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Who Cares? Caregiver Well-being in Europe

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Abstract

This paper analyzes a multi-national sample comparing self-reported well-being of those who provide dependent care to that of non-caregivers. We pair individual-level data from the 2004 European Social Survey (ESS) for respondents in 22 nations (*n*=41,000+) with country-level measures of attitudinal support for co-residential familial caregiving (2007 Eurobarometer), old age and family public transfers (OECD Social Expenditures Database, 2014) and economic development (GDP). Using multi-level modeling, we examine the association between country-level co-residential familial attitudes and public spending and individual-level caregiver well-being, comparing effects by gender. We find that: (1) caregiving is differentially associated with well-being for men and women; (2) female caregivers report worse well-being than male caregivers in countries with greater attitudinal support for co-residential familial caregiving; (3) caregivers, regardless of gender, report better well-being in countries with more generous old age transfers. These findings are important in the context of Europe's population structure and the threats to public spending for dependent populations.

Keywords: aging, care, caregiving, co-residential familial care, well-being

Providing dependent care, whether to children, older family members, or the disabled, has far-reaching consequences for caregiver well-being (Marks, Lambert and Choi, 2002; Pavalko and Woodbury, 2000). Yet it remains unclear whether differences in country-level approaches to caregiving, particularly co-residential familial care norms and public transfers, structure caregiver well-being. Co-residential familial care norms, or the expectation that dependents should co-reside with one's family, may burden caregivers and limit alternative care options including market substitutes. Further, limited public transfers for old age and families place economic burdens on caregivers which may increase stress and deteriorate well-being. Indeed, increased welfare spending is shown increase social contact among older age citizens, thus promoting health and well-being (Ellwardt et al. 2014).

This link between co-residential familial norms, public transfers and caregiver well-being is especially pertinent considering Europe's changing demographics. Europe has 19 of the world's 20 countries with the oldest populations, and estimates project that nearly 30% of the European population will be over the age of 65 by 2060 (Eurostat, 2013). Adult children in Europe are increasingly called upon to provide care for their aging parents as a substitute for formal care (Bonsang, 2009) which is complicated by the "sandwiching" of care for children and older adult(s) simultaneously (Miller, 1981). Further, the number of individuals who provide dependent care to elders, children, or both concurrently, will continue to increase (Eurostat, 2013), as shifting demographics of aging populations and delayed fertility create unprecedented challenges for policy-makers and families alike (Bengtson and Lowenstein, 2003; Billari and Kohler, 2004). This gap is even more troubling in the context of the global financial crisis whereby potential cutbacks in government support to caregivers will place greater demands on

informal caregiving (Bolin, Lindgren and Lundborg, 2008). The implications of these studies are clear: those providing dependent care, whether it is for older adults, children or the disabled, will face unparalleled challenges. In this context, we apply a broad definition of caregiving which includes those with any dependent in the home, to assess the impact of macro-level influences of co-residential familial caregiving norms and public transfers on their well-being.

Despite the important policy implications of the country-level differences in approaches to care on caregiver well-being, there is a dearth of literature examining these multi-level effects. Providing a broad theoretical framework, Glenn (2010) argues that the "social organization of caring", including how caregiving responsibilities are assigned in a society, are essential to caregiver well-being. Specifically, individuals may be coerced into caregiving through normative care expectations assigned based on gender role expectations. Indeed, women and minorities in the United States are often coerced into caregiving (Glenn, 2010), and in Europe, care work disproportionately falls to women; for example, in Spain, 84% of caregivers are women (IMSERSO, 2004). In the European context, countries differ in familial care norms reflecting variation in the social organization of care (Daatland, 2001). Notably, studies examining data from the 5-country European OASIS study (Old Age and Autonomy: The Role of Service Systems and Inter-generational Family Solidarity) found a north-south gradient in which southern countries have stronger filial obligations, including providing help and support for aging parents (Daatland, 2001; Lowenstein and Daatland, 2006). While these studies identified important variation in co-residential familial norms of the social organization of care, they did not examine the multi-level effects of co-residential familial care norms on caregiver well-being. Specifically, stronger normative expectations for co-residential family care may reflect coerced

caregiving arrangements with potential consequences for caregiver well-being. In addition, institutional provisions also coerce care. Notably, government transfers economically reward caregivers which may alleviate additional stress associated with caregiving. It follows that caregivers in countries with more generous public transfers for caregiving should report better well-being. Thus, threats to public transfers, motivated by austerity measures, may have important consequences for caregiver well-being. In light of these political dialogues, investigating these associations is timely and important.

This study addresses this gap in the understanding of caregiver well-being by using the 2004 European Social Survey dataset of 22 countries to: (1) compare the well-being of caregivers to those not providing dependent care, (2) examine whether the association between caregiving and well-being varies for men and women, and (3) assess the importance of country-level attitudes toward co-residential familial caregiving and old age and family transfers on caregiver well-being. Familial caregiving norms, specifically the expectation that children should provide co-residential dependent care for an aging parent, may reflect a coercive social environment in which individuals, even those who prefer not to, are called on to provide dependent care (Glenn, 2010). Further, lack of institutional support, notably through limited public transfers, may also coerce individuals into providing dependent care. We take a broad view of caregiving which reflects those providing dependent care for any family member within the family home. We contribute to existing literature in several ways. First, we take a multi-level approach to examine how country-level factors—co-residential familial caregiving norms and public transfers—are associated with individual-level caregiver well-being. Second, we assess well-being using a measure that reflects both positive psychological aspects and the absence of

depressive symptoms (Bech, 2004; Bech *et al.*, 2003) as opposed to common uni-dimensional health measures. Finally, while the bulk of previous research on caregiver well-being has used smaller samples from one or a few countries and from primarily urban populations, we analyze data from a large, multi-national sample of urban and rural residents, which permits us to examine these research questions in a multi-level perspective.

We hypothesize that well-being may be lower among caregivers in coercive contexts, where there is strong social pressure to provide care within the family home and economic support for caregiving is limited. Moreover, we expect a more severe penalty for female caregivers, who disproportionately shoulder these responsibilities. Our results highlight important country differences in caregiver well-being and identify a strong association between country-level contexts and caregiver well-being.

