

Field Actions Science Reports

Special Issue 10 (2014) Improving Health Among Immigrant Populations

Brian Joseph Gillespie

Does Intergenerational Solidarity Buffer the Negative Effects of Residential Mobility?

Evidence for U.S. Children

Warning

The contents of this site is subject to the French law on intellectual property and is the exclusive property of the publisher.

The works on this site can be accessed and reproduced on paper or digital media, provided that they are strictly used for personal, scientific or educational purposes excluding any commercial exploitation. Reproduction must necessarily mention the editor, the journal name, the author and the document reference.

Any other reproduction is strictly forbidden without permission of the publisher, except in cases provided by legislation in force in France.



Revues.org is a platform for journals in the humanities and social sciences run by the CLEO, Centre for open electronic publishing (CNRS, EHESS, UP, UAPV).

Electronic reference

Brian Joseph Gillespie, « Does Intergenerational Solidarity Buffer the Negative Effects of Residential Mobility? », Field Actions Science Reports [Online], Special Issue 10 | 2014, Online since 21 March 2014, connection on 21 May 2014. URL: http://factsreports.revues.org/3266

Publisher: Institut Veolia Environnement http://factsreports.revues.org http://www.revues.org

Document available online on: http://factsreports.revues.org/3266 This PDF document was generated by the journal. Creative Commons Attribution 3.0 License © Author(s) 2013. This work is distributed under the Creative Commons Attribution 3.0 License. http://factsreports.revues.org/3266 Published 28 April 2014



Does Intergenerational Solidarity Buffer the Negative Effects of Residential Mobility?

Evidence for U.S. Children

Brian Joseph Gillespie

Ph.D. Assistant Professor Department of Sociology Sonoma State University 1801 E. Cotati Avenue Rohnert Park, CA 94928 e-mail: bgillesp@uci.edu

Abstract. This longitudinal study examines the moderation effects of parent-child closeness on residential mobility and two important adolescent outcomes. Children's behavior problems and academic achievement test scores were compared across four survey waves of the National Longitudinal Survey of Youth (2000, 2002, 2004, and 2006) and matched to data from their mothers' reports from the National Longitudinal Survey of Youth 1979. The results suggest that controlling for other dimensions of social capital (i.e., child-community and parent-community), the negative <u>behavioral</u> effects of moving are buffered by the reported level of emotional closeness to one's parent. That is, the closer a child reports being to his/her parent, the fewer behavior problems this child will experience following relocation. Furthermore, the negative <u>academic</u> effects of moving are moderated by intergenerational solidarity *and* conditioned by sex. This indicates that the reported level of parent-child closeness (*vis-à-vis* residential mobility) is significantly altered by sex for achievement outcomes.

Keywords. Residential Mobility, Academic Achievement, Behavior Problems, Adolescence, Social Capital, Intergenerational Solidarity

1. Introduction

The recent economic downturn has destabilized housing for low and middle-class populations with the harmful effects of tighter housing budgets, refinancing, foreclosure, etc. In addition to this, evictions and relocations are occurring with greater frequency and forcing individuals to move. According to the Current Population Survey, about 37.1 million Americans (12.5% of the population) moved between 2008 and 2009 (U.S. Census Bureau 2010). Among these movers, 67.3% relocated within the same county, 17.2% moved to another county and 12.6% relocated across state lines. The relatively high percentage of Americans (and particularly families with children) that relocates annually continues to raise concerns for researchers and practitioners

(Jelleyman and Spencer 2008; Ersing, Sutphen, and Loeffler 2009).

Especially in trying economic times, it is important to better understand the effects of residential mobility on individuals and families. For the most part, research has shown negative outcomes for residentially mobile children, yet to date, few studies have advanced to help understand what factors might serve to cushion the negative effects associated with residential mobility. For instance, to what extent can intergenerational solidarity (i.e., parent-child closeness) offset the negative effects of moving for children?

Intergenerational solidarity has long been a major focus in the study of the family. The parent-adolescent relationship, specifically closeness between parent and child, occupies a central place in most conceptions of the socialization process. This is because the family is one of, if not the primary, focus of emotional energy during adolescence. The main focus of this paper is whether or not intergenerational solidarity helps to offset the negative effects of moving on children.

¹ A large portion of the mobility rate in America can be accounted for by a subpopulation of hypermobile households (Clark and Davies-Withers 2007). Therefore, these CPS figures might underestimate rates of residential mobility because these figures do not reflect multiple moves made by those who moved more than once within a year.

