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Valerie A. Lykes¹ and Markus Kimmelmeier¹

Abstract

Using two multilevel analyses of residents in 12 (1992 Eurobarometer; $N = 3,902$) and 22 (2006 European Social Survey, $N = 38,867$) European societies, respectively, we examined loneliness as a function of dominant cultural values. Levels of loneliness were higher in collectivistic compared with individualistic societies, but societies differed in terms of their predictors of loneliness. In collectivistic societies, the absence of interactions with family was more closely linked to loneliness than was the case in individualistic societies. Conversely, in individualistic societies, the absence of interactions with friends and having a confidant was more closely linked to loneliness than in collectivistic societies. Findings are consistent with the notion that autonomy and choice with regard to interaction partners have greater implications for well-being in individualistic societies whereas traditional social bonds are more potent in collectivistic societies.

Keywords

loneliness, individualism, culture, interpersonal relationships, aging, Europe

Loneliness is a pervasive social issue in many countries, with negative mental and physical health consequences for those experiencing it (e.g., Alpass & Neville, 2003; Anderson, 1999; Cacioppo, Hawley, & Bernston, 2003; Lynch, 2000). In part because of its pervasiveness, the study of loneliness is now at the center of a prolific area of multidisciplinary research (e.g., Akerlind & Hörnquist, 1992; Anderson, 1999; Dykstra, 2009; Imamoglu, Küller, Imamoglu, & Küller, 1993; McWhirter, 1990; Moore & Schultz, 1983; Rokach, Orzeck, Moya, & Exposito, 2002; Wilson et al., 2007). This article examines the kinds of experiences that increase or reduce loneliness in different societies. We recognize that interpersonal interaction, or lack thereof, is always important for one's experience of loneliness. However, we argue that not all interactions are created equal, and that different social interactions, especially those involving friends or family, vary in whether they help reduce loneliness in individualistic and collectivistic societies.

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Loneliness and Social Isolation

Perlman and Peplau (1984) define loneliness as “the unpleasant experience that occurs when a person’s network of social relationships is significantly deficient in either quality or quantity” (p. 15). That is, loneliness is a mismatch between the subjective perceptions of the size and quality of individuals’ social networks and the size and quality of their desired social networks. Individuals may objectively be socially isolated, but may not feel lonely. Conversely, even in the presence of or interaction with others, individuals may still feel lonely (cf. de Jong Gierveld & van Tilburg, 1999; Weiss, 1973). For the purposes of the present research, it is important to mark that interactions with others will not necessarily reduce one’s sense of loneliness. Indeed, as argued below, certain types of interactions will have different implications for the experience of loneliness depending on one’s cultural context.

Effects of Loneliness on Mental and Physical Health

Loneliness can have aversive mental and physical health effects for all ages, for example, depression and anxiety (Fees, Martin, & Poon, 1999; Parkes, 1973; Perlman & Peplau, 1984). Especially for older adults, Wilson et al. (2007) found that baseline cognition was lower for those who reported high levels of loneliness, and these individuals declined faster mentally than those reporting lower levels. Loneliness was also linked to increased risk of later-life onset of dementia, with Alzheimer’s disease being twice as likely for lonely older adults. A related and dangerous consequence of loneliness is suicidal ideation and suicide (Diamant & Windholz, 1981; McWhirter, 1990; Peck, 1983; Trout, 1980). For instance, Stravynski and Boyer (2001) found in a survey of the general population of Quebec that higher degrees of reported subjective loneliness were associated with increased prevalence both of suicidal ideation and attempted suicide (see also Lebre, Perret-Vaille, Mulliez, Gerbaud, & Jalenques, 2006; Waern, Rubenowitz, & Wilhelmson, 2003).

Loneliness also impedes physical health. Lynch (2000) found a variety of links between loneliness (both in childhood and adulthood) and an increased rate of premature death, primarily from heart disease. Akerlind and Hörnquist (1992) argued that loneliness plays an important role in alcohol abuse, with consistent abuse leading to a variety of physical health problems, such as liver disease, breast cancer, cardiomyopathy, and high blood pressure (U.S. Department of Health and Human Services, National Institute on Alcohol Abuse and Alcoholism, 2000). Indeed, Cacioppo et al. (2003) and Hawkey and Cacioppo (2003) identified loneliness as a silent killer in that it affects physiology over long periods of time, causing stress, which leads to issues such as high blood pressure, sleep deprivation, and insufficient repair of other physiological processes.

Culture and Loneliness

Loneliness occurs not only as a function of one’s personal experiences and personality, but always emerges within the context of a larger society and culture with its perceived normative values and practices (Rokach et al., 2002). Culture is defined here as

explicit and implicit patterns of historically derived and selected ideas and their embodiment in institutions, practices, and artifacts; cultural patterns may, on one hand, be considered as products of action, and on the other as conditioning elements of further action. (Adams & Markus, 2004, p. 341)

Cultural researchers have proposed a variety of ways in which to characterize cultural differences. Arguably, the most influential framework has been offered by Hofstede (2001) who surveyed employees of a large multinational organization and identified five dimensions of cultural

difference: power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, and long-term orientation. Though originally on equal footing with its four brethren, the dimension of individualism emerged as the most dominant in the cross-cultural literature (e.g., Oyserman, Coon, & Kimmelmeier, 2002; Triandis, 1995). According to Hofstede, individualism is characterized by valuing autonomy and placing one's personal goals above those of others, whereas collectivism champions the interests of one's in-groups (such as one's family or community) above those of oneself.

Building on Hofstede (1983, 2001), Markus and Kitayama (1991) proposed a theory of self-construals, noting that American culture tends to think of the self as independent, whereas Asian cultures think of themselves as interdependent. Independent self-construals focus attention on the individual as an actor separate from others with unique qualities, traits, and preferences that persist across contexts, and with individuals being motivated to determine their own actions and express themselves through their personal choices (Markus & Kitayama, 1991). Interdependent self-construals, however, focus attention on individuals as being connected to others, with individual experience and behavior often being shaped by varying social contexts, and individuals being motivated to fit in and maintain harmonious relations with others. Although Markus and Kitayama (1991) initially developed their theory in the context of East-West comparisons, subsequent research made clear that patterns of independence and interdependence vary widely across cultures as well as within cultures, with different contexts giving rise to one or the other self-construal (e.g., Gardner, Gabriel, & Lee, 1999). From the perspective of self-construal theory, different cultural environments are best understood as varying in the extent to which they encourage individuals to think of themselves as independent or interdependent, with individualistic societies promoting independent self-construals and collectivistic societies promoting interdependent self-construals (Kanagawa, Cross, & Markus, 2001; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Oyserman & Lee, 2008; Trafimow, Triandis, & Goto, 1991). Indeed, contemporary research assumes that the salience of different self-construals is at the heart of the individualism-collectivism distinction (e.g., Oyserman et al., 2002).

