

ASSESSING THE PRIDE OF HOUSING OWNERSHIP OPTIONS AMONG OLDER ADULTS IN GEORGIA

Anne L. Sweaney, Yoko Mimura, Stephanie E. Vanderford, and Jaxk Reeves

Abstract

This experimental study involved the use of photographs of both single-family site-built and manufactured houses to determine if the knowledge that a certain house is manufactured would make older individuals feel less proud of living in such a house, compared to a single-family site-built house. Based on a total of 82 study participants, the findings of this pilot study suggested that when told the structure type of each house, participants were slightly less likely to choose a manufactured home as the house in which they would be the most proud to live. The researchers' difficulty in communicating the concept of "pride" to the study participants was discussed as well.

Introduction

Participants in this study assessed their relative level of pride by viewing photographs of manufactured and single-family site-built houses, in some cases with and in other cases without knowledge of the construction type corresponding to each picture. The primary goal of this experimental study was twofold: (a) to measure the relative level of pride that older Georgians would have by living in and owning manufactured housing, as compared to single-family site-built housing and (b) to determine whether the relative level of pride is affected by knowing that a particular home is called a manufactured home. The latter helps to address whether or not there is a bias against manufactured housing that is not based on the visual appeal of current manufactured homes but that still prevents potential home buyers from considering that housing type.

Anne L. Sweaney is Professor and Head and Yoko Mimura is Research Professional, Department of Housing and Consumer Economics, University of Georgia, Athens, GA; Stephanie E. Vanderford is Math Teacher, Providence Day School, Charlotte, NC; and Jaxk Reeves is Associate Professor, Department of Statistics, University of Georgia, Athens, GA. This project was funded by the University of Georgia's Institute of Gerontology and the Georgia Agricultural Experiment Station. We thank Yimei Cai for statistical consulting, and Mandi Colson, Carrie P. Eaves, Tommy Edwards, Deanne Smith, and Leigh Ann Wedekind for research assistance.

Older individuals were the focus of this research. Older Americans face unique housing conditions and needs that potentially could be met by manufactured homes. Manufactured homes are a particularly suitable housing type for older persons for at least two reasons. First, households headed by older individuals often have limited and fixed incomes. According to the 2000 Census, among Georgia households with a householder age 55 or older, 21% of those who owned their homes were cost burdened and 41% of those who rented were cost burdened, meaning they spent 30% or more of their income on owner costs or rent, respectively (U.S. Bureau of the Census, 2000a, 2000b). Even if older individuals live in expensive site-built homes that they own outright, they may not be able to afford property taxes and repairs. Selling their homes and moving into less expensive manufactured homes should increase their liquid assets and provide them more money for other living expenses.

Second, older people are more likely than younger people to live in substandard housing, such as housing with inadequate plumbing facilities (Gaberlavage & Blanchette, 1995). It is often difficult for older homeowners to maintain their homes due to limited physical and financial resources. Therefore, a new manufactured home could offer a higher level of quality than an older site-built home.

Housing types included in this study were limited to manufactured and single-family site-built because of the desire to focus on options for homeownership. Past research indicates that homeownership results in much greater pride in one's dwelling than does renting (Despres, 1991; Gunter, 2000; Rae, 1997). By omitting other, more commonly rented housing types such as apartments and retirement-community housing, the effect of tenure status on pride was controlled.

It was hypothesized that older Georgians would feel equal amounts of pride about the prospect of living in manufactured homes based only on the way the houses look, but that they would feel significantly less pride about living in manufactured homes once they knew how they were built. Such findings would indicate that education of community members about current manufactured housing might make more people willing to consider manufactured homes as a viable affordable homeownership option—for themselves and for their neighbors.

Literature Review

Manufactured housing refers to homes built after June 1976 in accordance with the U.S. Department of Housing and Urban Development (HUD) Manufactured Home Construction and Safety Standards Code, which is why they are often referred to as HUD-Code homes. A manufactured home is defined as a movable dwelling, eight feet or more wide and 40 feet or more long, that is designed to be towed on its own chassis, has transportation gear integral to the unit in place when it leaves the factory, and does not need a permanent foundation (Apgar, Calder, Collins, & Duda, 2002; Suchman, 1995). Recent research has compared both the cost and the quality of manufactured housing to site-built homes.

Regarding cost savings, as the prices of site-built houses rise, manufactured housing remains an affordable option to help more Americans become homeowners or remain homeowners. The results of a recent hedonic price comparison of manufactured homes and comparable site-built homes in the U.S. indicated that, on average, manufactured home prices are less than one third of site-built home prices, *ceteris paribus* (Vanderford, Mimura, & Sweaney, 2005). This study, which used a sample from the 2001 American Housing Survey, found that the values of manufactured and comparable site-built homes were very different, even when controlling for structural, neighborhood, and geographic features traditionally associated with home price variations.