2. Prior Research and Theory

2.1 Residential Mobility and Child Outcomes

Research widely focuses on two specific outcomes of mobility on children: academic achievement and behavior problems. Scholars have consistently found that compared with non-mobile children, mobile children experience significantly more behavior problems, (Simpson and Fowler 1994; Haynie, South, and Bose 2006; Gillespie 2013), poorer health outcomes (Gillespie and Bostean, 2013), as well as negative academic outcomes, such as dropping out (Coleman 1988; Haveman, Wolfe, and Spaulding 1991; South, Haynie, and Bose 2005), decreased academic performance (Ingersoll, Scamman, and Eckerling 1989; Tucker, Marx, and Long 1998), and grade retention (Simpson and Fowler 1994).

One possible reason given for the differences in outcomes between mobile and non-mobile children is the loss of social capital experienced by both the child and the parents in the move (Coleman 1988; Stack 1994; Pribesh and Downey 1999; Pettit and McLanahan 2003). Household characteristics that predict selection into migration can complicate the picture, as moves can be instigated by family disruptions, such as divorce, that negatively affect child outcomes (Astone and McLanahan 1994; Tucker, Marx, and Long 1998; Norford and Medway 2002). At the same time, long-distance moves are more common for families with higher levels of education and household income (Tucker, Marx, and Long 1998; Fischer 2002), which are positively related to child outcomes (Davis-Kean 2005).

Outside of individual and household predictors, such as marital disruption (Madigan and Hogan 1991), the major debates on residential mobility and child outcomes have centered largely on community and family support.

2.2 Community and Family Protective Factors

The most well-known way of measuring community and family protective factors is through the transmission and maintenance of social capital, a concept that has been popularized by James Coleman. Over the past two decades, Coleman's (1988) work on social capital has inspired scholars to view where a person lives as promoting the formation and maintenance of social ties that are paramount in forming a child's ability to excel in educational settings. Coleman's key point is that interactions between individuals and institutions (i.e., parents, teachers, schools, and community) are resources that provide children with assets that increase their abilities, achievement-levels, and general welfare. These social and community ties are broken when a family relocates, resulting in a loss of social capital. Negative effects may be even worse when families relocate repeatedly: e.g., "...for families that have moved often, the social relations that constitute social capital are broken at each move" (Coleman 1988: 113).

Coleman argues that the concentration of social interactions among parents, between parent and child, and between parents and community institutions (e.g., school) close

intergenerational relations and, in turn, create pathways to the attainment of social capital. He charges that moving erodes family and community ties to social capital and that this has important and negative effects on child outcomes. However, it has not been considered whether or not the parent-child bond (arguably the social capital dimension *least* affected by a move) can serve to buffer the negative effects of broken social and community-level ties after relocation.

2.3 Intergenerational Solidarity

Research on the effects of the parent-child relationship on child outcomes has, for the most part, shown that high quality intergenerational relationships are beneficial for children. For instance, Aseltine, Gore, and Colten (1998) found a significant relationship between parent-child closeness and decreased depression and externalizing behavior problems in children. Others (Conger, Ge, Elder, Lorenz, and Simons 1994) found that positive parent-child relationships buffer the negative emotional and behavioral effects of divorce on children. In a longitudinal study, Hair, Moore, Garrett, Ling, and Cleveland (2008) found that adolescent intergenerational cohesion was associated with greater young adult mental well-being. However, little is known about whether parent-child closure can offset the negative effects of moving associated with loss of community-level social capital.

Few people question the value of a strong parent-child relationship. Close intergenerational bonding during adolescence has been linked to a number of positive outcomes, such as fewer behavior problems (Aseltine, Gore, and Colten 1998; Hair, Moore, Garrett, Ling, and Cleveland 2008) and higher educational attainment (Bronte-Tinkew, Scott, and Lilia 2010). Again, it should stand that the parent-child relationship (ostensibly the dimension of social capital left most intact after a move) will help to buffer the negative effects of moving on children over and above parent-community and child-community social capital.

The act of moving is a decision made almost completely by parents, albeit sometimes with children's interests a major concern. Further, the decision to move (and where to move) is made almost completely by parents, and this decision is expected to have consequences on children's behavior and achievement. However, in the same respect, a strong parent-child relationship might buffer the negative effects of community-based social capital loss for parents and children alike.