Despite the dominance of the individualism-collectivism framework in cross-cultural research, the implications for loneliness are not readily apparent. Specifically, there are two distinct lines of arguments. On one hand, it could be that individuals in individualistic societies are more likely to experience loneliness than those in collectivistic societies. This might be because social arrangements tend to differ from collectivistic societies: more people live alone and traditional ties to family and other primary groups are weaker. Among older adults, the proportion of those living alone or in institutions, rather than with family members, is greater, thus, potentially increasing the risk for loneliness (Dykstra, 2009; Jylhä & Jokela, 1990).

On the other hand, an analysis less focused on social isolation might argue that precisely because collectivistic societies champion interpersonal ties, the lack of such ties is likely to be experienced as painful, and thus, increases feelings of loneliness; that is, because strong interpersonal ties are normative, loneliness is effectively a psychological response when an individual does not meet cultural expectations. This would suggest that individuals in collectivistic societies are *more* likely to feel lonely when objective levels of isolation are comparable.

Individualism, Collectivism, and Loneliness: The Evidence

Cross-cultural research on loneliness has been conducted from multiple perspectives and paradigms. Using a five-factor loneliness scale Rokach (2007) found Canadians scoring higher on developmental, relocation/separation, and social marginality than Czechs, though there was no difference on unfulfilling intimate relationships, with Canadians scoring lower on personal inadequacies than Czechs. Other studies found Canadians to be higher on all subscales than samples from Portugal (Rokach & Neto, 2005) and Spain (Rokach et al., 2002), two societies commonly

regarded as more collectivistic than Canada. Rokach et al. (2002) concluded that North Americans “are more painfully aware of their own contribution to their loneliness. More than their Spanish counterparts . . . they tend to attribute their loneliness to their own shortcomings” (p. 76). In essence, with its emphasis on personal achievement and competition the individualistic culture in North America creates self-blame if an individual’s social network is not deemed good enough (cf. Grimm, Church, Katigbak, & Reyes, 1999).

However, Anderson (1999) found Chinese to feel lonelier than Americans, and to blame themselves if they felt their social network was lacking. Americans were less likely to hold themselves responsible, but instead, blamed external factors if they did not possess the kind of social network they desired. Anderson interpreted these findings as being consistent with the individualism-collectivism framework, with Americans, much more than Chinese, deflecting personal responsibility for their loneliness in an effort to preserve a positive self-view. Support for this conclusion comes from Imamoglu et al. (1993) who found Turks (low individualism) to have more feelings of loneliness than Swedes (high individualism), even though they had broader social networks and more interpersonal interactions than Swedes. Similarly, W. H. Jones, Carpenter, and Quintana (1985) revealed that Puerto Rican respondents reported higher levels of loneliness than U.S. Americans.

Juxtaposing the work by Rokach and colleagues against Anderson (1999) quickly reveals a contradiction. How is it possible that the individualism-collectivism framework would sometimes predict higher level of loneliness-related self-descriptions in more individualistic societies and sometimes in more collectivistic societies? The source of such apparent contradictory findings in the literature might be in part the fact that studies such as those by Rokach and Anderson only focus on pairwise comparisons of societies, in which both ends of the individualism-collectivism dimension are represented by only a single society. Such comparisons are open for criticism as observed country-level differences may not have been shaped by underlying differences in individualism-collectivism, but by coexisting, perhaps idiosyncratic differences of the specific pair of countries aided in part by being small and nonrepresentative samples (cf. Oyserman et al., 2002; Yang & Victor, 2011). At the same time, studies comparing individualistic societies, such as the one by Heikkinen, Berg, and Avlund (1995) comparing Sweden, Finland, and Denmark, or the one by Stevens and Westerhof (2006) comparing Dutch and German older adults, have generally not found any differences in levels of loneliness between them. However, these particular societies were rather similar on a range of dimensions, such that similar levels of loneliness cannot necessarily be attributed to cultural similarity in terms of individualism. Therefore, if researchers are interested in relating loneliness to individualism, it is imperative that comparative studies examining such culture differences focus on a range of societies, where each end of the construct is represented by more than one society.

Indeed, the few studies providing comparisons of multiple countries are consistent with the idea that residents of collectivistic societies are more likely to feel lonely than those in individualistic societies in spite of the fact that individuals are more likely to live alone in the latter. For instance, Walker (1993) using the Eurobarometer data, Jylhä and Jokela (1990) using the World Health Organization Eleven Country Study on Health Care of the Elderly, and Fokkema, de Jong Gierveld, and Dykstra (2012) using the SHARE Wave 2 data from 14 European countries confirmed that northern and western European countries, which are often characterized as individualistic, exhibited lower levels of loneliness than southern and central/eastern countries, which are often characterized as collectivistic (see also Yang & Victor, 2011; see Dykstra, 2009, for a review). This is initial support for the notion that loneliness is lower in individualistic as compared with collectivistic societies.

Yet, past research primarily interpreted observed differences and patterns through the lens of individualism-collectivism, but did not actually measure cultural levels of individualism-collectivism. In this sense, studies such as those by Walker (1993), Jylhä and Jokela (1990), and

Fokkema et al. (2012) remain only suggestive. Lastly, the same studies did not simultaneously focus on individual-level variables, and thus, do not help elucidate what factors within a particular culture might shape the experience of loneliness.

Cultural Antecedents of Individualism and Collectivism

It is important to acknowledge that culture may not only help shape overall levels of individualism, but also the circumstances under which individuals within a society feel lonely. Culture typically resides in the patterns and nature of interpersonal relationships; hence, cultural values are often reflected in the types of relationships that are more or less critical in the experience of members of a culture (e.g., Fiske, 1992). Individualism is related to choice and autonomy in relationships. For instance, in individualistic societies people tend to be much more “relationally mobile” with individuals continuously choosing when to form and abandon friendships compared with collectivistic societies in which individuals tend to rely on existing social networks (Schug, Yuki, & Maddux, 2010). Thus, if loneliness reflects a discrepancy between actual and desired social networks, one would expect loneliness to occur more frequently in individualistic countries among those who are limited in their freedom to choose their relationships.

Initial support for this notion comes from de Jong Gierveld and van Tilburg (1999) who compared older adults and their household arrangements in the highly individualistic Netherlands and the more collectivistic Italy. The researchers discovered that Italian older adults reported higher levels of loneliness than their Dutch counterparts. However, when exploring individual life circumstances, de Jong Gierveld and van Tilburg revealed that Italians reported less loneliness if they lived with one of their children compared with when they lived alone: by contrast, Dutch older adults reported feeling lonelier precisely when they lived with one of their children compared with living alone. This country-level difference persisted even though the authors controlled for a range of potentially confounding variables. Presumably, Italians cherish family and mutually caring relationships, and view it as normative and desirable for an older adult to reside with his/her children rather than by themselves (de Jong Gierveld & van Tilburg, 1999). The Dutch, however, may value autonomy and self-reliance over family connectedness; therefore, for an older adult, moving in with his/her children might signify a loss of choice, including a loss of choice over social connections and daily interactions, regardless of the quality of the relationship with said children.

