

The Relationship between Housing Environment and Well-being*

A Review Study

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For most people living in an exquisite large house is one of the dreams in their lives (Cantril, 1965). Further, a house is the largest consumption item in their lifetimes, and it is also the place where they find a sense of reassurance, relaxation, and satisfaction (Adams, 1984). Based on these views, good quality of individuals' housing environments should improve their levels of well-being. The purpose of this study is to conduct a comprehensive review of the literature regarding the relationship between housing environment and well-being to examine whether better housing environment really leads to higher levels of well-being and what characteristics of housing highly contribute to well-being. In the current study, we used the term "broad well-being." It includes not only cognitive and affective components of "subjective well-being" (e.g., life satisfaction, positive affect, domain specific satisfaction), but also various types of mental and physical health. The current study extends prior research reviewing this relationship (Evans, 2003; Evans, Wells, & Moch, 2003; Nakazato, 2014).

We mainly reviewed prior studies examining this relationship using objective housing characteristics. The reason is that using subjective self-rated housing quality is problematic due to the unknown validity, shared method variance with self-reported outcome variables, and top-down effects on both predictor and outcome variables (Evans, 2003; Evans et al., 2003). Further, our focus is mainly on the effect of housing on the general public's well-being in developed countries, so generally we do not use research on the relationship based on special populations (e.g., people in low-income households) for our review. Prior housing studies can be roughly categorized into (a) cross-sectional studies examining the relationship between a single housing characteristic and well-being, (b) cross-sectional studies examining effects of multiple housing characteristics on well-being, and (c) longitudinal studies.

Cross-sectional studies: A single housing characteristic and broad well-being indicators

Based on our review, prior studies consistently reported positive associations between a "good house" and broad well-being indicators such as mental health (See Evans, 2003; Evans et al., 2003; Kellett, 1989). First, prior studies generally revealed that a single detached family house was associated with higher levels of well-being than other types of housing (e.g., Fanning, 1967; Moore, 1975), especially high-rise housing (e.g., Amick & Kviz, 1974; Richman, 1977). Researchers assumed that multi-unit housing has negative effects on well-being because dwellers cannot control social interac-

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tion with other residents, and unexpected interactions occurred more frequently in high-rise buildings due to the high number of residents (Evans, Saltzman, & Cooperman, 2001). Moreover, the reason for positive effects of detached housing was presumed to be that dwellers could easily show off the houses to others as their symbols and accomplishments (Halpurn, 1995).

Second, previous studies also have reported a negative relationship between smaller housing size or household crowding and broad well-being indicators (e.g., Gabe & Williams, 1986; Gove, Hughes, & Galle, 1979). This relationship has been explained by that in crowded space people have to share more space with more people and cannot feel sense of control over the space (Baum & Valins, 1979; Paulus, 1988). Further, prior studies reported that better housing conditions (e.g., lack of sagging, cracked and broken structural features; dampness) based on objective assessment by trained raters predicted higher well-being (e.g., Duvall & Booth, 1978). Researchers have considered adverse housing conditions to have a direct negative influence on dwellers' physical and mental health.

However, these prior studies have a limitation in that they lack examinations of unique contributions of objective housing characteristics that researchers were interested in because they did not control for effects of other housing confounders. For example, it is possible that adverse effects of high-rise housing on well-being were also due to factors such as quality of neighborhood (McCarthy, Byrne, Harrison, & Keithley, 1985), quality of housing (Keithley, Byrne, Harrison, & McCarthy, 1984), household crowding (Gillis, 1977), and home ownership (Peck & Stewart, 1985).

Cross-sectional studies: Multiple housing characteristics and housing satisfaction

Several cross-sectional studies account for relative importance and unique contribution of each housing characteristic by simultaneously examining the relationship between those and well-being (e.g., Campbell, Converse, & Rodgers, 1976; Morris, Crull, & Winter, 1976; Peck & Stewart, 1985). Most of these studies used housing satisfaction as an indicator of well-being.¹⁾ Prior studies generally reported that housing size, housing condition, and home ownership were strong predictors of housing satisfaction, although these studies varied in the number of predictors, what predictors were examined, and the findings of relative importance of predictors. For example, two US studies examined this relationship without controlling for SES (e.g., Campbell et al., 1976; Peck & Stewart, 1985). Campbell et al. (1976) examined the relative importance of housing size (i.e., rooms per person), home ownership, values of house and land, type of house, and housing condition (i.e., age of house). They found that these characteristics explained 12% of the variance in housing satisfaction, and that rooms per person was the strongest predictor and the effects of other characteristics were half to one third of it.²⁾ Peck and Stewart (1985) found that housing characteristics (housing condition rated by an interviewer, persons per room ratio, and home ownership) along with duration of residence, perceived housing cost, and neighborhood satisfaction explained 25% of the variance in housing satisfaction, but housing type (detached single house vs. others) was not significant. Among those predictors housing condition was the strongest predictor and effects of persons per room ratio and home ownership accounted for half.

