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Age, Plans to Move, and Perceptions of Collective Efficacy

Wesley B. Jeffrey

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of

Master of Science

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## ABSTRACT

### Age, Plans to Move, and Perceptions of Collective Efficacy

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There is a growing recognition that to more fully understand the complex dynamics of neighborhoods and communities, we must effectively link the micro- and macro-level dimensions of community processes. As important as collective efficacy at the macro level has been shown to be, literature looking at factors shaping the individual-level experience is relatively scarce. Since the latent community attribute of collective efficacy is largely measured as a function of individual perceptions, understanding what affects the individual is vital, especially in light of within-neighborhood heterogeneity. In this study, I use insights from social disorganization theory, the systemic model to community attachment, and a life-course perspective in order to examine *why* age is associated with perceptions of collective efficacy. Utilizing Wave 1 L.A.FANS data (N=2,619), results show that age is positively associated with perceptions of collective efficacy, but that this relationship is indirect, with plans to move as the key mediator between age and perceptions of collective efficacy. Surprisingly, other factors linked to social disorganization theory and the systemic model of community attachment are not important for explaining the age relationship. Overall, this study takes the next step at identifying significant predictors of individual perceptions of collective efficacy both from the structural macro-level perspective and the individual micro-level perspective. Additionally, this analysis adds another urban context to the literature by analyzing Los Angeles County, a distinct area from those most looked at in previous studies.

Keywords: collective efficacy, social disorganization theory, systemic model of community attachment, age, life-course perspective

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## Age, Plans to Move, and Perceptions of Collective Efficacy

There is a growing recognition that to more fully understand the complex dynamics of neighborhoods and communities, we must effectively link the micro- and macro-level dimensions of community processes (Sampson 1991). An important macro-level change taking place in the United States, as well as around the world, is population aging driven primarily by rising longevity and falling fertility rates (Lee and Mason 2010; Oeppen and Vaupel 2002; Ortman, Velkoff, and Hogan 2014; Rowe 2009; Schoeni and Ofstedal 2010; Wise 1997). At the micro-level, then, greater longevity (and a larger older population) begs the question of how age is related to community dynamics (Schoeni and Ofstedal 2010; Wise 1997).

One fruitful avenue for studying community dynamics, bridging the fields of sociology and social psychology, has been the identification of the construct called collective efficacy. Collective efficacy is a latent community attribute—as well as a task-specific construct—that combines dimensions of informal social control and social cohesion or trust (Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997). Through a shared willingness to take action that is based on mutual trust (Kubrin and Weitzer 2003), a community is able (or unable) to interact effectively with one another in order to prevent undesirable social outcomes such as crime and violence (Sampson et al. 1999). Thus, higher levels of neighborhood collective efficacy are associated with improved health outcomes, lower levels of violence and crime, and greater satisfaction of residents (Ahlin 2010; Burchfield and Silver 2013; Cohen et al. 2006; Mazerolle, Wickes, and McBroom 2010; Sampson 2012; Sampson et al. 1997).

As frequently measured, collective efficacy aggregates the individual perceptions of a sample of the neighborhood in order to construct an overall score. Consequently, higher scores of the individual residents that live within a neighborhood correspond with a higher aggregate score for the neighborhood. In a number of studies, individual age has been positively associated with

perceptions of collective efficacy (Duncan et al. 2003; Fernández-Ballesteros et al. 2002; Sampson et al. 1997; Oh 2003; Oh and Kim 2009; Mazerolle et al. 2010; Wickes et al. 2013), although until now it has been unclear why this is the case.

In this study, I utilize insights from social disorganization theory, the systemic model to community attachment, and a life-course perspective in order to examine why age is associated with perceptions of collective efficacy (Kasarda and Janowitz 1974). Specifically, I focus on proximal factors that would seem to correspond with certain life stages (as well as transitions) in an individual's life, and subsequently, how patterns and events surrounding those stages would explain why age affects perceptions of collective efficacy. By doing this, we can better understand some of the factors that affect perceptions of neighborhood collective efficacy, through the lens of age.

Thus, this study adds to the literature of community processes by focusing on one individual characteristic (albeit socially influenced) that is becoming more salient in policy discussions, namely that of age. Moreover, this study takes the next step at identifying significant predictors of individual perceptions of collective efficacy both from the structural macro-level perspective (Sampson and Groves 1989; Shaw and McKay 1969) and the individual micro-level perspective (Collins, Neal, and Neal 2014; Fernández -Ballesteros et al. 2002; Markowitz et al. 2001; Oh and Kim 2009; Wickes et al. 2013). Lastly, this analysis adds another urban context to the literature by analyzing Los Angeles County compared to other similar studies that have mostly looked at Chicago (Sampson 2012; Sampson and Groves 1989; Sampson et al. 1997) and rural areas (Cope et al. 2016; Flaherty and Brown 2010); all which may have distinct underlying community processes.

## BACKGROUND

Within the field of criminology, collective efficacy is measured as the aggregate of individual perceptions of their neighborhood's capacity to effectively exercise informal social control of children (Sampson 2012; Sampson and Grove 1989; Sampson et al. 1997). Informal social control, in turn, generally refers to the willingness of residents to intervene or otherwise manage disorder-related problems that affect the area, in a personal or group context (Bursik 1988; Taylor 1996). The basis for this measurement strategy emerged largely through the studies of Bandura (1982; 1998; 2000) who stated that the best way to study collective efficacy, when there is a significant amount of interdependence needed to accomplish a group achievement, is to aggregate individual evaluations of the group's collective capabilities. Researchers acknowledge that individual perceptions vary between and even within neighborhoods (Sampson 2012; Sampson et al. 1997). However, this study adds to the literature on collective efficacy by making individual perceptions the focal point, and examining one significant predictor, that of age.

In order to examine the effects of age on perceptions of collective efficacy, I draw upon a number of theories relevant for this analysis, such as the theory of social disorganization and the systemic model of community attachment. Social disorganization refers to the inability of local communities to realize the common values of their residents or solve commonly experienced problems, and gives rise directly and indirectly to crime rates (Bursik 1988; Kubrin and Weitzer 2003; Taylor 1996; Warner and Rountree 1997). According to social disorganization theory, as a macro-level process, crime and delinquency rates for a neighborhood are the result of three structural factors: low economic status, ethnic heterogeneity, and residential mobility (Kubrin and Weitzer 2003; Sampson and Groves 1989; Shaw and McKay 1969). Specifically, this theory posits that poverty influences residential instability and ethnic heterogeneity, which both in turn inhibit the formation of durable social ties, weaken community attachments, and make it hard to

implement shared goals (Browning 2002; Sampson 1991; Sampson et al. 1999). Furthermore, crime and the neighborhood fear it provokes, are powerful forces in decreasing local community bonds (Fischer 1982; Sampson 1988). Thus, the theory of social disorganization predicts that poverty, ethnic heterogeneity, and residential mobility lead to higher rates of crime at the macro level (Warner and Rountree 1997), and therefore, higher fear of crime and victimization at the individual level (Brunton-Smith and Sturgis 2011; Gates and Rohe 1987; McGarrell, Giacomazzi, and Thurman 1997; Skogan and Maxfield 1981; Taylor 1996; Taylor 2001).

The systemic model of community attachment views the neighborhood as a complex system of friendship and kinship networks, and formal and informal associational ties, which form the ecological structure to the community and affect a community's capacity to enact social control (Berry and Kasarda 1977; Duncan et al. 2003; Kasarda and Janowitz 1974; Sampson 1991; Sampson and Groves 1989). In addition, the systemic model focuses on length of residence as the key exogenous factor that influences attitudes and behavior toward the community (Kasarda and Janowitz 1974; Sampson 1988). Thus, the systemic model can be seen as an extension of social disorganization theory, in that macro-structural processes affect social ties and attachment at the micro level both directly and indirectly (Kubrin and Weitzer 2003; Warner and Rountree 1997). Specifically, poverty, residential mobility, and racial or ethnic heterogeneity at the macro level, affect friendship and acquaintanceship networks at the micro level (Warner and Rountree 1997), which in turn affect individual attachment to the community (Sampson 1991). And those attached to the community are more likely to get involved in community affairs—a representation of more formal ties (Flaherty and Brown 2010; Kasarda and Janowitz 1974)—as research shows that length of residence significantly increases participation in every type of community involvement (Sampson 1988).

## AGE AND PERCEPTIONS OF COLLECTIVE EFFICACY

In this analysis, I combine social disorganization theory and the systemic model of community attachment, with a life-course perspective, in order to account for age. For some, the age variable stands as a proxy for diverse phenomena, namely biological maturation, psychological development, membership in larger social categories, or life stage (Carstensen 1995; Mortimer and Shanahan 2003; Santrock 2011; Settersten Jr. 2003; Settersten Jr. and Mayer 1997; Wohlwill 1969). Others similarly outline that age should be viewed chronologically as a developmental index, historically in light of macro-level changes affecting distinct birth-year cohorts (Elder Jr. 1975; Elder Jr. 1994; Elder Jr. and Rockwell 1979; Hareven 2001), or socially as an identifier for certain behavioral patterns representing social roles, timetables, and transitions (Ferraro 2001). In this analysis, I focus on age in the latter form and its relation to normative life transitions within the life-course literature.

By a life-course framework, I refer to the content, timing, and sequencing of stages or phases in the process of maturation (O’Rand and Krecker 1990). Moreover, a life-course perspective focuses on age-differentiated, socially recognized, sequences of transitions, and the personal and social consequences associated with those transitions (Ferraro 2001; George 1993; Rossi 1980). Within each stage—from one normatively governed transition to another—particular roles are assigned to individuals that shape their behavior (George 1993).

In essence, a life-course perspective would predict that age stands as a proxy for certain behavioral and cognitive patterns associated with normative experiences over time (George 1993; O’Rand and Krecker 1990; Rossi 1980). In other words, age acts as a heuristic for the types of activities people of a given life stage carry out, on average. In turn, those activities shape perceptions—and perceptions also shape activities—and in this case, lead to an overall view of the neighborhood’s social cohesion and social control. Consequently, attributes associated with

particular age groups, as well as perceptions of collective efficacy, would shed light on why age is related in this way.

Overall, then, it seems that thinking about the aging process, and its relationship to particular life stages (Settersten Jr. 2003; Settersten Jr. and Mayer 1997), can help identify potential mediating mechanisms between age and perceptions of collective efficacy. Namely, age and its relation to certain life-course changes (Carstensen 1995; George 1993), highlight ways in which social disorganization theory and the systemic model of community attachment can affect perceptions of collective efficacy. For example, since age is associated with social ties (Sampson 1991), and social ties are associated with perceptions of collective efficacy (Collins et al. 2014), then the relationship between age and perceptions of collective efficacy may be mediated through social ties.

#### *Potential Mediating Mechanisms*

The factors I focus on in this study are fear of crime and prior victimization, civic engagement, social ties, and physical attachment. By utilizing these factors in this analysis, as well as neighborhood-level control variables, I am able to combine aspects of social disorganization theory, the systemic model to community attachment, and a life-course perspective. From social disorganization theory and its effects at the individual level, fear of crime and prior victimization are analyzed in relation to age and perceptions of collective efficacy. From the systemic model of community attachment, civic engagement—which is a behavioral correlate of attachment (Taylor 1996)—is analyzed in relation to age and perceptions of collective efficacy; social ties and physical attachment are also looked at with this model.

### *Fear of Crime and Prior Victimization*

Studies show that fear of crime will play a crucial role in weakening social interactions, as well as social cohesion and trust (Markowitz et al. 2001; Oh and Kim 2009) through its effects on local friendships (Fischer 1982). Fear of crime also depresses attachment and local community bonds (Sampson 1991), as well as participation in local community life (Kubrin and Weitzer 2003; Liska and Warner 1991; Sampson 1988; Skogan 1986), presumably by decreasing a person's desire to interact with others.

Fear of crime and age has revealed mixed results among researchers. Most research finds that older people feel higher fear of crime, or in other words, are more fearful than younger people (Lagrange and Ferraro 1989; Gibson et al. 2002; Oh and Kim 2009), likely because of greater perceived vulnerability as one ages (Brunton-Smith and Sturgis 2011; Skogan and Maxfield 1981). However, one study reveals that after controlling for demographic differences, younger people reported greater fear of crime than older persons (Lagrange and Ferraro 1989).