An Overview of Caregiver Well-being

Providing care, whether to older adults or children, may have both positive and negative consequences for well-being (Pinquart and Sörensen, 2003a; Pinquart and Sörensen, 2003b; Stanca, 2012; Walker, Pratt and Eddy, 1995). On one hand, social exchange theory points to the rewarding aspects of caregiving, suggesting it may improve the caregiver's relationships with the elder receiving care (Hinrichsen, Hernandez and Pollack, 1992; Walker and Allen, 1991). Reciprocally, elderly dependents may provide help in the home for the caregiver's family, especially when children are present (Ingersoll-Dayton, Neal and Hammer, 2001). However, a larger literature points to the negative impact of caregiving on well-being, especially for women (for review, see Carretero *et al.*, 2009). For example, women who provide care for elderly

parents have increased depression (Schulz *et al.*, 1995), an effect not found in caregiving sons (Amirkhanyan and Wolf, 2006). Providing care for children also structures parents' well-being with more detrimental effects for mothers than fathers (Bird, 1997). These relationships hold cross-nationally, with parents reporting lower well-being (measured by life satisfaction and happiness) than those without children (Stanca, 2012). Role strain theory explains these findings by focusing on conflicting demands of work and caregiving (Pavalko and Woodbury, 2000). Indeed, those who provide dependent care for an elder family member report greater pressure balancing work and family demands (Walker and Allen, 1991) and negative costs to their employment and earnings (Aassve, Mazzuco and Mencarini, 2005; Wakabayashi and Donato, 2006). Collectively, these studies highlight the detrimental effects of caregiving on well-being. Moreover, caregiver experiences may be structured by broader institutional constraints.

The Institutional Link: Co-residential familial Caregiving Norms and Public Transfers as Coercive Care

A major limitation of existing caregiver well-being research is that it applies single or small country samples and thus is unable to examine multi-level, cross-national differences (Borg and Hallberg, 2006; Daatland, Veenstra and Lima, 2010; Llacer *et al.*, 2002; Nordberg *et al.*, 2005). Yet existing research suggests that caregivers' experiences vary by countries' systems of care. For example, the economic and psychological impact of providing informal care in the home varies cross-nationally (Bolin, Lindgren and Lundborg, 2008; Wahrendorf, von dem Knesebeck and Siegrist, 2006). Further, Bolin et al. (2008) find that providing long-term care severely impacts caregivers' work and family decisions with stronger effects in countries with limited publicly financed long-term care programs. Collectively, these studies indicate that

country-level differences in norms and economic approaches to care may impact caregiver well-being. Others examine caregiver well-being for single nations to draw institutional conclusions. For example, a small percentage of Norwegians provide sandwiched care (3%), yet they benefit from these arrangements through improved life satisfaction (Daatland, Veenstra and Lima, 2010). This relationship is explained, in part, by generous institutional support for the care of aging or disabled family members (Daatland, Veenstra and Lima, 2010; McGill Institute for Health and Social Policy, 2011).

Indeed, countries' approaches to the care of dependent populations is a central aspect of welfare state classification (Cousins and Tang, 2004; Esping-Andersen, 1990). For example, Scandinavian countries have expansive policies for family caregiving, including guaranteed child care coverage and older adult care subsidies (Esping-Andersen, 1990; Gornick, Meyers and Ross, 1997). In the Scandinavian context, dependent care is considered a social issue that should be addressed collectively through government support. Although marketization has been increasing recently even among Scandinavian welfare states (Szebehely, 2005), they remain much more supportive of publically-funded child and older adult care than do more conservative welfare states that favor family-centered caregiving, either in the child or parents' home (Daatland, 2001). Finally, many of the liberal welfare states, such as the United States and Great Britain, provide few institutional supports for dependent caregiving, focusing instead on market-driven interventions, which reflect ideological support for individualistic approaches to care and tendencies towards marketization (Freeman and Schettkat, 2005; Gornick, Meyers and Ross, 1997).

Since cultural preferences are reflected through institutions, these welfare systems reflect normative expectations for care (Bolin, Lindgren and Lundborg, 2008). Normative expectations, in turn, may influence individuals' abilities to opt-out of care arrangements through structural impediments thus reflecting "coercive care." Supporting this view, Menaghan (1989) found that norms surrounding childbearing affect the association between parenthood and psychological well-being. Investigating attitudinal support for child-to-parent transfers more broadly, Lowenstein and Daatland (2006) found that adult children in Europe expect to provide more support to parents in more familistic societies compared to more individualist societies. Collectively, these studies suggest that normative expectations for caregiving influence caregiver experiences. Nevertheless, an explicit analysis of this issue is conspicuously absent from the literature.

The need to understand the "social organization of caring" (Glenn, 2010), including how caregiving responsibilities are assigned in a society, is essential for caregiver well-being. In some societies, individuals are "coerced" into providing care through normative expectations of who should provide care and limited public transfers to absorb the economic impact of caregiving (Glenn, 2010). Risk for coercive care is not gender neutral. Women are disproportionately responsible for caregiving based on their statuses as wives, mothers and daughters (Glenn, 2010). That female caregivers report lower well-being than male caregivers is not surprising (Daatland, Veenstra and Lima, 2010; Dautzenberg *et al.*, 1999; Freeman and Schettkat, 2005). However, situating women's experiences within broader societal norms for family care highlights the compounding effect of "coercive care" at the structural-level on well-being at the individual-level. Expectations that care is provided within the home limits the availability of alternative care

options (Daatland, 2001). Further, limiting public transfers for care places greater economic burdens on caregivers, which may deteriorate caregiver well-being. As a consequence, families with limited caregiving abilities and/or desires may be called upon to provide dependent care, which may have detrimental effects on caregiver well-being. Females, especially, may be "coerced" into care by way of their status as women, and therefore may have limited ability to decline providing care. Given the diversity in caregiver regimes, the need to understand caregiving cross-nationally is pertinent as country-level differences in attitudes toward caregiving may have implications for well-being above and beyond individual-level resources.

To summarize, this study builds on existing literature to expand the models to a large country sample and explicitly tests the impact of co-residential familial norms and old age and family public transfers on caregiver well-being. Further, we apply a representative urban and rural sample which improves upon previous urban-only research (Lowenstein and Ogg, 2003). Our novel approach assesses the multi-level effects of caregiving and country context on well-being by combining individual-level data from 22 nations from the 2004 ESS, with country-level measures of attitudinal support for co-residential familial caregiving from the Eurobarometer and old age and family public transfer percentages from the OECD Social Expenditures database. Our specific research questions and hypotheses are outlined below.