1) Diener, Suh, Lucas, and Smith (1999) added domain satisfaction itself (e.g., housing satisfaction, health satisfaction) to one of the indicators of well-being.

2) House type was the worst predictor, but the house type variable was contaminated by own/rent status and no description of the way in which type variables were entered into the model.

Some prior studies controlled for SES such as income. Controlling for SES could provide better evidences for the causality between objective housing environment and well-being because doing so excludes the possibility of self-selection bias. A US study (Morris et al., 1976) revealed that absence of the needed number of bedrooms, absence of a single detached family house despite a desire for it, and absence of home ownership despite a need for it had roughly equal influence on housing satisfaction after controlling for SES (e.g., income) and several confounders. Consequently, these predictors explained 18% in variance.

Further, relatively recent studies examined unique effects of objective housing characteristics along with neighborhood characteristics on well-being with control for SES (e.g., Lu, 1999; Parkes, Kearns, & Atkinson, 2002). For example, a US study (Lu, 1999) examined the determinants of housing satisfaction using housing and neighborhood variables (e.g., actual rooms divided by needed rooms; housing condition; home ownership; neighborhood area) from American Housing Survey data sets. It revealed that home ownership was the strongest predictor of housing satisfaction, and that actual number of rooms per needed number of rooms and living in central city or suburban area (vs. nonmetropolitan area) were also important predictors of housing satisfaction. Home ownership has been considered to be a strong predictor of well-being because it is a sign of personal success (Rakoff, 1977), and allows dwellers to have more freedom to arrange housing environments so that the house becomes more comfortable for themselves (Diaz-Serrano, 2009).

To sum up, prior cross-sectional studies consistently reported that housing size, housing condition, and home ownership were important determinates of housing satisfaction although the findings of relative importance of predictors varied across studies. Further, some studies reported the importance of housing type and neighborhood area. The reason for somewhat different pictures of the relationship between housing characteristics and housing satisfaction across studies is not completely obvious, but differences in (a) what predictors were examined at the same time, (b) whether SES was controlled or not, and (c) whether predictors were completely objective could be the reason.

Longitudinal studies

Longitudinal research accounts for causality between housing characteristics and well-being better than cross-sectional studies. Several recent longitudinal studies using data from large panels examined the effects of changes in housing characteristics caused by moving on well-being (e.g., Diaz-Serrano, 2009; Pevalin, Taylor, & Todd, 2008). Pevalin et al. (2008) provided the evidence that changes in the number of housing and neighborhood problems with the conditions predicted changes in mental and physical health, using the British Household Panel. Diaz-Serrano (2009) examined the effects of housing characteristics on housing satisfaction after controlling for SES, using a two-wave panel design. As a result, he found that achieving home ownership after moving was the strongest predictor to the extent that the effect was as strong as effects of improvements in all other housing characteristics' factors (i.e., basic amenities such as existence of bath/shower; bad housing conditions such as a leaky roof; bad neighborhood environment such as noise from neighbors or outside; positive utility such as number of rooms and presence of terrace or garden) for an increase in housing satisfaction. In sum, longitudinal research also revealed that housing condition and home ownership were important predictors of well-being.

As we described earlier, longitudinal research is methodologically more sophisticated than cross-

sectional studies. However, there are still several limitations in previous studies. First, prior longitudinal studies did not provide clear evidence for long-term effects of housing characteristics and year-to-year trends of well-being because most studies were based on a two-wave study design (i.e., pre-moving vs. post-moving) that examined transition within the relatively short-term interval since moving (i.e., one year interval). Second, prior longitudinal studies provided no clear evidence for relative importance of housing characteristics because study methods made the unique effects indistinct (e.g., grouping housing variables into factors). Finally, only a few longitudinal studies exist in this field at present.