Relatively new manufactured homes are of high quality; however, many individuals may not be aware of this fact. Since the early 1990s the trend for manufactured homes has been toward homes that are wider and longer. In addition, home buyers can choose plans with many options for altered or added exterior or interior features. As a result, manufactured homes are often barely distinguishable from site-built homes. In light of these industry changes, many studies have been conducted to compare various structural aspects in manufactured and site-built homes. For example, researchers at the University of Michigan reviewed many years' worth of past research on manufactured home quality and concluded that manufactured homes had essentially the same level of quality as site-built homes. The design and production inspection processes, as well as the building codes to which homes are built, were studied. No major quality differences were found between these regulations for site-built and manufactured homes. In fact, it was concluded that certain aspects of inspection processes and codes for manufactured homes were actually slightly stricter than those for site-built homes (Johnson, 1993).

Many older Georgians currently benefit from the cost advantages and quality trends of manufactured housing. In 2000 over 71,000 Georgia households with householders age 55 or older lived in manufactured or mobile homes that they owned (U.S. Bureau of the Census, 2000c). However, potentially larger numbers of older Georgians could benefit from the opportunity to purchase manufactured housing if it were not for the obstacles that exist in many communities. One of the barriers to greater consumer acceptance of manufactured housing is the negative perception of it, which often exists because manufactured homes are associated with older trailers or mobile homes. Although only those homes built before June 1976 are officially *trailers* or *mobile homes*, many people still use those terms to refer to manufactured homes. After studying perceptions of manufactured homes in Virginia, one group of researchers (Beamish, Goss, Atilas, & Kim, 2001) concluded that the poor views that community members held about manufactured homes were likely to be based on images of older trailers and mobile homes, especially because modern manufactured homes often are not easily distinguishable from site-built homes. Partially as a result of such negative perceptions and the misconceptions of community leaders and

government officials, zoning ordinances forbidding manufactured housing exist in many communities (Hood, 1998; Overend, 1998).

Although much research has been done regarding *satisfaction* and *perceptions*, little has been done on the topic of *pride* in one's home. Past research has focused on residents' levels of satisfaction with their homes (Paulus, Nagar, & Camacho, 1991) and on individuals' perceptions of different types of housing (Beamish et al., 2001; Devlin, 1994). However, pride certainly seems to be another important concept that captures something different than satisfaction or perceptions. Weber (1999) wrote, "Attractive, well-built homes give residents of any socioeconomic level a sense of individuality and pride" (p. 121). Therefore, if manufactured homes are attractive and of high quality, individuals should feel proud of the prospect of living in such houses. However, the relative level of pride felt about two or more houses may be affected by physical characteristics such as the number of rooms (Gunter, 2000). Determining whether or not the construction type alone is a feature that affects pride was an aim of this research.

Study Design and Procedure

First, photographs and price information were obtained for four houses in one metropolitan area in Georgia. All four houses are non-brick, single-story, detached homes with front porches. Two of the houses are modern manufactured homes; the other two are single-family site-built homes. They all have sales prices comparable to each other, ranging between \$100,000 and \$135,000 as of Spring 2005. Each house was photographed from a slight angle from the front.

Second, 82 older adult participants (at least 55 years old) were recruited for this study at three facilities in the same city in Georgia. These facilities are two retirement communities and a recreational facility. At all three facilities flyers were posted in advance of the experiment date(s), and individuals were able to sign up to participate. Individuals who did not sign up in advance were still allowed to participate (however, at one facility some people were turned away to prevent the sample size from that facility from being too large). At both retirement communities, interviews were conducted on two different days; one session was conducted at the recreational facility. Altogether there were five interview sessions.

The Solomon four-group factorial experimental design was used for this research. The primary advantage of using this experimental design is that it eliminates the possibility of interaction between the testing (ranking of houses) and the treatment (being told the houses' structural types). At each interview session the volunteer participants were randomly assigned to four groups, as shown in Figure 1. Each group consisted of approximately 20 individuals in total, from all five interview sessions. The overall sample size was based on the assumption that approximately 80% of the participants would change their ranking order between the pretest and the posttest, the use of a 95% confidence interval level, and the desire to have the minimum required sample for this pilot study.

