

## **Living Arrangements, Marital Status and Intergenerational Support in Puerto Rico**

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### **ABSTRACT**

This study aims to 1) examine the stability of the associations between living arrangements based on marital status and the likelihoods of older adults' receipts of functional and health support from their children and 2) investigate how the relationships between living arrangements and receipt of support from children can vary by the gender of the older adult parent over time. Data were drawn from the Puerto Rican Elderly Health Conditions Survey of non-institutionalized elderly persons aged 60 years and over first interviewed in 2003 with follow-up interviews in 2007. The sample was restricted to those married or widowed and providing information on all predictors and outcomes across both waves, producing N=3,467. Living arrangements were categorized as 1) married couple living alone, 2) widowed living alone, 3) married couple living with others including children and 4) widowed living with others including children. Random effects logistic regression models examine the effect of living arrangement categorization on changes in the probabilities of receiving functional, health and emotional support from children controlling for demographic, socio-economic, health characteristics and time. Among the living arrangements examined, widows either living alone or living with others have the highest likelihoods of receiving support from children over time. This suggests that widowhood does present vulnerabilities that the family takes the responsibility of minimizing. Moreover, the relationship between living arrangements and support varies by gender, reinforcing the matrifocality of Puerto Rican family structures.

## **Introduction**

Puerto Rico is among the forerunners of the demographic transition in Latin America and the Caribbean. As such, it is categorized among countries in the advanced stages of population aging (Saad 2011). In 2010, older adults 60 years and over accounted for 18.2 percent of the population (United Nations (UN) 2013). As is evidenced worldwide, population aging is a gendered process. Generally, older women outnumber men due to gender differences in longevity (Mirkin and Weinberger 2001). As such, older women are more likely than their male counterparts to experience the loss of a spouse. Relative to other world regions, the prevalence of widowhood among older adults is demonstrably lower in Latin America and the Caribbean (UN 2001), which may be attributed to the prevalence of non-marital unions.

Nevertheless, the rapid aging of Puerto Rico and other Caribbean nations, implicates an increase in widows and widowers among older adults within the coming years. Widowhood is a critical life stage that is often associated with social, economic and health vulnerabilities, which are differentially experienced by men and women (Carr and Bodnar-Deren 2009). Widowhood is particularly important in Caribbean countries such as Puerto Rico, where older adults depend on the family unit, particularly children, for instrumental, health, emotional and other support (Garcia-Preto 1996).

The extent to which parents can depend on children is contingent on family size and proximity of their children as well. Puerto Rico experienced a 2.2 percent decline in its population between 2000 and 2010 censuses, which has been attributed to emigration to the United States primarily and fertility declines (PAHO 2012). While close proximity between older adults and their children is critical for support transfers (Bengston and Roberts 1991)

support relations are not necessarily severed by distance (Knodel et al 2010; Quashie and Zimmer 2013).

Research conducted in China and other Asian societies has shown that intergenerational coresidence is generally protective of physical and emotional health difficulties during widowhood due to collectivist cultural practices that ensures older adults' access to familial support (Hermalin, Ofstedal and Mehta 2002; Zhang, Li and Silverstein 2005). Latin America and the Caribbean shares similar social norms as other developing societies, including Asia, in the prevalence of intergenerational coresidence and the family unit having significant responsibility for the care of older adults (Rawlins 1999, Pelaez and Martinez 2002, UN 2005; Knodel and Ofstedal 2002). Puerto Rico, unlike the majority of the Caribbean, has a higher proportion of older adults living alone. According to UN estimates 56% of men and 52% of women, 60 years and over in Puerto Rico, lived alone or with a spouse in 2005. This is in contrast to 32% of men and 27% of women, 60 years and over, in all Latin America and the Caribbean in similar living arrangements in 2005 (UN 2012).

Puerto Rican family structures tend to resemble that of developed nations as they tend to be more nuclear than extended and a significant proportion of elderly widows live alone (Safa 2005). According to the 2010 census, multigenerational households accounted for 6.6 percent of households in Puerto Rico (Lofquist, Lugaila, O'Connell and Feliz 2010). In Puerto Rico, female-headed households constitute approximately 23 to 27 percent but one-third of these households constitute widows (Safa 2010; Lofquist et al. 2010). Thus, Puerto Rico evidences some living arrangement patterns that are similar to developed nations. The independent living among older widows may be attributed to their access to and coverage of government support

combined with women's preference to avoid remarriage (Safa 1995, 2010), which implicates support relations with children.