3. Research Question and Hypothesis

Following from the research discussed in the previous section, the main research question being considered is: does intergenerational solidarity moderate the relationship between residential mobility and child academic and behavioral outcomes? It is expected that since the parent-child relationship remains relatively intact it will offset the loss of community-based social capital and negative behavioral and achievement effects after a move. This research question linking mobility and child outcomes is tested with measures for an extensive set of child and family characteristics and commu-

nity-based social capital.

4. Data and Methods

4.1 National Longitudinal Survey of Youth (NLSY) Information and Sampling

The National Longitudinal Survey of Youth (NLSY79) is a longitudinal study of a representative sample of 12,696 American men and women aged 14 to 21 in 1979. The children of the female NLSY79 respondents are also surveyed biennially starting in 1986 and these NLSY79 Child and Young Adult data files can be linked with the original NLSY79 to assess intergenerational phenomena and outcomes. The present study utilizes data only from the 2000, 2002, 2004, and 2006 survey waves because respondents' residential mobility was not assessed in the NLSY until 2000. The age ranges for children during the 2000 wave of interviews is from 5.83 – 15.17, and the ages of the mothers in the study ranged from 36-40 at the time of the 2000 interview.

Multiple children are surveyed in each household, giving the NLSY a useful hierarchical design. High response rates (between 85-90%) also contribute to the validity of the analysis. This rate has been maintained because data are primarily collected in the respondent's home through face-to-face interviews. This study utilizes the records of 3,168 adolescent respondents.

4.2 Variables and Measures

4.2.1 Child Outcomes

Academic achievement was measured using the NLSY79 Child and Youth respondent's 2000, 2002, 2004, and 2006 Peabody Individual Achievement Test (PIAT) scores. The PIAT is a widely used measure of academic achievement for children. Since 1986, the children in this study have been assessed biennially between ages five and 15. Each assessment begins with five age-appropriate questions and progresses to more advanced concepts. The reading recognition test measures word recognition and pronunciation ability, and the math test measures basic math skills and concepts.

The *behavioral problems* measure was measured using Peterson and Zill's (1986) Behavior Problems Index (BPI). This index consists of 28 questions, drawn primarily from the widely used Child Behavior Checklist (Achenbach and Edelbrock 1981) along with other widely used child behavior scales. The respondent's mother indicates whether a statement about the child's behavior is "often true," "sometimes true," or "never true."

Because the purpose of this analysis is to assess the effects of moving and several other theoretical predictor variables on changes in educational achievement and behavior problems, it is important to use longitudinal data which includes measures of the predictors and outcomes in a person-year format. This allows for consideration of social capital for each survey wave in the analysis. Adequately controlling for past behaviors *before* a move occurs is crucial; otherwise, associating changes in child outcomes *after* moving cannot be done

confidently. The sample consists of children who completed the PIAT and BPI for the 1998 (*baseline*), 2000, 2002, 2004, and 2006 survey rounds. The PIAT is administered starting at age five, and the behavior problems assessment begins at age four; neither examination is recorded after age 15.

4.2.2 Control Variables

Individual and Household Characteristics

Individual and household characteristics include time variant variables, such as annual household income, age, and whether or not a family change (e.g., marital disruption) occurred between any of the survey waves. Dummy variables for marital status marked whether or not a respondent's parent was married, never married, divorced, remarried, separated, or widowed across each survey wave. Time-invariant variables include the child's sex, birth order, mother's age at child's birth, mother's highest year of education completed (measured once in 2000), family structure (father in household or not), and the number of children in the respondent's household. Children were assigned to racial groups based on the primary racial identification of their mothers as Black, Hispanic, or Non-Black/Non-Hispanic. All other variables in the analysis vary across survey waves.

Social Capital

Interaction between parents and community institutions was measured using two variables: how often a child's parent volunteers at the child's school reported as never or almost never (0), once or twice a term (1), once a month (2), once or twice a month (3), or once a week or more (4) (Morgan and Sørensen 1999), and, following Coleman (1988), a dichotomous variable marking whether or not a child attends Catholic school.²

Interaction between child and community institutions was measured by whether or not the child participates in extracurricular activities (White and Gager 2007); how often he/she attends religious services as coded as about once a week (1), about once a month (2), a few times a year (3), or never (4) (Parcel and Dufur 2001); and how often the child feels lonely or wishes he or she has more friends as measured as being never or hardly ever (1), sometimes (2), or often (3).

4.2.3 Key Independent Variables

The potentially disruptive act of *residential mobility* is captured by a variable marking whether a respondent did not move (0), moved locally (1), or moved across city, county, or state boundaries.