Group	Pretest	Treatment	Posttest
1	Yes	Yes	Yes
2	Yes		Yes
3		Yes	Yes
4			Yes

Figure 1. Experimental Design

Three stages—the pretest, the treatment, and the posttest—are part of the Solomon four-group design, but only one group experiences all three stages. *Pretest* and *posttest* refer to the actual rating of pride level by the participants upon viewing the home pictures and with knowledge of the sales price range for the houses. Note that only Groups 1 and 2 were pretested, but all groups were posttested. The treatment in this study was the explanation about construction type, which was only given to the individuals in Groups 1 and 3. The purpose of the treatment was to find out whether or not learning that a manufactured home is, indeed, a manufactured home would make a difference in the pride level ranking by the study participants. Finally, all participants were asked to provide some basic demographic information as well as information about which types of housing they had lived in throughout their lives.

Results

Demographic and housing history information about the participants is summarized in Table 1. Most participants were White females who had lived in houses and apartments over the course of their lives. In addition, the mean age was about 77; the minimum was 55 and the maximum was 95.

Table 1. Descriptive Statistics of Participants

Variable	Answered Yes	Answered No
	Percent	
Female	74.39	25.61
White ¹	87.80	12.20
Have ever lived in:		
a house?	100.00	0
an apartment?	89.02	10.98
a mobile home? ²	23.17	76.83
a duplex?	18.29	81.71
a condominium?	14.63	85.37
a trailer? ²	14.63	85.37
a townhouse?	8.54	91.46
a manufactured home? ²	6.10	93.90

¹ All participants identified themselves as either White or Black.

² Three participants said they had lived in a mobile home, a trailer, and a manufactured home. Nine other participants indicated that they had lived in two of the three (mobile home, trailer, and manufactured home).

Posttest results are the focus of the analysis for Solomon four-group experiments. The posttest ranking orders were examined as follows. There were 24 possible orders of houses, among which 14 were actually observed in the 82 participants' responses. These 14 could then be reduced to six patterns of ranking site-built and manufactured homes, without distinguishing between the two site-built homes or the two manufactured homes. The ranking orders are shown in order of popularity in Table 2.

Table 2. Pride Rankings

First Choice	Second Choice	Third Choice	Fourth Choice	Number of Participants
Site-built	Site-built	Manufactured	Manufactured	50
Site-built	Manufactured	Site-built	Manufactured	17
Manufactured	Site-built	Site-built	Manufactured	6
Site-built	Manufactured	Manufactured	Site-built	5
Manufactured	Site-built	Manufactured	Site-built	3
Manufactured	Manufactured	Site-built	Site-built	1
Total				82

The main analysis examined the first house choice by focusing on whether or not the house that the participants would feel most proud of living in and owning was manufactured or site-built. Based on the counts in Figure 2, 72 participants chose a site-built house as the house they would feel the most proud of living in. The remaining 10 participants chose a manufactured house.

The specific question asked to motivate the analysis was: Could the 72/10 ratio of choosing site-built homes over manufactured homes be explained by either the treatment or the pretest? The ordinary logistic regression model used to answer this question was:

$$\ln(P/Q) = B_0 + B_1 * Treatment + B_2 * Pretest$$

where P = Probability that the participant ranks a site-built home first,

$$Q = 1 - P,$$

$Treatment = 1$ if participant was in the treatment group (0 otherwise), and $Pretest = 1$ if participant was in the pretest group (0 otherwise).

The effect of the pretest ($Pretest$) was not significant. As a result, $Pretest$ was eliminated and the following model was tested:

$$\ln(P/Q) = B_0 + B_1 * Treatment.$$

The coefficient estimates were $B_0 = 1.4171$ and $B_1 = 1.5533$. Although not strongly statistically significant ($p = .0598$), the direction of coefficient B_1 supports the hypothesis that the participants in the treatment groups were more likely than those in the control groups to have claimed that they would feel most proud of living in one of the site-built homes.

Differently stated, 33/41 (80.5%) of the control group indicated a site-built house would give them a higher level of pride, while 39/41 (95.1%) of the treatment group did so (Table 3). This increase results in a p-value of only 6%, not quite extreme enough to be significant.

Table 3. Reduced Pride Rankings

Received Treatment	Structural types ranked the highest		Total
	Site-built	Manufactured	
No (Groups 2 and 4)	33	8	41
Yes (Groups 1 and 3)	39	2	41
Total	72	10	82

Summary and Discussion

The experiment conducted on a diverse group of older adults from one city in Georgia showed that, overall, these participants would feel more proud of living in and owning site-built homes than manufactured homes. When the structure type of manufactured homes was explained, the participants were somewhat less likely to indicate that one of the manufactured homes would give them the highest pride.

Although the results slightly supported the hypothesis, the study has some limitations. First, a larger sample size would enable the analyses to be more powerful. A larger sample size would also allow control variables, such as interview site, gender, age, and race/ethnicity, to be included in the model. Knowledge gained during this study will be used to conduct a larger study on a different population, possibly a younger generation because they are more likely to purchase a home in the future and are also likely to face affordability challenges.