Fear of crime is often cited in its relation to prior or expected victimization (Skogan and Maxfield 1981). Although, personal and family victimization has been shown to increase fear (Markowitz et al. 2001; Skogan 1987; Skogan and Maxfield 1981), some critics state that we should have little faith in prior victimization as a determinant of fear of crime. This is because those who are the most likely to be victimized (i.e. younger males) may have less fear of crime (Gibson et al. 2002), while older individuals (especially females) tend to experience fewer incidents of victimization but may experience higher fear of crime (Garofalo and Laub 1978; Lagrange and Ferraro 1989; McGarrell et al. 1997). Consequently, victimization and fear of crime seem to be independent of one another and ultimately are either unrelated or marginally related to the other (Gates and Rohe 1987; Liska, Sanchirico, and Reed 1988).

### *Civic Engagement*

Research suggests that participation in a local organization promotes collective efficacy and a heightened sense of community (Gibson et al. 2002; Ohmer 2007; Sampson et al. 1997). Furthermore, prevention and intervention studies show that civic engagement in community-based activities can lead to more collective efficacy as well as individual perceptions of collective efficacy (Collins et al. 2014). According to a national survey those most likely to participate in a neighborhood watch program (e.g., community-based activity) are white, have middle or upper class incomes, are homeowners, and have lived at their address for at least five years (Rosenbaum 1987). Yet in every form of community involvement, individual-level length of residence significantly increases participation (Sampson 1988).

When looking at age and its relationship to civic participation, it seems that volunteer service increases with age until mid-life and then it begins to decrease as the individual reaches older adulthood (Jennings and Stoker 2004; Van Ingen 2008). In specific, life-cycle theory argues that patterns of civic engagement arise once individuals have settled into adult roles, such as steady jobs, marriage, and parenting, which in effect build up one's stake in community affairs (Flanagan and Levine 2010; Rotolo 2000).

### *Social Ties*

When addressing social ties, we refer to both family or kinship ties as well as neighboring or friendship ties. Research has shown that residents with greater bonding social capital are more likely to report higher levels of collective efficacy (Collins et al. 2014). Further studies confirm this finding and state that individual-level social ties is positively related to perceptions of collective efficacy. In particular, social integration has the most important effect on individual perceptions of collective efficacy (Gibson et al. 2002; Wickes et al. 2013).

Research regarding age and social ties finds that as people get older the number of local friends fall, but their dependency on social contact is greater (Oh 2003; Oh and Kim 2009). Similarly, socio-emotional theory predicts that over the life course, the regulation of emotion becomes increasingly salient meaning that individuals will seek out more meaningful relationships (Carstensen 1995). This may help explain why even as older person's desire to seek out unfamiliar contacts decreases, their personal neighbor network is still positively associated with their age. In specific, the number of neighbors named, length of relationships, and number of contacts per year is positively associated with age (Oh 2003; Oh and Kim 2009). In other words, age is positively associated with friendships and acquaintanceships in the community (Sampson 1991).

#### *Physical Attachment*

In this study, I investigate the construct of physical attachment (Hidalgo and Hernandez 2001), or neighborhood "rootedness", by incorporating length of residence, homeownership, and plans to move, as defined by Riger and Lavrakas (1981). In accordance with the systemic model to social bonding, length of residence (or low mobility) and homeownership have been shown to be associated with higher levels of collective efficacy (Mazerolle et al. 2010; Sampson et al. 1997), most likely because homeowners have a shared financial interest in supporting neighborhood life (Sampson et al. 1999). Other research, however, suggests that homeownership status is not a significant predictor of perceptions of collective efficacy after controlling for other demographic characteristics (Collins et al. 2014). Plans to move captures a more affective dimension of community physical attachment (Flaherty and Brown 2010) and, according to the systemic model, as well as the idea of a community of "limited liability", suggests that individuals may have reduced attachment as demonstrated by a desire to leave (Janowitz 1967;

Kasarda and Janowitz 1974; Taylor 1996). Much of the research that has looked at similar concepts as plans to move, utilize questions that ask how sorry an individual would be to leave the area (Kasarda and Janowitz 1974; Mesch and Manor 1998; Brown, Perkins, and Brown 2003). However, past empirical research has not directly analyzed the relationship between plans to move and perceptions of collective efficacy.

As life-cycle theory predicts, age overall is inversely related to mobility, indicative that “life cycle transition points appear to delineate normative events that are related to subsequent residence changes” (Yee and Van Arsdol 1977:218). In other words, mobility decreases with increasing age (Speare 1970), except for a potential uptick starting around the age of retirement (Rogers 1988). With respect to homeownership, research shows it increases with age (Gyourko and Linneman 1997). Plans to move, or the similar concept of regret leaving the local community, are affected most by length of residence but also advanced life-cycle stage (Kasarda and Janowitz 1974), meaning age is positively associated with physical attachment to the neighborhood (Hidalgo and Hernandez 2001; Riger and Lavrakas 1981).

[Insert Figure 1 here]

In sum, Figure 1 above presents the conceptual model for this study.

Overall, this investigation has three main objectives: 1) to analyze the relationship between age and the key theoretical factors of collective efficacy outlined above, 2) to explore the potential mediating role of these factors for the relationship between age and perceptions of collective efficacy, and 3) to identify the significant predictors of perceptions of collective efficacy both at the macro and micro levels.

## DATA AND METHOD

### *Data*

Data for this study come from Wave 1 of the Los Angeles Family and Neighborhood Survey (L.A.FANS) carried out from April 2000 to January 2002 (see Table 1) (Peterson et al. 2004). Additionally, analyses in this study incorporated public and restricted versions of the data in order to account for information at the census-tract level. L.A.FANS gathered a variety of personal information from residents of Los Angeles County, which included their perceptions of their neighborhoods. In order to get this information, this project utilized a stratified random sample design composed of 65 neighborhoods located in Los Angeles County.<sup>1</sup> Using three-stage strata, researchers interviewed over 2,600 Los Angeles adult residents representing all of Los Angeles County.<sup>2</sup> Information was collected from respondents using a computer-assisted interview process (in English and Spanish), and included various modules designed to be answered by individuals pertinent to the questions being asked in those modules.

### *Measurement*

For this study, a predicted latent measure of collective efficacy (at the individual level) was constructed combining two separate dimensions: social cohesion/trust and informal social control (Sampson 2012; Sampson et al. 1997). These combined dimensions were developed through the use of multiple five-item Likert scale questions. Respondents rated their agreement from (1) strongly disagree to (5) strongly agree with respect to questions pertaining to social

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<sup>1</sup> For purposes of this project, an oversampling took place of tracts that were defined as poor and very poor using 1997 state and county administrative data. This study also oversampled households with children.

<sup>2</sup> For this project, 777 households without children were selected, with 90% of the Randomly Selected Adults (RSA) from these households having completed the adult module. An additional 2,308 households with children were selected. Of these 2,308 households, 1,119 were households where only an RSA was selected and the completion rate for these respondents was 78%. The remaining 1,189 households had an RSA who was also the Primary Caregiver (PCG). The completion rate for these cases was 89%.

cohesion and trust. Sample items include: “This is a close-knit neighborhood”, “People in this neighborhood can be trusted”, and “People are willing to help neighbors.” In order to make up the informal social control dimension, respondents rated the likelihood from (1) very unlikely to (5) very likely that their neighbors would act if they were in one of three situations: “Neighbors do something if kids hang out”, “Would do something if kid does graffiti”, and “Would scold kid if showing disrespect.” Answers to both dimensions of collective efficacy were combined into one composite factor utilizing factor analysis.<sup>3</sup> Because the construct of collective efficacy incorporates two separate dimensions already developed in the literature, it seemed that a principal factor (PF) analysis to get the factor loadings was best suited for this measure (Acock 2008).<sup>4</sup>

#### *Control Variables*

In an effort to approximate key life stages (Kasarda and Janowitz 1974), in all models, *age* was collapsed into four categories (17-34, 35-49, 50-64, 65+) (Oh 2003) where the youngest group is compared to the other three age groups. These cutoffs roughly correspond with (estimated) life-course stages: emerging (20s) and early adulthood (30s); middle adulthood (40s-50s); and late adulthood (65+) (Santrock 2011). Analyses controlled for *marital status* (married =1; not married =0), *sex* (male=1; female=0), *race*, collapsed into three categories (Latino=1; white=2; other=3) with Latino as the reference group, and *employment status* (currently employed=1; not currently employed=0). *Education* is a continuous variable indicating years of school completed ranging from (none =0) to (graduate or professional degree =19). *Family income* indicates the actual family earned income. *Health* is a recoded dichotomous measure

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<sup>3</sup> As a regular index measure, however, the eight items can be combined to form a summary scale with a Cronbach’s alpha of .78.

<sup>4</sup> Only one factor was retained based on the standard Eigenvalue cutoff of  $\geq 1$  (Hoffmann 2016).

indicating if the respondent perceives they are healthy or not overall (healthy=1; not healthy=0). I also control for *neighborhood definition*, which asks the respondent when talking about the neighborhood, do they mean: (1) “The block or street you live on”, (2) “Several blocks or streets in each”, (3) “Area within a 15-minute walk”, or (4) “Area larger than a 15-minute walk”.

### *Key Theoretical Factors*

To incorporate theoretically relevant factors, two separate variables were used as indicators for prior victimization and fear of crime. *Fear of crime* was measured using the individual’s response to the question, “How safe is it to walk around alone?” (Gibson et al. 2002; Oh and Kim 2009). Respondents rated their response from (1) completely safe to (4) extremely dangerous. *Prior victimization* was measured by whether the household has been robbed or not in the respective neighborhood (robbed =1; not robbed=0). Civic engagement was measured using two separate variables: *neighborhood block meeting* participation and participation in *volunteering in a local organization* (participated=1; did not participate=0). Social ties was measured by two distinct aspects: one is *family ties* which indicates the response to “# of relatives living in neighborhood” and was coded from (1) none to (4) most or all; and *friendship ties* which indicates the response to “# of friends living in neighborhood” also coded from (1) none to (4) most or all. Physical attachment was measured using three separate variables: *length of residence* is a continuous measure representing the number of years at the current address, *homeownership status* was recoded into a dichotomous measure indicating whether the respondent either owned or rented their property (own=1; rent=0), and *plans to move* indicates if the respondent plans on moving in the next year or two (yes=1; no=0).

### *Neighborhood-Level Variables*

To control for specific neighborhood contextual effects, and to account for the different types of neighborhoods individuals live in, five neighborhood-level measures were utilized. Most neighborhood-level variables come from the Los Angeles Neighborhood Services and Characteristics Database (L.A.NSC) provided by L.A.FANS as a contextual addition specifically for multilevel models.<sup>5</sup> Thus, *neighborhood racial/ethnic composition* is a categorical measure that indicates the racial/ethnic mix of a neighborhood. It was coded (predominantly white=1; high Asian/Pacific Islander=2; Latino & black=3; predominantly Latino=4; white & other=5)<sup>6</sup>, with predominantly white as the reference group, and applies to one aspect of racial or ethnic heterogeneity (Kubrin and Weitzer 2003; Sampson and Groves 1989; Shaw and McKay 1969). *Percent foreign born* is the other aspect of neighborhood racial or ethnic heterogeneity, and is a continuous measure specifying the percent of the census tract that was born outside the United States. *Percent low-income* is a continuous measure indicating the percent of the census tract considered to be in poverty. *Residential stability* (i.e., reverse of residential mobility) is a continuous measure representing the percent of the census tract occupying the same dwelling for at least five years. Lastly, *percent owner* is a continuous measure indicative of the percent of dwellings that are owner-occupied.

### *Missing Data*

To deal with missing data in this study, I utilized multiple imputation with twenty imputed data sets. Although most measures have less than five percent missing, family income is

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<sup>5</sup> As outlined in the L.A.NSC published report, the neighborhood-level variables come from the 2000 Census Summary File 3 (SF-3) which contains social, economic, and housing characteristics from a sample of households that received the long-form questionnaire (Peterson, Pebley, and Sastry 2007).