Intergenerational solidarity was measured by the level of closeness the respondent reported feeling to his/her mother, reported as being not very close (1), fairly close (2), quite close (3), or extremely close (4).

4.3 Analytic Strategy

Linear Mixed Modeling (LMM) was used to examine the

² Coleman argues that Catholic school is indicative of social ties in the larger community that are based on members' religious affiliation.

 Table 1. Intergenerational Solidarity, Residential Mobility, and Child Academic Achievement.

Fixed Effects	Variable	Model A Main Effects Model	Model B Interaction Model	Model C Individual and Household	Model D Final Model
Initial Status	Residential Mobility	-0.79*	-0.75	-0.178	0.15
	Intergenerational Solidarity	.676*	0.53	-0.347	-0.776
	Residential Mobility x Intergenerational Solidarity		-0.182	-0.273	0.092
	Residential Mobility x Intergenerational Solidarity x Gender		.219*	.239*	.248*
	Individual/Household				
	Male	1.14	1.95**	2.37**	2.44**
	Age			-0.78***	-0.84***
	Black			-6.58***	-6.37***
	Hispanic			-0.699	-0.79
	Income			.00002**	.00003***
	Father in Household			0.434	0.233
	Birth Order			-0.653	-0.613
	Mother's Age at Child's Birth			.385**	.339*
	Children			-0.27	-0.222
	Never Married			1.87	-1.74
	Got Divorced			1.18	0.852
	Mother's Education			.938***	.844***
	Social Capital				
	Parent Volunteer				-0.149
	Church Attendance				0.009
	Extracurricular				1.49*
	Loneliness				-0.34
	Catholic				2.054
	PIAT Baseline 1998	.775***	.771***	.685***	.677***
	Constant	10.1***	9.99***	7.28	11.395
Variance Com	ponents				
Level 1	Within Household	58.32*	59.98*	41.40*	36.55
Level 2	Initial Status	-52.4*	-54.9*	-54.24	-58.96
+ p <.10	Rate of Change	4.13	4.35*	4.17*	4.5*
* p <.05 ** p <.01	Covariance	791.41	819.92*	822.37*	892.96*
*** p < .001	Residual	95.56	93.80*	88.80*	87.56*

moderation effects of intergenerational solidarity on the relationship between moving and child academic and behavioral outcomes. Models were run separately for each of these two child outcomes.

This study applied an upward two-step *preliminary* modeling procedure employed by Singer and Willett (2003): (a) an unconditional means model, and (b) and unconditional growth model.³ First, the unconditional means model is the preliminary verification for whether LMM is appropriate for this analysis by partitioning the total variation in the outcome variable (BPI or PIAT). The intra-class correlation coefficient (ICC) measures the proportion of variance in the outcome variable that is due to between-children differences rather than differences within children over time.

LMM is a flexible and powerful method for the analysis of longitudinal data. In LMM, independent observations are not assumed, meaning that between-subject and within-subject effects are both considered. This modeling structure is also flexible in its use of missing information. Other models use listwise deletion of cases if a complete trajectory is not available for an individual. LMM, on the other hand, accounts for all respondents in the data set and is, therefore, arguably a better model for unbalanced panel data sets like the NLSY where not every respondent is observed in every year. Lastly, LMM allows for the analysis of hierarchically organized data. In this study, four models (A through D) were tested on three levels using an LMM structure. The first of these three levels consisted of households, the second was the individual child nested in each household and the last level, time, was measured by interview round and nested within each child.

The Hausman specification test validated these models (results not shown). LMM assumes that the dependent variable be conditionally normal. Shapiro-Wilkins, and Skewness/Kurtosis testing (not shown), indicate that both dependent variables were distributed reasonably normally. Stata estimated the fixed and random effects as well as the reliability and correlation coefficients. Variance inflation factors were checked in order to assess for severe multicollinearity in the model (average VIF: 1.24). Analysis of the correlation matrix (not shown) indicates that none of the observed relationships between the independent variables in the models were very strong.

5. Results

5.1 Sample Characteristics in 2000 (Valid N=3,168)

The average household income for families in the sample from the 2000 wave was approximately \$55,000 per year. The majority of the children in the sample (52%) were boys, only a slightly larger percent than the entire NLSY population sample (51%). The mean age of children in the sample at the time of the 2000 wave was 10.8 (SD= 2.45). Half of the sample mothers identified as Non-Black, Non-Hispanic (50.44), 28.6% identified as Black, and 20.9% identified as Hispanic.

