancipation – that is the freedom to make a decision, be it good or bad.

Influence and control comes in many forms ranging from controlling the temperature of the house to decisions about where or how to live. It can mean the development of participatory systems so that a community can have some form of control over its destiny (Shrubsole et al, 2014). The key appears to be the balance between doing something to people and doing something with people, as coercive action is unlikely to be generally successful (Allen, 2003); whereas involvement seems to be helpful (see Table 3 below). Therefore, the development of capacity to deliver individual, designer, carer, health professional and community leadership and dialogue could be an important lever to help maintain mental health across the piece. It is the lack of influence over one's future that can be counter-productive.

Table 3 provides a summary of the literature relating to an individual's influence over decisions that will impact upon them (see methodology for explanation of table headings). It shows that there was general consensus that involvement in decisions is something to be embraced because of the link to a person's mental wellbeing and that it should become pervasive as the issue is not just about 'big' decisions, but also minor irritations (such as setting the temperature of the dwelling (Walker, 2013)).

Table 3: Theme: Influence over decision – summary of the literature

Embrace	Avoid	Complexity
Respect and status of residents (Bond et al., 2012) Inclusive design and self-actualisation (Henwood et al., 2015) Include carers in decision making (Browne & Hemsley, 2010) Management and maintenance (Mridha, 2015) Control is additive (Shenassa et al., 2007) Participatory systems (Shrubsole et al., 2014) Integration of stakeholders in the design process (Connellan et al., 2013) Empowerment – community integration (Nelson et al., 1998) Seeing from the residents perspective (Smith et al., 2015)	Designs to avoid (Connellan et al., 2013) Impact of pre-set thermostats (Walker, 2015) Avoid coercion (Allen, 2003)	Multiple uses and end users to consider (Kearns et al, 2015) Issues around citizenship contribution to society (Sylvestre et al., 2007)

Category 2: Quality of the neighbourhood

The quality of the local neighbourhood was specified by several authors for its impact on people's mental health and wellbeing. The causation ranged from the socio-economic status of the neighbourhood (Fitzpatrick, 2007) through to the impact of new front doors (Curl et al., 2015) to design of new neighbourhoods (Jones-Rounds et al., 2014). The issue of design of something new compared to improving something old was not explicitly covered together in the papers reviewed. However, it was dealt with in separate papers (eg Galea et al., (2007), Fitzpatrick (2007), Jones-Rounds et al., (2014)). That said the provision of quality outdoor space, regardless of the local neighbourhood can have a positive impact – which Gidlof-Gunnarsson and Ohrstrom (2007) demonstrated through the provision of noise 'free' areas, and others (Bendiner-Viani and Saegert, 2007) demonstrated in terms of 'good quality' public space. Understanding the causal pathways will be important in helping to design effective interventions with only intended consequences (Dunstan et al., 2013).

Table 4 summarises the literature on the quality of the community. This is a complex area where there is much descriptive work, but – in this review – less translational work. The dynamics between local community and quality of housing emerges with Jones-Rounds et al., (2014) arguing that a quality exterior environment can offset poor interior environment.

Table 4: Quality of the community – summary of the literature

Embrace	Avoid	Complexity
Community safety (Blackman & Harvey, 2001) Thermal comfort and new front doors (Curl et al., 2015) Sounds (Andringa & Lanser, 2013) Noise free areas (Gidlof-Gunnarsson & Ohrstrom, 2007) Green space (Bertram & Rehdanz, 2015) Location important rather than dwelling type (McCarthy, 1985)	Poor quality neighbourhood (Galea et al., 2007) Lack of green space (Bertram & Rehdanz, 2015) Loneliness resulting from residential structures (Kearns et al., 2015)	Quality of interactions with neighbours and quality of neighbourhood (Dunstan et al., 2013) Planning/health linkages (Wells et al., 2010) Recovery from stress following viewing green spaces (van den Berg et al., 2015) SES of neighbourhood (Fitzpatrick, 2007) Impact on TV watching (MacLeod et al., 2008) Quality of neighbourhoods is important but so too is respect and status (Bond et al., 2012) Economic regeneration alongside property led regeneration (Curl et al., 2015) Good external environment can offset poor interior environment (Jones-Rounds et al., 2014)

Category 3: Quality of the home

The literature revealed much in terms of the link between mental health and housing and develops two sub-themes relating to how the house is designed and how the house is used.

Poor design impacts mental health (Guite et al., 2006); poor housing can also have intergenerational impacts as children's emotional functioning can be impacted (Coley et al., 2013). It also helpfully identified issues that were applicable to only some sections of society – for example for people on low-moderate income 'unaffordable' housing has a negative impact on their mental health (Bentley et al., 2011); or age related mental health impacts and housing (Howden-Chapman et al., 2011).