Using data from two waves of the Puerto Rican Elderly Health Conditions Survey (Palloni, Davila and Ayendez-Sanchez 2007), 2003 and 2007, this paper investigates older adults' likelihood of receiving functional, health and emotional support from their children based on their living arrangements, marital status and gender. Specifically, it compares the receipt of support among older adults who are married and living alone, widowed and living alone, married and living with others, and widowed and living with others. The data are analyzed from the perspective of older adults 60 years and over. Whereas existing research on intergenerational support in Latin America and the Caribbean has been limited to cross-sectional assessments (DeVos 1990; Saad 2005; Quashie and Zimmer 2013), the current study extends the literature by examining how parents' likelihood of receiving support may change based on their living arrangements, which are argued to be contingent on their marital status. Furthermore, it examines the significance of gender in structuring support relations within a matrifocal Caribbean society. This offers insight into how marital status and household structure differentially protects men and women, through their relationships with their children, within a region where family remains the most central source of support for older adults.

## Background

Empirical research shows that older adults' marital status is consistently shown to be a significant predictor of coresidence choice and intergenerational support. Both cross-sectional and longitudinal studies have shown positive associations between parental widowhood and

coresidence with children and other extended family (DeVos 1990; Lee and Dwyer 1996, Roan and Raley 1996; Korinek, Zimmer and Gu 2011).

Intergenerational coresidence may be especially beneficial for overall well-being in cultures where family cohesion is highly valued such as Latin American, Spanish and Asian cultures (Zunzunegui, Beland and Otero 2001; Gonzales 2007). The family altruism perspective argues that intergenerational support is likely to occur at the onset of certain vulnerabilities that limit independent living, such as declining health or economic standing, which is typically associated with widowhood. This framework has been tested in several contexts and is widely supported (Frankenberg, Lilliard and Willis 2002; Zimmer 2005). According to the altruism perspective, family members support those in the most need without any explicit expectation of repayment. Nydia Garcia-Preto's (1996) review of Puerto Rican family structures notes that the family is guaranteed to care for its members across the life course for as long as persons stay within the family system. Ethnographic research of elder support in Puerto Rico (Sanchez-Ayendez 1998) has shown that adult children take a more active role in the daily personal and functional care for their older parents when a spouse dies, the parent lives alone or their health declines.

As observed in studies of family support in other developed and developing countries, however, the gender of the parent moderates intergenerational support exchanges (Wolf and Soldo 1988; Silverstein, Gans and Yang 2006; Kalmijn 2007). The matrifocal family structure that characterizes much of the Hispanic and Afro-Caribbean region (Momsen 2002; Safa 2005), explains to some extent why mothers receive more attention and protection from children relative to fathers. Women are actively involved in the economic and domestic duties of the household and as such display more investment, relative to fathers, in their children's well-being

throughout their life course. Subsequently, mothers establish closer bonds with their children across the life course relative to fathers and thus receive more support from their children during their later years of life. Garcia-Preto (1996) further explains that daughters and mothers have mutual exchange relationships such that daughters typically encourage or actively take their widowed mothers to live with them and in turn the mothers provide assistance in the home.

Simultaneously women, in their roles as kin-keepers within the family, may encourage children to build relationships with their fathers and support them when necessary. Thus, fathers may indirectly benefit from support that children provide to mothers during the course of marriage and this may or may not continue following the death of the mother. Research consistently shows widowers generally have less contact with their children than married fathers and receive less support from children (Aquilino 1994; Grundy and Shelton 2001; Kalmijn 2007). Thus, marriage is generally beneficial to men in regard to intergenerational support relations with their children. Thus support relations in widowhood may be more tenuous for men in matrifocal societies.

Moreover, gender socialization throughout the life course influences the types of the support that is exchanged between parents' and children in parents' adaptation to widowhood. Men's roles as breadwinners throughout the life course may inhibit their abilities to perform household tasks very well or adequately care for themselves in the event of illness following the loss of their spouse. Similarly, women may require more financial and related emotional support. The majority of existing research on these gender differences in the type of support has been conducted in the United States and Europe (Ha, Carr, Utz and Nesse 2006, Carr and Bodnar-Deren 2009). Moreover, cultural context influences the extent of gender differences in support following the loss of a spouse. For instance research conducted among widowed older

adults in China (Li et al 2005) showed no significant gender differences in depressive symptoms, which authors attributed to social norms of filial piety that encourages social support to vulnerable older adults. Although Puerto Rico shares similarity of familism as China, familial support is limited to those who are considered members of the family. The matrifocal family structure of Puerto Rico introduces the possibility of gender differences in support that is in contrast to China.

