

The Leisure Home as Health Resource: Addressing Issues of Selection and Dose Assessment

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Abstract

Recent longitudinal studies in Sweden have addressed the possibility that use of a leisure home may prevent ill health. These studies found that men who owned a leisure home were less likely to suffer premature departure from the paid labour force due to early retirement for health reasons (Hartig & Fransson, 2009) or early death (Fransson & Hartig, 2009). The explanations offered for these prospective associations emphasized the opportunities for physical activity and psychological restoration that leisure homes and their natural surroundings offered for men burdened by the demands of paid work. That women who owned a leisure home did not appear to enjoy the same benefit was speculatively treated as a manifestation of gendered responsibility for domestic work; the leisure home might simply be another domestic setting in which women have a relatively greater load of unpaid work.

The present paper extends this line of inquiry by addressing two general weaknesses with the previous studies. First, both of the previous studies involved a comparison between owners and non-owners of leisure homes. Each sought to control for the “drift” of less healthy people into less healthy residential circumstances by including in analyses only people who had stable residential circumstances and a history of paid work for an extended period prior to a period of follow-up; however, these measures could not rule out the possibility that self-selection into different residential circumstances occurred before the period studied.

Second, neither of the two studies directly addressed some important “dose” issues. They did consider the possibility that the potential for benefiting from a leisure home varied as a function of socioeconomic position and housing type for the primary residence (multi-family vs. single-family detached and row housing); however, there are a number of other dose issues in need of attention. Not least, the owner/non-owner dichotomy contains rather little information about the actual use of leisure homes.

To provide guidance for further research, the present paper addresses these selection and dose assessment issues. It culminates in a set of design and analytic recommendations for new empirical studies that, like the previous studies, make use of longitudinal register data from Sweden. Beyond enhancing our understanding of the leisure home as a health resource, this line of inquiry offers a useful perspective on the residential context of health more generally. Given the means, people may distribute their living across multiple residences to take advantage of their respective benefits and offset their respective shortcomings. A second home may serve some health-promoting social and psychological functions better than the primary residence, and it is worth knowing why.

Keywords: Leisure home; health; stress; restoration; natural environment.

Introduction

Recent longitudinal studies in Sweden have addressed the possibility that use of a leisure home may prevent ill health. These studies found that men who owned a leisure home were less likely to suffer premature departure from the paid labour force due to early death (Fransson & Hartig, 2009) or early retirement for health reasons (Hartig & Fransson, 2009) .

The explanations that we offered for these prospective associations emphasized the opportunities for physical activity and psychological restoration that leisure homes and their natural surroundings offered for men burdened by the demands of paid work. That women who owned a leisure home did not appear to enjoy the same benefit was speculatively treated as a manifestation of gendered responsibility for domestic work; the leisure home might simply be another domestic setting in which women have a relatively greater load of unpaid work.

The present paper extends the line of inquiry on the leisure home as a potential health resource by addressing two general problems with the previous studies, self-selection and the neglect of “dose” issues. After describing the nature of the data used in the previous studies, we discuss each of these two problems. The paper culminates in a set of design and analytic recommendations for new empirical studies that make use of the same kind of data.

The Data Available

Several of the issues that we discuss here arise from the fact that our two previous studies were done with longitudinal register data for the Swedish population. A brief description of that database is needed here to understand both why those issues have arisen and what we propose can be done to address them.

The database we have been using consists of data from separate databases created and maintained by Statistics Sweden for the production of official statistics. Four annually updated databases have provided individual-level information on demographics, education, income, employment, and geographic location. Statistics Sweden has merged data from these and other sources into a single database with longitudinal data on individuals and their residential and socioeconomic circumstances for a period starting in 1990 and now extending through 2006. It has records for all individuals who at some point during the period resided in Sweden and were registered in the Swedish social security system. The database has annually updated geographical coordinates for primary residences, useful for following changes in residence. The database also has data used in property taxation of the primary and secondary residences, registered on the 1st of January 1991, 1996 and 2001, which effectively refers to the state of affairs in 1990, 1995, and 2000.