As the old adage says, “you can choose your friends but you can’t choose your family.” In countries where personal choice is valued, the amount of choice in relationships should affect levels of reported loneliness. Thus, in more individualistic societies, we would expect that more frequent interactions with friends would be a better buffer against loneliness than visits from family because friends are chosen. Conversely, in more collectivistic cultures where family, other primary groups, and embeddedness in mutually caring relationships might be considered more important than individual choice, it would be expected that interactions with family or caring relationship more generally would be highly valued and would serve to reduce levels of loneliness.

Importantly, individualistic and collectivist societies vary in levels of relational mobility, with the more traditional family and community structures in collectivistic societies rendering interpersonal relationships more stable. Because relationships are much more transient in individualistic societies, people in these societies might not only have more choice with regard to relationships, but there is a necessity to continuously choose and maintain interpersonal relationships. This may have consequences for the experience of loneliness. Schug et al. (2010) argued that individuals seek to form meaningful relationships through self-disclosure, that is, by sharing personal details. Consistent with the observation that people are more likely to self-disclose in individualistic societies, this implies that self-disclosure may be more critical for the stability of

relationships in individualistic societies. With self-disclosure predicting lower loneliness (e.g., Wei, Russell, & Zakalik, 2005) compared with collectivistic societies, members of individualistic cultures should benefit more from having a confidant, that is, a person with whom to discuss intimate matters.

The Current Studies

To examine the influence that culture may have on the experience of loneliness, two multicountry data sets were analyzed. The first study focused on older adults and the extent to which contact with family and/or friends may limit feelings of loneliness among this population. The second study allowed for more generalizability, studying loneliness among a general population aged 14 years and above. It also served to broaden the influence that culture may have on loneliness.

Our first goal of these studies was to reexamine whether individualism has a general effect on loneliness. Based on the dominant finding in the larger and more reliable studies reviewed by us (e.g., Fokkema et al., 2012; Jylhä & Jokela, 1990), we propose our first hypothesis:

Hypothesis 1: Members of collectivistic societies are more likely to experience loneliness than members of individualistic societies.

In keeping with the notion that individuals have more opportunity in choosing their friends than members of their family, our second hypothesis states as follows:

Hypothesis 2: In individualistic societies, interpersonal interaction with friends has a greater impact in reducing loneliness than in collectivistic societies.

Based on the notion that being embedded in traditional kinship networks is more important in collectivistic societies, our third hypothesis states as follows:

Hypothesis 3: In collectivistic societies, interpersonal interaction with family members has a greater impact in reducing loneliness than in individualistic societies.

Based on the idea of the greater instability of interpersonal relationships in individualistic societies, self-disclosure can be expected to be more important for choosing and maintaining meaningful relationships. Thus, our fourth hypothesis states as follows:

Hypothesis 4: In individualistic societies, having a confidant has a greater impact in reducing loneliness than in collectivistic societies.

Assuming that being embedded in one's family and having strong interpersonal ties are normative in collectivistic societies, our fifth hypothesis states as follows:

Hypothesis 5: In collectivistic societies, feeling that one is embedded in mutually caring relationships has a greater impact in reducing loneliness than in individualistic societies.

Control Variables

We tested these hypotheses while controlling for a number of extraneous variables that have been known to influence loneliness, but which were either not at all or only insufficiently considered in previous research. Age, as mentioned earlier, is a predictor of loneliness (Moore & Schultz, 1983) with adolescents and the oldest old reporting high levels of loneliness (Dykstra, 2009).

Research found that marriage provides a buffer against loneliness (Wenger, Davies, Shahtahmasebi, & Scott, 1996), possibly by creating an emotional connection and by increasing social contacts through one's partner. Those who are widowed are much more likely to experience loneliness, both from missing their partner, and also potentially (and especially for widowed men) for the broader social network that the spouse might have been in charge of (Dykstra, 2009). Marital status was also accounted for in the analysis. Occasionally gender differences are found within loneliness analyses, with men reporting higher levels of loneliness in some (e.g., Borys & Perlman, 1985; Lauder, Mummery, & Sharkey, 2006) and women reporting more loneliness in others (see meta-analysis by Pinquart & Sörensen, 2001); therefore, gender was included in the current analysis. We included community size though it has yielded divergent effects. Routasalo, Savikko, Tilvis, Strandberg, and Pitkälä (2006) reported greater loneliness in rural compared with urban areas among aging adults, though D. A. Jones, Victor, and Vetter (1985) found the opposite, whereas other investigators found no differences (e.g., Hawthorne, 2008; Mullins, Elston, & Gutkowski, 1996).

Routasalo et al. (2006) found living alone to be one of the strongest predictors of loneliness among older adults. As such, whether the respondent lives alone or not was controlled for. Whether the respondent was a paid worker is also controlled for in Study 2 (we did not include this variable in Study 1 as the population was mostly retired) as unemployment has been found to be related to higher loneliness (Creed & Reynolds, 2001; Lauder, Sharkey, & Mummery, 2003). Finally, previous research has found a negative association between health and loneliness, suggesting that we control for this variable (D. A. Jones, Victor, et al., 1985; Jylhä, 2004).

Study 1: Eurobarometer

The first study sought to examine the influence that culture (using the framework of individualism) has on older adult loneliness in 12 European countries. Though older adults are not the loneliest group in society, loneliness is prevalent among older adults, with those 80 years of age and older reporting the second highest level of loneliness of any age group (Dykstra, 2009). As people age, they are more likely to experience loss in their life, and especially the death of a loved one may lead to both emotional and social loneliness (e.g., widowhood, see Routasalo et al., 2006; Stevens & Westerhof, 2006). And to the extent that older adults enter into new living arrangements, for example, they may move in with family or move to a retirement home, the nature and quality of one's social networks may change, putting older adults at risk of loneliness.

This study considered the first three hypotheses posed above to determine whether there is (a) an effect of culture on loneliness, (b) whether interacting with friends is more closely linked with lower levels of loneliness in individualistic countries, and (c) whether interacting with family is more strongly associated with lower levels of loneliness in collectivistic countries. In addition, we also examine to what extent the need for assistance in daily life increases one's sense of loneliness, presumably because it undermines personal autonomy—a central concern in individualistic cultures. Thus, we expect the need for assistance to have a stronger relationship to loneliness in individualistic as compared with collectivistic countries.

