

Differences in late-life loneliness: a comparison between Turkish and native-born older adults in Germany

Tineke Fokkema · Robert Naderi

Published online: 6 March 2013
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Abstract The aim of this study was (1) to examine whether Turkish older migrants are indeed—as is often claimed without solid scientific evidence—lonelier than their peers with no migration background and (2) to determine the factors that account for the differences in loneliness between them. We analysed data of adults aged 50–79 from the first wave of the German Generations and Gender Survey and a supplementary survey of Turkish nationals in Germany ($N = 3,248$ born in Germany and $N = 494$ born in Turkey). Differences in degree of loneliness between Turkish and native-born older adults were determined by the six-item Loneliness Scale of de Jong Gierveld. To identify the specific factors contributing to these loneliness differences, a series of multivariate regression analyses were conducted, examining the impact of two groups of risk factors (poor health and low socioeconomic status) and two groups of protective factors (social embeddedness in the family and informal support exchanges) on loneliness. Results showed that feelings of loneliness are indeed more prevalent among older adults of Turkish origin than their German counterparts, which is entirely attributable to their lower socioeconomic status and poorer health. Living with a partner or children, frequent contacts with non-coresident children, emotional support exchange and looking after grandchildren—though important factors to prevent loneliness at the individual level—did not specifically protect Turkish older

adults from loneliness, or did so rarely. These findings not only indicate new and challenging directions for further research but also raise questions about the effectiveness of the most common loneliness interventions, which focus on improving number and quality of social relationships.

Keywords Older migrants · Loneliness · Germany · Turks

Introduction

Since the 1960s, an increasing number of labour migrants, particularly from countries with lower wage levels, have come to Northwestern Europe. As a response to shortages of unskilled labour, European governments recruited the so-called guest workers, initially from Southern Europe and subsequently from the Maghreb region of North Africa (Morocco, Algeria, Tunisia) and Turkey. Despite the 1973 oil crisis and in contrast to those migrants from Southern Europe, Turkish and Maghrebian guest workers did not return en masse to their home countries. Instead, an additional flow of immigration occurred through family reunification and family formation. In Germany, for instance, the number of migrants increased from around 686,200 (Western Germany) in 1961 to around 7,370,000 in 2011 (Statistisches Bundesamt 2012); the number of Turkish migrants, representing the largest group of foreign residents in Germany, increased from around 6,700 in 1961 (Statistisches Bundesamt 1973) to 1,607,000 in 2011 (Statistisches Bundesamt 2012).

The first generation of these migrants is now approaching retirement age. Despite their persistent wish to spend their older years in their country of birth, most will stay in the host society. The main obstacles to returning home are the presence of children/grandchildren, high-quality social and

Responsible editor: R. O. Ciobanu.

T. Fokkema (✉)
NIDI, The Hague, The Netherlands
e-mail: fokkema@nidi.nl

R. Naderi
BiB, Wiesbaden, Germany
e-mail: robert.naderi@bib.bund.de

healthcare services, fear of losing one's residence permit and pension rights and women's fear of restricted freedom of movement upon return. Instead of returning permanently, they opt for travelling back and forth, spending several months a year in their country of birth while keeping official residence in Europe (de Haas and Fokkema 2010). This phenomenon of pendular migration is also becoming increasingly popular among current older Turkish migrants in Germany. For example, the percentage who stays longer than 6 months in Turkey increased from 11 % in 1996 to 30 % in 2002 (Uslucan 2004).

As the group of older migrants has become larger in numbers and hence more visible, not only practitioners and policymakers but also researchers are showing a growing interest in them. The main interest focuses on their disadvantaged and vulnerable position in society (e.g. Lindert et al. 2008; Micheel and Naderi 2009; Scheppers et al. 2006; Solé-Auró and Crimmins 2008; Treas and Mazumdar 2002). Compared with their native peers, older migrants often experience health problems, financial hardship and housing deficits. Due to their poor linguistic skills and different cultural values, norms and forms of expression, they often lack a network of native citizens and are less likely to take part in social activities. Moreover, older migrants make less use of healthcare services, particularly long-term care services for the elderly like nursing homes, home care and homes for the elderly.

Given their less favourable position in Western society, it is not surprising that older migrants are often assumed to be lonelier than their native peers. In long-standing research on loneliness, some of the aforementioned characteristics of older migrants are repeatedly found to be main *risk* factors for developing feelings of loneliness. There is a consistent, strong and positive link between loneliness and poor health (for reviews see Hawkey and Cacioppo 2010; ÓLuanaigh and Lawlor 2008; Theeke 2007). Loneliness not only increases health-risk behaviour (e.g. lack of physical activity, smoking, obesity, reluctance to see the doctor, having trouble remembering to take medications) that may lead to health problems (Cornwell and Waite 2009): a poor health condition can also be the cause of loneliness. For example, persons with physical limitations, poor eyesight or hearing impairments experience participation restrictions in daily life related to aspects like mobility outside the home, keeping up with family and friends and engagement in social activities (Alma et al. 2011; Korporaal et al. 2008; Pronk et al. 2011). There is also a clear socioeconomic gradient in loneliness: *low socioeconomic status* (captured by, for instance, a low level of education and income, residential dissatisfaction and living in deprived neighbourhoods) is associated with a high level of loneliness (Deeg and Thomése 2005; Hawkey et al. 2008; O'Rand 2001; Patsios 2006; Pinquart and Sörensen 2001; Prieto-Flores et al. 2011; Savikko et al. 2005; Scharf