Conclusion

Our review of prior studies suggests that a “good house” contributes to higher levels of well-being, and that housing condition, home ownership, and housing size are potentially strong predictors among housing characteristics. However, considering several limitations in prior studies, there are three important things that researchers should conduct in the future studies. First, more longitudinal studies of effects of changes in housing characteristics caused by moving on well-being should be conducted to investigate the causality between housing characteristics and well-being further. Second, in those longitudinal studies, examination of long-term effects of housing characteristics on well-being over several waves is needed to examine whether the characteristics are still important several years after moving. It is possible that short-term effects at one-time observation could represent temporal fluctuation of well-being evoked by achieving characteristics of a new house and it is also possible that short-term and long-term effects of some housing characteristics on well-being could be different (e.g., household crowding: Lepore, Evans, & Schneider, 1991; housing condition: Marsh, Gordon, Pantazis, & Heslop, 1999). Simultaneously examining the short-term and long-term effects of housing characteristics on well-being by using a sophisticated statistical approach such as the conditional latent growth modeling (Bollen & Curran, 2006) provides more elaborate evidence. In other words, it allows researchers to ascertain whether people adapt to each housing characteristic of their new houses within a short period of time or whether the effects are long-lasting (See Brickman & Campbell, 1971; Diener, Lucas, & Scollon, 2006 for adaptation theory). Third, also in a longitudinal study design, researchers should simultaneously examine effects of multiple housing characteristics on well-being with control for confounder variables (e.g., SES). These three points allow for examining unique long-term effects of individual housing characteristics on well-being. Such a finding would have practical implications for architects and individuals who plan to purchase a house, especially if it is shown that some housing characteristics have long-term effects on well-being but effects of others are short-lived.

Further, moderation and mediation effects of housing characteristics on well-being should also be examined in future studies. Several researchers have suggested that housing satisfaction is determined by the discrepancy between an individual’s ideal environment and her or his actual housing environment (Francescato, 2002; Galster, 1987; Lu, 1999; Michalos, 1985, 2008), but few studies empirically examined this particularly in longitudinal studies. It is also important to examine in which psychological process housing variables influence well-being.

References

- Adams, J. S. (1984). The meaning of housing in America. *Annals of the Association of American Geographers*, 74, 515–526.
- Amick, D. J., & Kviz, F. J. (1974). Density, building type, and social integration in public housing projects. *Man-Environment Systems*, 4, 187–190.
- Baum, A., & Valins, S. (1979). Architectural mediation of residential density and control: Crowding and the regulation of social contact. *Advances in Experimental Social Psychology*, 12, 131–175.
- Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation perspective*. New York: Wiley Interscience.
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation-level theory* (pp. 287–305). New York: Academic Press.
- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage Foundation.
- Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Diaz-Serrano, L. (2009). Disentangling the housing satisfaction puzzle: Does homeownership really matter? *Journal of Economic Psychology*, 30, 745–755. doi: 10.1016/j.joep.2009.06.006
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, 61, 305–314.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302.
- Duvall, D., & Booth, A. (1978). Housing environment and womens health. *Journal of Health and Social Behavior*, 19, 410–417.
- Evans, G. W. (2003). The built environment and mental health. *Journal of Urban Health-Bulletin of the New York Academy of Medicine*, 80, 536–555.
- Evans, G. W., Saltzman, H., & Cooperman, J. (2001). Housing quality and children's socioemotional health. *Environment and Behavior*, 33, 389–399.
- Evans, G. W., Wells, N. M., & Moch, A. (2003). Housing and mental health: A review of the evidence and a methodological and conceptual critique. *Journal of Social Issues*, 59, 475–500.
- Fanning, D. M. (1967). Families in flats. *British Medical Journal*, 4, 382–386.
- Francescato, G. (2002). Residential satisfaction research: The case for and against. In J. I. Aragonés, G. Francescato & T. Garling (Eds.), *Residential environments: Choice, satisfaction, and behavior* (pp. 15–34). Westport, CT: Bergin & Garvey.
- Gabe, J., & Williams, P. (1986). Is space bad for your health: The relationship between crowding in the home and emotional distress in women. *Sociology of Health & Illness*, 8, 351–371.
- Galster, G. C. (1987). Identifying the correlates of dwelling satisfaction: An empirical critique. *Environment and Behavior*, 19, 539–568.
- Gillis, A. R. (1977). High-rise housing and psychological strain. *Journal of Health and Social Behavior*, 18, 418–431.
- Gove, W. R., Hughes, M., & Galle, O. R. (1979). Overcrowding in the home: Empirical investigation of its possible pathological consequences. *American Sociological Review*, 44, 59–80.
- Halpam, D. (1995). *Mental health and the built environment*. London: Taylor & Francis.
- Keithley, J., Byrne, D., Harrisson, S., & McCarthy, P. (1984). Health and housing conditions in public sector housing estates. *Public Health*, 98, 344–353.
- Kellett, J. (1989). Health and housing. *Journal of Psychosomatic Research*, 33, 255–268.
- Lepore, S. J., Evans, G. W., & Schneider, M. L. (1991). Dynamic role of social support in the link between chronic stress and psychological distress. *Journal of Personality and Social Psychology*, 61, 899–909. doi: 10.1037//0022-3514.61.6.899
- Lu, M. (1999). Determinants of residential satisfaction: Ordered logit vs. regression models. *Growth and Change*,