Method

Data from the Eurobarometer 37.2, retrieved from the archives of the Inter-University Consortium of Political and Social Research (ICPSR), were used in the current study (European Commission, 1992). Eurobarometer data are collected multiple times a year to assess public opinion in European countries (European Commission Public Opinion, 2010). This special Eurobarometer is themed around older adult issues and includes a measure of loneliness. Data were collected

Table 1. Frequencies and Individualism Ranking by Nation.

Country	Hofstede individualism	Study 1— Eurobarometer	Study 2—European Social Survey
		N	N
Austria	55		2,155
Belgium	75	343	1,787
Bulgaria	30		1,203
Cyprus	35		869
Denmark	74	378	1,447
Estonia	60		1,359
Finland	63		1,875
France	71	346	1,973
Germany (West)	67	311	2,805
Great Britain	89	346	2,354
Greece	35	361	
Hungary	80		1,439
Ireland	70	385	1,543
Italy	76	261	
Luxembourg	60	164	
Norway	69		1,740
Poland	60		1,606
Portugal	27	328	2,008
Romania	30		1,837
Russia	39		1,971
Slovakia	52		1,582
Spain	51	298	1,831
Sweden	71		1,897
Switzerland	68		1,751
The Netherlands	80	381	1,835
Total N		3,902	38,867

through face-to-face interviews, with approximately 400 older adults (aged 60 years and above) in each European country (except for Luxembourg which had 164 respondents; see Table 1 for details), using a multistage national probability sampling technique. Interviews were conducted in the appropriate national language (European Commission, 1992). Finally, it allowed for the examination of 3,902 individuals with complete data residing in 12 different countries (data from East Germany was excluded because East Germany was not part of Hofstede's index).

Statistical Approach

Because the same societal-level data (on individualism) were linked to all respondents within the same society, the present data are nested, requiring the use of a multilevel statistical approach. Because our dependent variable (loneliness) was ordinal, we relied on Generalized Linear Mixed Modeling (GzLMM) in SPSS 21 to analyze societal-level, individual-level, and cross-level effects.

Dependent variable. Loneliness was a single-item question asking the frequency with which the respondent experiences loneliness (“Do you feel lonely often, occasionally, or never?”). Responses included *often* ($n = 565$), *occasionally* ($n = 1,302$), or *never* ($n = 2,035$). This type of single-item

measure of loneliness is the most frequently used measure in studies of loneliness (e.g., Pinquart & Sörensen, 2001; Stack, 1998). It has high face validity, is consistently highly correlated with multi-item loneliness scales in both English and Spanish (W. H. Jones, Carpenter, et al., 1985; Solano, 1980), and additional items do not typically increase measurement quality (Glenn, 1995). It has been demonstrated to be related to but distinct from depression (Cacioppo et al., 2006).

Similar to Stack (1998), we examined whether the association between loneliness and background variables varied by country. We did not find much cross-cultural variability in the size of the coefficients for our background variables. Where models indicated potential cross-cultural variability, we did not find that the size of the coefficient increased or decreased with country-level individualism. Overall, the fact that the correlational pattern of our loneliness item with established predictors was largely constant across cultures supports measurement equivalence (cf. Jylhä, Guralnik, Ferrucci, Jokela, & Heikkinen, 1998).

Country-level variables. Countries were ranked on individualism based on Hofstede's (2001) index scores and ranks of individualism/collectivism for countries from the IBM data set. See Table 1 for individualism ratings for each society.¹

Individual-level variables

Background variables. Age ranged from 60 years old to 85 years or older. Gender was dummy coded so that male = 1, female = 0. Household size was measured as either a single-person household = 1 or living with others = 0. Community size was coded very small/village = 1 (reference category), small to midsize town = 2, and large town/city = 3. Marital status was coded using three dummy variables with those reporting being married or living as married serving as the reference category (code of 0), relative to those reporting being divorced or separated (divorced = 1), those reporting being widowed (widowed = 1), or those who reporting being single (single = 1). We also dummy coded if respondents had a long-term illness (yes = 1), or received assistance because they needed help with activities of daily living (yes = 1). Effectively, receiving assistance was taken to indicate a loss of independence.

Social experience. Respondents answered two questions concerning the frequency of contact with family and friends, which was dichotomized because of extremely skewed distributions. We categorized respondents based on more frequent contact (twice a week to every day) or less frequent contact (never to once a week). See Table 2 for basic demographic information and Table 3 for a correlation matrix of individual-level variables.

Results and Discussion

A generalized linear mixed model was generated to examine individual and country-level effects on loneliness (see Table 4). Individual-level variables included gender, age, marital status, living alone, long-term illness, community size, receiving assistance, frequency of family visits, and frequency of friend visits. Level of individualism was measured at the country-level. Cross-level interactions were also tested in the model to observe the extent to which individual-level coefficients change as a function of a country's value on a societal-level dimension. The individual-level variables visiting with friends, visiting with family, and assistance were specified as random coefficients and crossed with individualism. Per Nakawaka and Schielzeth (2013), we calculated the amount of variance explained by the GzLMM. Based on the formulas proposed by these authors, the amount of variance explained by the fixed effects is reflected in the marginal R^2 , which was $R^2_{GLMM(m)} = .214$. The amount of variance explained by the total model, accounting for the explanatory power of both random and fixed effects, is captured by the conditional R^2 , which was $R^2_{GLMM(c)} = .281$.

Table 2. Descriptive Information About Level 1 Variables.

	Study 1—Eurobarometer				Study 2—European Social Survey			
	Min	Max	M	SD	Min	Max	M	SD
Age years	60	85	70.82	7.199	14	101	46.15	18.210
Single	0	1	0.10	0.302	0	1	0.27	0.446
Divorced/separated	0	1	0.03	0.169	0	1	0.08	0.276
Widowed	0	1	0.33	0.471	0	1	0.07	0.258
Married	0	1	0.54	0.499	0	1	0.57	0.496
Male	0	1	0.43	0.495	0	1	0.47	0.499
Long-term illness	0	1	0.41	0.491				
Live alone	0	1	0.35	0.477	0	1	0.14	0.342
Need assistance	0	1	0.38	0.486				
Family contact	0	1	0.61	0.488				
Friend contact	0	1	0.57	0.495				
Community size	1	3	1.87	0.804	1	5	2.96	1.195
Subjective health					0	100	69.58	22.625
Paid worker					1	2	1.44	0.496
Meet socially					0.5	365	115.77	127.950
People care					0	100	84.19	17.703
Have confidant					1	2	1.09	0.289
Social peers					0	100	43.71	23.492

In this model, more individualistic countries reported lower frequencies of loneliness, $b = -.035$, $p = .004$, confirming Hypothesis 1 that collectivistic countries experience higher levels of loneliness. At the individual level, age, gender, and community size did not have a significant effect. Compared with married older adults, those who were single, $b = .627$, $p < .001$, divorced/separated, $b = .812$, $p < .001$, or widowed, $b = 1.049$, $p < .001$, reported increased levels of loneliness, with widowed older adults reporting the highest rates of loneliness compared with their married counterparts. Similarly, those living alone reported higher levels of loneliness compared with those who lived with at least one other person, $b = .777$, $p < .001$, and older adults with long-term illnesses were also more likely to be lonely than their healthier counterparts, $b = .460$, $p < .001$.