et al. 2004; Scharf and de Jong Gierveld 2008; Scharf and Smith 2004; van der Meer 2006). Individuals from higher socioeconomic classes generally have a more diverse social network (Antonucci et al. 1999) and more financial resources and opportunities to keep in touch with others through in-person visits, phone calls or emails. More financial resources also mean more opportunities to engage in outdoor activities (e.g. sports, excursions, cultural and church events) that could increase social contacts.

Solid empirical evidence for higher levels of loneliness among older migrants is scarce, however. Due to a lack of large-scale survey data among older migrant populations, only qualitative research and some small-scale quantitative studies on their subjective well-being have been conducted so far (e.g. Dong et al. 2012; Emami and Ekman 1998; Ip et al. 2007; Treas and Mazumdar 2002; Victor et al. 2012). Outcomes of these studies largely confirm the general idea that low socioeconomic status and poor health are main determinants of loneliness amongst older migrants, apart from some group-specific, risk-enhancing factors like homesickness, missing family and friends left behind, language and cultural barriers and experiences with racial discrimination, stigmatisation and other negative reactions from the outside world. However, no quantitative indication is given of the extent to which older migrants are more likely to be lonely than their native peers, nor of the differences in impact on loneliness of these diverse factors.

Further, little is known about the degree to which other specific features of older migrants are likely to *protect* them from loneliness. In this respect, their strong *social embeddedness in the family*, especially the immediate family, seems to be particularly relevant. Given their relatively young age and low divorce rates, older Turkish migrants live more often with a *spouse* than their native peers. A study of Hubert et al. (2009) shows a difference of more than ten percentage points in the proportion of married persons between Turkish migrants aged 50 and older and Germans without a migration background in the same age group. Probably the most consistent protection against feelings of loneliness is the presence of a partner (e.g. de Jong Gierveld et al. 2012; Dykstra and de Jong Gierveld 2004; Fokkema et al. 2012; Jennifer Yeh and Lo 2004; Victor et al. 2000). Partners are the primary source of support and fulfil most needs for intimacy and attachment, especially when the quality of the relationship is high (de Jong Gierveld et al. 2009; Pinquart 2003; Stevens and Westerhof 2006; Wang and Amato 2000). In addition, older migrants more often *coreside with their children* than native-born peers (Baykara-Krumme 2008; Bolt 2002; Himes et al. 1996). Although coresident children do not provide the same psychological benefits as a partner (Weiss 1974), several studies do show that sharing the house with children is associated with lower levels of loneliness than

living alone. This holds true especially for countries where multigenerational households are more common and where residential autonomy and privacy are valued less highly (Chen and Short 2008; de Jong Gierveld et al. 2012). Besides a strong social embeddedness in the immediate family, there is also a wide belief that migrant families are generally characterised by high levels of *informal support exchange*. In this respect, one often refers to their strong sense of family obligations and negative attitudes towards formal care services (Dykstra and Fokkema 2012; Merz et al. 2009; de Valk and Schans 2008). Moreover, migrants often live near other relatives and friends from their country of origin (Andersen 2010); as many studies have proven, close proximity facilitates the exchange of support, especially practical help and care (Litwak and Kulis 1987; Joseph and Hallman 1998; Daatland and Lowenstein 2005).

Against this background, the aim of our study is to examine the difference in prevalence of loneliness and its determinants between Turkish older migrants living in Germany and their German peers with no migration background. We addressed the following research questions: (1) are Turkish older adults in Germany lonelier than their native peers?; and if so, (2) what are the main explanatory factors for their higher levels of loneliness?; and (3) are there factors that specifically protect Turkish older adults from loneliness?

Data source and method

Data

We used data from the first wave of the German Generations and Gender Survey (GGG). In two different samples, about 10,000 Germans and 4,000 migrants of Turkish origin were interviewed face-to-face in 2005 and 2006, respectively. Both surveys were restricted to non-institutionalised individuals aged 18–79 and carried out by the German Federal Institute for Population Research (BiB, *Bundesinstitut für Bevölkerungsforschung*) together with TNS Infratest, under the auspices of the United Nations Economic Commission for Europe (UNECE) in Geneva (Vikat et al. 2007). For Turkish migrants a translated questionnaire was available if needed.¹ The German questionnaire was translated into Turkish (forward translation) by an independent bilingual translator; no backward translation was undertaken. Completion of the questionnaire took, on average, 57 (natives)

¹ After the end of the questionnaire, the interviewer reported if and how many times a translation was needed for the interview. The categories are ‘constantly’, ‘frequently’, ‘sometimes’, ‘rarely’ and ‘never’. One out of five made constantly (12.3 %) or frequently (6.2 %) use of Turkish language help.

and 73 (Turks) minutes. For our study, a selection of older adults aged 50–79 born in Germany ($N = 3,432$) or Turkey ($N = 614$) was conducted. After deleting cases with missing information on relevant variables, the final sample contains 3,248 Germans and 494 Turkish migrants.