The size of the database, its longitudinal character, and the availability of geographical coordinates for each person’s primary residence, secondary residence (if any), and workplace

(if any) offer some important advantages for research on residence and health. The lack of variables concerning behaviours, perceptions and attitudes toward the residence does however impose some significant problems. For example, the database does not include variables that would help us to directly address the possibility that highly paid and educated women do not find the leisure home restorative, but rather see it as another domestic setting in which they must perform unpaid work (cf. Bjerke, Kaltenborn, & Vittersø, 2006). Work guided by psychological theory, such as ours, is left to proceed with variables in which some psychological meaning can plausibly be invested. It can therefore only aim to uncover theoretically interesting associations; it cannot support rigorous tests of presumed psychological mechanisms.

Selection Problems

Of course, some of the problems we have faced in our research on leisure homes and health are not unique to work with such databases. Of particular interest here, the comparison between owners and non-owners of leisure homes can be viewed as a weakness of our studies because it is open for the claim that the associations we uncovered owe to self-selection. A self-selection alternative explanation holds that people who do not own a leisure home are less healthy to begin with, so any seeming advantage of leisure home ownership discovered in the study really only reflects pre-existing differences between owners and non-owners. Self-selection is an inferential threat with a variety of study designs that might be employed in this area, including surveys and quasi-experiments.

In the two previous studies we did impose measures to control for the “drift” of less healthy people into less healthy residential circumstances. We did so in three ways. First, we included only people with stable primary residential circumstances. More specifically, we selected for study only non-institutionalized members of the population who did not change primary residence during the entire period 1990-2000 or up to the year before either early retirement in 1998-1999 (Hartig & Fransson, 2009) or early death in the period 1995-2000 (Fransson & Hartig, 2009). We used the geographic coordinates for the primary residence to make this determination.

Second, we included only people who had stable secondary residential circumstances. In the study of early retirement for health reasons (Hartig & Fransson, 2009), we restricted the study population to those people who owned or did not own a specific leisure home over the

entire period 1990-2000. In the study of early death (Fransson & Hartig, 2009), we restricted the study population to those people who owned or did not own a specific leisure home up to 1995, prior to dying between 1995 and 2000. In the latter study, because data were not available for leisure home ownership for every year of the period, it was not possible to say with certainty whether or not those who died in the period 1995-2000 changed their leisure home circumstances between 1995 and their death. In any case, the people classified as owners did own a leisure home for at least five years prior to the period of follow up.

Third, the previous studies included only people who had a history of paid work for an extended period prior to a period of follow-up. They were thus of sufficiently good health to stay in the workforce. This inclusion criterion would also have worked against self-selection of less healthy people into less healthy housing circumstances, in that they had relative stability of income over the period of the study.

Although our earlier studies thus used data from people who had stable primary and secondary residential circumstances for a substantial period and were healthy enough to work, they still could not rule out the possibility that self-selection into different residential circumstances had occurred before the period covered by each of the two studies. One way to address this issue is to look only at people who own a leisure home or who are likely to have access to one through their immediate family. With this focus, it becomes necessary to address the question of “dose.”

Dose Issues

Stated simplistically, the question of dose is this: how much use of a leisure home is needed to yield some preventive health benefit? The question as posed is simplistic because the underlying problem has several aspects. In the present context, the discussion of dose must address multiple components of a model that relates health to the use of a leisure home for restorative activities in natural surroundings.

Given the concern for restoration, the determination of an effective dose must refer to some need for restoration, and so to the everyday demands that would engender a need for restoration. We have addressed this matter in two ways in our two previous studies. First, we selected only people in the labour force, and so included only people who faced regular demands from working life. Unfortunately, however, we do not have access to information on how intensively people work or how difficult or stressful they find their jobs to be.

Second, we assessed moderation of the leisure home – health association by variables that reflected on demands in everyday life. One of these was housing type for the primary residence. We thought that the fact of residence in multi-family housing would imply a variety of demands (emanating from characteristics of the housing and its surroundings) over and above those found with single-family or row housing, such as more noise from neighbours and from traffic in the surroundings. Given this, people who live in multi-family housing and own a leisure home could have a lower risk of ill health (e.g., early retirement) than people who live in multi-family housing but do not have a leisure home. In contrast, people who live in single-family detached or row housing may in contrast realize little more benefit from a leisure home than they do from a garden in the yard.

We also considered socioeconomic position as a moderator. We thought that people of lower socioeconomic position could benefit disproportionately from owning a leisure home. We took socioeconomic position to reflect on the demands that people face in their everyday circumstances as well as the range of options available for relief from those demands when desired. These may involve issues of housing quality, neighborhood quality, quality of the work environment, and transportation. We assumed that people lower in socioeconomic position would face more demands and also have fewer options for relief in their everyday surroundings.