About three-fourths of the sample (75.82%) did not move

while 15.27% moved locally and 8.91% moved across city, county, or state lines. The sample statistics on mobility are reasonably consistent with recent reported rates of residential mobility in the United States (U.S. Census Bureau, 2010).

5.2 Academic Achievement

For each dependent variable, four models were tested on three levels using a LMM structure. Table 1 presents a summary of the series of theoretically important variable cluster models fitted to the data on academic achievement.

Model A in Table 1 shows a test of the main effects on achievement. The results suggest that there is a significant positive relationship between the child's reported closeness to mother and his/her achievement. There is also a significant association between residential mobility and achievement. Sex is not a significant predictor of achievement at this level of the model.

In Model B, the main effects included in Model A are being tested with the inclusion of interaction terms between residential mobility and intergenerational solidarity as well as a triple interaction effect for residential mobility, intergenerational solidarity, and sex. The only significant interaction term in this model is the three-way interaction term with gender. This indicates that the relationship between parent-child closeness and residential mobility is conditioned by the child's sex.

Model C was the first theoretical model in which household and individual-level characteristics were added to the model that includes the interaction effects. In Model B, the added variables include age, Black, Hispanic, household income, family structure (father in household), number of children in the household, birth order, mother's age at birth of child, mother's education, whether or not a marital disruption (divorce or separation) took place between survey waves, and a dummy variable for never married.

The results of this model also imply that mother's age at child's birth and her education level are positively associated with the respondent's academic achievement score when all other modeled variables are controlled. As expected, the baseline PIAT score is a significant and positively associated predictor of later academic achievement. The linear age term remains significant, indicating that academic achievement scores decrease over time. The triple interaction term also remains significant in this model.

The full and final model, Model D, includes measures of individual and household characteristics as well as controls for community-level social capital. The added variables are for parents' classroom volunteering frequency and the respondent child's Catholic school attendance (parent/child-community connectivity); the child's participation in extracurricular activities, religious service attendance, and child's self-reported level of loneliness (child-community connectivity). When included in the model, only participation in extracurricular activities significantly predicts academic achievement levels above and beyond the effects of individual and household characteristics. However, the three-way interaction among residential mobility, intergenerational solidarity, and child's sex is significant at the .05 level. The

³ The preliminary models confirmed significance for each dependent variable and are not presented in the tables.

considerable decrease in information criterion fit statistics (Table 2) clearly indicates that the final model is a significantly better fit than all prior models.

Table 2. Fit Statistics of Linear Mixed Models

	Deviance	AIC	ВІС						
Behavior Problems:									
Model A	35394.84	35414.83	35477.63						
Model B	34805.36	34829.37	34904.53						
Model C	26264.9	26310.91	26448.46						
Model D	24985.02	25041.03	25207.11						
Academic Achievement:									
Model A	29085.24	29105.23	29166.89						
Model B	28795.52	28819.53	28893.4						
Model C	22042.24	22088.24	22223.84						
Model D	20988.02	21044.02	21207.74						

Notes: When analyzing fit of nested models, the test of significance for likelihood ratio testing is a X^2 test with degrees of freedom equal to the difference in the number of parameters between the models. If two models are not nested they can be compared using Akaike Information Criterion (AIC) and/or the Bayesian Information Criterion (BIC). Only the preliminary models were compared using LRT. A decrease in AIC and BIC scores between non-nested models is an indication of better fit.

5.3 Behavior Problems

Similar to academic achievement, analysis was run using the BPI as a dependent variable in four models on three hierarchical levels (time within children and children within households). Table 3 shows the prediction of behavior problems in these four steps: Model A shows only the main effects modeled against behavior problems, Model B then adds the key interaction terms of interest, Model C adds adjustment for individual and household characteristics, and Model D adds the series of controls for community-based social capital.

With regard to the nature of the relationship between the main effects and behavior problems, Model A in Table 3 shows only a marginally significant positive relationship between residential mobility and the respondent child's BPI score with the lagged BPI baseline in the model (.059). The respondent's reported closeness to his/her mother is negatively associated with behavior problems. Being a male is shown to be a positively associated significant predictor of child behavior problems.

Model B in Table 3 adds relevant interaction terms into the model. The coefficient for residential mobility x intergenerational solidarity is significant at the .05 level. Model C includes measures for individual and household characteristics. Intergenerational solidarity is the only significant predictor of behavior problems in this model. No interaction terms between solidarity and mobility are significant in this model. The final behavior problems model, Model D, includes individual- and household-level predictors as well as controls for community-based social capital (in order to isolate the

effects of intergenerational social capital). This model shows significant negative effects for intergenerational solidarity and also the interaction between intergenerational solidarity and residential mobility on behavior problems. Therefore, closeness to mother is a significant predictor of behavior problems and these effects increase after a residential move takes place (locally or across distance).