<sup>6</sup> These categorical separations and definitions utilize those provided in the L.A.FANS Wave 1 Codebook and public-use dataset (See report for further details).

missing on over a quarter of the respondents. Supplementary analyses did not seem to indicate any systematic nature to those who did not provide a response to family income. Thus, multiple imputation, which assumes missing at random, was incorporated to make use of all available data for this analysis. In essence, as White, Royston, and Wood (2011) summarize:

[Multiple imputation uses] the distribution of the observed data to estimate a set of plausible values for the missing data. Random components are incorporated into these estimated values to reflect their uncertainty. Multiple data sets are created and then analyzed individually but identically to obtain a set of parameter estimates. Finally, the estimates are combined to obtain the overall estimates, variances and confidence intervals (P. 377).

### *Analytic Strategy*

To accomplish the first objective, age and its relation to key theoretical components of perceptions of collective efficacy is explored at the bivariate level. This is performed in order to examine if age is significantly related to these factors for the Los Angeles population. Because these tests are done at the bivariate level, cross-tabulations with a chi-squared test and an ANOVA test of means are utilized for almost all relationships. Whether a relationship is considered significant or not is determined using the p-value measure threshold; ( $p < .05$ ) signifies that the relationship is significant.

In this analysis, I focus on the proximal factors that would seem to mediate the relationship between age and perceptions of collective efficacy. However, since micro- and macro-level factors affect individual perceptions of collective efficacy (Logan 2012), I control for neighborhood level characteristics that could directly or indirectly impact individual perceptions using multilevel regression—alternatively called hierarchical linear modeling (HLM). This is important in order to adequately measure the influence of individual measures (such as age), since selection effects are a large issue in neighborhood studies. The clustering of

individuals within and across neighborhoods, leads to potential spurious effects at the individual-level that are really a reflection of neighborhood attributes rather than individual characteristics.<sup>7</sup>

Utilizing HLM is a more effective way to take into account this clustering of individuals when compared to OLS regression (Brunton-Smith and Sturgis 2011; Kubrin and Weitzer 2003; Logan 2012). In essence, HLM controls for the interdependence among observations within a given area by estimating “standard errors for the coefficient of contextual variables in these models that are corrected for the (spatial) dependence across individuals” (Logan 2012:519). In other words, since each resident within a given community is influenced by the same neighborhood environment, HLM controls for this dependence among individuals by estimating equations for both the between- and within-neighborhood levels at the same time (Kubrin and Weitzer 2003). I ran supplementary analyses to see to what extent individuals cluster in specific areas of Los Angeles County, and found evidence for significant clustering, justifying the use of a multilevel model (see Appendix A–E).<sup>8</sup>

Thus, in this analysis, I utilize HLM in order to more accurately portray the relationships of interest, recognizing the clustered nature of the data. Specifically, I use a random intercept<sup>9</sup>, multilevel model<sup>10</sup> in order to separate the variability—in individual perceptions of collective efficacy—that is due to differences across individuals (or within census tracts) and the variability that is due to differences across census tracts (Hoffmann 2016). This form of the random intercept model “predicts the level 1 intercept on the basis of the level 2 grouping variable” as

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<sup>7</sup> When referring to clustering, typically it means calling attention to zones in which there is a larger than expected concentration of some characteristic (Logan 2012).

<sup>8</sup> Included in the Appendix are maps produced utilizing ArcGIS software with census data, and a correlation matrix of variables of interest at the neighborhood level to demonstrate how related the factors are to each other.

<sup>9</sup> A random-intercept model seems preferable to one that includes random-slopes because 1) it simplifies the analysis and 2) there is no a priori reason to believe that the underlying relationships (i.e., slopes) of interest vary significantly across tracts.

<sup>10</sup> This model is also referred to as a random intercept ANCOVA model (Garson 2012).

well as both level 1 and level 2 covariates (Garson 2012:9). Thus, this model captures theoretically that if collective efficacy is a latent neighborhood construct, it would operate to lift average neighborhood residents' perceptions (i.e., the intercept). Ultimately, through this model we can obtain estimates of the relative contributions of individuals and neighborhoods to total variation in perceptions of collective efficacy, before incorporating more detailed individual- and neighborhood-level measures to account for the variability (Brunton-Smith and Sturgis 2011).

To accomplish the second and third aims of this study, I ran a number of iterations of the multilevel model as presented in Table 1 below. In Model 1, I calculated the overall intraclass correlation (ICC), in order to get a baseline measure of the within- versus between-tract variability in perceptions of collective efficacy. In Models 2-4, I included the key variable of interest, age, first without other individual or neighborhood controls, and then with them, respectively. In Models 5-8, I tested for the potential mediating role of key theoretical variables on the relationship between age and collective efficacy. Namely, in Models 5-8, I added individual fear of crime and prior victimization, civic engagement, social ties, and physical attachment, respectively, to see if they independently explain away the relationship of age with perceptions of collective efficacy. Model 9 is the full model, and includes all relevant individual- and neighborhood-level variables together. Model 9 is the most effective model at fulfilling the third objective of this study because it takes into account all relevant factors simultaneously.

## RESULTS

### *Bivariate Analysis*

First, I performed an ANOVA test of means to explore if age and fear of crime were significantly related. Results from the ANOVA test of means somewhat surprisingly, but in accordance with other research (Lagrange and Ferraro 1989), indicate that there is a significant negative association at the bivariate level between age and fear of crime where  $F(3, 2572) =$

24.51,  $p < 0.001$ . In specific, the youngest cohort has significantly higher fear of crime when compared to the other three older age groups (see Figure 2). Additionally, I ran a cross-tabulation with a chi-squared test of significance to see if age and prior victimization were significantly associated at the bivariate level. Results indicate that younger and older people do not experience significant differences in prior victimization where  $\chi^2(3, N=2,589)$ ;  $p$  is not significant.

To see if age and participation in either a neighborhood block meeting or volunteering in a local organization were significantly related, I performed a cross-tabulation with a chi-squared test on both of these relationships. Results indicate that age is significantly related to participation in neighborhood block meetings where  $\chi^2(3, N=2,589)$ ;  $p < 0.001$ . Specifically, people age 50-64 participate the most (16 percent), followed by those age 35-49 (15 percent), then those age 65+ (9.5 percent), with those age 17-34 (7 percent) participating the least (see Figure 3). Likewise, age is significantly related to volunteering in a local organization, where  $\chi^2(3, N=2,589)$ ;  $p < 0.001$ . Specifically, about 20 percent of middle (35-64) and older (65+) adults volunteer, which is significantly more than the youngest group (17-34) at about 11 percent (see Figure 4).

To examine the relationship between age and neighborhood social ties, an ANOVA test of means was performed for both family and friendship ties. Results show that in relation to the proportion of family or kinship ties living in the neighborhood, there is a significant difference between younger and older people where  $F(3, 2586) = 12.55$ ,  $p < 0.001$ . Specifically, younger people report having a higher proportion of family living in the area compared to older people (see Figure 5). Yet concerning the proportion of friendship ties living in the neighborhood, results show that there is not a significant difference between younger and older people where  $F(3, 2586) = 0.59$ ,  $p$  is not significant.

To determine if age was associated with physical attachment, first an ANOVA test of means was used to examine the relationship between age and length of residence. Results indicate that there is significant difference among age groups with average length of residence incrementally increasing with each older stage where  $F(3, 2531) = 337.38, p < 0.001$  (see Figure 6). Next, a cross-tabulation was performed on age and homeownership status with results showing that older people tend to own their home significantly more than younger people where  $\chi^2(3, N=2,529); p < 0.001$  (see Figure 7). Finally, a cross-tabulation was performed on the relationship between age and plans to move within the next year or two. Similar to findings for length of residence, older people tend to plan to move within the next year or two significantly less than younger people where  $\chi^2(3, N=2,463); p < 0.001$  (see Figure 8). Consequently, combining these three dimensions we see that older adults overall seem to be less mobile than younger adults, or conversely, have a higher level of physical attachment and are more rooted in the area (Riger and Lavrakas 1981).

#### *Multilevel Regression (HLM)*

[Insert Table 2 here]

Models 1-4 in Table 2 depict the simplest models for the multilevel regression, only looking at the effect of age while progressively adding individual-level and neighborhood-level controls, respectively. Model 1 presents the overall baseline or null model, without any control variables, and is utilized to calculate the intraclass correlation (ICC). The ICC measures the proportion of the variability in the outcome that is between groups. Although not shown in the table, the ICC for this analysis is 20.6, meaning that about 20 percent of the variation in

individual perceptions of collective efficacy is between census tracts; by extension, around 80 percent of the variation is within census tracts or between individuals.<sup>11</sup>

I add the age variable in Model 2, and, without controlling for any other variables, we see that age is significantly associated with perceptions of collective efficacy for those age 35-49 ( $\beta=.140$ ,  $p<.05$ ), and age 65+ ( $\beta=.139$ ,  $p<.05$ ), when compared to the youngest group. However, those age 50-64 are not statistically different from the youngest group, even without controlling for any other factors. And although age is a significant predictor of perceptions of collective efficacy, results show that it independently explains less than 1 percent of the variation within tracts and about 4.5 percent of the variation between tracts.

The story stays largely the same in Models 3 and 4 after controlling for individual- and neighborhood-level controls, respectively. Namely, in Model 3, after adding individual-level controls, 35-49 year-olds remain significant ( $\beta=.119$ ,  $p<.05$ ), while the coefficient decreases slightly. Likewise, those 65+ ( $\beta=.222$ ,  $p<.01$ ) remain significant, but there seems to have been a suppression effect of the oldest group brought out once other factors were included. As would be expected, this extended model (with individual-level controls) explains over 5 percent of the variation within tracts—an increase from the less than 1 percent explained when only age is included in the model—while the between-tract variation explained stays roughly the same. In Model 4 we find that even with the neighborhood-level controls added, age remains positively associated with perceptions of collective efficacy, with the coefficients for this relationship staying largely unchanged compared to Model 3. Importantly, once neighborhood-level controls are included in the model, the explained variation between tracts jumps from about 3 to 4 percent

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<sup>11</sup> Utilizing the ICC, we see that this analysis has a *design effect* of over nine (well over the two or more threshold), substantiating the warrant for a multilevel model (Hoffmann 2016).

in the previous models to over 70 percent, with the variation within tracts that is explained remaining the same.

[Insert Table 3 here]

Overall, Models 5-8 in Table 3 indicate that out of the proposed theoretical factors, only physical attachment seems to mediate the relationship between age and perceptions of collective efficacy. Namely, once fear of crime and prior victimization are included in Model 5, 35-49 year-olds remain significant ( $\beta=.119$ ,  $p<.05$ ), with almost no change to the coefficient from Model 4 (i.e., comparison model for Models 5-8). Likewise, those 65+ ( $\beta=.198$ ,  $p<.05$ ) remain significant, with the coefficient decreasing only slightly. Similarly, once civic engagement is included in Model 6, both 35-49 year-olds ( $\beta=.098$ ,  $p<.10$ ), as well as those 65+ ( $\beta=.186$ ,  $p<.05$ ), remain marginally significant and significant, respectively, with small decreases to their coefficients. Then in Model 7, social ties are included, and reveal another example of a suppression effect for both those age 35-49 ( $\beta=.132$ ,  $p<.05$ ), as well as those 65+ ( $\beta=.221$ ,  $p<.05$ ), meaning the coefficients for both groups increased after controlling for this factor.

In contrast to Model 7, Model 8 clearly demonstrates that physical attachment mediates the relationship between age and perceptions of collective efficacy, as shown by the substantial decrease in the relevant coefficients for all age groups. Specifically, the relationship for 35-49 year-olds ( $\beta=.078$ ,  $p>.10$ ), as well as those 65+ ( $\beta=.099$ ,  $p>.10$ ), becomes non-significant after including physical attachment in the model. However, out of the three variables that make up the construct of physical attachment, only plans to move is significant ( $\beta= -.322$ ,  $p<.001$ ), meaning it is the main mediator between age and perceptions of collective efficacy. Yet when comparing all the key theoretical factors utilized, it is evident that fear of crime and prior victimization explain the greatest amount of variability in perceptions of collective efficacy (more generally)

within tracts ( $\approx 13$  percent), followed by social ties (10 percent), physical attachment (9 percent), and finally civic engagement ( $\approx 7$  percent).