### Current Study and Hypotheses

The preceding discussion highlights both theory and research which suggest that the probability of receiving a particular form of support may be a function of the living arrangement, marital status and gender of the parent. Puerto Rico presents an interesting case to examine these associations as it presents elements of household behaviors that are characteristic of both developed and developing countries as well as cultural nuances of Latin America and the Caribbean. In Latin America and the Caribbean support for older adults is primarily undertaken in the private sphere of families (Rawlins 1999, Saad 2005). Generally, adult children are the primary source of support in the absence of a spouse (Agree and Glaser 2009). Likewise, Puerto Rican cultural values of familism precludes family members, including children take care of their older parents when needs arise. Thus, hypothesis 1 proposes that *widowed older adults living alone or in extended households will be more likely than married couples living alone to receive support from their children*. The unavailability of a spouse or any other person present in the household is expected to command more attention from children.

At the same time, the matrifocal character of Puerto Rican households combined with differences in gender socialization across the life course implicates the likelihood of gender

differences in the receipt of support based on living arrangements and marital status of parents. Hypothesis 2 proposes widows and widowers living alone or with others will differ in their likelihood of receiving functional, health and emotional support from children due to gender role specialization across the life course.

## **Methods**

### *Data and Sample*

Data are drawn from the two waves of the Puerto Rican Elderly Health Conditions (PREHCO) conducted between 2002-2003 and 2006-2007. The island-wide study was a multi-stage stratified clustered sample of the elderly non-institutionalized population aged 60 years and over. The sample of households was randomly selected from the 2000 Population and Household Census of the Census Bureau of the United States. In the first wave of data collection, a total of 4,291 elderly targets (inclusive of 391 individuals who used a proxy) and 1,442 surviving spouses were interviewed during May 2002 and May 2003. By the second wave of data collection between May 2006 and November 2007, more than half of the baseline respondents were re-interviewed (n=3,891 targets and n=1,260 spouses). The target interviews in wave 2 represents 2,726 independent target interviews, 439 targets interviewed through a proxy, 678 deceased (15.8 percent), 48 who became institutionalized (1.1 percent). Information, though relatively, on targets who died or became institutionalized was provided via a proxy using a reduced questionnaire. Information on a total of 400 baseline targets was not available thus producing a minimal non-response rate of less than 1 percent. The sample for the current study utilizes the information provided by the target interviewees across both waves of data collection, including those who used a proxy. Thus, the data form a balance panel. The samples are



restricted to those who were either partnered or widowed and had at least 1 living child, regardless of parentage, at the time of both interviews. This yields an analytical sample of 2170 providing 4340 observations but due to the exclusion of missing data on some variables (self-rated health, education, income, cognitive impairment and employment status) the sample was reduced to 1990 elderly respondents accounting for 3,467 observations across the two waves. Missing data on the individual variables used in the study is modest. The highest recorded is 11.47% of individuals for self-rated health. Results are weighted to ensure representativeness of the population.

### *Measures.*

#### *Dependent Variables*

The *receipt of support* is measured in three different forms: functional, health and emotional support. In both waves elderly respondents were asked the following questions separately: “Do you receive help with transportation? Do you receive help with work tasks, household chores or gardening? Do you receive help with errands? Is there someone that helps you when you are sick? There is someone who helps you by visits, providing companionship or listening to your problems?” They were then asked to identify who helps them most in each of these situations.

Elderly respondents were coded as receiving functional support from at least 1 child if they indicated any child from the children’s roster provided support with any of the first three tasks, health support if any child from the children’s roster provided support in response to the fourth question, and emotional support if any child provided support in response to the final question. All three outcomes are dichotomous with 0 representing those who do not receive such support from any children and 1 representing those who receive support from at least 1 child.

This paper does not include analyses of financial support received from children as this was not explicitly asked in the survey.

### *Covariates*

The key independent variable is *living arrangements*. Based on the union status and household composition (provided through the household roster) of the elderly respondents at baseline and follow-up, living arrangements were categorized as 1) married couple living alone (reference); 2) widowed and living alone; 3) married couple living with at least 1 child and others; and 4) widowed and living with at least 1 child and others.