Research Questions and Hypotheses

We examine three empirical questions: (1) Do caregivers report lower well-being than non-caregivers net of sociodemographic differences? (2) Does the association between caregiving and well-being differ for males and females? (3) Are country-level attitudes toward

co-residential familial caregiving and public transfers associated with individual caregiver well-being?

Based on the previous literature, we derive three hypotheses:

Hypothesis 1: Caregivers report lower well-being compared to those who do not provide dependent care.

Hypothesis 2: Female caregivers report lower well-being than male caregivers.

Hypothesis 3: Caregivers in countries with more coercive contexts report worse well-being than those in countries with less coercive contexts; we expect this effect to be magnified for female caregivers.

3a: Country-level preferences for co-residential familial caregiving are associated with lower individual caregiver well-being compared to caregivers in countries with less co-residential familial caregiving attitudes.

3b: Limited old age and family public transfers are associated with lower individual caregiver well-being compared to caregivers in countries with more generous public transfers.

Data and Sample

This study combined individual-level data from the 2004 ESS module on family, work and well-being, with country-level data from the 2007 Eurobarometer (for co-residential familial caregiving attitudes), the 2004 OECD Social Expenditures database (for old age and family public transfers as a percent of total Gross Domestic Product) and CIA World Factbook (2004)

[for per capita Gross Domestic Product (GDP) in 2004 dollars]. The ESS is an academically-led general composite social survey of European nations, designed to be representative of all persons ages 15 and over residing in private households in each country. The sample was selected based on strict random probability methods at each stage of the survey design, and respondents were interviewed face-to-face. The ESS sample includes urban and rural residents, going beyond previous studies that only sampled urban residents (Lowenstein and Ogg, 2003). Our sample included data for respondents (n=42,523 for co-residential familial caregiving attitudes and n=41,244 for old age and family public transfers) from the following countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Iceland, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and United Kingdom. Estonia was excluded because of missing data on individual-level income. Because we draw on different data sources, three countries did not have all measures, so were excluded from certain analyses: Iceland and Ukraine, missing the co-residential familial caregiving attitudes measure, are excluded from the models in Table 3; Turkey and Ukraine, missing on the public transfer measures, are excluded from the models in Table 4. To analyze our macro-measures in the same models would reduce our country-level sample to 19, thus violating the assumptions of multi-level modeling (Kreft 1996). Thus, we assess these measures in separate models.

Country-Level Measures

Our country-level measure of co-residential familial caregiving attitudes is from the Eurobarometer report on Health and Long-term Care in the European Union (2007). Initially, we explored preferences for co-residential familial provided childcare (from the 2002 International

Social Survey Programme) and parental care (from the 2007 Eurobarometer). However, we found these preferences to be highly correlated ($\alpha = 0.90$). Thus, we examine preferences for family-provided parental care. In light of the very strong correlation between these variables, our main country-level measure captures attitudinal preferences for family-centered parental *and* childcare arrangements, which is appropriate given our measure of caregiving that does not distinguish between care to youth or elderly.

Co-residential familial caregiving attitudes are measured using the following question:

> "Imagine an elderly father or mother who lives alone and can no longer manage to live without regular help because of her or his physical or mental health condition. In your opinion, what would be the best option for people in this situation?"

Respondents selected one of six options: (1) they should live with one of their children; (2) public or private service providers should visit their home and provide them with appropriate help and care; (3) one of their children should regularly visit their home, in order to provide them with the necessary care; (4) they should move into a nursing home; (5) it depends; (6) none of these. We coded co-residential familial caregiving to reflect the percent of respondents in each country who reported that the dependent should live with his/her child, which reflect preferences for co-residential arrangements. Switzerland and Norway were excluded from the Eurobarometer, thus we imputed the values using a measure of attitudes toward childcare from the 2002 International Social Survey Programme, which was highly correlated ($\alpha = 0.90$) with attitudes toward elder care. Specifically, we averaged three Eurobarometer co-residential familial care values for countries with the most similar values to Switzerland and Norway's child care measure. We then ran our models with and without these imputed countries; results were robust.

To account for the impact of public spending on caregiver well-being, we also include measures for old age and family public transfers measured as a percentage of the total GDP (OECD Social Expenditures Database, 2004). Our application of country-level data from multiple sources has implications for our sampling of countries. Specifically, the OECD does not include data on old age and family public transfers for Turkey but does include data for Iceland. Thus, these models apply slightly different sampling of countries, excluding Turkey, which likely underestimates the impact of family and old age transfers as Turkey spends little on other public assistant programs (Bergvall *et al.,* 2006). Finally, we include per capita GDP (in 2004 USD) to control for the confounding effect of country-level economic development.

As a sensitivity test, we also explored respondents' attitudinal support for child-provided care within the parental home. This included support for the following statement from the 2007 Eurobarometer: "one of their children should regularly visit their home in order to provide them with the necessary care." In models not shown, we find co-residential familial and child-provided care measures are not correlated indicating these reflect distinct cultural care preferences. We then ran equivalent multi-level models for the child-provided care measure; this was non-significant when entered alone and net of individual-controls. We also explored these care attitudes measures net of each other and found the co-residential familial results to be robust net of the non-significant child-provided care measure. Of course, providing intense and frequent care for elderly parents in the parents' home, an arrangement common in Northern Europe, has implications for caregiver well-being that may not be captured in our models. Nevertheless, we find a robust negative effect for co-residential familial in-home care on caregiver well-being, net of this variation.

Individual-Level Measures

Dependent Measure

We examine the WHO-5 well-being index (Bech, et al., 2003), a measure used in previous research (Boye, 2011; Layte, 2012). Self-reported well-being over the past two weeks is assessed by the following statements: (1) I have felt cheerful and in good spirits; (2) I have felt calm and relaxed; (3) I have felt active and vigorous; (4) I have woken up feeling fresh and rested; (5) My daily life is filled with things that interest me. Respondents were included in the overall well-being measure if they responded to all scale items. Responses are on a six-point scale ranging from one ("at no time") to six ("all of the time"). The index has high overall internal consistency (Cronbach's $\alpha = 0.85$; ranges from 0.64 to 0.93 for each country), and is both a measure of emotional well-being and can be used as a screener for depression (Heun *et al.*, 1999). We computed a well-being measure by taking the mean of the previous five items, with higher values reflecting reports of greater well-being. To assess whether Iceland, which has the lowest internal consistency in the well-being measures, was driving our results, we re-ran our models (Table 4) excluding Iceland, and found that the results are robust. We also investigated our dependent measure as a factor score which produced equivalent results. For simplicity, we present the results for mean well-being.