Model 9 represents the full model, and is used in this analysis to fulfill the third objective of the study. Once again, with all relevant theoretical and control variables included, we see that age is not significantly associated with perceptions of collective efficacy. In contrast, both fear of crime and prior victimization have strong negative associations with perceptions of collective efficacy. Namely, compared to those who feel that it is completely safe to walk around alone, those who feel it is only fairly safe ( $\beta = -.195, p < .001$ ), somewhat dangerous ( $\beta = -.495, p < .001$ ), or extremely dangerous ( $\beta = -.873, p < .001$ ), have increasingly lower perceptions of neighborhood collective efficacy, respectively. And prior victimization is associated with a .252-unit decrease in perceptions of collective efficacy, on average, controlling for all other factors in the model.

Results from Model 9 also show that attendance at a neighborhood block meeting ( $\beta = .196, p < .01$ ), as well as volunteering in a local organization ( $\beta = .102, p < .05$ ), are positively associated with perceptions of collective efficacy. With respect to social ties, friendship ties seem to be the main aspect associated with perceptions of collective efficacy, where, compared to those who report no friends in the neighborhood, those who report a few ( $\beta = .222, p < .001$ ), many ( $\beta = .436, p < .001$ ), or most or all ( $\beta = .319, p < .05$ ), have elevated perceptions. Although length of residence and homeownership status are not associated with perceptions of collective efficacy, plans to move has a significantly negative relationship ( $\beta = -.269, p < .001$ ). Lastly, while not shown in Table 3, once all individual-level variables are controlled for, the only neighborhood-level variable that is significant is percent foreign born (with percent low-income as marginally significant). Overall, Model 9, with all relevant variables included, explains about

21.5 percent of the variation in perceptions of collective efficacy that is within tracts, and over 85 percent of the variation that is between tracts.

## DISCUSSION

As important as collective efficacy at the macro level has shown to be (e.g., Ahlin 2010; Burchfield and Silver 2013; Cohen et al. 2006; Mazerolle et al. 2010; Sampson 2012; Sampson et al. 1997), literature looking at factors shaping the individual-level experience is relatively scarce (Collins et al. 2014; Fernández-Ballesteros et al. 2002; Markowitz et al. 2001; Oh and Kim 2009; Wickes et al. 2013). Since the latent community attribute of collective efficacy is largely measured as a function of individual perceptions, understanding what affects the individual is vital, especially in light of within-neighborhood heterogeneity (Bandura 1982; Bandura 1998; Bandura 2000; Sampson 2012; Sampson et al. 1997). This study adds to the micro-level literature of community processes by focusing on age and its relation to perceptions of collective efficacy.

In the first part of this study, I analyzed the relationship between age and key theoretical factors of collective efficacy that have been addressed in the literature. Largely in accordance with prior research, I found that age is significantly associated with most of the concepts highlighted in the review. For example, at the bivariate level, age is associated with fear of crime, civic engagement, family ties, and physical attachment (see Figures 2-8). Namely, older adults have less fear of crime, participate more in neighborhood block meetings and volunteering in local organizations, have less family ties, have lived at the current address for a longer period of time, are more likely to own their property, and plan to move less, all compared to younger adults.<sup>12</sup> However, these relationships are not all directly linear with increasing age, providing

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<sup>12</sup> Friendship ties and prior victimization do not seem to differ by age group, at least in Los Angeles.

support for a life-course perspective in relation to the age variable. Specifically, at different stages of the life course, a variety of competing interests and priorities shape the activities and behaviors relevant for that particular group (Ferraro 2001; George 1993; O’Rand and Krecker 1990; Rossi 1980; Wohlwill 1969).

For the second part of this analysis, I explored the potential mediating role of these factors on the relationship between age and perceptions of collective efficacy. Overall, results indicate that age is positively associated with individual perceptions of collective efficacy, but that only physical attachment fully mediates this relationship. In other words, even when fear of crime and prior victimization, civic engagement, and social ties are independently included in the model, none of them are able to explain away the significant relationship between age and perceptions of collective efficacy. Moreover, controlling for all other factors in the model, only plans to move seems to ultimately explain the age relationship of interest. This finding is somewhat surprising given that age is significantly related in the expected directions with key theoretical factors, and likewise, those factors are in turn significantly related with perceptions of collective efficacy. Thus, even though the other theoretical factors of interest are significantly related to perceptions of collective efficacy, they do not mediate the age relationship examined here.

Thus, one of the main findings of this study, is that the positive relationship between age and perceptions of collective efficacy is actually indirect, with plans to move as the key mediator; this is the first study of which I am aware to demonstrate the reason for this link between age and perceptions of collective efficacy empirically. Similar to findings of the bivariate analysis, Models 2-8 indicate that age is related to perceptions of collective efficacy in a nonlinear way and for a mix of reasons. Namely, once the clustering of individuals is

accounted for, the youngest group and those 50-64 are not statistically different from one another, on average. As Model 6 shows, civic engagement partially mediates the age relationship for those 35-49 years old; likely a result of their high civic engagement overall compared to the youngest group. Lastly, for all older groups, but specifically for the oldest individuals, physical attachment (i.e., plans to move) is the main mediating factor between age and perceptions of collective efficacy.

Consequently, applying a life-course perspective to these findings, we see that younger and older adults differ in their perceptions of collective efficacy mainly due to differences in mobility patterns corresponding to the life stage of the individual. In other words, depending on the age group, push and pull factors involving school, work, and family responsibilities all influence when and to where individuals choose to migrate (Plane, Henrie, and Perry 2005; Yee and Van Arsdol 1977). Furthermore, at least in Los Angeles, on all measures of physical attachment (i.e., length of residence, homeownership status, and plans to move) increasing age is significantly associated with increasing neighborhood rootedness (Riger and Lavrakas 1981).

Finally, in this analysis, and in accordance with the third objective of this study, I identified the factors significantly related with perceptions of collective efficacy at both the macro and micro levels. As Model 9 highlights, fear of crime and prior victimization, civic engagement, friendship ties, and plans to move are all significantly and independently associated with perceptions of collective efficacy. Likewise, although not shown here, family income and neighborhood definition at the individual level, as well as the percent foreign born at the neighborhood level, are also significant predictors of perceptions of collective efficacy. However, as indicated by their non-significance, many of the neighborhood-level factors seem to operate indirectly rather than directly on individual perceptions, presumably through other

mechanisms identified here as social disorganization theory and the systemic model predict (Brunton-Smith and Sturgis 2011; Gates and Rohe 1987; Kubrin and Weitzer 2003; McGarrell et al. 1997; Skogan and Maxfield 1981; Taylor 1996; Taylor 2001; Warner and Rountree 1997).

Thus, as research shows, different mechanisms operate uniquely as the unit of analysis changes from the neighborhood level to the individual level (Cope et al. 2016; Sampson 1991). This is highlighted by the fact that Model 9 explains a substantially larger portion of the variability between neighborhoods compared to within them. Part of this difference is likely a result of the large within-neighborhood variability relative to the between-neighborhood variability to begin with. Future work should acknowledge this significant within-neighborhood heterogeneity and attempt to explain a greater portion of the variability at the individual level; for even with the extensive list of factors included in the final model here, it is only able to explain about a fifth of the variation across individuals (i.e., within neighborhoods).

Additionally, the final model, as well as others throughout this analysis, highlight that length of residence is not significant once other factors are included in the model. Although length of residence measures a similar aspect of community attachment as plans to move (Riger and Lavrakas 1981), it seems that an individual's future expectations with the community has a stronger association with perceptions of collective efficacy than duration of time in the area, *per se*. This finding provides statistical support for what other researchers have predicted; namely that where there is less expectation for future contact (or limited liability), there will be lower levels of collective efficacy (Janowitz 1967; Kasarda and Janowitz 1974; Sampson 2012; Taylor 1996). However, because length of residence gets most of the focus in the community literature in relation to the systemic model of community attachment (Kasarda and Janowitz 1974;

Mazerolle et al. 2010; Sampson et al. 1997), evidence from this study indicates that plans to move should be incorporated more thoroughly in academic research.

Yet perhaps just as important as planning to move is for shaping perceptions, is the reason for moving as well. In other words, it is unclear whether it is the intention to move in and of itself—and the psychological adjustment that likely results—that shapes perceptions of collective efficacy, or if it is the motivation behind moving that is key. Future research should seek to clarify this point. Moreover, as I address in the limitations, research should investigate possible reciprocal effects of the neighborhood on plans to move and plans to move on perceptions of the neighborhood.

Overall, results in this analysis imply a number of avenues for improving individual perceptions of collective efficacy, and in turn, the neighborhood aggregate. For example, as social disorganization theory and the systemic model suggest, decreasing fear of crime in an area, as well as increasing community attachment (e.g., through greater civic engagement, more friendship ties, and lower plans to move), would all be expected to increase individual perceptions of collective efficacy. Nevertheless, figuring out ways to actually help local residents improve their perceptions through these mechanisms is a formidable challenge for local officials, especially in light of growing segregation across the United States that isolate factors associated with either higher or lower levels of collective efficacy (see Appendix F). In other words, because of growing segregation in the United States, and the concentration of advantages in particular, factors associated with improved collective efficacy are isolated by area, exacerbating the difficulties for those in impoverished regions. Likewise, some factors are more susceptible to adaptation at the local level, while others seem to be the result of macro-level forces—such as economic, political, or demographic changes.

This study was limited by its cross-sectional design, inhibiting any causal claims. Moreover, due to data limitations, I cannot address potential generational effects (Elder Jr. 1975; Elder Jr. 1994; Elder Jr. and Rockwell 1979); it may be that the indirect age relationship with perceptions of collective efficacy changes as the dynamics of age-graded mobility vary in the future (e.g., Heaton, Clifford, and Fuguitt 1981). Additionally, in this analysis I have simplified the relationships in order to show overall associations and to more easily divide the variability in perceptions of collective efficacy into its within- and between-tract components. Future work should include possible reciprocal effects between factors (Oh and Kim 2009), better measures of fear of crime (i.e., more scaled items), and data of police-recorded neighborhood crime and violence to more adequately capture the nuances of social disorganization theory. Finally, it is important to note that extrapolating findings from this study to other areas requires consideration of the potentially unique aspects of Los Angeles, such as migration and segregation patterns, crime rates, and underlying population demographics (Burchfield and Silver 2013) (see Appendix A–F).

Despite these limitations, however, this study adds to the literature in a number of important ways. First, this analysis demonstrates that age and its positive association with perceptions of collective efficacy is actually indirect. In other words, the relationship between age and perceptions of collective efficacy is really a representation of the relationship between plans to move and individual perceptions, for which age stands as a proxy. Consequently, although age is not independently predictive of perceptions of collective efficacy, it has provided a lens from which to identify more proximal relationships. Moreover, as long as age is associated with mobility patterns, then we would expect growing numbers and concentrations of older adults to have macro-level influences on community processes such as collective efficacy.

Second, this study continues the research that aims to bridge the macro- and micro-dimensions of community processes by identifying a number of factors associated with perceptions of collective efficacy both at the individual and neighborhood levels. This work will become increasingly important as demographic shifts take place in the United States that affect migration patterns (e.g., Fuguitt and Heaton 1995; Heaton et al. 1981), segregation (i.e., both within and between neighborhoods), and ultimately community dynamics. Lastly, this analysis adds another urban context to the literature by analyzing Los Angeles County, a unique area with its own history and structure from those most examined in previous studies.

## CONCLUSION

There is a mounting need to effectively integrate macro-level dynamics with micro-level processes. With the share and concentration of older adults in the United States on the rise, the need to account for age is increasingly important. In this analysis, I have shown that age is associated with a host of community factors, the most prominent being that of physical attachment to the neighborhood. Overall, it seems that the age relationship with elevated perceptions of collective efficacy, is mediated through plans to move—since older adults are less mobile compared to their younger counterparts.

Additionally, since neighborhood collective efficacy predicts a number of aggregate outcomes (e.g., crime and violence), continuing this line of work to figure out what affects collective efficacy both at the macro and micro levels is vital. Because individual perceptions differ substantially even within the same neighborhood, and since individuals are ultimately the active agents of change, future research needs to uncover other factors that predict individual perceptions. Doing so will aid residents, local officials, and policymakers in improving communities across the United States by highlighting the mechanisms that lead to a greater sense of cohesion and control in an area.