Recall that we predicted that the statistical impact of interpersonal interactions with friends and family would wax and wane with varying levels of cultural individualism—a prediction we tested through the inclusion of cross-level parameters. Whereas at average levels of individualism, more frequent visits with family seemed to be associated with lower levels of loneliness, $b = -.492$, $p < .001$, country-level individualism interacted with frequency of family visits, $b = .011$, $p = .031$. This interaction suggested that at higher levels of individualism, visits by family were not as closely linked to lower levels of loneliness. This supports our third hypothesis, which posited that in more collectivistic societies, more interaction with family would be more strongly associated with lower loneliness than in individualistic societies.

Similarly, at an average level of country-level individualism, more frequent contact with friends implied lower levels of reported loneliness, $b = -.305$, $p = .006$, although qualified by country-level individualism, $b = -.013$, $p = .023$. This interaction suggested that in more individualistic countries, frequent contact with friends is more strongly related to lower levels of loneliness. This finding confirmed Hypothesis 2, which proposed that due to the ability to freely choose them, contact with friends would be more beneficial in reducing loneliness in more individualistic societies.

Table 3. Pairwise Correlations for Studies 1 and 2.

Variables	Lonely	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Study 1: Eurobarometer																	
1. Single	.06																
2. Divorced/separated	.04	-.06															
3. Widowed	.30	-.24	-.13														
4. Male	-.14	-.04	-.03	-.31													
5. Age	.13	-.01	-.05	.35	-.08												
6. Live alone	.30	.27	.18	.57	-.24	.25											
7. Family contact	-.08	-.10	-.06	-.01	.01	-.07	-.23										
8. Friend contact	.00	.04	-.03	.01	.09	-.04	-.01	.17									
9. Long-term illness	.18	-.02	.03	.07	-.04	.12	.04	.02	-.01								
10. Need assistance	.13	-.01	.00	.11	-.02	.27	.00	.10	.02	.32							
11. Big city	-.01	-.01	.05	.01	-.01	.02	.05	-.08	-.05	.02	-.03						
Study 2: European Social Survey																	
1. Single	.03																
2. Divorced	.09	-.19															
3. Widowed	.21	-.17	-.08														
4. Male	-.08	.08	-.05	-.15													
5. Age	.06	-.59	.06	.38	-.03												
6. Live alone	.21	.10	.23	.42	-.04	.22											
11. Big city	.03	.05	.05	.01	-.01	-.04	.07										
12. People care	-.20	.01	-.05	-.05	-.04	-.07	-.09					.02					
13. Meet people socially	-.05	.23	-.03	-.03	.01	-.21	.00					.01	.09				
14. More social than peers	-.14	.08	-.01	-.07	.03	-.10	-.02					.03	.11	.21			
15. Have confidant	.17	-.04	.03	.12	.04	.13	.10					-.03	-.19	-.11	-.16		
16. Subjective health	-.22	.21	-.04	-.20	.07	-.37	-.10					.00	.13	.11	.21	-.14	
17. Paid work	.12	.00	-.06	.23	-.12	.30	.10					-.03	-.05	.04	-.08	.10	-.25

Table 4. Generalized Linear Mixed Model Analysis Using Eurobarometer Data on Loneliness, Study I (N = 3,902).

Variable	Estimate	SE
Lonely threshold = 0	0.407	0.407
Lonely threshold = 50	2.502***	0.405
Individual-level parameters		
Age	-0.001	0.007
Single	0.627***	0.116
Divorced/Separated	0.812***	0.181
Widowed	1.049***	0.094
Male	-0.111	0.066
Long-term illness	0.460***	0.078
Live alone	0.777***	0.098
Community size-large	-0.097	0.067
Community size-midsized	-0.094	0.101
Need assistance	0.244*	0.088
Family contact	-0.492***	0.071
Friend contact	-0.305**	0.073
Country-level parameters		
Individualism (from 1-100)	-0.037**	0.007
Cross-level parameters		
Need assistance × Individualism	0.016*	0.003
Family contact × Individualism	0.011*	0.004
Friend contact × Individualism	-0.013*	0.005
Variance components		
Intercept (between-country)	0.278*	0.140
Family contact variance	0.007	0.015
Friend contact variance	0.011	0.018
Need assistance variance	0.013	0.020
-2 log likelihood	30592.543	
$R^2_{GLMM(m)}$	21.4%	
$R^2_{GLMM(c)}$	28.1%	

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Relatedly, at average levels of individualism, older adults receiving assistance were more lonely than those not receiving assistance, $b = .244$, $p = .018$. However, there was an interaction involving country-level individualism and receiving assistance, $b = .016$, $p = .05$. In more individualistic countries, receiving assistance was associated with higher levels of loneliness, likely because individuals were unable to meet the culturally championed goal of independence and self-determination (cf. Markus & Schwartz, 2010; Oishi, Diener, Lucas, & Suh, 1999). By contrast, in more collectivistic societies the link between receiving assistance and loneliness was weaker.

To illustrate the meaning of these interactions, we provide the simple slopes for the most individualistic country, Great Britain, and the most collectivistic country, Portugal, available in the data set. The frequency of contact with family was linked to less loneliness in Portugal, $b = -.886$, $p = .01$, but not in Great Britain, $b = -.01$, $p = .14$. Conversely, the frequency of contact with friends was more strongly linked to lower loneliness in individualistic Great Britain, $b = -.03$, $p < .001$, than in the more collectivistic Portugal, $b = .166$, $p = .43$. Last, with regard to receiving assistance, the coefficient for Great Britain was $b = 9.48$, $p = .004$, whereas for Portugal it was

$b = -.327, p = .30$. That is, in a highly individualistic society, older adults' loss of independence was a reliable predictor of loneliness, whereas this was not the case in a more collectivistic society.

Overall, findings confirmed that, first, older adults in more collectivistic countries are lonelier. Second, our results are consistent with the notion that culture moderates the influence of the frequency of contact with family and friends on loneliness. In more collectivistic countries, where family and community are highly valued, more frequent contact with family was linked to less loneliness. In more individualistic countries, this was not the case. Rather, in these countries frequent contact with friends was more closely associated with the experience of loneliness. We posit that this is due to the element of choice, which is so highly valued in individualistic countries being represented in interactions with friends—a bond that is chosen rather than expected by blood. Similarly, needing assistance was more strongly linked to loneliness in individualistic societies than collectivistic ones. Presumably, having to rely on others is incompatible with the ideal of personal independence and self-determination, which are critical values in individualistic societies.