Demographic characteristics of the older adult that may influence the likelihood of the receipt of support from their children include age, gender, and the supply of children. *Age* is coded as a categorical variable with persons 60 to 69 years as the reference, which is compared to those 70-79 and 80 and older. *Gender* is dichotomous with women chosen as the reference group. The supply of children is determined by the *number of living children*, which is treated as a continuous variable and the *location of children* relative to the respondent. The location of children is based on information on the location of each child at both interviews and is measured dichotomously in the following ways. Older adults are indicated to have at least one child, or not, in the following locations: in the same neighborhood, same city, another city, the United States or another country.

Socio-economic characteristics include *employment status*, with persons not working at the time of the surveys as the reference group. I include a category for those who provided no information on work. A measure of *monthly income* from the following source is also accounted for. These sources include job, pension, rental of properties, social security, welfare, nutritional

assistance program, and other sources. Within each source, weekly and biweekly income values were converted to monthly income. Monthly income was then converted into quartiles and older adults in the bottom quartile were chosen as the reference. Highest *education attained* is categorical with primary education as the reference group and there is a category for those not reporting education.

Health status is examined through three measures. *Self-rated health* is a categorical variable. The respondent was asked the following question: ‘Would you say that your health is excellent, very good, good, average or bad?’ I collapsed excellent health, very good health good and average health into one category because of the small numbers of respondents indicating excellent health, very good and good health. This is the reference category. Those not providing any information on health status are accounted for in a separate category. Respondents’ *disabilities* were assessed with their indications of having difficulty with at least one Activity of Daily Living (ADL) and Instrumental Activity of Daily Living (IADL). The former include bathing; dressing; eating; getting in and out of bed; walking across a room and using the bathroom. IADLs include preparing a hot meal; shopping; doing light housework; doing heavy housework; managing finances and taking medication. Cognitive impairment was measured by the final score on the Mini mental State Examination. This measure of cognitive impairment is treated as a continuous variable with higher scores representing better cognitive functioning. The PREHCO research team notes that a total score of 11 or more on the minimal scale indicated that the interviewee was not cognitively impaired. The final scores on the minimal exams were used to determine the use of a proxy.

Control variables used in this study include region and year, which are both categorical. In the former San Juan, the capital is chosen as the reference category and for the latter the baseline year is the reference.

### *Analytic Strategy*

This paper proceeds first with a description of demographic, socioeconomic and health characteristics of the analytical sample at baseline and follow-up, which is presented in Table 1. Following this, in Table 2, are descriptions of living arrangement states at baseline and follow-up. Specifically, I present the distributions of older adults in each category at the two periods, the distributions of transitions between categories over the two waves of data collection and finally the percentage distributions of functional and health support received according to living arrangement status at baseline and follow-up. The latter is done to assess if there is a bivariate relationship and the nature thereof. Multivariate analyses follow.

Random effects logistic regression models are used to predict the probability of older Puerto Ricans' receipt of functional, health and emotional support as a function of their living arrangements, controlling for other covariates. This is followed by a model that tests for interactions with gender and living arrangements to assess if the effects of living arrangements on support vary for older Puerto Rican men and women.

Although the majority of the sample of older adults demonstrates stability in their living arrangements across the 4 years of the data collection, there has been some modest change in their living arrangement states. Thus, the data allow the analysis of both between and within case variation. For instance, between case variations in the receipt of support is assessed for older adults who are categorized as a married couple living with others relative to those widowed

and living with others in both waves. The estimated differences in the receipt of support for these individuals tells us how the stability of these types of living arrangements can be associated with an increased or decreased probability of receiving support from children. Within case variation in the receipt of support is examined for individuals in either living arrangement state whose circumstances may change or that of the household, which produces a change from not receiving support from children to receiving support from children. This paper intends to examine both of these variations because the effect of living arrangements on support received from children is argued to be contingent on circumstances that can change over time for both the older adult and the household.

Based on the dichotomous construction of the outcomes of interest and the structure of the sample, logistic random effects model estimation is the most appropriate analytic tool. Random effects models allow the simultaneous estimation of within and between case variations. Fixed effects models, in contrast, will delete all cases that remain stable in their receipt of support, the dependent variable, between the 2 waves. Therefore, I lose observations of older adults who received either no support from children or support from at least 1 child across the two waves. Provided such stability in categorization exists, the assessment of the association between one's living arrangements and changes in the probability of support received between the two time points is greatly reduced. Arguably, the stability of support can impact one's living arrangement choice. Moreover, fixed effects models unlike random effects models, do not allow the assessment of gender differences as gender does not change between waves. The social meaning of a given gender, however, can change and this can implicate support transfers.