Measurements

Loneliness

This dependent variable is considered to be the outcome of evaluating the match between the amount and quality of existing relationships and one’s relationship desires (Peplau and Perlman 1982). Hence, loneliness not only refers to the number of persons in a network but also to the quality of contacts (de Jong Gierveld and van Tilburg 2010). Moreover, the concept of loneliness differs from objective social isolation and is therefore only measurable by subjective viewpoints. In this study, loneliness was measured using the shorter, 6-item version of the de Jong Gierveld Scale (de Jong Gierveld and van Tilburg 2006). Three items are positively formulated (‘There are plenty of people that I can lean on in case of trouble’, ‘There are many people that I can count on completely’ and ‘There are enough people that I feel close to’) and three items negatively formulated (‘I experience a general sense of emptiness’, ‘I miss having people around’ and ‘I often feel rejected’). The answer categories are ‘no’, ‘more or less’ and ‘yes’. Counting neutral and positive answers (‘more or less’, ‘yes’) on the negatively formulated items and neutral and negative answers (‘more or less’, ‘no’) on the positively formulated items results in the loneliness scale score, ranging from 0 (not lonely) to 6 (intensely lonely) with a reliability (Cronbach’s alpha) of 0.79 for older Turkish citizens and 0.77 for older Germans without migration background in this study.² A score of two or higher is indicative of feelings of loneliness.

Health

Two variables were used to measure respondents’ health status. The first variable was the *subjective* evaluation of one’s state of *health*, assessed by the question ‘How is your health in general?’ with answer categories 1 = very good, 2 = good, 3 = fair, 4 = bad and 5 = very bad. The second variable captures the *objective health* status of the respondent and was based on information about whether or not the respondent suffered from a long-standing illness or chronic condition and/or whether a physical or mental

² The loneliness scale has been found to be a valid and reliable measurement instrument for both native and Turkish older adults (further information upon request).

health problem or a disability restricted the person in his/her daily activities (0 = no, 1 = yes).

Socioeconomic status

Four indicators of socioeconomic status were used: education, employment, financial situation and living situation. *Education* refers to the highest level of education completed by the respondent, coded into the 1997 International Standard Classification of Education (ISCED-97). Three levels were distinguished: low (ISCED levels 1 and 2; the reference group), middle (ISCED levels 3 and 4) and high (ISCED levels 5 and 6) and a category of missing cases.³ *Employment* indicates whether the respondent had a paid job (=1) or not (=0). *Financial situation* refers to the extent to which respondents perceived difficulties in making ends meet with answers on a 6-point scale, running from 'very easily' to 'with great difficulty'. Based on their answers, they were divided into three groups: poor (reference group), moderate and good financial situation.⁴ *Living situation* is captured by respondents' evaluation of their housing. Respondents were asked how satisfied they were with their dwelling, on a scale from 0 to 10.

Social embeddedness in family

Two indicators of social embeddedness were included. The first is *partner*, distinguishing respondents without a partner (reference group) from those with one.⁵ As the quality of the partner relationship is likely to determine the degree of marriage protection against loneliness, a further distinction was made within the partnered group between persons with a perceived high-quality (score 7 or higher on a 10-point scale regarding quality of partner relationship;

³ A separate category for missing cases was created as the education measure had more missing data than other variables. The rather high number of missing values is mainly due to missing data among Turkish older adults. In 75 cases (10 %), it was not possible to identify the level of education to match into ISCED. Note that missing cases on education is a common problem in immigrant surveys and has largely to do with variation in educational systems between countries and within countries over time—which is hard to adequately capture in a single education question. For difficulties of comparability of educational levels between developing and Western countries, see Heath et al. (2008).

⁴ We did not use an objective measurement—level of income—for two reasons. Firstly, respondents' personal income as well as household income is reported in categories, thus impeding calculation of an exact equivalised net income. Secondly, there are no missing cases for the subjective measurement of financial situation in our groups under study, whereas for household income 15.2 % of cases are missing.

⁵ Unfortunately, the phrasing of the question in the GGS did not allow for a further separation of the unmarried category into widowed, divorced and never-married persons.

reference group) and a low-quality partnership, respectively. The second is *children*, pertaining to whether respondents had children and, if so, whether they coresided with one or more of their children. Older adults who did not coreside were further divided by number of face-to-face contacts they had with at least one of their non-coresident children: one or more times per week (high frequency) versus less often than weekly contact (low frequency). As the quality of the parent–child relationship might have more impact on loneliness than physical presence or number of face-to-face contacts (Mullins and Dugan 1990), and as high levels of parent–child togetherness can also lead to conflicts and tensions (van Gaalen and Dykstra 2006), older adults with non-coresident children were further divided by the quality of the relationship with their children (high versus low, with the same cut-off as the partner relationship).⁶ More specifically, based on the level of satisfaction of the relationship with each non-coresident child, running from 0 (not satisfied at all) to 10 (very satisfied), respondents characterised with either high or low frequency of parent–child contacts were further split into those with a perceived high-quality relationship (score 7 or higher) with at least one of their non-coresident children and those with a low-quality parent–child relationship.