Study 2

Study 1 was limited by the fact that the data set included only 12 Level 2 units (countries in our analysis), when most experts on multilevel modeling recommend having at least 30 to be able to detect cross-level interactions (e.g., Hofmann, 1997; Hox, 2002), and when even more might be needed to achieve unbiased Level 2 effect estimates (Maas & Hox, 2005). Note, however, that in Study 1, the cross-level interactions already emerged with fewer Level 2 units. Furthermore, the use of secondary data renders the number of countries in the analysis outside of the authors' control. But even if large Level 1 sample sizes can compensate somewhat for having fewer Level 2 units (Hofmann, 1997; Maas & Hox, 2005), it is important to make sure that this finding was not merely an anomaly. Therefore, we reexamine Hypotheses 1 in a different data set, which includes representative samples from a larger number of European countries. Aside from our focus on loneliness in older adults, this replication also allows an examination of the extent to which our findings are generalizable to younger individuals.

This second study affords the opportunity for an expanded examination of our central predictions. Whereas in Study 1 we directly examined interactions with friends (Hypothesis 2) and family (Hypothesis 3), in Study 2 we addressed similar conceptual issues through different variables. We argue that individualistic societies do not only afford more choice, but they also require more choice to form and maintain interpersonal relationships. Based on Schug et al.'s (2010) observation that people in individualistic societies are more relationally mobile and more likely to self-disclose, having a person to discuss personal and intimate things is more important for the experience of loneliness in individualistic societies (Hypothesis 4). Conversely, we hypothesized that embeddedness in a social network of stable, mutually caring relationships, such as families, is more effective at reducing loneliness in collectivistic societies (Hypothesis 5). The former sought to address an aspect of friendship, whereas the latter addressed an aspect of family relations.

As a replication, this data set provides many benefits. The foremost benefit is the increased number of European countries with data, allowing for more confidence in the results of our hierarchical model. Although there are 25 countries in this data set, only 22 were viable for our analysis due to the lack of individualism/collectivism (I-C) scores provided by Hofstede (2001) for three countries. A second benefit is the scaling of the dependent variable. Although loneliness is a single-item measurement, it is quantified using a 4-point response allowing for more variability. Finally, the data set is not exclusive to older adults, providing increased generalizability of findings to the broader European population.

Method

Data from round three of the European Social Survey (ESS), retrieved from its website, was used in Study 2 (ESS Round 3, 2006). Since 2002, ESS data have been collected every 2 years to assess how attitudes and opinions are changing among Europeans (ESS Round 3, 2011). Wave 3 contains data from 25 European countries, surveying persons aged 14 years and older in private households. Face-to-face interviews are conducted for those selected through a random probability sample, with a response rate of at least 70%. Very stringent translation protocols were used. Sample sizes varied by country, with the least number of people interviewed in Cyprus and the most in Germany. See Table 1 for details.

Statistical Approach

Due to the nested nature of the data, a hierarchical linear regression was used. Because our dependent variable (loneliness) was ordinal, we relied on GzLMM in SPSS 21 to analyze societal-level, individual-level, and cross-level effects. The data were weighted using the ESS's design weight variables to compensate for aspects of the multistage sampling procedure. Because data from Romania did not have any weights associated with them, we weight each case equally (weight of 1) to be able to include them in the analysis.

Dependent variable. Loneliness is a single-item question asking the frequency with which the respondent experienced loneliness in the last week ("How much of the time during the past week you felt lonely?"). Responses included categories such as, *none or almost none of the time* ($n = 26,567$), *some of the time* ($n = 9,455$), *most of the time* ($n = 2,025$), and *all or almost all of the time* ($n = 938$). To further demonstrate that this single-item measure was cross-culturally invariant, we established that its association with a six-item scale of depression, generated through factor analysis (including self-ratings of depression, anxiousness, boredom, difficulty in "getting going," sadness, and perceived effort of living), was comparable across countries. Furthermore, depression did not interact with country individualism in predicting loneliness.

Country-level variables. Countries are ranked on individualism based on Hofstede's (1991) index scores and ranks of I-C for countries from the IBM data set. Additional estimated I-C scores were available on Hofstede's (2012) website for seven countries, and Greece's score proxies for Cyprus. Individualism was centered for the analysis. See Table 1 for individualism ratings for each society.

Individual-level variables

Background variables. Ages span from 14 to 101 years. Gender and household size were coded in the same way as Study 1. Marital status is coded using three dummy variables with those reporting being married or in a civil partnership serving as a reference category (code of 0) relative to those reporting being separated (either still in a civil partnership or marriage), formerly in a civil partnership or divorced (divorced = 1), those reporting being widowed (widowed = 1), or those reporting being single (single = 1). Subjective health was scored on a 5-point scale from 100 = very good to 0 = very bad. Community size was scored from very large (= 1) to the reference category very small/farm or countryside home (= 5). Finally, having paid work is dummy coded (paid work = 1; no paid work = 0).

Social experience. Respondents answered multiple questions concerning social activities they engaged in and the quality of their social support. First, respondents were asked the frequency with which they met socially with friends, relatives, or colleagues. Responses were recoded in terms

of days per year, with those reporting everyday = 365 to those reporting never = 0.5. Respondents were also asked to report how much they take part in social activities compared with others of the same age using a 5-point scale. Responses were scaled from much less than most = 0 to much more than most = 100. Having anyone to discuss intimate and personal matters with “have confidant” was dummy coded (yes = 1, no = 0). Finally, respondents were asked how strongly they agreed or disagreed with the statement “there are people in my life who care about me” on a 5-point scale. This variable was rescaled such that agree strongly = 100 and disagree strongly = 0 to generate the “people care” variable. Descriptive information can be found in Table 2 and correlations can be found in Table 3 for individual-level variables.

Results and Discussion

As before, using Nakawaka and Schielzeth (2013) we calculated the amount of variance explained by the GzLMM. The marginal R^2 was $R^2_{GLMM(m)} = .242$, and the conditional R^2 was $R^2_{GLMM(c)} = .268$. Thus, our model accounted for a substantial proportion of the overall variance.

Results from this GzLMM provided support for Hypothesis 1 (see Table 5). In more collectivistic countries, respondents reported feeling lonelier within the last week, $b = -.017$, $p = .002$. This agrees with the notion that in collectivistic countries, a sense of belonging is extremely important, and when absent, it can have deleterious effects. Similar to previous research findings including Study 1, married individuals are less lonely than single, $b = .420$, $p < .001$; divorced, $b = .720$, $p < .001$; and widowed, $b = 1.077$, $p < .001$, respondents, with widowed reporting the highest levels of loneliness. In addition, those reporting lower subjective health, $b = -.014$, $p < .001$, and those living alone, $b = .773$, $p < .001$, also report more feelings of loneliness in the last week. Both gender, $b = -.211$, $p < .001$, and age, $b = -.012$, $p < .001$, were also significant predictors of loneliness, with females and younger people reporting more loneliness, respectively. People living in a larger communities, $b > .18$, $p < .01$, and those not engaged in paid work, $b = -.218$, $p < .001$, were more lonely. In terms of more socially oriented factors, taking part in more social activities compared with others, one’s age, $b = -.007$, $p < .001$, and more frequent social meetings with family, friends, and colleagues, $b = -.001$, $p < .001$, were both associated with lower reported loneliness. These results support the general finding that any social interaction has the potential of reducing loneliness.