Thus, random effects models are better suited for analysis in the current study given the substantive meaning of the variation in receipt of support due to the nature of one's living

arrangements is derived from both the between and within case variations. This is combined with the interest in examining gender differences in the association between marital status, living arrangements and support in Puerto Rico.

As a matter of sensitivity analysis, fixed effects models are also estimated as a check for unobserved heterogeneity bias in the random effects model. One of the main benefits of fixed effects model estimates is that they control for all unobserved effects that can be correlated with an individual's living arrangement state across time thus affecting the likelihood of receiving support from children. Unmeasured characteristics such as the health or economic status of other household members if the individual lives with other persons in both waves, regardless of their marital status, can alter the probability of support received from children. The results of the fixed effects models are presented in Appendix 1 and 2. The results are similar to the random effects models.

## **Results**

Table 1 shows the sample characteristics by presenting the distribution of social, demographic, economic and health variables for older Puerto Ricans at baseline and follow-up. On average, older Puerto Ricans have 4 living children and half the sample indicates having at least one child in the same city, another city within Puerto Rico or within the United States, in 2003 and 2007. The majority of the sample is lower educated (67.2% primary education), economically inactive; and receive an average of \$800 per month. The sample is overwhelmingly healthy. Approximately 90% report good self-rated health and no difficulties with activities of daily living at baseline and follow-up. A slightly lower proportion of older adults reported having no difficulties with instrumental activities of daily living. Using a final score of 11 as the benchmark of cognitive function on the MMSE, the mean score of sample at the two periods

indicates that older adults in the sample are not cognitive impaired. This suggests that older adults may have better capacities for independent living. Descriptive analyses, not shown here, indicate that women receive less monthly income on average (\$569 versus \$1081); are more likely to report poor self-rated health (14% versus 10%) and difficulties with at least 1 ADL (17.8% versus 9.7%) and 1 IADL (33.24% versus 18.51%). This suggests that older women experience more vulnerability than older men, which may have implications for their likelihood of receiving support.

[Table 1 about here]

Table 2 shows baseline and follow-up living arrangement states and the distributions of support received according to the living arrangements. Looking at Panel A, the sample shows a slight increase in the proportions of older adults who live only with their spouses, widows living alone and widows living with others between the two cross-sections whilst there is a cross-sectional decline in the proportion of married couples living with others.

It is evident from Panel B that across both waves, widowed Puerto Ricans living with others, including their children, are most likely to receive all three forms of support. Widowers living alone follow closely behind in their receipt of support. In contrast, married couples who live alone are least likely to receive functional and health support in 2003 and 2007. The sharpest reduction in the likelihood of receiving all three forms of support from at least one child between baseline and follow-up is shown for those who are widowed and living with others. On balance, the descriptive results indicate that the likelihood of elderly parents receiving different types of support varies by their living arrangement status with widows being most likely to receive all forms of support but more so for widows who are coresiding with others.

[Table 2 about here]

Next, random effects logistics multivariate analyses to test whether the bivariate associations, presented in Table 2, are upheld after accounting for individual characteristics are presented in Table 3. Controlling for demographic, health and economic factors, relative to parents living only with their spouse, widowed parents living alone are more likely to receive both functional and health support from their children but less likely to receive emotional support. Widowed parents living with others also have higher likelihoods of receiving all forms of support relative to those who are living with a spouse only. It is also shown, however, that married couples living with others are more likely to receive functional and health support from their children. Thus, there is *support* for the first hypothesis that widowed older adults living alone or with others will be more likely to receive all forms of support relative to married couples. Gender differences are also evident in the receipt of support. Net of demographic, health and economic covariates, older men are significantly less likely than older women to receive all three forms of support from their children.

[Table 3 here]

Hypothesis 2 predicts that the relationship between living arrangements and the likelihood of parents receiving all forms of support will vary by gender. This hypothesis was tested with the inclusion of interaction terms. Table 4 shows the random effects logistic model with only the main effects and interaction terms of the key independent variables. Each model controls for the other covariates in the previous table. To facilitate easier interpretation of the interaction terms, Table 5 shows the odds ratios of support received for each combination of parents' living arrangements and the gender. *The models provide support for the second hypothesis.*

[Table 4 here]



[Table 5 here]

The random effects model shows men who are widowed and living alone, widowed and living with others, or married and living with others have lower odds of receiving functional support compared to women who live with a spouse only. Directing attention to the receipt of health support, widowed men living alone and widowed men living with others are more likely to receive support from children when they are sick relative to married women living with a spouse only between 2003 and 2007. This suggests that widowed fathers have increased dependence on their children for support in times of illness, following the loss of their wife. Women in their caregiving roles, as wife, would have typically provided such support thus husbands are at a loss for independent care during widowhood.