Main Independent Measures

Providing dependent care. Respondents reported whether they were "currently providing care for a small child, someone ill, someone disabled or the elderly in the home." This measure was dichotomously coded (1 = *respondent is providing dependent care in the household*). Given the wording of this measure, we are unable to distinguish between those providing long-term versus intermittent care for dependents in the home. While we can capture some of this variation through our household composition measures, this dependent care measure likely underestimates the impact of long-term caregiving and does not speak to differences by type of dependent.

Gender. Respondent's gender was coded dichotomously (1 = *female*).

Independent Controls

We control for household composition through a series of dichotomous measures. A limitation of the ESS is that it does not ask for whom the respondent was providing dependent care; therefore, we instead measured household composition. We used the household roster to identify dependents by age and relationship (not mutually exclusive categories): child ages 5 and under, child ages 6 to 15, spouse ages 65 to 74, spouse ages 75 plus, parent ages 65 to 74, parent ages 75 plus, other adult ages 65 to 74, and other adult ages 75 plus. We also coded the presence of a disabled partner in the home (1= *disabled partner present*) which is asked in a separate one-item measure and shown to significantly impact caregiver well-being (Marks, 1998; Schulz and Beach, 1999). Previous research focuses on the sandwiching of care (Daatland, Veenstra and Lima, 2010; Grundy and Henretta, 2006; Loomis and Booth, 1995; Van Gaalen and Dykstra, 2006). To measure the "sandwich" households, we collapsed the child and adult over 65 measures into single dichotomous measures, then multiplied the terms. Given the gender

distribution of care, we include gender interactions for each of these measures (Freeman and Schettkat, 2005). Thus, the gender effect is net of the gender distribution of household composition.

Sociodemographic controls include issues that have been tied to well-being: employment status, household income, education, marital status, religiosity, and age. For employment status, respondents reported their current main activity: employed in paid work (reference group), unemployed, student, disabled, retired, and housewife/househusband. We also examined household income (relative to others in one's country) on a 12-point scale, with higher values representing higher household income relative to others in the same country. We imputed missing values for those missing income data. As 26.8% of our sample are missing or failed to report household income, we explored models with and without the imputed respondents. These produced largely equivalent results, but are discussed in more detail in the subsequent section. For education, respondents reported their highest completed education level on a categorical scale (standard ISCED classification), which we recoded into four dichotomous categories: no primary, basic, secondary (completed high school, some college) and tertiary (college or higher, reference group).

Current marital status was coded into five dichotomous measures: married (reference group), separated, divorced, widowed, and never married. Religiosity, a moderator of caregiver well-being (Moen, Robison and Dempster-McClain, 1995), was measured through the following question: "Regardless of whether you belong to a particular religion, how religious would you say you are?" Responses were on a 10-point scale ranging from "not at all religious" to "very

religious" with higher values represent higher self-reported religiosity. Age was included as a continuous variable ranging from 18 to 100.

Statistical Models

We estimate our coefficients through hierarchical linear modeling (HLM 7) analyses. The data are weighted using the design weights provided by ESS. Multilevel models allow simultaneous estimation of a micro-level model (here, an individual-level model predicting reports of well-being) and a set of macro-level (here, country-level co-residential familial caregiving expectations and public transfers) equations (Guo and Zhao, 2000; Raudenbush and Bryk, 2002). Unlike OLS models that assume the observations are independent, HLM accounts for the nesting of individuals at multiple-levels (in this case, a two-level model of individuals within countries) and models the standard errors accordingly (DiPrete and Forristal, 1994; Guo and Zhao, 2000) In effect, our modeling approach is similar to estimating the individual-level model predicting the probability of reporting well-being separately in each of the 22 countries (Fuwa, 2004). Our individual-level coefficients, which express the relationship between individual-level variables and the reports of well-being, become the outcome variables in the country-level equations. This allows us to evaluate the effects of county-level variables on not only the likelihood of reporting well-being net of individual-level factors, but also the effect of country-level variables on the female, caregiver, and female x caregiver slopes. As such, the models permit direct examination of cross-level interaction effects.

Results

Table 1 provides a descriptive overview of each country's mean well-being and inter-item correlation, co-residential familial caregiving attitudes, public transfers and GDP. For the

overall sample, respondents in Denmark report the highest well-being and those in Turkey the lowest. Among caregivers, respondents in Switzerland report the highest and those in Turkey the lowest well-being. In half of the countries, caregivers report worse well-being than the general population, indicating that caregivers report varying levels of well-being by country. At the country-level, Turkey shows the greatest support of co-residential familial caregiving attitudes, and Sweden the least. Respondents in post-communist and traditional welfare states are generally the most likely, and those in the Scandinavia least likely, to support co-residential familial care. With the exception of Iceland and Ireland, most countries spend a higher percentage of GDP on old age compared to family transfers. Austria, France and Germany spend the highest proportion of their GDP on old age transfers (10.4%) and Iceland the least (2.1%). By contrast, Luxemburg and Denmark spend the most on family transfers (3.8 and 3.7% respectively) and Slovenia and Spain the least (1.1%). The per capita GDP is highest in Luxemburg and lowest in Turkey. Collectively, the descriptive statistics indicate that Turkey reports the lowest well-being, strongest co-residential familial caregiving attitudes and lowest GDP. Given its outlier status, we model our HLM effects with a sample that includes and excludes Turkey; the results were equivalent.

Table 2 provides a description of the sample. Approximately 25% percent of respondents report providing dependent care within their household, and two-thirds of those are females. The household composition measures reflect who lives in the home and may provide some insight into the types of dependent care provided by the respondent. With regard to the presence of a child in the home, 11% of the sample report having a child under 5 years of age, and 22% report having a child ages 6 to 15 in the home. It is important to note that these categories are not mutually exclusive. Having an older adult in the home is also not uncommon; 7% of respondents

report living with a spouse ages 65 to 74; 3% with a spouse ages 75 or older; 1% with a parent ages 65 to 74 or 75 plus; and 0.6% with another adult 65 to 74 and 1% with another adult ages 75 plus. Roughly 1% of the sample make-up the "sandwich generation," those with both an adult age 65 or older and a child present in the home, and 1% report having a disabled partner in the home. These descriptive statistics indicate that a large portion of the sample have either children or an adult age 65 or older in the home, but few respondents live with both groups in the home concurrently.