Examining our critical variables, we first focused on the observation that having a confidant to talk to was strongly linked to lower reported loneliness, $b = -.541$, $p < .001$, but this main effect was qualified by a significant cross-level interaction, $b = -.006$, $p = .049$. An analysis of simple effects revealed that the association between having a confidant and loneliness was most pronounced in Great Britain, the most individualistic country in this sample, $b = -.719$, $p < .001$. By comparison, in Portugal, the most collectivistic country, the coefficients was still reliable, but less than half in size, $b = -.337$, $p < .01$. This is consistent with Hypothesis 4 that having someone to discuss personal and intimate things with has greater implications for loneliness in individualistic versus collectivistic societies.

As expected, at average levels of individualism, having people who care about you in your life was linked to lower levels of loneliness, $b = -.016$, $p < .001$. However, the cross-level interaction with individualism was not significant, $b = .00009$, $p = .116$. Even though the direction of the coefficient hinted at caring relationships reducing loneliness more strongly in collectivistic societies, there were no reliable country-level differences, with simple slopes for the most individualistic country, Great Britain, and the most collectivistic country, Portugal, being roughly equal, $b = -.013$ and $b = -.019$, respectively. This finding does not lend support to our fifth hypothesis that in more collectivistic countries, social bonds and embeddedness in caring relationships are more important for the experience of loneliness.

Table 5. Generalized Linear Mixed Model Analysis Using European Social Survey Data on Loneliness, Study 2 ($N = 38,867$).

Variable	Estimate	SE
Lonely threshold = 0	-4.709***	0.135
Lonely threshold = 33	-2.692***	0.133
Lonely threshold = 66	-1.387***	0.135
Individual-level parameters		
Age	-0.012***	0.001
Single	0.420***	0.035
Divorced	0.720***	0.042
Widowed	1.077***	0.048
Male	-0.211***	0.024
Subjective health	-0.014***	0.001
Live alone	0.773***	0.038
Paid worker	-0.218***	0.025
Community size-very large	0.325***	0.061
Community size-large	0.190**	0.064
Community size-medium	0.312***	0.059
Community size-small	0.252***	0.059
Meet socially	-0.001***	<0.001
People care	-0.016***	0.001
Have confidant	-0.541***	0.057
Social peers	-0.007***	0.001
Country-level parameters		
Individualism (1-100)	-0.017**	0.005
Cross-level parameters		
Have confidant × Individualism	0.006*	0.003
People care × Individualism	0.00009	<0.00005
Variance components		
Intercept (between-country)	0.109†	0.056
Variance people care	<0.001†	<0.0005
Variance have confidant	0.019†	0.010
-2 log likelihood	531227.628	
$R^2_{GLMM(m)}$	24.2%	
$R^2_{GLMM(c)}$	26.8%	

† $p < .06$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Overall, Study 2 replicates our earlier findings concerning basic predictors of loneliness, and provides additional support for two of our hypotheses. As in Study 1, participants in collectivistic countries reported higher levels of loneliness than those in individualistic countries. More important, having someone to discuss personal and intimate matters with—a characteristic of close personal friendships—was linked more strongly to feelings of loneliness in individualistic countries than in collectivistic countries.

General Discussion

In this research, we were interested in cultural variations in the experience of loneliness in different countries. Our results both affirm previous research on this topic and expand upon that research (Anderson, 1999; Fokkema et al., 2012; W. H. Jones, Carpenter, et al., 1985; Jylhä &

Jokela, 1990). First, in both studies, we found support for Hypothesis 1: Individuals in collectivistic countries are more likely to feel lonely than those in individualistic countries (cf. Anderson, 1999). Compared with individualistic societies, in collectivistic societies residents seem to pay closer attention to familial relationships and caring interpersonal bonds, are more concerned with “fitting in,” and are more likely to derive a sense of identity from relationships and membership in groups (U. Kim, 1994; H. S. Kim & Markus, 1999; Triandis, 1995). To the extent that such rich, personal and familial relationships are lacking, individuals in collectivistic societies are more likely to feel lonely. Our findings are consistent with those by Walker (1993) and Jylhä and Jokela (1990), who examined cross-cultural differences in multicountry studies, though our study is the first to clearly show that European cultural differences in loneliness can be attributed to differences in individualism-collectivism rather than merely a north-south division (Fokkema et al., 2012; Jylhä & Jokela, 1990).

Arguably, the biggest story in our analysis surrounds how culture moderates the effect of different relationships on loneliness, and we tested four cross-level hypotheses. Hypothesis 2 proposed that for those in individualistic societies, more interpersonal interaction with *friends* would have a greater impact in reducing loneliness than in collectivistic societies. We argued that personal choice and autonomy, two of the defining characteristics of individualism, would be of central importance to people in individualistic societies. By choosing their friends, these individuals affirm their personal identity as different and unique from others, and by expressing their personal preferences through their interaction they feel less lonely. Indeed, Study 1 confirmed this prediction. Conversely, in collectivistic societies in Study 1, it was striking to observe that interacting with friends had little implication for experienced loneliness. Consistent with the greater importance of personal autonomy, Study 1 did show that older adults requiring assistance with daily living felt lonelier in more individualistic societies, but not in more collectivistic societies.

Hypothesis 3 proposed that interaction with *family* would reduce loneliness more strongly in collectivistic rather than individualistic societies—a prediction that was supported in Study 1. Interacting with family was linked to lower levels of loneliness in collectivistic cultures, but no effect emerged among highly individualistic cultures. With friendships having little or no appreciable relationship with experienced loneliness, this finding highlights the critical importance of families for well-being in collectivist societies.

Hypothesis 4 was supported in Study 2, which showed that having a confidant was more strongly linked to lower levels of loneliness in highly individualistic societies. This is consistent with the argument by Schug et al. (2010) that in individualistic societies, interpersonal relationships are less stable, giving individuals the opportunity and also requiring them to choose new friends and establish new relationships on a continuous basis. With self-disclosure being a central characteristic of personally meaningful relationships in individualistic societies (Kito, 2005; Schug et al., 2010), the finding confirmed that personal feelings of loneliness are more likely to hinge on the having a confidant and the opportunity to self-disclose in individualistic societies compared with collectivistic societies. Broadly, this invites the conclusion that predictors of loneliness in a society are at least in part a reflection of the structure and stability of relationships in that same society.