Residual plotting for both behavior problems and academic achievement models revealed constant variance and indicated that neither model's residual errors deviate from a normal distribution. Additional diagnostics plotting the best linear unbiased predicted values (BLUPs) for random effects did not provide evidence of extremely unusual random child or household effects in either model.

6. Discussion

The current study tested the moderation of intergenerational solidarity on the relationship between residential mobility and adolescent outcomes. It was hypothesized that intergenerational solidarity and residential mobility would interact to significantly affect adolescent behavior and achievement above and beyond other theoretically important variables (including measures for other dimensions of social capital).

To test these hypotheses with the greatest rigor, a longitudinal analysis was conducted that involved four conditional growth models incorporating clustered theoretically important variables (i.e., individual/household characteristics and community-based social capital). In light of mixed research on the relationship between social capital and residential mobility effects for children, it was important to analyze how the parent-child relationship might cushion the effects of mobility and attendant loss community-based social capital.

It was expected that the parent-child relationship would significantly buffer the negative academic and behavioral effects of moving on children. This is because the intergenerational form of social capital is arguably the one dimension of capital to remain relatively intact once a move takes place. This hypothesis is supported by this research.

The effect in Model D, Table 3, shows a significant positive association between behavior problems and an interaction between residential mobility and intergenerational solidarity. Controlling for all other theoretically important variables, intergenerational solidarity is a significant predictor of behavior problems, and this is especially so after a residential relocation takes place. For academic achievement, this association holds but only when conditioned by gender.

These analyses are subject to several caveats. Measuring child outcomes across only four waves of this longitudinal survey does not allow for analysis of behavior and achievement to the extent that the relationship between residential mobility and academic achievement and/or behavior problems takes longer than two, four, or six years to develop. Reverse causation may also be present in the models above. For instance, problem behavior may cause children to have distant relationships with their parents. Also, because only the children of NLSY female respondents are surveyed, father-child and father-community interaction (other than what is reported by the mother) cannot be assessed as a component

of intergenerational solidarity or community-based social capital. The information available for a child's mother is not necessarily available for the child's father. Moreover, because of the NLSY design, children raised in single-father homes are not included in the sample. With the rise of joint

custody arrangements, this is an important limitation to this study, if only because this study's main focus is on the parent-child relationship.

7. Conclusion

Table 3. Intergenerational Solidarity, Residential Mobility, and Child Behavior Problems

Fixed Effects	Variable	Model A Main Effects Model	Model B Interaction Model	Model C Individual and Household	Model D Final Model
Initial Status	Residential Mobility	1.05	0.924	0.785	0.741
	Intergenerational Solidarity	-1.89***	-1.71***	-1.68**	-2.3***
	Residential Mobility x Intergenerational Solidarity		0.38	0.344	1.52**
	Residential Mobility x Intergenerational Solidarity x Gender		-0.34*v	-0.3	-0.27
	Individual/Household				
	Male	2.15**	0.91	0.724	0.832
	Age			0.056	0.11
	Black			0.247	0.797
	Hispanic			-0.776	-0.7
	Income			-0.0000007	0.0000002
	Father in Household			-0.67	-0.63
	Birth Order			-0.004	-0.21
	Mother's Age at Child's Birth			0.227	0.24
	Children			0.037	0.34
	Never Married			1.35	0.638
	Got Divorced			-0.82	-0.19
	Mother's Education			-0.274	-0.28
	Social Capital				
	Parent Volunteer				-4.6**
	Church Attendance				0.497
	Extracurricular				0.686
	Loneliness				4.05***
	Catholic				-1.6
	BPI Baseline 1998	.56***	.56***	.557***	.55***
	Constant	30.0***	30.69***	28.50***	23.29**
Variance Componer	nts				
Level 1	Within Household	94.62*	95.50*	91.86*	84.54*
Level 2	Initial Status	-38.08	-31.04*	-44.37	-66.49
+ p <.10	Rate of Change	3.59*	3.04*	3.77*	5.49*
* p <.05	Covariance	565.2*	475.89*	676.54*	958.44*
** p <.01 *** p < .001	Residual	254.81*	255.70*	261.39*	259.0*

The effect of moving on child outcomes was successfully modeled with a hierarchical design to compensate for time as it is nested within children and children nested within households. Intergenerational solidarity significantly interacts with residential mobility to predict adolescent behavior and achievement outcomes. As such, intergenerational solidarity is one dimension of social capital that needs purposeful consideration in residential mobility research because it appreciably offsets negative child academic and behavioral outcomes.