Regarding emotional support, widowers living alone and married men living with others were less likely to receive companionship or visits from children relative to women living with their spouse only. In contrast, widowers living with others were more likely than married women to receive emotional support. On one hand, widowers may be less likely to express the need for companionship due to gender socialization or the matrifocal nature of households impinges on fathers building close bonds with their children thereby reducing the likelihood of receiving emotional support during widowhood. On the other hand, widowers living with others may still not express their need for emotional support to their children but benefit indirectly from the emotional support children may give to other persons in the household.

Table 5 shows the odds of receiving support for every combination of gender and living arrangements based on the interactions presented in Table 4. The findings show that mothers have higher odds of receiving all forms of support relative to fathers, regardless of their living arrangements.

## **Discussion and Conclusion**

This paper has explored the differential impact of living arrangements among widowed and married persons on the likelihood that older adults receive functional, health and emotional support from their children in Puerto Rico. The study also explored the extent of gender differences in support received based on parent's living arrangements and marital status. The findings extend our understanding on the gendered process of aging, both in the demographic process of women outliving men and the salience of matrifocal family systems, in shaping children's responses to the needs of their aging parents.

The results show strong evidence that the living arrangements of older Puerto Ricans and gendered nature of family relations influence the likelihood of receiving different forms of support transfers from children. There is both an independent and intersecting relationship of gender and living arrangements. Overall, the results show that widowhood increases the likelihood of receiving functional, health and emotional support from children, whether one is widowed and living alone or widowed and living with others, including their children. This supports the altruism perspective that family members support those in most need. The extent to which the results fully support the altruism perspective is limited by data on parents' support to their children and whether children's support exceeds such. The results also show, however, that married couples living with others were more likely than couples living alone to receive support from children.

At the same time, marital status and living arrangements of older adults confers different intergenerational support relations for men and women. Similar to Kalmijn's (2007) research on gender differences in the effect of marriage on support in the Netherlands, married Puerto Rican fathers do not appear to receive any support from their children. The presence of other people in

the household including a wife, however, may contribute to this decreased likelihood of receiving support from children due to the availability of support from several sources.

Furthermore, children are even less likely to support their fathers in regard to functional and emotional support, following the loss of their spouse. The preceding analyses show widowed men living alone or with others were less likely to receive functional support from their children. Moreover, widowed men living alone were also less likely to receive emotional support from their children, relative to married women. These findings imply that children in Puerto Rico are still more likely to support their mothers relative to their fathers even if their fathers are without a spouse or any residual household member and even if their mothers have a spouse. The models did not include a control for assistance from the spouse so it is difficult to determine the extent to which the presence of a spouse, for married women, is negligible or not. Married women may still depend on their children for support if they are charged with the responsibility of caring for an ailing spouse. Widowed fathers' lower likelihood of receiving assistance from children with errands, household tasks, or transportation may be due to their fathers' expressing more independence in these areas. The lack of receiving emotional support among widowers living alone may be attributed to fathers' lesser investment in forming close bonds with their children earlier in the life course. These findings call for further research on the extent of need and the quality of parent-child relationships among older women and men in Puerto Rico.

The salience of gender is also evident in widowers' receipt of health support from their children. Widowers living alone or with others were more likely to receive support from their children when sick. This reflects father's greater dependence on their children following the loss of their wife who would have likely assumed the role of caretaker thus limiting men's abilities to

care for themselves independently. Thus, widowhood presents different vulnerabilities for older men and women, which command different forms of support from children.

Nevertheless, the matrifocality of Puerto Rican society is supported in this study in that older men are significantly less likely to receive support from their children relative to older women. Moreover, in matrifocal societies such as Puerto Rico, marriage does not appear to protect men with regard to intergenerational support relations with their children and this disadvantage is exacerbated during widowhood. Older men, however, may be less reliant on children for support during widowhood because they may have less need for support, or greater access to formal support or other alternative sources.