This literature review did not find what a good or "normal" (Hogan and Carling, 1992) house was in terms of helping people attain or retain a healthy mental state. This is consistent with Bonnefoy (2007) and Evans et al., (2003). However there is some discussion about the development of a housing quality assessment tool (Keall et al., 2010). Although there is not agreement on whether housing quality is more important than housing type (Kearns et al., 2012).

Table 5 summarises the literature relating to the quality of the home. There is a wealth of research on the relationship between the home and mental wellbeing, but there is little that an individual might be able to adopt to enhance their mental wellbeing.

Table 5: Quality of the home – summary of the literature

Embrace	Avoid	Complexity
<p>Heating and new front doors (Curl et al., 2015)</p> <p>Lack of draughts (Blackman & Harvey, 2001)</p> <p>Engage with nature (Maller et al., 2009)</p>	<p>Unaffordable housing (Bentley et al., 2011)</p> <p>Poor design and social features (Guite et al., 2006)</p> <p>Dampness (Hopton & Hunt, 1996)</p> <p>Affordability issue as get older (Howden-Chapman et al., 2011)</p> <p>Crowded homes (Solari & Mare, 2012)</p> <p>Overcrowding (Shenassa et al., 2007)</p> <p>Violence, housing disarray and childhood asthma (Suglia et al., 2010)</p> <p>Crowding (Wells & Harris, 2007)</p> <p>Heat stress (Maller & Strengers, 2011)</p> <p>Poor quality housing has higher impact on mental wellbeing than housing type (Grigg et al., 2008)</p>	<p>Influence of sleep quality, indoor air quality, accessibility, obesity, mould, hygrothermal conditions and energy consumption on mental health (Bonnefoy, 2007)</p> <p>Clustering of ailments in deprived areas (Adamkiewicz et al., 2014)</p> <p>Indoor conditions affect physical health (Veitch, 2008)</p> <p>Housing tenure (Baker et al, 2013)</p> <p>Healing environment MOBE (Hoisington et al., 2015)</p> <p>Home repossession (Pevalin et al., 2009)</p> <p>Quality of interactions with neighbours and quality of neighbourhood (Dunstan et al., 2013)</p> <p>Step down community housing for people coming out of care (Barr et al., 2013)</p> <p>Homes and mental health making the policy links (Johnson, 2005)</p> <p>Affordability and homelessness (Martin, 2015)</p> <p>Health implications of multiple environmental risk exposure (Evans et al., 2003)</p> <p>Patient physical environment (van der Schaaf et al., 2013)</p> <p>Pleasurable and annoying sounds (Andringa & Lanser, 2013)</p> <p>Little research on the positive health effects of exposure to areas of good sound quality (van Kempen et al., 2014)</p> <p>Improvements produce health benefits (Pevalin, 2009)</p> <p>Poor housing & children's emotional functioning (Coley et al., 2013)</p> <p>Unexpected consequences (MacLeod et al., 2008)</p> <p>Community, family and individual influencers (Curtis et al., 2013)</p> <p>Global south might need different research methodologies (Ferguson et al., 2013)</p> <p>House design big impact on use of environment (Marcheschi et al., 2016)</p> <p>Permanent housing has a positive impact (Smith, 2005)</p>

Sub-category – how the house is designed

Housing design quality was shown to be key – good design has a big impact on how people use the house and development (Marcheschi et al., 2016), and the opposite (Guite et al., 2006). Simple things like daylight, view of nature (Maller et al., 2009) and noise (Andringa & Lanser, 2013), being damp free (Hopton & Hunt, 1996) are all important but so too are other variables (such as the interesting emerging work on microbiomes (Hoisington et al., 2015)). Whilst all are part of good design: all can be devalued through occupation. Designing a house to drive behaviours that promote mental health (Marcheschi et al., 2016) or how people use the house (Brunsgaard & Fich, 2016) are clearly important and bring us back to the issues of values raised by Sylvestre et al., (2007).

However new build whilst important will always be less in quantity than the number of existing homes. Housing improvements also deliver benefits (Pevalin et al., 2008) – such as reducing drafts (Blackman & Harvey, 2001), removing dampness (Hopton & Hunt, 1996), renovating bathrooms and kitchens (Curl et al., 2015) as well as providing heating (ibid). Issues such as preset thermostats (Walker, 2015) can have the opposite impact and could result in heat stress which itself has a negative impact on mental health (Maller & Strengers, 2011). Interestingly Curl et al., (2015) showed that the provision of heating can also negatively impact occupants' physical activity which in turn can impact on mental health.