Informal support exchange

Three kinds of support were investigated: emotional support, personal care and financial support. A distinction was also made between support received and support given. Emotional support was measured by asking respondents whether or not they had talked to anyone about their personal experiences and feelings (received), and whether or not anyone had talked to them about personal experiences and feelings (given) over the last twelve months and, if so, who it was: their partner, parents, parents-in-law, children, stepchildren, grandparents, grandchildren, siblings, other relatives, or non-relatives. For both directions of emotional support respondents could mention at most five persons. Based on this information we constructed two dichotomous variables (0 = no, 1 = yes): *emotional support received* and *emotional support given*. The same structure of questions and variable construction were used for personal care (whether respondents had received/given regular help with personal care tasks such as eating, getting up, dressing, bathing, using the toilet over the last twelve months) and financial support (whether the respondents or their partner had received/given money, assets or goods of substantive value from/to a person outside the household over the last

⁶ A similar distinction could not be made for those older adults living with one or more children, as information about the quality of their relationship was lacking.

twelve months), resulting in *personal care received*, *personal care given*, *financial support received* and *financial support given*. Additionally, the variable *looking after grandchildren* was constructed, based on the question of how frequently they helped look after their grandchildren, if any, ranging from 1 = at least weekly to 4 = never, with “no grandchildren” as reference group.

Control variables

We controlled for respondents’ age (50–79) and sex (0 = male, 1 = female).

Table 1 presents descriptive information about each of the independent variables. The main differences between Turkish and German older adults are addressed in the discussion of the results of the explanatory analyses.

Analytical approach

After examining differences in the prevalence of loneliness between Turkish and German older adults, a series of multivariate analyses were conducted to assess the key predictors of older adult loneliness and their contribution to explaining the differences in loneliness between Turkish and German older adults. In the first model, besides origin (being Turkish or not) the control variables age and gender were included, examining to what extent the loneliness differences between Turkish and German older adults were attributed to differences in demographical composition. Following the order of risk and protective factors outlined in the previous sections, variables related to health status, socioeconomic status, social embeddedness in the family and informal support exchanges were separately added in Models 2–5, respectively. In the final model all sets of variables were included.

Results

Prevalence of loneliness by origin

The final rows of Table 1 show that, as expected, Turkish older adults were lonelier than their German counterparts. The mean loneliness score was 2.1 for older adults of Turkish origin compared with 1.6 for older adults born in Germany. Looking at the responses in more detail, 53.6 % of Turkish older adults experienced loneliness (a score of 2 or higher on the loneliness scale) and 8.5 % had the maximum loneliness score of 6. The equivalent percentages for German older adults were 42.9 and 4.6.

The higher prevalence of loneliness among Turks cannot be attributed to differences in demographical make-up, measured by age and gender, of the two population groups.

On the contrary, as they were clearly younger than their native counterparts (Table 1) and the multivariate analysis shows a positive effect of age on loneliness (Table 2), the effect of being of Turkish origin on loneliness even increased slightly from 0.09 (baseline) to 0.10 (Model 1, Table 2) after controlling for composition differences in age and gender. In other words, if the Turkish older adults had the same age structure as their German counterparts, the initial difference in loneliness would have been even greater.

Risk factors

Models 2 and 3 in Table 2 incorporated the two groups of risk factors for loneliness in this study: health and socioeconomic status, respectively. In line with previous studies, there was a strong association between feeling lonely and health. The more poorly older adults rated their health, the higher their level of loneliness. In addition, higher levels of loneliness are found among those experiencing a chronic illness or physical limitations. The claim of an economic gradient of loneliness is also highly confirmed by our data. Feelings of loneliness were inversely related to older adults’ levels of education, employment, perceived income and satisfaction with their dwelling (Model 3, Table 2).

Table 1 shows that, as expected, Turks’ health status was relatively poor. Compared with German older adults, they rated their health as good (40.9 against 59.1 %) less often and reported a chronic illness or physical limitations (39.5 against 34.2 %) more often. Socioeconomic inequality between Turkish and German older adults is also evident in Table 1. Older Turks were significantly less well-educated than older Germans: more than three-quarters (75.5 %) had a low education and no more than 3.8 % attained higher education, against percentages of 14.1 and 28.9, respectively, for natives. In addition, the proportion of employed older adults was lower among Turks (25.7 %) than among Germans (32.3 %). Moreover, Turks also reported their financial situation as poor (32.4 against 8.2 %) and lower levels of satisfaction with their dwelling (7.4 against 8.5 on a 10-point scale) more often. Once the differences in health are included in the multivariate analysis, the value of the coefficient for being of Turkish origin drops substantially from 0.10 in Model 1 to 0.05 in Model 2. After taking the differences in socioeconomic status into account, the effect of origin even turns negative in Model 3. In other words, the higher level of loneliness among Turkish older adults is largely attributed to their relatively poor health and socioeconomic status.