Do Country-Level Co-Residential Familial Care Norms Matter for Caregiver Well-Being?

Table 3 examines the relationship between attitudes towards co-residential familial caregiving and well-being. In an initial analysis of the null model (results not shown), we find that well-being varies by country (intercept = 4.08, $p<0.001$; country-level variance = 0.05, $p<0.001$; ICC=.049) indicating that multi-level modeling is appropriate for our data. We then estimate the effect of co-residential familial caregiving attitudes and GDP on the model intercept, gender slope, caregiver slope and female x caregiver slope. Model 1 estimates the multi-level effects without all individual-level sociodemographic controls; model 2 introduces the full set of controls including gender interactions for household composition. The caregiving effect is largely the same with and without control variables.

Supporting our first hypothesis, we find that caregivers report lower well-being than those not providing care (β = -.054, $p<0.05$). However, the association between caregiving and well-being does not vary by country-level attitudes or GDP. Consistent with our second hypothesis, we find that women report worse well-being than men (β = -.149, $p<0.001$) and effect amplified for female caregivers (β = -.149 + -.054 = -.203); however, this is a consequence

of the main gender effect rather than the interaction between caregiver status and gender which is non-significant. Supporting our third hypothesis, we find women report significantly worse well-being in countries with stronger attitudinal support for co-residential familial caregiving (β =-.002, $p<0.05$), an effect that is magnified for female caregivers (β =-.002 + -.004 = -.006). Moreover, female caregivers in more economically-developed countries also report worse well-being (β= -.009, $p<0.05$), indicating a well-being disadvantage for female caregivers in more economically-developed countries net of individual-level economic resources.

The variance components from model 1 indicate that country-context, gender and caregiver status explain 64% of the variance in well-being (variance in null model = .053; reduction = .053 - .019 / .053 = .64 or 64%). The inclusion of the individual-level controls in model 2 explains an additional 2% of the total variance. In sum, the reduction in variance indicates that co-residential familial caregiving norms, GDP, gender and caregiver status explain the bulk of variation in well-being. Moreover, the model fit statics indicate that the models are significant improvement compared to the null, and the best model includes individual controls. To further test the robustness of our findings, we assessed how our imputed income measure impacts our results by running these models excluding respondents missing on household income. The results are equivalent with one exception – the gender effect of co-residential familial caregiving attitudes is nonsignificant for the restricted sample. This suggests a reporting bias whereby respondents in co-residential familial contexts more often omit income. Yet women in family centered caregiving countries report lower well-being, so respondents in family-centered caregiving countries are more likely to omit income *and* report gender differences in well-being. The exclusion of these respondents due to missing income masks the

gender effect of co-residential familial caregiver norms on women's well-being. The negative impact of co-residential familial caregiving for female caregivers, however, is robust in both the restricted and full-model.

To better understand these relationships, Figure 1 graphically depicts the statistically significant difference in well-being by country-level attitudes for four groups: (1) men not providing dependent care; (2) women not providing dependent care; (3) male caregivers; (4) female caregivers. At the intercept, the results are consistent with expectations: men not providing dependent care reporting the highest well-being followed by male caregivers, females not providing dependent care and female caregivers. Given the non-significant effect of co-residential familial caregiving at the intercept (men not providing dependent care) and for the caregiver slope (male caregivers), these lines are flat and largely similar with both groups reporting average well-being of 4.3 and 4.2, respectively, which corresponds to positive well-being more than half of the time. Women not providing dependent care report lower well-being than their male counterparts, an effect that is exacerbated in co-residential familial caregiving contexts. Among the groups, female caregivers report the worst well-being, a relationship intensified in more family-centered caregiving contexts. While the size of the effect appears small, it is important to note that the difference in coefficients between men not providing care (mean=4.3) and female caregivers (mean=3.6) in the most family-centered contexts corresponds to reporting well-being more than half (value=4) versus less than half (value=3) of the time. As such, even small decreases in well-being coefficients correspond to large differences in lived experiences, a central concern of sociological research on health and well-being.

In addition to attitudes toward co-residential familial caregiving, country-level old age and family public transfers may also structure caregiver well-being. To assess this, we included measures of public transfers to older aged citizens and families (Table 4). Consistent with expectations, model 1 shows that caregivers report better well-being in countries with higher spending on old age transfers (β=0.014, $p<0.05$). Model 2 includes public spending on family transfers which has no effect on caregiver well-being. Finally, model 3 weighs these measures net of each other. When accounting for family transfers, the positive effect for old age transfers is non-significant. This suggests that some of the impact of old age transfers on caregiver well-being is explained by providing more generous family transfers. Across all of the models, the inclusion of our measures improve model fit with old age transfers increasing the amount of variance explained to 70%. Collectively, the implications of Tables 3 and 4 are clear: co-residential caregiving norms and limited funding to old age transfers are negatively associated with caregiver well-being.

Discussion

This study is among the few to compare well-being in a large European multi-national sample to provide insight into the association between the social organization of caregiving—specifically normative attitudes toward intense co-residential familial caregiving and old age and family transfers—and individual-level caregiver well-being. Overall, our results reveal that female caregivers report worse well-being, especially in countries where there are strong normative expectations for care to be provided within the family home. Furthermore, caregivers, regardless of gender, report better well-being in countries with more expansive old age public transfers.

Four main study findings speak to caregiver well-being in Europe. Our first two findings confirm our hypotheses and are consistent with a broad body of European literature: (1) caregivers report lower levels of well-being compared to those who do not provide dependent care; (2) female caregivers fare worse than do male caregivers. Our third and fourth findings are important and serve to situate previous findings within institutional contexts: (3) co-residential familial caregiving norms are associated with a well-being disadvantage for women, particularly female caregivers, but not men; (4) limited old age transfers are associated with lower caregiver well-being, regardless of gender. Although many European countries are promoting austerity measures, anchored in the logic that citizens can access care through informal networks, the results of this study are clear: informal care arrangements and limited old age public transfers are negatively associated with caregiver well-being.