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TABLES

Table 1. Weighted Descriptive Statistics

Categorical Variables		N (equivalent)	% in Category
<i>Age</i>			
	17-34	975	37%
	35-49	823	31%
	50-64	492	19%
	65+	329	13%
<i>Sex</i>			
	Male	1,283	49%
	Female	1,336	51%
<i>Marital Status</i>			
	Married	1,330	51%
	Not Married	1,289	49%
<i>Race</i>			
	White	957	36%
	Latino	983	38%
	Other	679	26%
<i>Employment Status</i>			
	Currently Employed	1,692	65%
	Not Currently Employed	927	35%
<i>Health</i>			
	Healthy	2,163	83%
	Not Healthy	456	17%
<i>Neighborhood Definition</i>			
	The block or street you live on	920	35%
	Several blocks or streets in each	654	25%
	Area within a 15-min walk	702	27%
	Area larger than a 15-min walk	343	13%
<i>Neighborhood Racial Comp.</i>			
	Predominantly White	415	16%
	High Asian/Pacific Islander	444	17%
	Latino & Black	167	6%
	Predominantly Latino	838	32%
	White & Other	755	29%
<i>Fear of Crime</i>			
	Completely Safe	656	25%
	Fairly Safe	1,381	53%
	Somewhat Dangerous	485	18%
	Extremely Dangerous	97	4%
<i>Prior Victimization</i>			
	Yes	1,024	39%
	No	1,595	61%

<i>Neighborhood Block Mtg.</i>			
	Participated	305	12%
	Did Not Participate	2,313	88%
<i>Volunteering in Local Org.</i>			
	Participated	505	19%
	Did Not Participate	2,114	81%
<i>Family Ties</i>			
	None	1,837	70%
	A Few	641	25%
	Many	88	3%
	Most or All	53	2%
<i>Friendship Ties</i>			
	None	795	31%
	A Few	1,396	53%
	Many	298	11%
	Most or All	130	5%
<i>Plans to Move</i>			
	Yes	735	28%
	No	1,884	72%
<i>Homeownership Status</i>			
	Own	1,314	51%
	Rent	1,305	49%

Continuous Variables	Mean	SD
<i>Perceptions of Collective Efficacy</i>	.130	.832
<i>Length of Residence (years)</i>	8.92	10.4
<i>Education (years)</i>	13.2	4.14
<i>Family Income (log)</i>	10.2	1.09
<i>Residential Stability (percent)</i>	50.8	9.38
<i>Percent Low-Income</i>	17.6	11.3
<i>Percent Owner</i>	50.7	25.1
<i>Percent Foreign Born</i>	35.9	15.3

N=2,619

Source: L.A.FANS 2002

Note: All (imputed) statistics are weighted to account for the stratified sampling design.

Table 2. Multilevel Regression on Individual Perceptions of Neighborhood Collective Efficacy (Models 1-4): Los Angeles, 2002

Fixed Effects	Model 1	Model 2	Model 3	Model 4
<u>Variable</u>				
Cohort by Age (omitted category= 17-34)				
· 35-49		.140*	.119*	.120*
		(.059)	(.051)	(.051)
· 50-64		.072	.067	.064
		(.119)	(.105)	(.104)
· 65+		.139*	.222**	.203*
		(.068)	(.079)	(.078)
Intercept	.148	.073	-.759	-.165
	(.054)	(.064)	(.276)	(.399)
Individual-Level Controls?	No	No	Yes	Yes
Neighborhood-Level Controls?	No	No	No	Yes
Random Effects	Model 1	Model 2	Model 3	Model 4
Residual	.528	.525	.499	.498
Within-Tract (Quasi) R <sup>2</sup>		.006	.056	.058
Between-Tract (Quasi) R <sup>2</sup>		.045	.027	.714

†p<.10; \*p<.05; \*\*p<.01;\*\*\*p<.001

Source: L.A.FANS Wave 1 (N=2,619)

Notes: Numbers in parentheses represent robust standard errors.

All results are weighted at the individual and tract levels.

Individual-level controls include: *sex, marital status, race, education, employment status, family income, health, and neighborhood definition.*

Neighborhood-level controls include: *neighborhood racial composition, residential stability, percent low-income, percent owner, and percent foreign born.*

Table 3. Multilevel Regression on Individual Perceptions of Neighborhood Collective Efficacy  
(Models 5-9): Los Angeles, 2002

Fixed Effects	Model 5	Model 6	Model 7	Model 8	Model 9
<i>Variable</i>					
Cohort by Age (omitted category= 17-34)					
· 35-49	.119*	.098†	.132*	.078	.075
	(.046)	(.054)	(.054)	(.054)	(.051)
· 50-64	.061	.041	.074	-.019	-.023
	(.098)	(.104)	(.100)	(.104)	(.088)
· 65+	.198**	.186*	.221*	.099	.106
	(.076)	(.080)	(.086)	(.087)	(.081)
<i>Social Disorganization Theory</i>					
Fear of Crime (omitted category=completely safe)					
Fairly Safe	-.189***				-.195***
	(.052)				(.056)
Somewhat Dangerous	-.520***				-.495***
	(.080)				(.081)
Extremely Dangerous	-.851***				-.873***
	(.152)				(.143)
Prior Victimization (yes=1)	-.211***				-.252***
	(.044)				(.043)
<i>Systemic Model of Community Attachment</i>					
Civic Engagement					
Neighborhood Block Mtg. (participated=1)		.207**			.196**
		(.073)			(.072)
Volunteering in Local Org. (participated=1)		.129*			.102*
		(.058)			(.052)
Social Ties					
Family Ties (omitted category= none)					
A Few			-.005		-.000
			(.065)		(.059)
Many			.128†		.183*
			(.074)		(.081)
Most or All			-.033		-.084
			(.133)		(.128)
Friendship Ties (omitted category=none)					
A Few			.231***		.222***
			(.057)		(.052)
Many			.493***		.436***
			(.078)		(.074)
Most or All			.370**		.319*
			(.129)		(.132)
Physical Attachment					
Length of Residence (years)				-.001	-.000
				(.003)	(.002)
Plans to Move (yes=1)				-.322***	-.269***
				(.068)	(.060)
Homeownership Status (own=1)				.028	.002
				(.074)	(.059)

Intercept	-.219 (.358)	-.061 (.407)	-.272 (.424)	-.005 (.405)	-.096 (.384)
Individual-Level Controls?	Yes	Yes	Yes	Yes	Yes
Neighborhood-Level Controls?	Yes	Yes	Yes	Yes	Yes
Random Effects	Model 5	Model 6	Model 7	Model 8	Model 9
Residual	.458	.490	.475	.480	.415
Within-Tract (Quasi) R <sup>2</sup>	.132	.072	.100	.090	.215
Between-Tract (Quasi) R <sup>2</sup>	.811	.732	.751	.728	.857

†p<.10; \*p<.05; \*\*p<.01; \*\*\*p<.001

Source: L.A.FANS Wave 1 (N=2,619)

Notes: Numbers in parentheses represent robust standard errors.

All results are weighted at the individual and tract levels.

Individual-level controls include: *sex, marital status, race, education, employment status, family income, health, and neighborhood definition.*

Neighborhood-level controls include: *neighborhood racial composition, residential stability, percent low-income, percent owner, and percent foreign born.*

FIGURES

Figure 1. Potential Mediating Role of Key Theoretical Factors on the Relationship between Age and Perceptions of Collective Efficacy

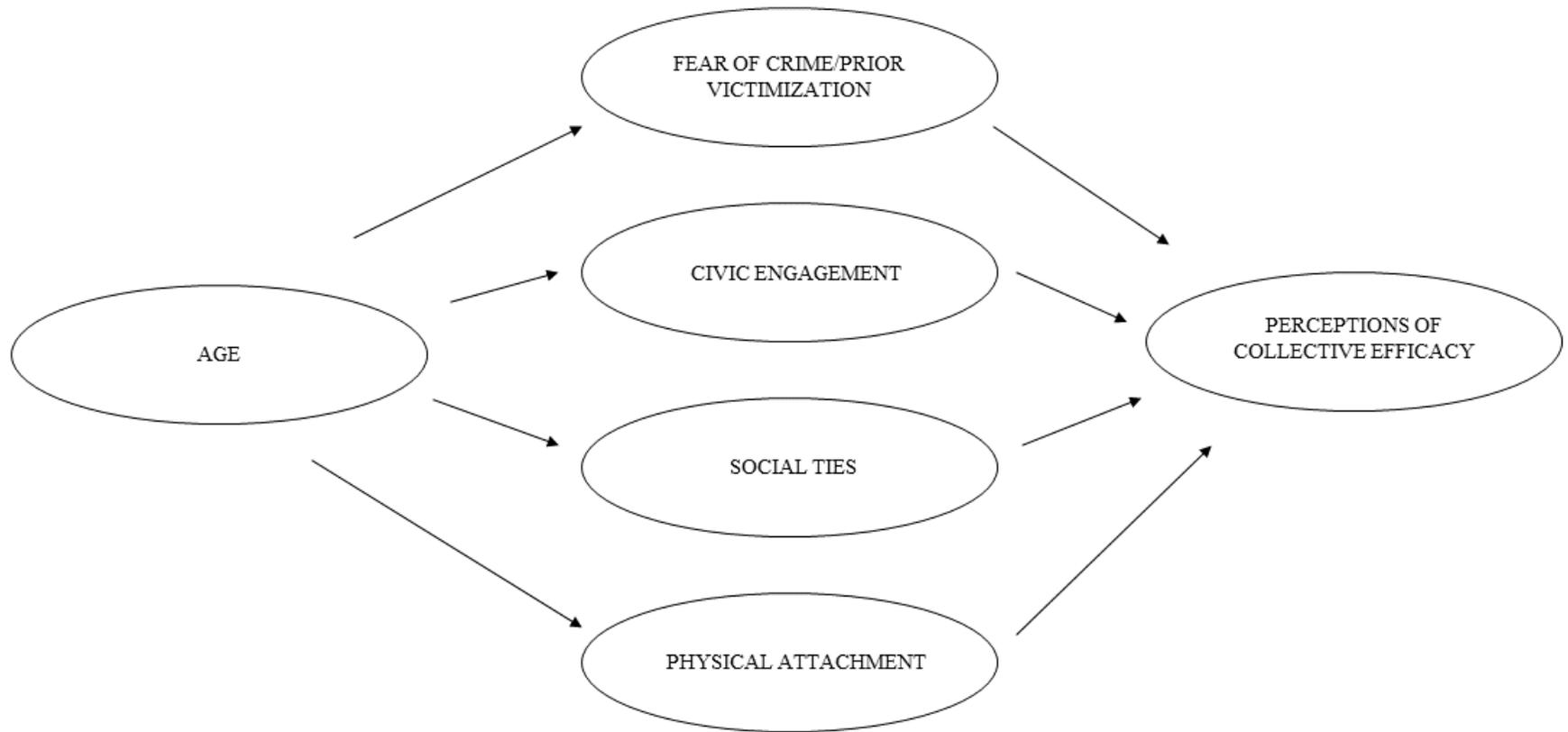


Figure 2. Age and Fear of Crime: Los Angeles (2002)