Protective factors

The two groups of potential protective factors for loneliness—social embeddedness within the family and informal

Table 1 Descriptive statistics ($N = 3,742$)

	Germans ($n = 3,248$)	Turks ($n = 494$)	Significance test
Control variables			
Age (mean: 50–80)	63.2	58.8	$F = 128.67^{***}$
Female	51.7	49.2	$\chi^2 = 1.05$
Health			
Subjective health			$\chi^2 = 75.52^{***}$
Poor	9.5	19.8	
Moderate	31.4	39.3	
Good	59.1	40.9	
No chronic illness or physical limitations	65.8	60.5	$\chi^2 = 5.24^*$
Socioeconomic			
Level of education			$\chi^2 = 943.51^{***}$
Low	14.1	75.5	
Medium	57.0	20.6	
High	28.9	3.8	
Paid job	32.3	25.7	$\chi^2 = 8.64^{**}$
Perceived income			$\chi^2 = 319.73^{***}$
Poor	8.2	32.4	
Moderate	51.4	55.9	
Good	40.5	11.7	
Satisfaction with dwelling (mean: 0–10)	8.5	7.4	$F = 155.52^{***}$
Social embeddedness in family			
Partner			$\chi^2 = 21.12^{***}$
No partner	31.0	20.9	
Partner, high partnership quality	61.3	70.0	
Partner, moderate/low partnership quality	7.7	9.1	
Children			$\chi^2 = 199.59^{***}$
Childless	21.8	18.6	
≥ 1 coresident children	10.6	32.2	
High contact frequency and high relationship quality with ≥ 1 non-coresident children	36.4	35.6	
Low contact frequency and high relationship quality with ≥ 1 non-coresident children	22.4	8.7	
High contact frequency and moderate/low relationship quality with ≥ 1 non-coresident children	2.4	2.0	
Low contact frequency and moderate/low relationship quality with ≥ 1 non-coresident children	6.5	2.8	
Informal support exchange			
Emotional support received	51.2	32.2	$\chi^2 = 61.86^{***}$
Emotional support given	46.0	25.3	$\chi^2 = 74.59^{***}$
Financial support received	2.2	0.4	$\chi^2 = 7.11^{**}$
Financial support given	7.2	3.6	$\chi^2 = 8.66^{**}$
Personal care received	0.8	2.6	$\chi^2 = 6.74^{**}$
Personal care given	7.3	4.3	$\chi^2 = 6.09^*$
Looking after grandchildren			$\chi^2 = 77.41^{***}$
No grandchildren	48.8	43.3	
At least weekly	19.3	31.0	
At least monthly	13.2	10.5	
Less than monthly	9.5	6.1	
Never	9.2	9.1	

Table 1 continued

	Germans (<i>n</i> = 3,248)	Turks (<i>n</i> = 494)	Significance test
Loneliness			
Degree of loneliness (mean: 0–6)	1.6	2.1	$F = 27.23^{***}$
% with feelings of loneliness (score 2 or higher)	42.9	53.6	$\chi^2 = 19.87^{***}$
% with maximum score on loneliness scale	4.6	8.5	$\chi^2 = 13.01^{***}$

Source: Generations and Gender Survey, 2005–2006

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

support exchanges—were entered into Models 4 and 5, respectively. Model 4 supports the well-known fact that presence of a partner and parent–child relationships serve as a buffer against feelings of loneliness. Older adults living with a partner were significantly less lonely than older adults without a partner, but only when the partner relationship was perceived as good. So it is not just the presence of a partner but the quality of the interaction with that partner which prevents older adults from experiencing loneliness. With regard to the presence of children, older adults experienced less feelings of loneliness if they either coresided with their children or, if they did not share their house with children, had a good relationship with at least one of their non-coresident children—even more so if they had frequent face-to-face contact with them. Those who did see their non-coresident children frequently but had low-quality interactions with them did not differ significantly in their feelings of loneliness from their childless counterparts; the lowest levels of loneliness are found among those having both infrequent and poor interactions with their non-coresident children. These differences indicate that the quality of older adults' relationship with their children is more important than quantity. Model 5 shows the importance of adults receiving emotional support and looking after grandchildren in order to protect them from feelings of loneliness. Providing emotional support on a regular basis also decreased the level of loneliness. The two other types of support seem to be of less importance: there were no substantial differences in loneliness between those who did and those who did not exchange financial support or personal care.