Our results support the argument that caregivers have lower levels of well-being than non-caregivers. These results are consistent with a wealth of research that finds caregivers report greater strain and conflict between work and family which deteriorates well-being (Pavalko and Henderson, 2006; Pavalko and Woodbury, 2000). We also confirm that female caregivers report worse well-being than male caregivers, a finding consistent with previous research (Daatland, Veenstra and Lima, 2010; Dautzenberg, et al., 1999; Freeman and Schettkat, 2005). Our individual-level results are confirmatory and consistent with previous research. However, our models do not capture the impact of long-term caregiving on well-being; due to data limitations, we are unable to assess the intensity of caregiving, a factor shown to moderate the impact of caregiving on health (Pavalko and Woodbury, 2000). In the short-term, the strain of caregiving has deleterious impacts on well-being, but it may be that as the duration increases, caregivers

adapt to the circumstances and are resilient. Alternatively, the detrimental effect of caregiving on well-being may compound over time, as suggested by previous research examining cumulative disadvantage a relationship supported in previous research (Wakabayashi and Donato, 2006). Further, we cannot assess the impact of reverse causality whereby respondents with lower well-being select into caregiving status. Indeed, previous research indicates that caregivers' deteriorated well-being is associated with scarcity rather than multiplicity or roles suggesting those with limited social roles select into caregiving (Dautzenberg, et al., 1999). Additional longitudinal research is needed to untangle these relationships. We also find economic disadvantage to be significantly associated with caregiver well-being. Economic development may provide families with additional resources to outsource dependent care, and thus those who remain primary caregivers may already have lower well-being reflecting a selection effect. Alternatively, female caregivers may experience a subsequent well-being disadvantage associated with their caregiver status. Disentangling this causal relationship is beyond the scope of this study, but our results indicate a well-being disadvantage for female caregivers in more economically-developed countries net of individual-level economic resources.

A major contribution of this study is the multi-level analysis, which shows that country-level co-residential familial care norms and limited old age public transfers are associated with lower caregiver well-being. This finding suggests that co-residential familial normative expectations may be a form of coerced care (Glenn, 2010). Living in a country with strong normative support for co-residential familial caregiving is associated with lower female caregivers' well-being net of individual-level characteristics. These findings are consistent with recent research. For example, Akpınar et al. (2011) found negative effects of caregiving among

females in Turkey, which may reflect strong support for co-residential familial care and limited public transfers in Turkey. More broadly, co-residential familial caregiving norms may encourage women to assume caregiving responsibilities at the expense of their well-being. This could function through two processes. First, providing care in a country with strong normative expectations for co-residential familial care may be associated with lower female caregiver well-being. For example, co-residential familial caregiving may reflect higher standards of care for all family members, of which women assume a larger burden. In other words, co-residential familial cultural norms may preclude women from outsourcing any care –cooking, cleaning, washing, childcare, etc. – thus increasing women's overall care burden. Thus, "good" care may equate with "mom's/daughter's" care in these more co-residential familial centered contexts. This increased strain may harm female caregiver well-being with no consequence for male caregivers, a claim supported, in part, by the negative association of family caregiving attitudes with women's well-being.

Additionally, countries with stronger co-residential familial caregiving attitudes may have few market or government options to outsource care. Thus, families who cannot support an additional dependent, and would outsource this care, may assume greater caregiving responsibilities at the expense of female caregivers' well-being. Our public transfer models support this argument. Specifically, we find that limited old age transfers are negatively associated with caregiver's well-being, regardless of gender. This suggests that a social organization of caring that limits support, attitudinal and economic, for dependent care outside the family home is detrimental to caregiver well-being. As European governments consider cuts to old age care, the impact on caregivers' well-being must be taken into consideration. The

implications from our results are clear: reliance on informal caregiving arrangements, notably co-residential family care and limited old age transfers, are negatively associated with caregiver well-being.

The demographic transitions of delayed marriage and fertility, and longer life expectancy typical in most European countries imply that the number of families at-risk for providing dependent care for children and older adults, in some cases even simultaneously, may be higher today than ever before, and will continue to increase. Current political emphasis on austerity and cuts to government-provided caregiver benefits may have disastrous effects on caregiver well-being. Considering these demographic and political realities, this study is especially pertinent, taking a step toward understanding how dependent care is associated with well-being in a multi-national context in which the social organization of care varies.

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Table 1: Unweighted Descriptive Statistics of Individual-level Well-being (Dependent Variable) and Country-level Independent Measures

	Individual-level							Country-level			
		Mean Well Being[a]						Family Care-giving Attitudes [b] (%)	Old Age Public Transfers [c] (% of GDP)	Family Public Transfers [d] (% of GDP)	GDP ($)[e]
Country	n	Whole Sample	S.D.	α	Caregivers	S.D.	α				
Austria	2217	4.08	1.01	0.88	4.07	0.98	0.80	17	10.4	2.9	30,000
Belgium	1776	4.22	0.98	0.81	4.16	0.97	0.80	17	6.9	2.6	29,100
Czech Republic	2937	3.95	0.97	0.90	4.00	0.91	0.88	36	6.1	1.8	15,700
Denmark	1471	4.44	0.85	0.79	4.33	0.90	0.80	7	5.3	3.7	31,000
Finland	1998	4.03	0.90	0.79	4.07	0.89	0.79	7	7.4	2.9	27,400
France	1806	4.11	1.09	0.84	4.12	1.06	0.83	18	10.4	3.0	27,600
Germany	2848	4.07	0.96	0.80	3.96	0.93	0.77	25	9.1	2.1	27,600
Greece	2403	3.82	1.24	0.93	3.87	1.24	0.92	49	10.4	1.2	20,000
Hungary	1486	3.73	1.13	0.82	3.76	1.13	0.83	36	6.9	3.1	13,900
Iceland	568	4.29	0.76	0.64	4.19	0.77	0.66	N/A	2.1	3.1	30,900
Ireland	2246	4.39	0.99	0.87	4.32	0.94	0.84	19	2.5	2.8	29,600
Luxemburg	1632	4.36	0.98	0.81	4.26	1.00	0.80	21	5.2	3.8	55,100
Netherlands	1873	4.17	0.97	0.82	4.09	0.96	0.83	4	4.7	1.7	28,600
Norway	1756	4.37	0.92	0.79	4.21	0.88	0.76	6	4.8	3.0	37,800
Poland	1702	4.05	1.10	0.87	4.11	1.07	0.86	59	9.5	1.2	11,100
Portugal	2033	3.75	1.14	0.89	3.80	1.16	0.89	44	8.3	1.2	18,000
Slovakia	1504	3.83	1.11	0.86	3.82	1.05	0.83	47	5.3	2.0	13,300
Slovenia	1409	4.01	0.94	0.85	4.05	0.87	0.83	29	9.8	1.1	19,000
Spain	1644	4.19	0.98	0.84	4.24	0.90	0.80	39	6.1	1.1	22,000
Sweden	1924	4.22	0.92	0.77	4.18	0.87	0.76	4	7.1	3.3	26,800
Switzerland	2131	4.39	0.86	0.78	4.41	0.82	0.76	16	6.4	1.3	32,700
Turkey	1847	3.51	1.26	0.88	3.28	1.23	0.86	74	N/A	N/A	6,700