The findings of the current study are important in a number of ways. First, the data show that intergenerational solidarity *does* significantly offset the negative behavioral and achievement effects of residential mobility, even when controlling for the effects of individual/household-level variables and community-level social capital. Second, the research indicates that in a study of child outcomes, generally, there are different significant predictors and interactions for behavior problems than there are for academic achievement in adolescence even though prior researchers had posited similarly negative effects of moving on a range of child outcomes (Coleman 1988; Hendershott 1989; Hagan, MacMillan, and Wheaton 1996; Norford and Medway 2002).

Moving is difficult—it is arguably one of life's most stressful commonly occurring events. Residentially mobile children, especially those who move frequently, are at a risk for a host of negative behavioral and academic outcomes. However, these potentially harmful effects may be forestalled by social services and policy commitment to help mobile children and families adjust to their new schools and communities. These approaches to intervention are based on a multidisciplinary effort that would include social workers, educators, school administrators, and the community at large.

In other words, community leaders and other practitioners ought to be mindful of these effects and help to improve parent-community and child-community social capital, especially among mobile and hypermobile families. For instance, community health practitioners might facilitate community-based functions that provide opportunities for recent "transplants" to network—this would be especially beneficial for high-mobility communities.

At the same time, community and school involvement for residentially mobile families relies, at least in part, on whether or not the school community reaches out to involve them and help them adjust. Thus, school-based services focused on residentially mobile individuals and families would help encourage parental involvement in school activities and functions. People will never stop moving—but helping integrate mobile families into their destination communities is a good start at alleviating the negative social, behavioral, and academic effects of residential mobility on children.

Acknowledgments:

The author would like to thank the Center of Expertise on Migration and Health, Michael Rodriguez, and David Lopez-Carr for their advice and comments on earlier drafts of this manuscript.

References

- Achenbach, T. M. and C.S. Edelbrock (1981), "Behavioral Problems and Competencies
- Reported by Parents of Normal and Disturbed Children Aged Four through Sixteen", *Monograph of the Society for Research in Child Development*, Vol. 46, No. 1, pp. 1-82.
- Aseltine, R. H. Jr., S. Gore, and M.E. Colten (1998), "The Co-Occurrence of Depression and Substance Abuse in Late Adolescence", *Development and Psychopathology*, Vol. 10, pp. 549-70.
- Astone, N.M. and S. McLanahan (1994), "Family Structure, Residential Mobility, and School Dropout: A Research Note", *Demography*, Vol. 31, No. 4, pp. 575-84.
- Bronte-Tinkew, J., M.E. Scott, and E. Lilia (2010), "Single Custodial Fathers' Involvement and Parenting: Implications for Outcomes in Emerging Adulthood", *Journal of Marriage and Family*, Vol. 72, pp. 1107-27.
- Coleman, J.S. (1988), "Social Capital in the Creation of Human Capital", *American Journal of Sociology*, Vol. 94 (Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure), pp. 95-120.
- Conger, R.D., X. Ge, G.H. Elder, Jr., F.O. Lorenz, and R.L. Simons (1994), "Economic Stress, Coercive Family Process, and Developmental Problems of Adolescents", *Child Development, Vol.* 65, pp. 541-61.
- Davis-Kean, P.E. (2005), "The Influence of Parent Education and Family Income on Child Achievement: The Indirect Role of Parental Expectations and the Home Environment", *Journal of Family Psychology*, Vol. 19, No. 2, pp. 294-304.
- Ersing, R. L., R.L. Sutphen, and D.N. Loeffler (2009), "Exploring the Impact and Implications of Residential Mobility: From the Neighborhood to the School", *Advances in Social Work*, Vol. 10, No. 1, pp. 1-18.
- Fischer, C.S. (2002), "Ever-more Rooted Americans", *City and Community*, Vol. 1, No. 2, pp. 177-98.
- Gillespie, B.J. (2013), "Adolescent Behavior and Achievement, Social Capital, and the Timing of Geographic Mobility", Advances in Life Course Research, Vol. 18, No. 3, pp. 223-233.
- Gillespie, B.J., and G. Bostean (2013), "Socioeconomic Status, Residential Mobility, and Health", In K. Fitzpatrick (Ed.), Poverty in America: A Crisis among America's Most Vulnerable, Vol. II, pp. 33-57. Santa Barbara: Praeger.
- Hagan, J., R. MacMillan, and B. Wheaton (1996), "New Kid in Town: Social Capital and the Life Course Effects of Family Migration on Children", *American Sociological Review*, Vol. 61, No. 3, pp. 368-85.
- Hair, E.C., K.A. Moore, S.B. Garrett, T. Ling, and K. Cleveland (2008), "The Continued Importance of Quality Parent-Adolescent Relationships during Late Adolescence", *Journal of Research on Adolescence*, Vol. 18, pp. 187-200.
- Haveman, R., B. Wolfe, and J. Spaulding (1991), "Childhood Events and Circumstances Influencing High School Completion", *Demography*, Vol. 28, No. 1, pp. 133-57.
- Haynie, D.L., S.J. South, and S. Bose (2006), "The Company You Keep: Adolescent Mobility and Peer Behavior", *Sociological Inquiry*, Vol. 76, No. 3, pp. 397-426.
- Hendershott, A.B. (1989), "Residential Mobility, Social Support and Adolescent Self-Concept", Adolescence, Vol. 24, No. 93, pp. 217-32.
- Ingersoll, G.M., J.P. Scamman, and W.D. Eckerling (1989), "Geographic Mobility and Student Achievement in an Urban Setting", Educational Evaluation and Policy Analysis, Vol. 11, No. 2, pp.