As expected, comparing the descriptive statistics of the social embeddedness and support exchange variables across the two population groups (Table 1), Turkish older adults were more likely to live with a spouse than the Germans: 79.1 % against 69.0 %. Also according to expectations, parent–child coresidence is much more common among Turkish families: while 32.2 % of Turkish older adults shared their house with one or more of their children, no more than 10.6 % of the Germans did. However, most of the

Germans whose children had left the parental home perceived their relationship to be of high quality and the majority did see at least one of their non-coresident children on a weekly basis. As geographical proximity facilitates face-to-face contact (Bengtson and Roberts 1991; Greenwell and Bengtson 1997; Grundy and Shelton 2001; Lawton et al. 1994; Lee et al. 1990; Mulder and van der Meer 2009; Smith 1998), this probably means that one or more of their children lived nearby. Contrary to common belief, Turkish older adults were not characterised by higher levels of informal support exchanges. Although they were more likely than Germans to look after their grandchildren on a regular basis and to receive personal care from family or friends, they were less involved in the other types of support. This also holds for emotional support exchange, one of the main protective factors against loneliness, despite the fact that older Turks were more likely to live with a spouse and/or children. While 32.2 % of Turks received and 25.3 % provided emotional support, the equivalent percentages for Germans were 51.2 and 46.0 %. Further examination shows that older Turks relied heavily on their spouse for emotional support, while Germans were more prone to share personal matters with someone outside the family, like friends and neighbours (Table 3).

Given the aforementioned differences—a higher likelihood of living with a spouse and children and looking after grandchildren among Turkish older adults counterbalanced by high-quality and frequent contacts with non-coresident children and relatively high exchanges especially of emotional support among German older adults—it is not surprising that the effect of being of Turkish origin hardly changes in Models 4 and 5, after controlling for social embeddedness and informal support exchanges, respectively.

In the full model (Model 6), where the control variables, risk factors and protective factors are considered simultaneously, five variables are no longer found to have a significant effect: age; chronic illness or physical limitations; paid job; high-quality, low-frequency contact with non-coresident children; and providing emotional support. Reduction of the effect of age, chronic illness or physical

Table 2 Multivariate regression on loneliness ($N = 3,742$)

Model	1	2	3	4	5	6
Turkish origin	0.10***	0.05**	-0.05**	0.11***	0.07***	-0.01
Control variables						
Age	0.06***					-0.01
Female	-0.01					-0.06***
Health						
Subjective health (ref. poor)						
Moderate		-0.17***				-0.11***
Good		-0.35***				-0.21***
Chronic illness or physical limitations (ref. yes)						
No		-0.04*				-0.02
Socioeconomic						
Level of education (ref. low)						
Medium			-0.08***			-0.06*
High			-0.16***			-0.11***
Paid job			-0.03*			-0.01
Perceived income (ref. poor)						
Moderate			-0.19***			-0.11***
Good			-0.28***			-0.17***
Satisfaction with dwelling (low–high)			-0.16***			-0.10***
Social embeddedness in family						
Partner (ref. no partner)						
Partner, high partnership quality				-0.27***		-0.21***
Partner, moderate/low partnership quality				0.00		-0.00
Children (ref. childless)						
≥ 1 coresident children				-0.13***		-0.09***
High contact frequency and high relationship quality with ≥ 1 non-coresident children				-0.20***		-0.12***
Low contact frequency and high relationship quality with ≥ 1 non-coresident children				-0.07***		-0.03
High contact frequency and moderate/low relationship quality with ≥ 1 non-coresident children				0.01		0.03
Low contact frequency and moderate/low relationship quality with ≥ 1 non-coresident children				0.08***		0.07***
Informal support exchange						
Emotional support received					-0.11***	-0.09***
Emotional support given					-0.08**	-0.03
Financial support received					0.01	0.00
Financial support given					-0.03	-0.01
Personal care received					0.03	0.01
Personal care given					-0.00	-0.00
Looking after grandchildren (ref. no grandchildren)						
At least weekly					-0.15***	-0.09***
At least monthly					-0.08***	-0.04*
Less than monthly					-0.05**	-0.04*
Never					-0.02	-0.02
Adjusted R^2	0.010	0.056	0.097	0.146	0.060	0.226

Source: Generations and Gender Survey, 2005–2006

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 3 Emotional support exchange by type of providers/receivers (%)

	Received		Provided	
	Germans (<i>n</i> = 1,662)	Turks (<i>n</i> = 159)	Germans (<i>n</i> = 1,493)	Turks (<i>n</i> = 125)
Partner	58.7	68.6	49.4	58.4
Children	11.8	15.7	14.1	10.4
Grandchildren	0.1	0.0	0.2	0.8
Relatives	6.0	2.5	7.2	6.4
Friends or neighbours	21.1	10.1	26.6	16.8
Others	1.6	2.5	1.3	1.6

Source: Generations and Gender Survey, 2005–2006

limitations and paid job could largely be explained by how they are interconnected and how they relate with the other health and socioeconomic variables. We also found that the coefficient for sex was negative. In other words, after controlling for the effects of the other variables analysed, older women were found to be less lonely, on average, than their male counterparts. Closer analysis showed that this is largely attributable to inclusion of the socioeconomic variables and partner status.