Aside from the need for restoration, the determination of effective dose involves the intensity of the use of the leisure home. Unfortunately, the database includes no direct use variable. Distance from the primary residence to the leisure home can however serve as an instrumental variable for frequency of use. Presumably, the further from the primary residence, the less frequently an owner will visit the leisure home. Jansson and Müller (2004) reported that a large percentage of their respondents in their survey lived within what they called a “daily visit zone”, which is within 60 minutes travel time and so presumably available for use on any given day. One could thus hypothesize that those who have a leisure home within a particular range from the primary residence will use the leisure home more frequently and so realize more health benefit through ownership. Yet, the matter is not as simple as that. People who have more distant leisure homes may spend just as much time at them, and have more profound restorative experiences while there, in that the relatively few visits that they make to them are for longer periods of time. That said, close proximity may also translate into ease of visitation for family and friends who have a primary residence close to the owner; their participation in social activities centered on the leisure home may further enhance the potential restorative benefit it offers to the owner, above and beyond that gained

by his or her own higher frequency of visitation. This social enablement and enhancement of restoration may not hold to the same degree with more distant leisure homes. Thus, distance may translate not only into frequency of use, but also into duration of periods of use, social circumstances that attend use, and activities performed (alone versus with others) during periods of use.

The determination of effective dose also must involve characteristics of the leisure home setting. In that the motivational picture for ownership and use of leisure homes in Sweden includes themes of close proximity to nature and possibilities for relaxation, it would seem that features of the natural environment are particularly important. One might, for example, contrast the owners or users of leisure homes in close proximity to water with those who have forest-bound leisure homes. Or, one might look at whether the character of the natural environment around the leisure home differs qualitatively from that around the primary residence. For example, for people in small towns close to the ocean, a leisure home in a mountain region may be preferable. Some kinds of natural settings may be distant from population centers in general, so that the desire to have access to those settings through leisure home ownership would necessitate more travel, and so imply fewer trips.

Finally, the determination of effective dose must take into consideration the kinds of adverse health outcomes that a person might be buffered against with use of a leisure home over the years. Early retirement for health reasons and early death are outcomes that could plausibly follow from excessive wear-and-tear with inadequate restoration, at least for some age cohorts. They also happen to be the two outcomes that are available to us in the database.

Design and Analytic Recommendations

We see several ways ahead for new empirical studies that use the longitudinal register data available to us. First, given a continuing emphasis on the cumulative effect of restorative experiences at the leisure home, further studies can identify additional ways to specify a need for restoration, over and above what might be captured with socioeconomic position and the type of housing for the primary residence. For example, they might look at the extent to which the relationship between leisure home use and health varies as a function of neighborhood conditions. Areas with lower population densities would presumably impose fewer demands and at the same time provide more ready access to residential amenities like those gained with leisure homes, such as access to gardens and green spaces. Conceivably, a stronger

association will be found for people with their primary residences in urban areas with high population densities than for people living in less densely populated areas, other things being equal. This implies tests of cross-level interactions with hierarchical linear modelling.

Second, further studies should consider different representations of use. Distance between the primary residence and the leisure home is an instrumental variable that presumably affects use, and, fortunately, with geographical coordinates for both the primary and secondary residence, we can with quite high accuracy determine the distance between them. As noted, however, the effect of distance on use may not be simple, but rather multi-faceted.

Third, as with the characteristics around the primary residence that might have relevance for everyday demands and restoration opportunities, further studies should better characterize the socio-physical environment around the leisure home in order to capture possible variation in its restorative quality. The database we have been working with enables characterization in terms of some social and physical attributes (e.g., land use, neighborhood socioeconomic status, density of housing), but it lacks in others. Given the availability of geographical coordinates, however, it is possible to attach environmental information from geographical information systems to the individual cases. We are currently pursuing this with information on green space and other relevant land uses.

Conclusions

Beyond enhancing our understanding of the leisure home as a health resource, this line of inquiry offers a useful perspective on the residential context of health more generally. Given the means, people may distribute their time, energies, thoughts and emotions across multiple residences to take advantage of their respective benefits and offset their respective shortcomings. A second home may serve some health-promoting social and psychological functions better than the primary residence, and it is worth knowing why.

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