30, 264–287.

- Marsh, A., Gordon, D., Pantazis, C., & Heslop, P. (1999). *Home sweet home?: The impact of poor housing on health*. Bristol, UK: Policy Press.
- McCarthy, P., Byrne, D., Harrison, S., & Keithley, J. (1985). Housing type, housing location and mental health. *Social Psychiatry and Psychiatric Epidemiology*, 20, 125–130.
- Michalos, A. C. (1985). Multiple discrepancies theory (MDT). *Social Indicators Research*, 16, 347–431.
- Michalos, A. C. (2008). Education, happiness and wellbeing. *Social Indicators Research*, 87, 347–366.
- Moore, N. C. (1975). Social aspects of flat dwelling. *Public Health*, 89(3), 109–115.
- Morris, E. W., Crull, S. R., & Winter, M. (1976). Housing norms, housing satisfaction and the propensity to move. *Journal of Marriage and the Family*, 38, 309–320.
- Nakazato, N. (2014). Living Conditions and Well-Being Using German Socio-Economic Panel. In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well-being research*. (pp. 3647–3654). New York: Springer.
- Parkes, A., Kearns, A., & Atkinson, R. (2002). What makes people dissatisfied with their neighbourhoods? *Urban Studies*, 39, 2413–2438. doi: 10.1080/0042098022000027031
- Paulus, P. B. (1988). *Prison crowding: A psychological perspective*. New York: Springer-Verlag.
- Peck, C., & Stewart, K. K. (1985). Satisfaction with housing and quality of life. *Family and Consumer Sciences Research Journal*, 13, 363–372.
- Pevalin, D. J., Taylor, M. P., & Todd, J. (2008). The dynamics of unhealthy housing in the UK: A panel data analysis. *Housing Studies*, 23, 679–695. doi: 10.1080/02673030802253848
- Rakoff, R. (1977). Ideology in everyday life: The meaning of the house. *Politics and Society*, 7, 85–104.
- Richman, N. (1977). Behaviour problems in pre-school children: Family and social factors. *British Journal of Psychiatry*, 131, 523–527.

The Relationship between Housing Environment and Well-Being: A Review Study

ABSTRACT

We review literature on the relationship between housing environment and well-being. Our review focuses mainly on how objective housing characteristics contribute to the general public's well-being. Reviewed articles were classified into (a) cross-sectional studies examining the relationship between a single housing characteristic and well-being, (b) cross-sectional studies examining effects of multiple housing characteristics on well-being, and (c) longitudinal studies. The literature has consistently showed that a better house leads to higher levels of well-being. In particular, housing size, housing condition, and home ownership were important housing characteristics. However, a number of limitations still remain in this field such as no control for housing characteristics other than the one researchers are interested in and no examination of long-term effects of housing characteristics on well-being. Accordingly, we suggest that future studies should (1) simultaneously examine effects of multiple housing characteristics on well-being after controlling for SES and (2) longitudinally examine the effects of housing characteristics on well-being over years after moving into a new house. These would allow researchers to ascertain the unique and long-term contributions of individual housing characteristics on well-being. Further, needs for moderation and mediation effects of housing characteristics on well-being in future studies are discussed.

Key Words: housing environment, well-being, housing satisfaction