Discussion and conclusions

This study shows that Turkish older adults in Germany have, on average, a higher level of loneliness than their native-born peers. Our research findings also confirm their relatively poor health and low socioeconomic status: compared to the older German population, older adults of Turkish origin report on their health more negatively, have a lower educational attainment and more difficulties making ends meet and are less satisfied with their dwelling. However, the key finding from our study is the strong link of their adverse health and socioeconomic conditions with their relative high levels of loneliness. Although this finding seems to come as no surprise—many studies have shown that impaired health and low socioeconomic status are main risk factors for developing feelings of loneliness—to the best of our knowledge this is the first study to provide evidence from a large-scale survey of older adults with a migration background. Moreover, our study shows that older Turkish migrants' poor health and wealth conditions entirely explain why they are generally lonelier than their native counterparts; after controlling for differences in health and socioeconomic conditions, the effect of being of Turkish origin on degree of loneliness was no longer significant. In other words, if Turkish older adults in Germany were as healthy and wealthy as their native-born age peers, no differences in loneliness between these two groups would exist.

No major specific protective factors against loneliness for Turkish older adults were observed in this study. Although living with a spouse and/or children is more common among older Turkish migrant families, to a large extent their native age peers 'compensate' for this by having high-quality and frequent interactions with their non-coresident children, which is also more in line with the generally preferred and expected parent–child relationships of older adults in Western European countries—intimacy-at-a-distance (Fokkema et al. 2008; Hank 2007; Rosenmayr and Köckeis 1963; Tomassini et al. 2004). In order to protect older adults against loneliness, it is the quality of the relationship with their children rather than geographical proximity which counts. Consequently, having a partner and coresiding with children are clearly insufficient to counteract the two risk factors of poor health and low socioeconomic status. Contrary to widespread belief, informal support exchanges are not more common among Turkish older adults. In fact, apart from looking after grandchildren and receiving personal care from family or friends, older Turks are less likely to be involved in informal support exchanges than their German native peers—including emotional support, which is one of the main factors protecting older adults from loneliness. This unexpected finding is intriguing and warrants further study. Given the strong family ties and sense of family obligations, is talking about personal or intimate problems with a non-relative less accepted or even inhibited? Do language barriers hinder Turks' ability to interact and exchange support with others outside their community? And what role do differences in culture and religion play in this respect?

The findings of this study not only reveal the urgent need to combat loneliness among older Turkish migrants, they also provide clues on the types of interventions that have the greatest potential to be helpful in reducing their feelings of loneliness—interventions aiming either at improving or at taking more into account the adverse health and socioeconomic status of Turkish older adults. This is not as obvious as it may seem. The overwhelming majority of loneliness interventions, also those specifically designed for older migrants, focus primarily on improving social relationships, either in quantity or in quality (Cattan et al. 2005; Findlay 2003; Fokkema and van Tilburg 2007; Masi et al. 2011). Moreover, certain health and socioeconomic conditions are a prerequisite to be able to participate in most of these interventions, for example being in good health to join a sports club; having sufficient income and mobility to participate in social and cultural activities; having some educational attainment and certain language, communication and computer skills to follow an internet course (Fokkema and Knipscheer 2007).

This study examined and explained the differences in loneliness between Turkish older adults and their native-born

peers in one single country, Germany. It would be of great interest if similar analyses were repeated for other European countries in order to discover whether differences in loneliness between Turkish and native-born adults are less prominent or less attributable to health and wealth differences in other welfare states. We also hope that future research will shed more light on the variation in level and determinants of loneliness *within* the Turkish migrant group, either restricted to the first generation or extended to a comparison of generations. With a focus on the first generation, we recommend giving special attention to the impact on loneliness of factors which, more than health and socio-economic status, are directly related to their migration history. In this respect one may think of language difficulties, problems coping with differences in cultural and social norms between the host and the home society, missing and worrying about relatives and friends left behind and the return-or-stay dilemma. When the focus lies on comparing first-generation Turks with their descendants, it will be of particular interest to examine the degree of ‘intergenerational transmission’ of loneliness and its determinants.