A second limitation of this research deals with the difficulty in operationalizing *pride*. During some interviews, participants implied that they were basing their ranking on preference or convenience (for instance for a physically impaired older person) rather than on pride. In some such instances, the interviewers emphasized that the choice should be made based on pride, not preference or convenience. But such an emphasis was not made to all participants. In some cases interviewers hesitated to deviate from the interview protocol, and in other cases participants did not reveal the basis for their decision until after the experiment session concluded. The lack of a clear explanation of what was meant by pride, as well as the interviewers' inconsistencies in regard to clarifying the definition, may have created a bias. In future research, the operational definition of *pride* should be more explicitly stated and clarified for participants.

Lastly, the question remains as to why the non-treatment groups' preference rate was not closer to 50%. There was "something" in the photograph of at least one of the manufactured homes that made it look worse (less prideful) than the

other houses, which clearly affected the rankings. If 80% of the people thought that house gave the least level of pride anyways, it would be difficult to detect much change unless the sample size in the two groups was much larger than was the case in this study. One could conduct the final study with the same photographs using a much larger sample. However, a more efficient design would be to utilize four photographs (two site-built and two manufactured) which seem almost uniformly preferred by non-treated individuals, so that the probability of ranking either type is 50% when not given the treatment. Then it could be possible to see if this percentage rises significantly for treated individuals.

Manufactured housing remains an affordable option to help more people realize their dream of homeownership. However, negative perceptions of manufactured housing and zoning barriers often prevent them from selecting this housing option. This pilot study found some evidence of this. Further research may develop solutions for improving the social acceptance of manufactured housing.

References

- Apgar, W., Calder, A., Collins, M., & Duda, M. (2002, September). *An examination of manufactured housing as a community- and asset-building strategy* (Report to the Ford Foundation). Washington, DC: Neighborhood Reinvestment Corporation.
- Beamish, J. O., Goss, R. C., Atilas, J. H., & Kim, Y. (2001). Not a trailer anymore: Perceptions of manufactured housing. *Housing Policy Debate, 12*, 373-392.
- Despres, C. (1991). The meaning of home: Literature review and directions for future research and theoretical development. *The Journal of Architectural and Planning Research, 8*(2), 96-115.
- Devlin, A. S. (1994). Children's housing style preferences: Regional, socioeconomic, sex, and adult comparisons. *Environment and Behavior, 26*, 527-559.
- Gaberlavage, G., & Blanchette, K. (1995). *State housing profiles*. Washington, DC: AARP.
- Gunter, B. (2000). *Psychology of the home*. London: Whurr Publishers.
- Hood, J. (1998). Factory-built housing: The path to ownership? *Consumers' Research Magazine, 81*, 15-18.
- Johnson, R. (1993). *Manufactured housing quality*. Ann Arbor, MI: University of Michigan, College of Architecture and Urban Planning.
- Overend, R. (1998, August). An old warrior finds new battlegrounds. *Manufactured Home Merchandiser, 26-40*.
- Paulus, P. B., Nagar, D., & Camacho, L. M. (1991). Environmental and psychological factors in reactions to apartments and mobile homes. *Journal of Environmental Psychology, 11*, 143-161.

- Rae, R. A. (1997). Ownership and equity: Perceptions of home ownership by low income owners of limited equity cooperative housing. *Dissertation Abstracts International, Section A: Humanities & Social Sciences*, 58(5-A), 1941.
- Suchman, D. R. (1995, March). *Manufactured housing: An affordable alternative* (Working Paper). Washington, DC: The Urban Land Institute.
- U.S. Bureau of the Census. (2000a). Table H71: Age of householder by gross rent as a percentage of household income in 1999. *Census 2000: Summary File 3 (SF 3) Sample Data*. Retrieved September 7, 2005, from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000b). Table H96: Age of householder by selected monthly owner costs as a percentage of household income in 1999. *Census 2000: Summary File 3 (SF 3) Sample Data*. Retrieved September 7, 2005, from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- U.S. Bureau of the Census. (2000c). Table HCT4: Tenure by age of householder by units in structure. *Census 2000: Summary File 3 (SF 3) Sample Data*. Retrieved September 7, 2005, from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_lang=en
- Vanderford, S. E., Mimura, Y., & Sweaney, A. L. (2005). A hedonic price comparison of manufactured and site-built homes in the non-MSA U.S. *Journal of Real Estate Research*, 27(1), 83-104.
- Weber, C. (1999, July). House proud. *Builder*, 121-128.