Finally, Hypothesis 5 was not supported in Study 2. Being embedded in caring relationships did not vary reliably between countries. Though caring relationships are typically associated with families, in some instances, family relations might be rather complex even in collectivistic societies with their stronger kinship ties. Conversely, in individualistic societies people might seek out caring relationships outside of the family. Thus, although being cared for clearly related to lower loneliness, future research may have to determine which types of relationships are being experienced as caring in individualistic and collectivistic societies.

Several aspects of our findings might be somewhat surprising. Especially in Study 1, which relied on data from older adults, the very weak effects of interacting with family on mitigating loneliness in individualist societies seems to run counter to the intuition that older individuals generally place great importance on family. Even in individualistic societies, older generations believe family rituals to be important to the creation of successful families, and older adults will take on many roles within their family to ensure bonds are maintained (Blieszner & Mancini, 1987; Fiese et al., 2002; Meske, Sanders, Meredith, & Abbott, 1994; Ramirez Barranti, 1985). At the same time, as our findings highlight, even if such family roles are initiated by older adults, this may tell us very little about their subjective experience of loneliness. Furthermore, many of these family activities might not necessarily occur for the benefit of the older adults who initiate them, but more for the benefit of others, perhaps younger members of the family network. In other words, a birthday remembered may make the birthday card recipient feel connected to others, but not necessarily alleviate the loneliness of the person who called or sent a greeting card. Lastly, one can expect there to be considerable variation in individualistic societies, not only within the population of older adults, but also between different age groups, which future research might wish to explore.

It might also come as a great surprise to see that in Study 1 interacting with friends did not seem to mitigate loneliness among older adults within collectivistic societies. The literature shows that in collectivistic societies, friendship networks are often of great importance and foster a sense of personal commitment and devotion (e.g., Lin & Rusbult, 1995), even though families are considered more important (French, Rianasari, Pidada, Nelwan, & Buhrmester, 2001). Hence, one could reasonably expect the interaction with friends to protect one from loneliness. However, if one distinguishes casual friends from close friends and confidants, a slightly different picture emerges. Though weaker than in individualistic societies, there was a significant relationship between having confidants and lower loneliness levels in collectivistic societies. This implies that having someone to confide in may actually serve a similar function in both types of societies. At the same time, recall that being embedded in caring relationships is always important, regardless of culture. Yet, the fact that Study 2 obtained different findings for these two variables makes it clear that a relationship with a confidant is not necessarily the same as a caring relationship, and vice versa. Indeed, future research might wish to explore the extent to which such relationships overlap or not in different societies.

At the most general level, our results demonstrate the importance of social network for reducing loneliness. That is, although social isolation or (lack of) embeddedness in a social network is analytically distinct from experienced loneliness, these two dimensions are inherently correlated in that social interaction is clearly an antidote to loneliness. In addition to our results confirming that interacting with family and friends differentially mitigates loneliness in collectivistic and individualistic societies, they also supported the idea of a differential effect for receiving assistance among older adults. Assuming that older adults are most likely to receive assistance when they are no longer able to complete activities of daily living, assistance signifies a declining level of control over one's life. With self-determination being of greater concern in more individualistic societies (Triandis, 1995), receiving assistance was associated with more loneliness among older adults in these societies, whereas it was unrelated to feelings of loneliness and social isolation among older adults in more collectivistic societies.

Lastly, we confirmed a number of established findings. In both studies, we replicated that married older adults experience lower levels of loneliness than unmarried ones, and that living alone and having a long-term illness significantly increased the frequency of loneliness—all factors that reduce the opportunity for social and emotional connections—whereas taking part in social activities was found to reduce loneliness (Dykstra, 2009; W. H. Jones, Carpenter, et al., 1985; Jylhä, 2004; Routasalo et al., 2006; Weiss, 1973; Wenger et al., 1996).

Limitations

As with all studies, the present research is no exception in that it possesses a number of shortcomings. Whereas our findings point to cultural differences in levels of loneliness as well as differences in what predicts loneliness, we were limited to two data sets that were somewhat small in the number of countries included, the Eurobarometer with 12 countries and the ESS with 22 countries. In addition, all of the countries represented are from Europe, restricting the types of generalizations that one can make. Although our data set may have significant advantages compared with studies that only encompassed two or three societies, it is clear that the present samples were only representative of a fraction of the world's population. Thus, additional research with broader data sets may reveal whether the present findings hold in individualistic and collectivistic societies around the world.

Another limitation was the fact that both data sets only included a single item on loneliness—the most typical and direct way of measuring loneliness, which has been used in research around the world, including cross-national studies (e.g., Pinquart & Sörensen, 2001). In spite of the popularity of single-item measures, their reliability could not be assessed here. And despite the credentials of this type of measure (e.g., W. H. Jones, Carpenter, et al., 1985), it is always possible that the meaning of the term *loneliness* differs slightly between languages and cultures, even when previous investigations did not assume this to be the case (Stack, 1998). Although future research might wish to examine this issue more closely, we suspect that if any differences in meaning existed, they might have been comparatively small, given that both studies relied on samples from European countries only.

Another drawback of a single-item measure is that it was not possible to distinguish different aspects of loneliness, such as social loneliness and emotional loneliness (e.g., Weiss, 1973). Specifically, we had limited opportunity to examine the extent to which comparable levels of isolation from or embeddedness in a social network result in the experience of loneliness in collectivistic and individualistic societies. Strictly speaking, we were unable to perform a test of the notion that members of collectivistic societies are more likely to feel lonely than members of individualistic societies *given comparable social networks*, especially to the extent that in collectivistic societies broader and tighter social networks are seen as desirable. Indeed, future research must address this issue through more extensive measurement of daily interaction partners, household composition, and so on. Still, we argue that it is not so much network density per se, but who is part of one's network and whether these relationships correspond to cultural values of autonomy and choice, or interpersonal connectedness, as is the case for family and friends.

Conclusion

Altogether, this analysis demonstrates that not only are there systematic cultural differences in the frequency of experienced loneliness, but that there are also cultural differences in predictors of loneliness, highlighting the importance of considering culture and context in the experience of loneliness. Such results could be extremely important for those in the applied sector attempting to find ways to reduce loneliness. At least regarding those in European countries, the country-level individualism does matter for the extent to which (a) frequency of family contact with older adults, (b) frequency of friend contact with older adults, (c) receiving assistance with daily living, and (d) having a confidant help to reduce reported loneliness. In brief, it has long been known that relationships matter for loneliness; however, as our work shows, not all relationships matter equally.

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Note

1. To check for model robustness, we also included Gross Domestic Product (GDP) per capita in both studies reported here. Individualism results were unchanged in Study 1, but weakened in Study 2 though likely attributable to high collinearity between GDP and individualism. Thus, GDP is not included in the analyses reported here.

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