Sub-category - how the house is used

Not being able to afford housing or not able to afford to run the house as designed are both stress inducers and can negatively impact a person's mental wellbeing. Such impacts are clearly delineated according to the ability to pay. Unaffordable housing is seen to be a key issue relating to mental wellbeing for those who are in the low-to-moderate income bracket (Bentley et al., 2011) as is the ability to pay bills (the impact of which changes with age (Howden-Chapman et al., 2011)). Although not directly related to cost, but linked, the link between housing tenure and mental well-being is unclear with studies demonstrating both sides of a different coin. Pevalin (2009) demonstrated that the mental health impact of home repossession is greater if it is owned rather than rented. Whereas Baker et al., (2013) found "little evidence of an intrinsic relationship between tenure and mental health". However, Smith (2005) found a strong link between secure, permanent accommodation and improving mental health.

How occupants use a house can impact on mental wellbeing. Overcrowding (Solari & Mare, 2012) is one such example of how occupants' use of their house can devalue good design and lead to a negative impact on mental health (Shenassa et al., 2007). Reducing overcrowding will improve mental health (Wells & Harris, 2007). Curtis et al. (2013) similarly identifies community, family and individual behaviours as being important influencers. For example production of 'annoying' noise (Andringa & Lanser, 2013) can mitigate design and lead to stress of inhabitants or neighbours.

The behaviour of housing occupants – violence or just disarray - can also have a negative impact on health (Suglia et al., 2015). The issue of how a house is used also links to the earlier discussion over control. Lack of control, or influence over the behaviour of inhabitants or neighbours can lead to negative mental health impacts.

5. Limitations of this work

As the literature is limited about the modifications that can be made to people's homes to improve their mental well-being (or help to protect them from a decline) it is not possible to say with confidence that all such literature has been captured. However the lack of evidence in the literature is a theme that has been present – and commented upon – since the research of Evans et al. (2003).

The approach of this literature review however, did mean that much literature on the role of intervention in prisons, police stations and similar institutions were not included. Similarly, there is much in the literature about 'green offices' and how green office space may or may not help to improve the productivity of, and environment for office workers (e.g. Thatcher and Milner (2012)). This paper has not sought to identify the research in the green office space and apply it to private housing but there are very likely to be transferable lessons.

Similarly this review did not pick up the body of work on biophilics. This is a rich stream of work that could well inform translational research to deliver benefits along the mental health spectrum as well as cover new and existing homes.

The vast majority of the papers reviewed were based in a western context with Marais and Cloete (2014), Marais et al., (2013) and Mridha (2015) being the exceptions. It is important to recognise that the research methodologies used in western cultures are not necessarily directly transferrable to other regions of the world (Ferguson et al., 2013; Marais et al., 2013)

6. Conclusion

There are three over-arching observations from this literature review.

Firstly is the need for transdisciplinary (Jantsch, 1972) and translational research (Nelson et al., (1998), Osypuk (2014) and Veitch (2008)). Transdisciplinary because the literature review revealed the difficulty faced in capturing all the relevant disciplines; and translational because there is a continued and evidenced need to start developing interventions that can help people in the self-help/social support end of the continuum. Such translational research needs to focus on as a minimum the individual and their social support as delivery pathways. Ideally such studies should be longitudinal (Pevalin et al., 2008). Either way, it cannot be acceptable from a policy perspective to leave those issues largely uncovered.

Secondly, Novick (1971) spoke about the need to focus on the person. This still applies today, but we should be focussing first on the individual and their needs. In the UK Government there is a discourse of 'policy making as if people matter'. This needs to be the case for work on housing. A focus on the person first and then the bricks and mortar is essential. If policy makers do not do this then we will continue to deliver the sorts of social unintended consequences identified by Shrubsole et al. (2014).

Thirdly – linking both the above points – housing and mental health policy development, and particularly housing building codes and guidelines seem to focus predominantly on the economic and environmental pillars of sustainable development. Inclusion of the environmental pillar over the last couple of decades represents real and genuine progress; the next step needs to more explicitly include the social pillar.

7. Recommendation for future work

With so many interdependencies between the three themes of influence, design and community it is difficult to identify a way to break down the vectors of causation. However, a productive transdisciplinary route is available to the innovative university. A living lab – perhaps based in either new and/or existing student accommodation could help to understand the interdependencies within and between the themes. Such a project could start the process of developing translational research to help update building codes and design guidelines with those actions that can be undertaken, particularly at the self-help social care end of the continuum, to promote mental well-being.

8. Declaration

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9. References

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