143-49.

- Jelleyman, T. and N. Spencer (2008), "Residential Mobility in Childhood and Health Outcomes: A Systematic Review", *Journal of Epidemiology and Community Health*, Vol. 62, pp. 584-92.
- Madigan, T.J. and D.P. Hogan (1991), "Kin Access and Residential Mobility among Young Mothers", *Social Science Quarterly*, Vol. 72, No. 3, pp. 615-22.
- Morgan, S.L., and A.B. Sørensen (1999), "Parental Networks, Social Closure, and Mathematics Learning: A Test of Coleman's Social Capital Explanation of School Effects", *American Sociological Review*, Vol. 64, No. 5, pp. 661-681.
- Norford, B.C. and F.J. Medway (2002), "Adolescents' Mobility Histories and Present Social Adjustment", *Psychology in the Schools*, Vol. 39, No. 1, pp. 51-62.
- Parcel, T.L. and M.J. Dufur (2001), "Capital at Home and at School: Effects on Child Social Adjustment", *Journal of Marriage and the Family*, Vol. 63, No. 1, pp. 32-47.
- Peterson, J.L. and N. Zill (1986), "Marital Disruption, Parent-Child Relationships, and Behavior Problems in Children", *Journal of Marriage and the Family*, Vol. 48, No. 2, pp. 295-307.
- Pettit, B. and S. McLanahan (2003), "Residential Mobility and Children's Social Capital: Evidence from an Experiment", *Social Science Quarterly*, Vol. 84, No. 3, pp. 632-49.
- Pribesh, S. and D.B. Downey (1999), "Why are Residential and School Moves Associated with Poor School Performance?", *Demography*, Vol. 36, No. 4, pp. 521–34.
- Simpson, G.A. and M.G. Fowler (1994), "Geographic Mobility and Children's Emotional/Behavioral Adjustment and School Functioning", *Pediatrics*, Vol. 93, No. 2, pp. 303-9.
- Singer, J.D. and J.B. Willett (2003), Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence, Oxford University Press, New York, NY.
- South, S.J., D.L. Haynie, and S. Bose (2005), "Student Mobility and School Dropout", *Social Science Research*, Vol. 36, pp. 68-94.
- Stack, S. (1994), "The Effect of Geographic Mobility on Premarital Sex", Journal of Marriage and the Family, Vol. 56, No. 1, pp. 204-8.
- Tucker, C.J., J. Marx, and L. Long (1998), "'Moving on': Residential Mobility and Children's School Lives", *Sociology of Education*, Vol. 71, No. 2, pp. 111-29.
- U.S. Bureau of the Census (2010), *Geographic Mobility: March 2008 to March 2009.* Current Population Reports, Washington DC: U.S. Government Printing Office.
- White, A.M. and C.T. Gager (2007), "Idle Hands and Empty Pockets? Youth Involvement in Extracurricular Activities, Social Capital, and Economic Status", *Youth & Society*, Vol. 39, No. 1, pp.75-111.