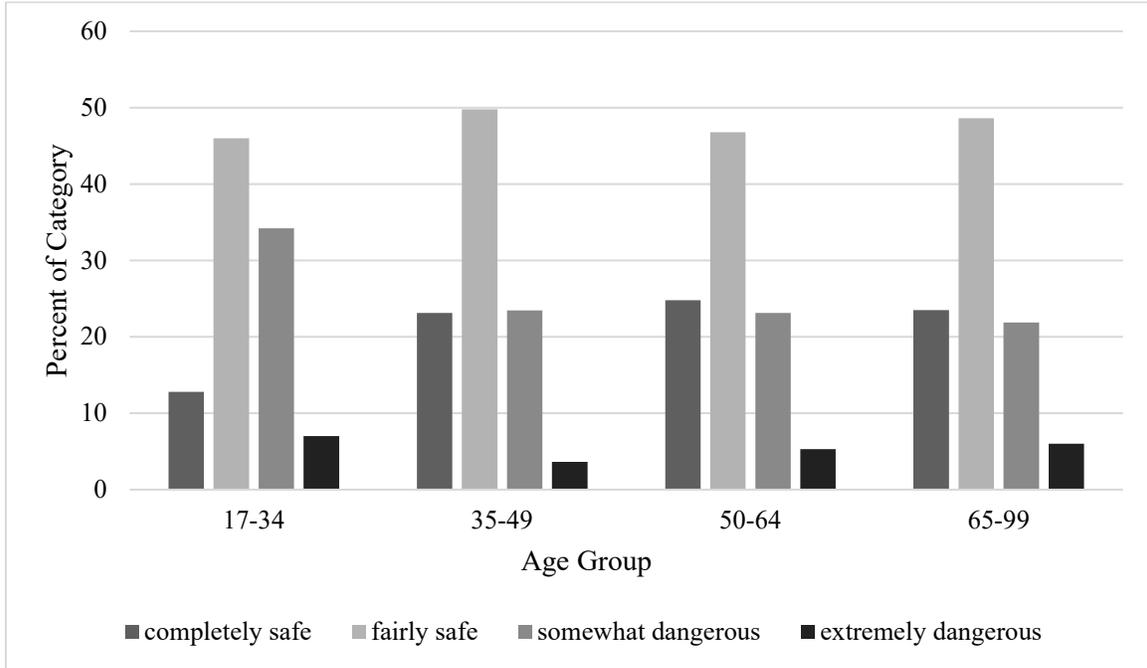


Figure 3. Age and Neighborhood Block Meeting Participation: Los Angeles (2002)

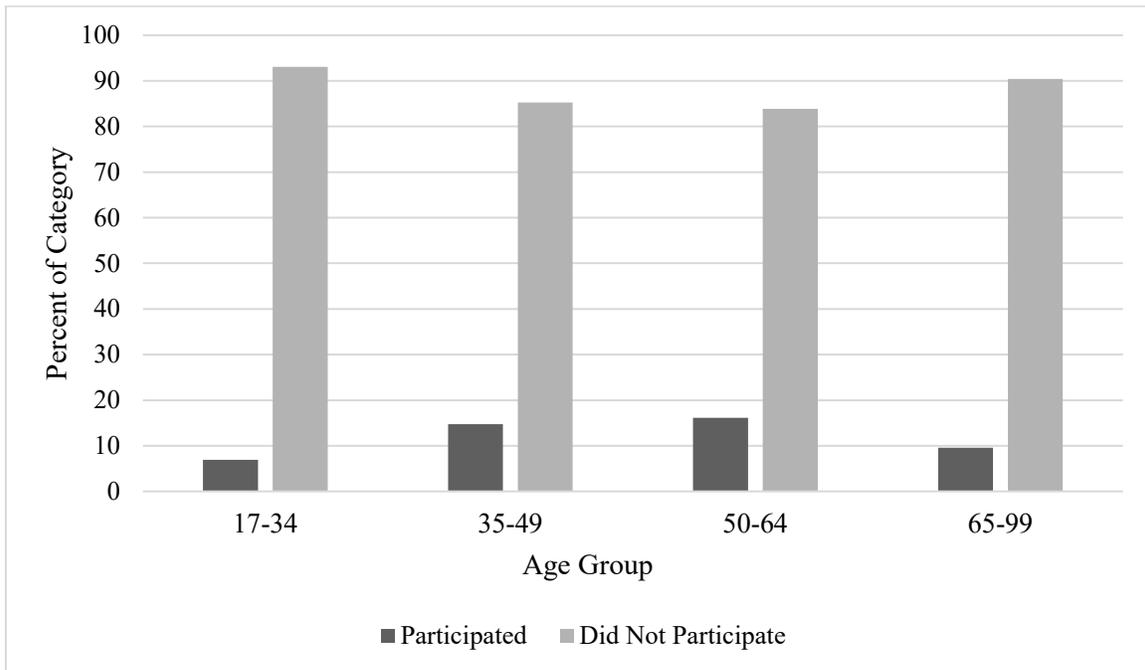


Figure 4. Age and Volunteering in Local Organization: Los Angeles (2002)

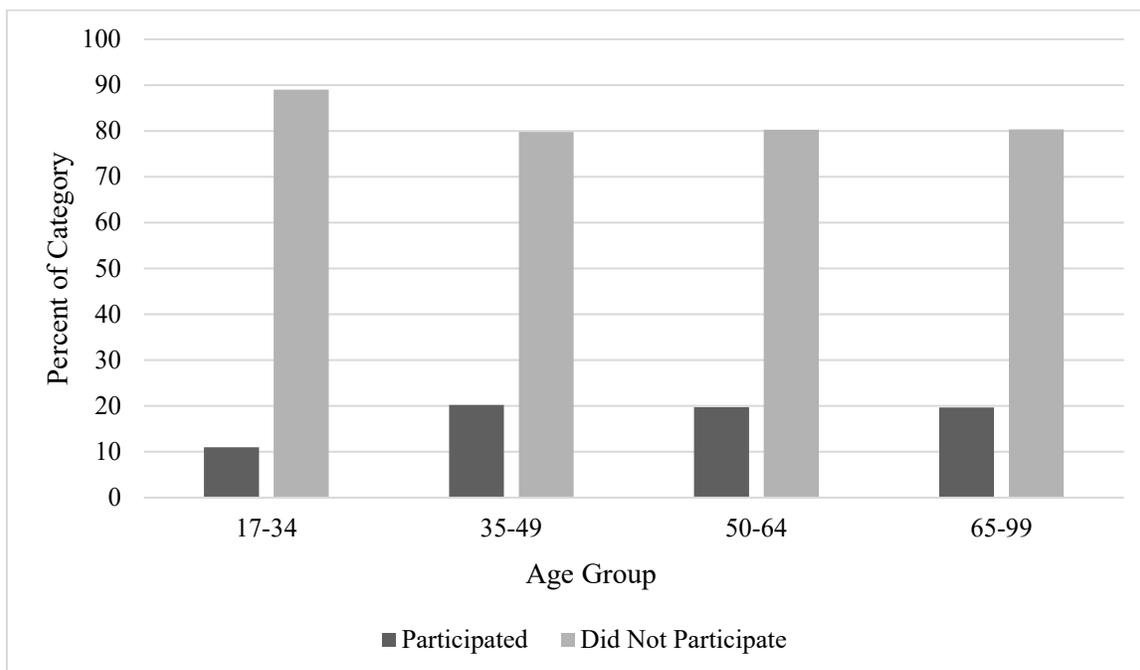


Figure 5. Age and Family Ties: Los Angeles (2002)

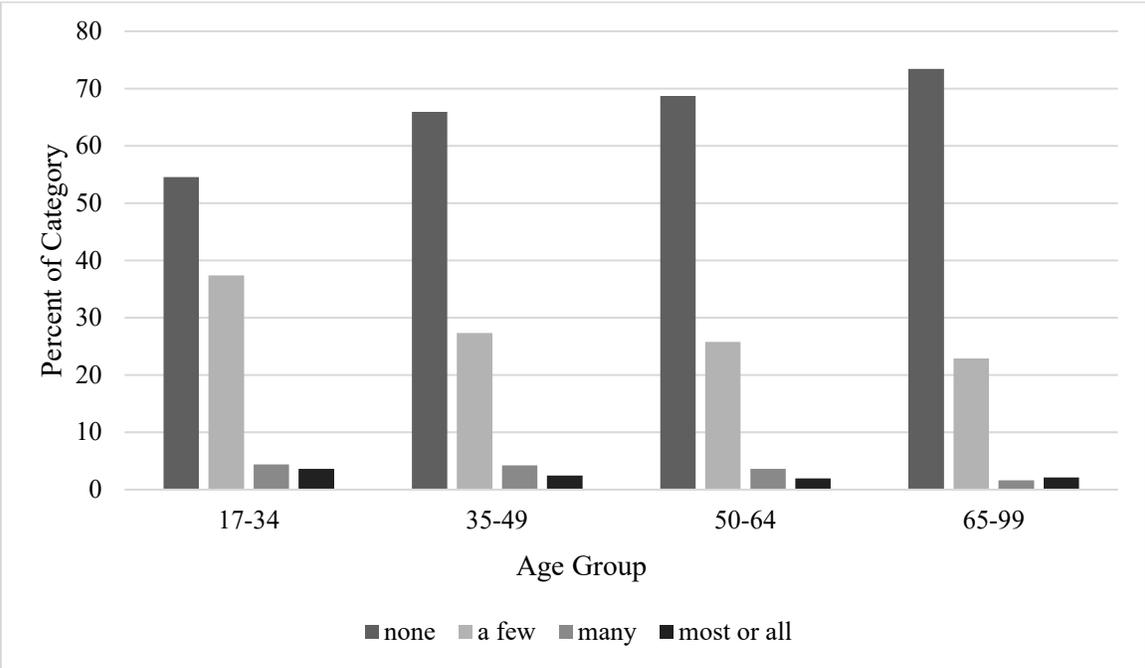


Figure 6. Age and Length of Residence: Los Angeles (2002)

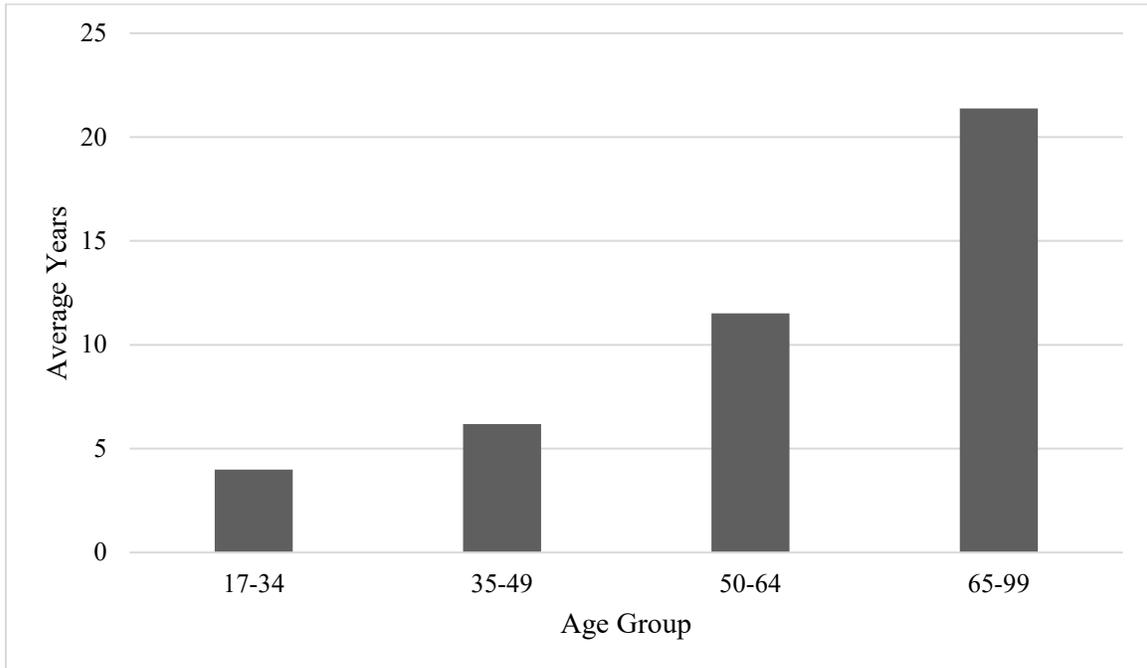


Figure 7. Age and Homeownership Status: Los Angeles (2002)