One of the main limitations of the study is that it does not assess support from the child's perspective to ascertain how parents' support to children can influence the support they receive from the child. Further, changes in the children's circumstances, including their proximity, can alter the likelihoods of support parents receive. Last but not least, the study does not examine the timing of marital and living arrangement transitions, both of which implicate support transfers. Despite these limitations, the study does advance the research in intergenerational support in the region, the cohesiveness of family ties across time and the centrality of women within Caribbean families.

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Table 1: Socio-demographic and health characteristics of the sample: Baseline and Follow-up distributions, N=3467.

Parents' Characteristics	Baseline (2003)	Follow-up (2007)
<b>Gender</b>		
% Women		56.3
% Men		43.7
<b>Age</b>		
% 60-69	52.8	33.8
% 70-79	31.2	43.8
% 80 and older	16.0	22.4
<b>Number of Living Children</b>		
mean (sd)	4.13 (2.66)	4.14 (2.58)
<b>Location of Children</b>		
% at least 1 child in neighborhood	38.3	39.1
% at least 1 child in city	48.8	49.2
% at least 1 child in another city	50.6	55.0
% at least 1 child in the United States	50.4	53.7
% at least 1 child in Another country	2.0	1.9
<b>Socio-economic Characteristics of Parents</b>		
<b>Employment Status (worked in past week)</b>		
% Did not work	88.5	92.1
% worked	11.5	7.9
<b>Monthly Income (0-374)</b>		
<b>\$0-\$374</b>	20.93	22.09
\$375-\$579	26.44	22.26
\$ 580 to \$890	24.66	28.1
\$ 892 and above	29.97	27.55
<b>Education Attained</b>		
% primary		63.14
% High School and Beyond		36.86

Table 1 continued

	Baseline (2003)	Follow-up (2007)
<b>Health Status (self-rated)</b>		
% good	87.6	88.3
% poor	12.4	11.7
<b>Difficulty with ADL</b>		
% no difficulty with any ADL's	86.0	81.1
% Difficulty with at least 1 ADL	14.0	18.9
<b>Difficulty with IADL</b>		
% no difficulty with any IADL's	71.9	68.1
% difficulty with at least 1 IADL	28.1	31.9
<b>Cognitive Impairment</b>		
Minimental score, mean (sd)	16.80 (2.35)	16.26 (2.33)
<b>Region</b>		
San Juan		29.8
Ponce		17.02
Myaguez		17.05
Arecibo		19.27
Zona Este		16.87

Table 2: Percentage Distribution of Living Arrangements and Informal Support Received: Baseline and Follow-up

	Living Arrangement State			
	Couple Alone	Widowed Alone	Couple with others	Widowed with others
<b>Panel A</b>				
Percent living in this state at:				
Baseline	32.9	21.7	26.9	18.5
Follow-up	31.8	24.7	22.4	21.2
<b>Panel B:</b>				
Percent living in this state receiving				
<b>1) Functional support at</b>				
Baseline	15.2	42.1	28.6	62.9
Follow-up	12.4	38.9	28.7	62.1
<b>2) Health support at</b>				
Baseline	16.4	44.9	26.8	63.3
Follow-up	8.6	37.8	17.8	51.0
<b>3) Emotional Support at</b>				
Baseline	13.4	16.4	9.6	26.5
Follow-up	4.0	7.1	5.4	12.4

Table 3: Random Effects Logistic Regression Odds Ratios for Support Received (N=3,467)

Parents' Characteristics	Support Received		
	Functional	Health	Emotional
<b>Living Arrangement (Married couple alone)</b>			
Widowed Living Alone	2.46*** (0.03)	4.97*** (0.07)	0.92*** (0.01)
Married Couple living with others	2.41*** (0.03)	2.66*** (0.03)	0.92*** (0.01)
Widowed living with others	5.64*** (0.08)	8.38*** (0.13)	1.81*** (0.03)
<b>Gender (Women)</b>			
Men	0.32*** (0.004)	0.29*** (0.003)	0.57*** (0.01)
<b>Age (60-69)</b>			
70-79	1.88*** (0.02)	1.49*** (0.02)	1.36*** (0.02)
80 and older	3.96*** (0.05)	2.30*** (0.03)	1.83*** (0.03)
<b>Number of Children</b>			
	1.15*** (0.002)	1.08*** (0.002)	1.05*** (0.003)
<b>Location of Children</b>			
At least 1 child in Neighborhood	1.56*** (0.01)	1.46*** (0.01)	1.40*** (0.02)
At least 1 child in Same City	1.43*** (0.01)	1.38*** (0.01)	1.58*** (0.02)
At least 1 Child In Another City	1.19*** (0.01)	1.22*** (0.01)	1.28*** (0.01)
At Least I Child in United States	0.51*** (0.01)	0.53*** (0.01)	0.72*** (0.01)
At Least 1 Child in Another Country	0.86*** (0.03)	0.81*** (0.03)	0.66*** (0.03)
<b>Education (Primary)</b>			
High School and Beyond	0.72*** (0.01)	0.44*** (0.01)	0.53*** (0.01)
<b>Employment (Did not work)</b>			
Working	0.62*** (0.01)	0.97 (0.02)	0.89*** (0.02)