UK	1880	3.82	1.05	0.82	3.65	1.06	0.83	20	5.3	3.2	27,700

Source: Well-being data from 2004 European Social Survey on n=42,523 individuals in 22 countries. Family Centered Caregiving measure from the Eurobarometer 2007. GDP from the CIA World Factbook 2004. Data on old age transfers and family transfers from OECD Social Expenditure Database 2004.

Note: [a]Well-being scale ranges from 1 to 6. [b]Family centered-caregiving is the percent of respondents who answered that an elderly father or mother who can no longer live without regular help because of a physical or mental health condition should live with his/her child. [c]Old age public transfers are the % of GDP that goes toward old-age programs. [d]Percent of GDP that are transfers for family programs. [e]GDP is in 2004 constant US dollars.

Table 2: Weighted Characteristics of Sample Respondents in 22 European Countries

Variable	Percentage or Mean[a]	Standard Error	Range
Dependent Variable			
Mean Well-Being (scale 1-6)[b]	4.04	1.05	1-6
Independent Variables			
Dependent Care			
Respondent provides dependent care	24.93	0.43	0-1
Female respondent provides dependent care	15.00	0.36	0-1
Types of Dependents in Household			
Child, under age 5	11.70	0.32	0-1
Child, ages 6 to 15	22.75	0.42	0-1
Spouse, ages 65 to 74	7.64	0.27	0-1
Spouse, ages 75 plus	3.37	0.18	0-1
Parent, ages 65 to 74	1.86	0.13	0-1
Parent, ages 75 plus	1.74	0.13	0-1
Other adult, ages 65 to 74	0.67	0.08	0-1
Other adult, ages 75 plus	0.91	0.09	0-1
Sandwich Household	1.51	0.12	0-1
Disabled partner	1.39	0.12	0-1
Female	53.77	0.50	0-1
Employment Status			
Employed in paid work	47.42	0.49	0-1
Unemployed	5.49	0.22	0-1
Student	9.38	0.29	0-1
Disabled	2.00	0.14	0-1
Retired	22.50	0.41	0-1
Housewife/househusband	11.30	0.31	0-1
Other	1.33	0.11	0-1
Relative Household Income (mean)[c]	6.08	2.24	1-12
Educational Attainment			
No primary education	4.63	0.21	0-1
Basic education	35.16	0.48	0-1
Secondary education	41.38	0.49	0-1
Tertiary education	18.30	0.38	0-1
Marital Status			
Married	53.47	0.50	0-1
Separated	1.56	0.13	0-1
Divorced	7.10	0.27	0-1
Widowed	9.46	0.29	0-1
Never Married	28.05	0.44	0-1
Self-reported Religiosity (mean)[d]	4.92	2.98	0-10
Age (mean)	47.07	17.74	18-100

Source: 2004 European Social Survey.

Notes: Weighted to account for sample design. [a]Mean is presented for continuous variables, and percentages for dichotomous (0,1) variables. [b]Well-being scale ranges from 1-6, with greater numbers indicating greater well-being. [c]Coded by ESS with range 1-12, representing household income relative to others in the same country, with a higher values indicating greater relative income. [d]Responses were on a 10-point scale ranging from "not at all religious" to "very religious." Higher values represent higher self-reported religiosity.

Table 3. Hierarchical Linear Model Coefficients Predicting Well-Being among Respondents in 22 European Countries: Individual-level and Country-level Estimates

	Model 1			Model 2		
	Estimate		**SE**	**Estimate**		**SE**
Intercept						
Intercept	4.196	***	0.030	4.325	***	0.033
Family centered caregiving (per 1% increase)	-0.004		0.002	-0.003		0.002
GDP (per $1,000 increase)	0.001	**	0.004	0.008		0.004
Female						
Intercept	-0.190	***	0.012	-0.149	***	0.015
Family centered caregiving (per 1% increase)	-0.002	*	0.001	-0.002	*	0.001
GDP (per $1,000 increase)	0.001		0.002	0.001		0.002
Caregiver						
Intercept	-0.051	**	0.020	-0.054	*	0.022
Family centered caregiving (per 1% increase)	0.002		0.001	0.003		0.002
GDP (per $1,000 increase)	0.000		0.003	0.002		0.003
Female x Caregiver						
Intercept	0.033		0.026	0.014		0.029
Family centered caregiving (per 1% increase)	-0.004	*	0.002	-0.004	*	0.002
GDP (per $1,000 increase)	-0.009	*	0.000	-0.009	*	0.004
Individual-Level Variance	1.020		1.009	0.972		0.986
Country-Level Variance	0.019	***	0.138	0.018	***	0.132
Inter-Class Correlation	0.018			0.017		
Model Fit (-2 ln likelihood function value)	411	***		2050	***	
Reduction in Variance	64%			66%		
n	42523			42523		

Source: 2004 European Social Survey.
Notes: *p < 0.05; **p < 0.01; ***p < 0.001 (two-tailed tests). Estimates weighted to account for sample design. Standard errors reported. n=42,523 individuals nested in 22 countries. Model 1 includes no individual-level controls. Model 2 includes the full set of individual controls: employment, marital status, education, relative household income, religiosity, age, the presence of dependents in the home and the gender interaction terms for household dependents.