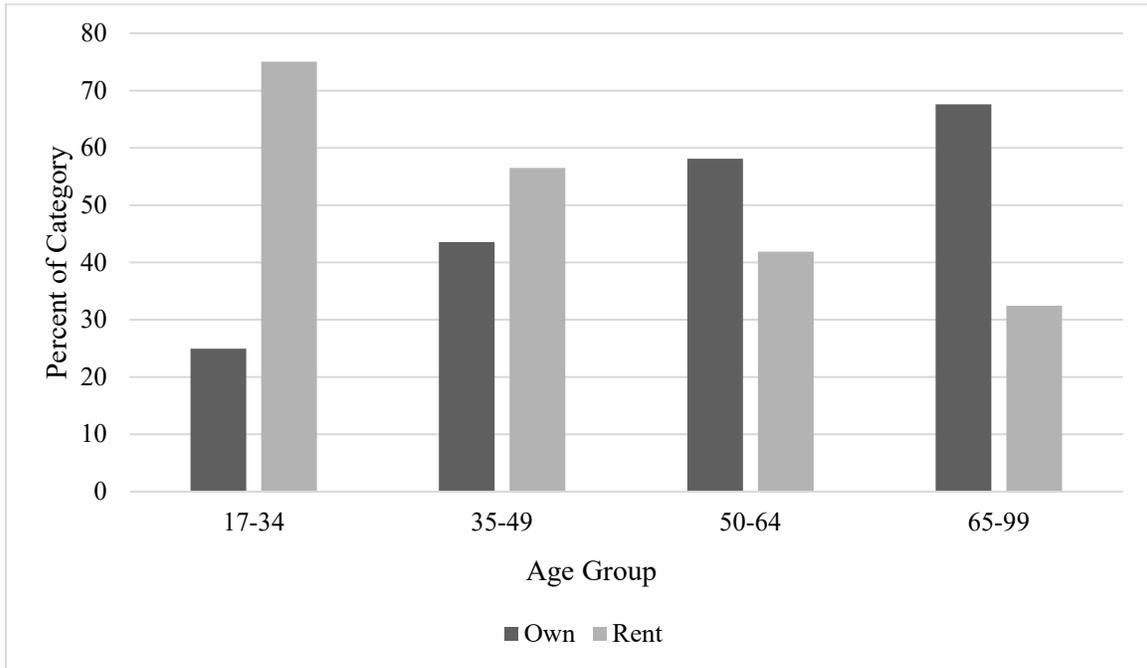
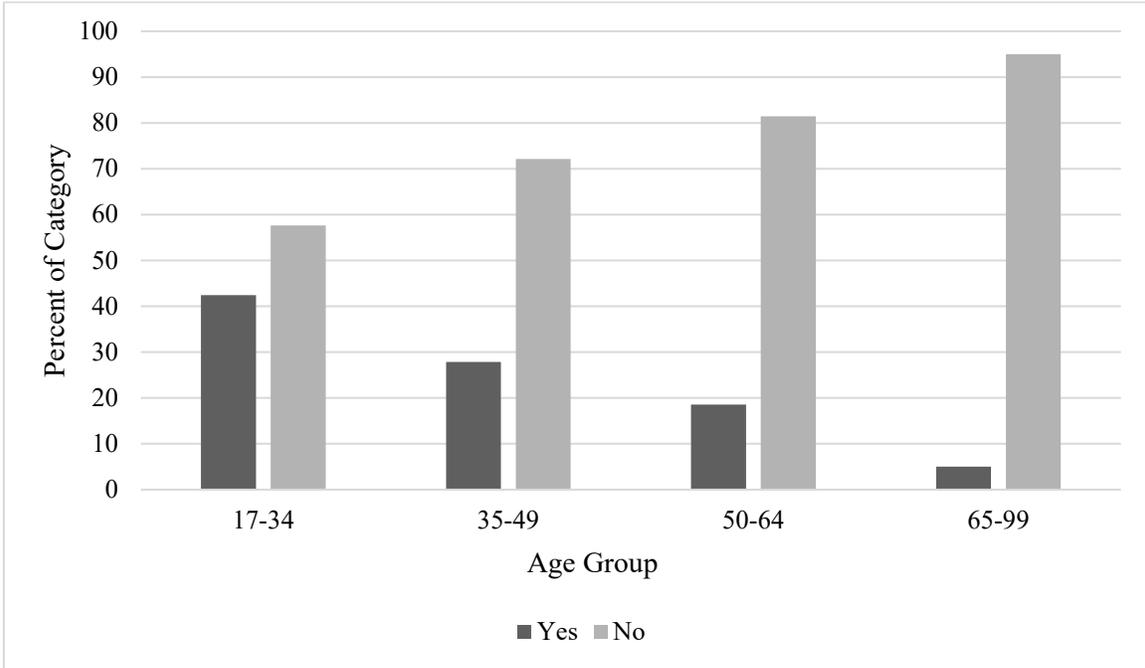
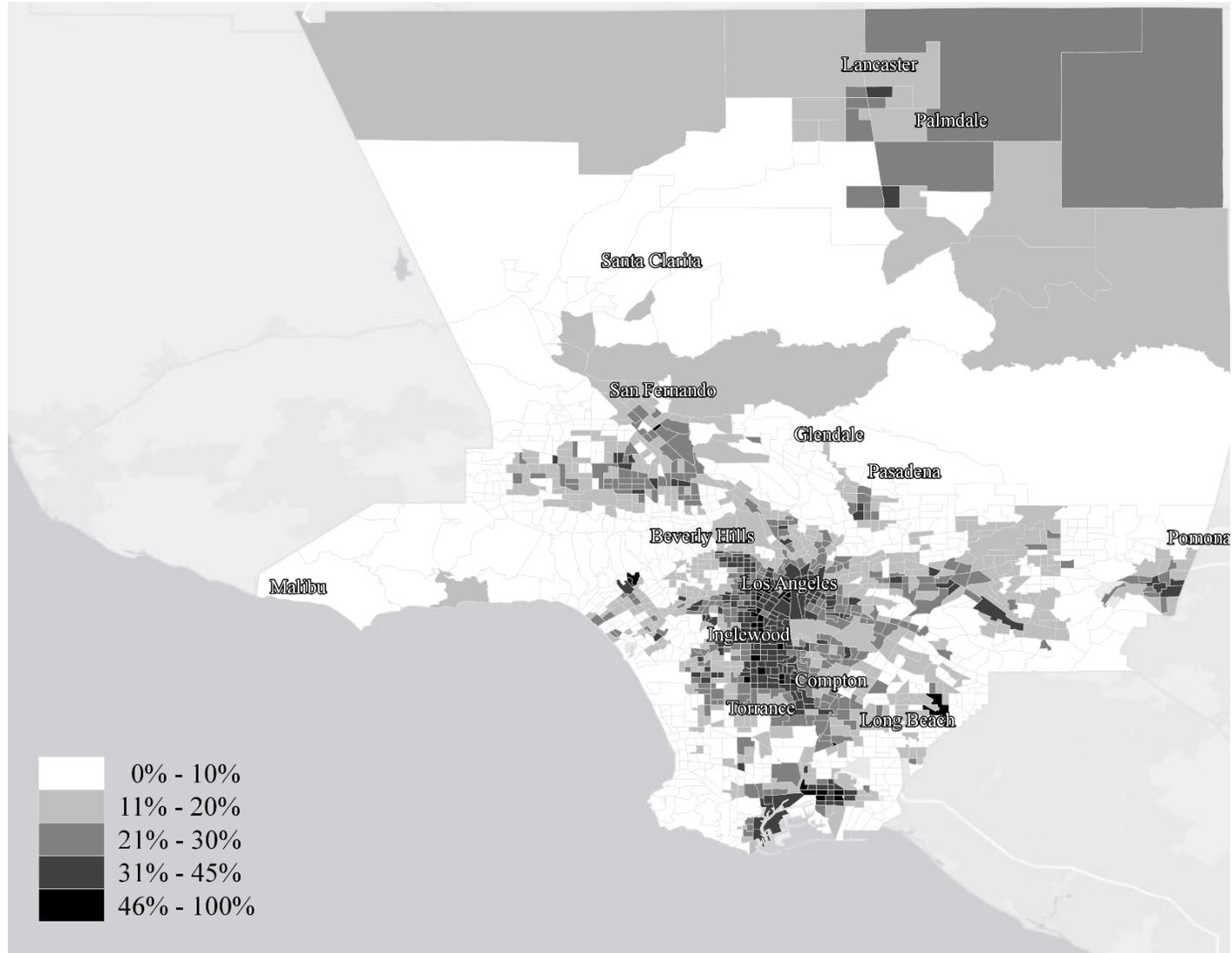


Figure 8. Age and Plans to Move: Los Angeles (2002)



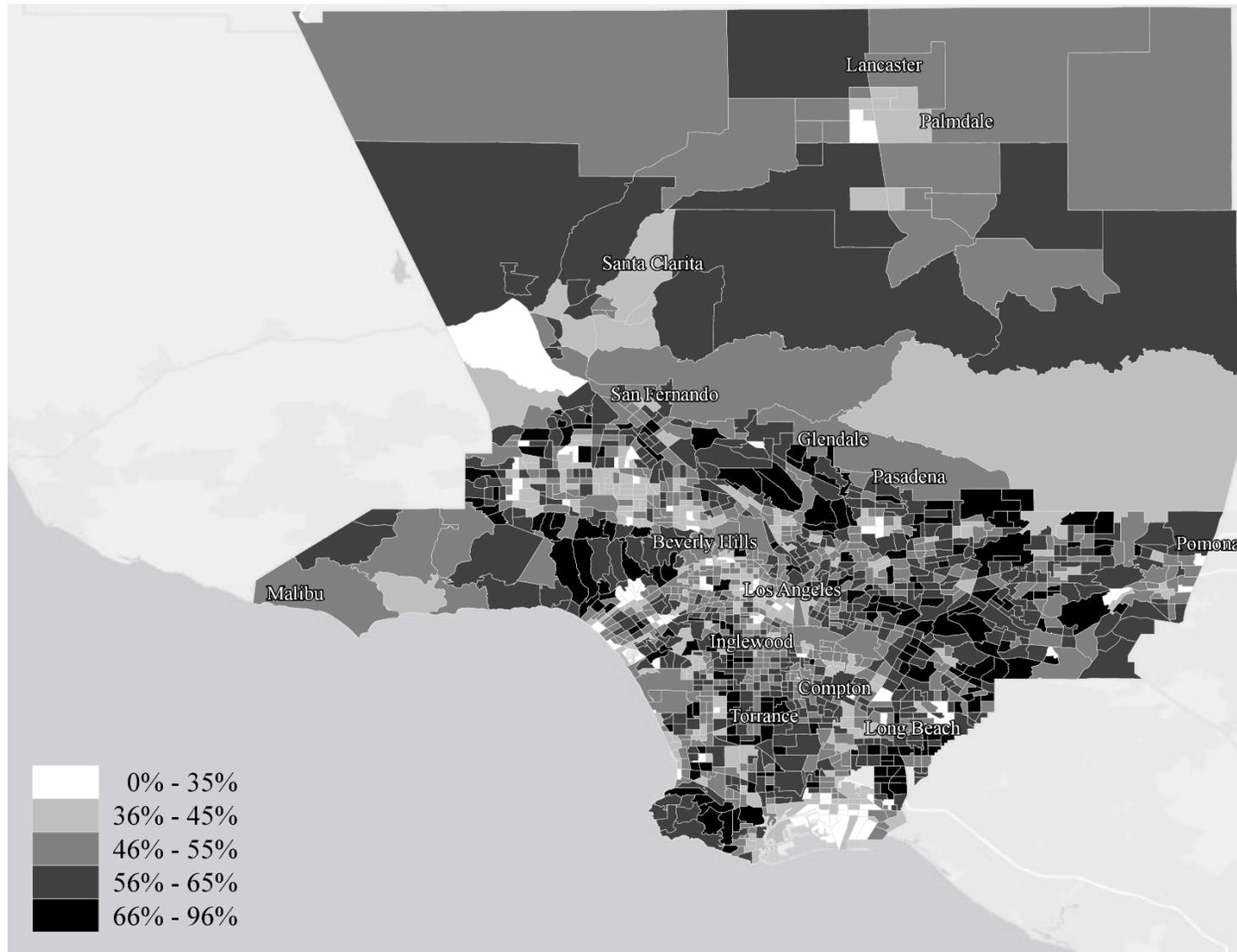
APPENDICES

Appendix A. Percent Low-Income by Census Tract: Los Angeles (2000)