**Monthly Income (\$0-\$374)**

\$375 - \$579	1.11*** (0.01)	0.60*** (0.01)	0.85*** (0.01)
\$580 - \$890	1.18*** (0.01)	0.82*** (0.01)	1.17*** (0.02)
\$892 and above	0.87*** (0.01)	0.80*** (0.01)	0.79*** (0.01)

**Self-rated health (good)**

poor	0.84*** (0.01)	0.52*** (0.01)	1.72*** (0.02)
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**Disability**

at least 1 ADL	1.75*** (0.02)	1.47*** (0.02)	1.42*** (0.02)
at least 1 IADL	2.74*** (0.03)	1.94*** (0.02)	1.02 (0.01)
Cognitive Impairment	0.98*** (0.002)	0.97*** (0.002)	0.96 (0.02)

**Region (San Juan)**

Ponce	0.99 (0.01)	0.72*** (0.01)	1.04** (0.02)
Mayaguez	1.10*** (0.01)	1.06*** (0.02)	1.33*** (0.02)
Arecibo	1.36*** -0.02	1.02 (0.02)	1.66*** (0.03)
Zona Este	0.87*** (0.01)	1.27*** (0.02)	0.83*** (0.01)

**Year (baseline)**

Follow-up 2007	0.69*** (0.01)	0.40*** (0.003)	0.30*** (0.003)
Constant	0.10*** (0.004)	0.30*** (0.01)	0.13*** (0.01)

Wald Chi 2	69455.81***	54254.20***	28344.41***
Observations	3,467	3,467	3,467
Number of caseid	1,990	1,990	1,990

Standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Table 4: Random effects Logistic Regression Odds Ratios for support transfers received showing interaction effects (N=3,467)

Parents' Characteristics	Support Received		
	Functional	Health	Emotional
<b>Living Arrangement (Married couple alone)</b>			
Widowed Living Alone	3.54** (0.06)***	5.05*** (0.09)	1.03 (0.02)
Married Couple living with others	4.32*** (0.07)	5.71*** (0.10)	1.41*** (0.03)
Widowed living with others	7.45*** -0.12	8.43*** (0.16)	1.93*** (0.04)
<b>Gender (Women)</b>			
Men	0.60*** (0.01)	0.42*** (0.01)	0.71*** (0.01)
<b>Interactions</b>			
Living Arrangement x Gender			
Widowed living alone x Men	0.43*** (0.01)	1.30*** (0.04)	0.84*** (0.03)
Married Couple w others x Men	0.33*** (0.01)	0.23*** (0.01)	0.45*** (0.01)
Widowed with others x Men	0.68*** (0.02)	2.01*** (0.07)	1.23*** (0.04)
Constant	0.07*** (0.003)	0.25*** (0.01)	0.11*** (0.01)
Wald Chi 2	70347.4***	55287.84***	28480.18***
Likelihood ratio test <sup>1</sup>	3055.66***	7316.82***	1204.76***
Observations	3,467	3,467	3,467
Number of caseid	1,990	1,990	1,990

Standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

<sup>1</sup> In comparison to previous model

Table 5: Logistic Regression Odds Ratios of Support Received by Living Arrangement and Gender of Parents

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	Functional Support	
	Women	Men
Married Couple Alone	0.30	0.15
Widowed Alone	1.42	0.58
Married Couple with Others	1.19	0.25
Widowed With Others	4.37	1.28
	Health Support	
	Women	Men
Married Couple Alone	0.20	0.06
Widowed Alone	1.18	0.87
Married Couple with Others	1.08	0.11
Widowed With Others	2.40	2.15
	Emotional Support	
	Women	Men
Married Couple Alone	0.08	0.06
Widowed Alone	0.11	0.07
Married Couple with Others	0.12	0.05
Widowed With Others	0.23	0.20

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