Figure 1: HLM Results for Well-Being by Caregiver Status, Gender and Family Centered Caregiving Norms (2004 ESS; n=42,523)

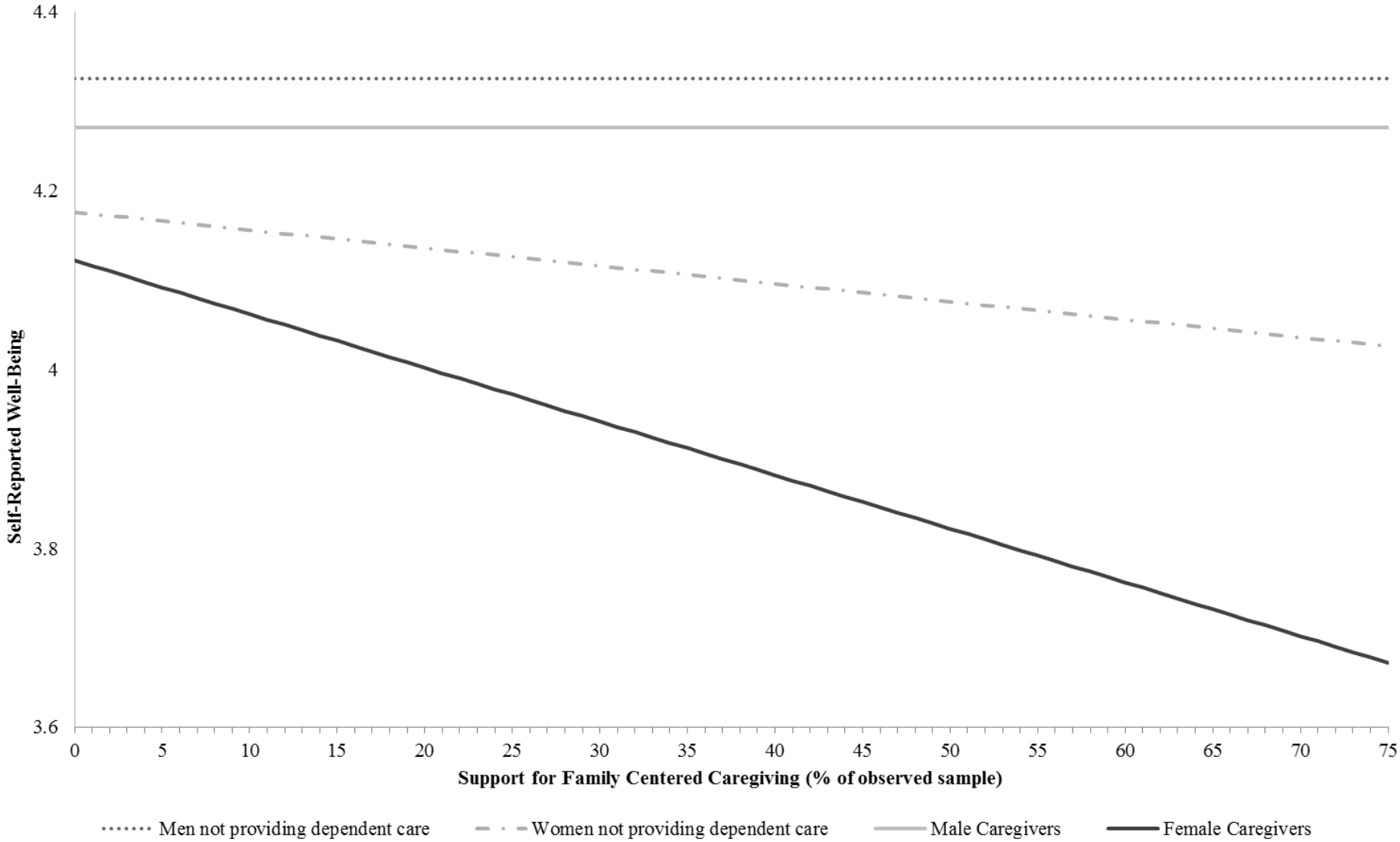

Table 4. Hierarchical Linear Model Coefficients Predicting Well-Being among respondents in 22 European countries: Individual-level and Country-level Estimates (n=41,244)

	Model 1		Model 2		Model 3	
	Estimate	**SE**	**Estimate**	**SE**	**Estimate**	**SE**
Intercept						
Intercept	4.359 ***	0.032	4.359 ***	0.033	4.360 ***	0.032
Old age public transfers (% of GDP)	-0.021	0.013	---		-0.022	0.013
Family public transfers (% of GDP)	---		0.001	0.042	-0.013	0.041
GDP (per $1,000 increase)	0.009 **	0.003	0.001	0.004	0.010 **	0.004
Female						
Intercept	-0.143 ***	0.014	-0.144 ***	0.014	-0.144 ***	0.014
Old age public transfers (% of GDP)	0.001	0.005	---		0.001	0.005
Family public transfers (% of GDP)	---		-0.018	0.018	-0.017	0.018
GDP (per $1,000 increase)	0.003	0.002	0.004 *	0.002	0.004 *	0.002
Caregiver						
Intercept	-0.057 ***	0.022	-0.055 **	0.022	-0.058 ***	0.022
Old age public transfers (% of GDP)	0.014 *		---	0.002	0.012	0.008
Family public transfers (% of GDP)	---		-0.038	0.028	-0.031	0.028
GDP (per $1,000 increase)	0.000	0.003	0.002	0.003	0.000	0.003
Female x Caregiver						
Intercept	0.018	0.029	0.017	0.029	0.018	0.029
Old age public transfers (% of GDP)	-0.008	0.011	---		-0.007	0.011
Family public transfers (% of GDP)	---		0.025	0.036	0.021	0.037
GDP (per $1,000 increase)	-0.006	0.003	-0.007 *	0.004	-.007 *	0.004
Individual-Level Variance	0.941	0.970	0.941	0.970	0.941	0.970
Country-Level Variance	0.016 ***	0.129	0.018 ***	0.134	0.016 ***	0.127
Inter-Class Correlation	0.016		0.018		0.016	
Model Fit (-2 ln likelihood function value)	2378 ***		2376 ***		2381 ***	

Reduction in Variance	70%	66%	70%
n	41,224	41,224	41,224

Source: 2004 European Social Survey.
Notes: *p < 0.05; **p < 0.01; ***p < 0.001 (two-tailed tests). Estimates weighted to account for sample design. Standard errors reported. n=41,224 individuals nested in 22 countries. Models control for all individual controls: employment, marital status, education, relative household income, religiosity, age, the presence of dependents in the home and the gender interaction terms for household dependents.