Source: L.A.NSC 2007

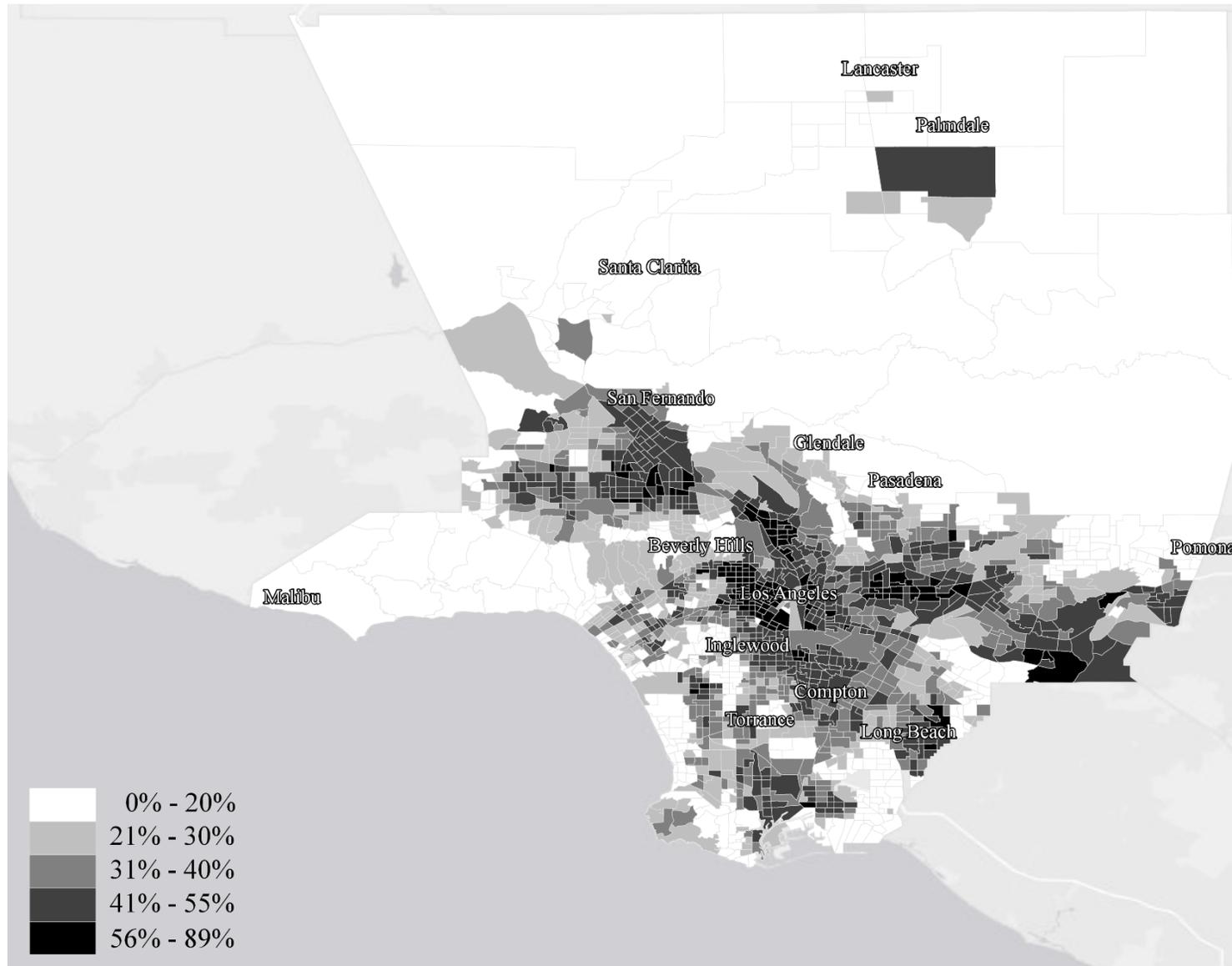
Appendix B. Residential Stability by Census Tract: Los Angeles (2000)



Source: L.A.NSC 2007

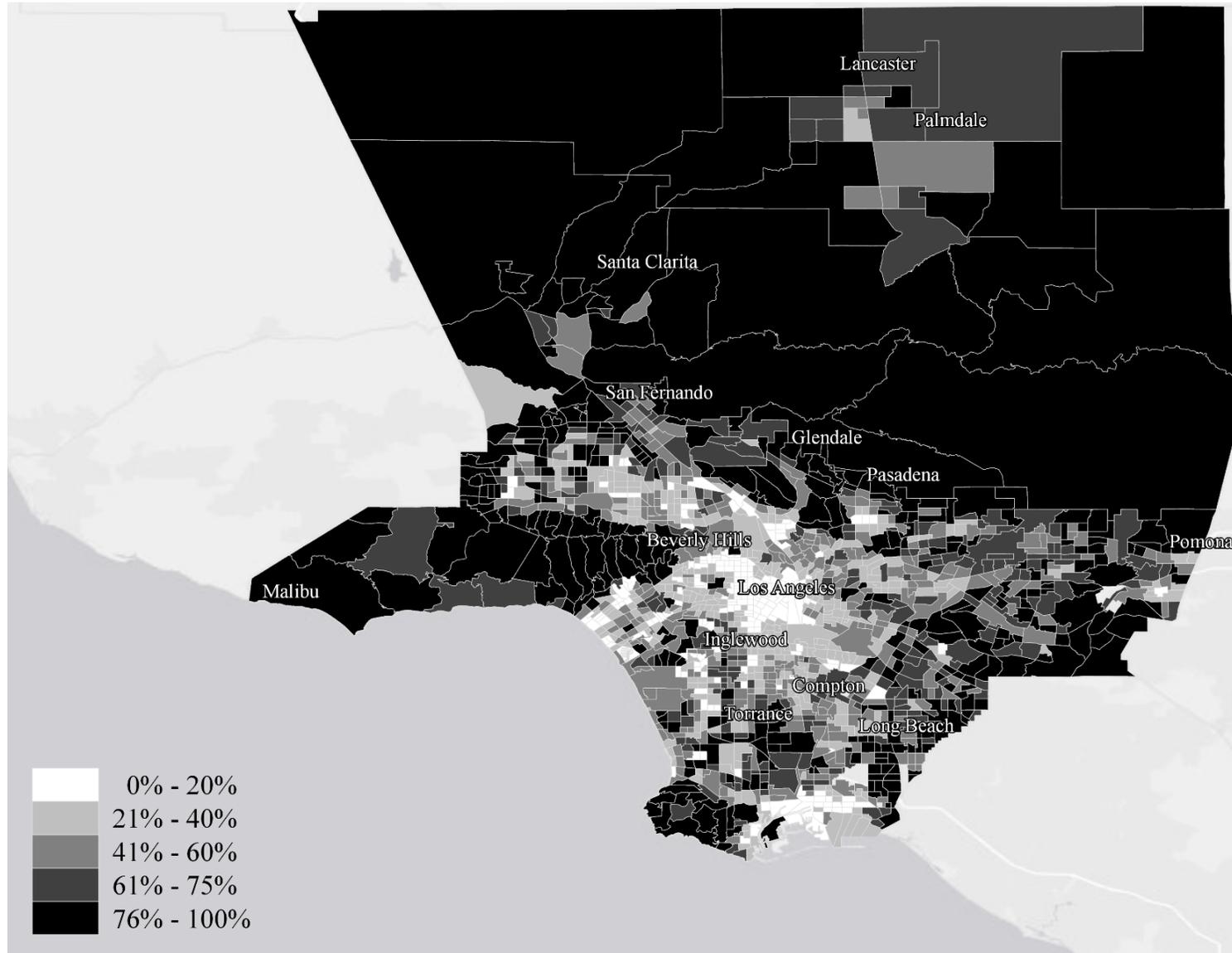
Note: Residential stability refers to the percent of the census tract that have lived at current dwelling for at least 5 years.

Appendix C. Percent Foreign Born by Census Tract: Los Angeles (2000)



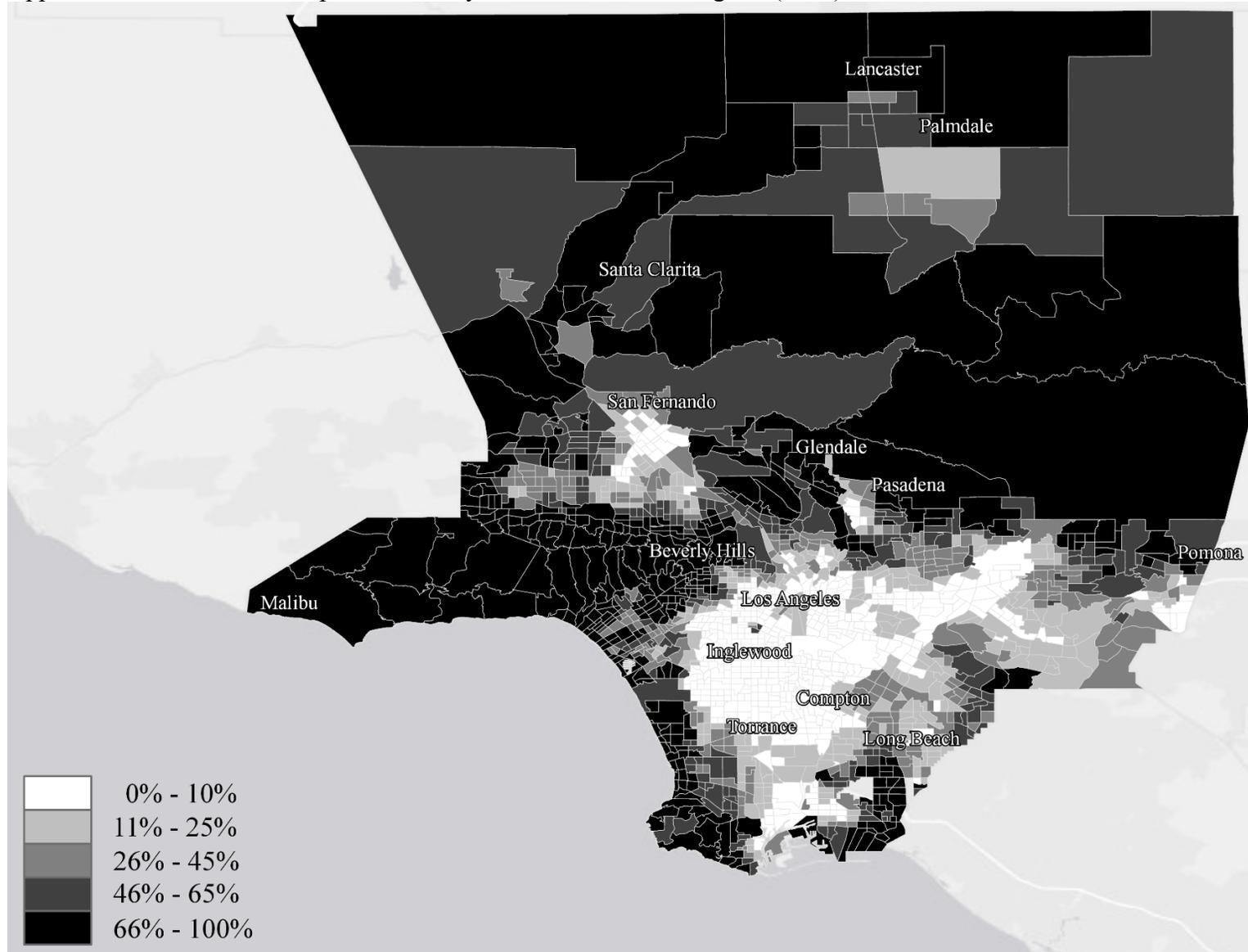
Source: L.A.NSC 2007

Appendix D. Percent Owner by Census Tract: Los Angeles (2000)



Source: L.A.NSC 2007

Appendix E. Percent Non-Hispanic White by Census Tract: Los Angeles (2000)



Source: L.A.NSC 2007

Appendix F. Correlation Matrix for Neighborhood-Level Variables: Los Angeles (2000)

Variables	(1)	(2)	(3)	(4)	(5)
(1) Percent Low-Income	1.00				
(2) Percent Owner	-.77	1.00			
(3) Percent Foreign Born	.67	-.75	1.00		
(4) Residential Stability	-.43	.64	-.33	1.00	
(5) Percent Non-Hispanic White	-.73	.53	-.66	.11	1.00

Source: L.A.NSC 2007