References

- Alma MA, van der Mei SF, Melis-Dankers BJM, van Tilburg TG, Groothoff JW, Suurmeijer TPBM (2011) Participation of the elderly after vision loss. *Disabil Rehabil* 33(1):63–72
- Andersen HS (2010) Spatial assimilation in Denmark? Why do immigrants move to and from multi-ethnic neighbourhoods? *Hous Stud* 25(3):281–300
- Antonucci TC, Ajrouch KJ, Janevic M (1999) Socioeconomic status, social support, age, and health. *Ann N Y Acad Sci* 896(1):390–392
- Baykara-Krumme H (2008) Reliable bonds? A comparative perspective of intergenerational support patterns among migrant families in Germany. In: Saraceno C (ed) *Families, ageing and social policy. Intergenerational solidarity in European Welfare States*. Cheltenham/Northampton, Edward Elgar, pp 285–311
- Bengtson VL, Roberts REL (1991) Intergenerational solidarity in aging families: an example of formal theory construction. *J Marriage Fam* 53:856–870
- Bolt G (2002) Turkish and Moroccan couples and their first steps on the Dutch housing market: co-residence or independence? *J Hous Built Environ* 17(3):269–292
- Cattan M, White M, Bond J, Learmouth A (2005) Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. *Ageing Soc* 25(1):41–67
- Chen F, Short SE (2008) Household context and subjective well-being among the oldest old in China. *J Fam Issues* 29(10):1379–1403
- Cornwell EY, Waite LJ (2009) Social disconnectedness, perceived isolation, and health among older adults. *J Health Soc Behav* 50(1):31–48
- Daatland SO, Lowenstein A (2005) Intergenerational solidarity and the family-welfare state balance. *Eur J Ageing* 2(3):174–182
- de Haas H, Fokkema T (2010) Intra-household conflicts in migration decisionmaking: return and pendulum migration in Morocco. *Popul Dev Rev* 36(3):541–561
- de Jong Gierveld J, van Tilburg T (2006) A 6-item scale for overall, emotional, and social loneliness. *Res Aging* 28(5):582–598
- de Jong Gierveld J, van Tilburg T (2010) The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. *Eur J Ageing* 7(2):121–130
- de Jong Gierveld J, Broese van Groenou M, Hoogendoorn AW, Smit JH (2009) Quality of marriages in later life and emotional and social loneliness. *J Gerontol B Psychol Sci Soc Sci* 64(4):497–506
- de Jong Gierveld J, Dykstra PA, Schenk N (2012) Living arrangements, intergenerational support types and older adult loneliness in Eastern and Western Europe. *Demogr Res* 27:167–200
- de Valk HAG, Schans D (2008) ‘They ought to do this for their parents’: perceptions of filial obligations among immigrant and Dutch older people. *Ageing Soc* 28(1):49–66
- Deeg DJH, Thomése GCF (2005) Discrepancies between personal income and neighbourhood status: effects on physical and mental health. *Eur J Ageing* 2(2):98–108
- Dong X-Q, Chang E-S, Wong E, Simon M (2012) Perception and negative effect of loneliness in a Chicago Chinese population of older adults. *Arch Gerontol Geriatr* 54(1):151–159
- Dykstra PA, de Jong Gierveld J (2004) Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Can J Aging/La Revue Canadienne du Vieillessement* 23(2):141–155
- Dykstra PA, Fokkema T (2012) Norms of filial obligation in the Netherlands. *Population* 67(1):97–122
- Emami A, Ekman SL (1998) Living in a foreign country in old age: life in Sweden as experienced by elderly Iranian immigrants. *Health Care Later Life* 3(3):183–198
- Findlay RA (2003) Interventions to reduce social isolation amongst older people: where is the evidence? *Ageing Soc* 23(5):647–658
- Fokkema T, Knipscheer K (2007) Escape loneliness by going digital: a quantitative and qualitative evaluation of a Dutch experiment in using ECT to overcome loneliness among older adults. *Ageing Ment Health* 11(5):496–504
- Fokkema T, van Tilburg TG (2007) Zin en onzin van eenzaamheidsinterventies bij ouderen [Loneliness interventions among older adults: sense or nonsense?]. *Tijdschr Gerontol Geriatr* 38(4):185–203
- Fokkema T, ter Bekke S, Dykstra PA (2008) Solidarity between parents and their adult children in Europe, NIDI report No. 76. KNAW Press, Amsterdam
- Fokkema T, de Jong Gierveld J, Dykstra PA (2012) Cross-national differences in older adult loneliness. *J Psychol* 146(1–2):201–228
- Greenwell L, Bengtson VL (1997) Geographic distance and contact between middle-aged children and their parents: the effects of social class over 20 years. *J Gerontol B Psychol Sci Soc Sci* 52(1):S13–S26
- Grundy E, Shelton N (2001) Contact between adult children and their parents in Great Britain 1986–99. *Environ Plan A* 33(4):685–698
- Hank K (2007) Proximity and contacts between older parents and their children: a European comparison. *J Marriage Fam* 69(1):157–173
- Hawkey LC, Cacioppo JT (2010) Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Ann Behav Med* 40(2):218–227
- Hawkey LC, Hughes ME, Waite LJ, Masi CM, Thisted RA, Cacioppo JT (2008) From social structural factors to perceptions of relationship quality and loneliness: the Chicago health, aging, and social relations study. *J Gerontol B Psychological Sci Soc Sci* 63(6):S375–S384

- Heath AF, Rethon C, Kilpi E (2008) The second generation in Western Europe: education, unemployment, and occupational attainment. *Annu Rev Soc Sci* 34:211–235
- Himes CL, Hogan DP, Eggebeen DJ (1996) Living arrangements of minority elders. *J Gerontol B Psychol Sci Soc Sci* 51(1):S42–S48
- Hubert S, Althammer J, Korucu-Rieger C (2009) Soziodemographische Merkmale und psychophysisches Befinden älterer türkischer Migrantinnen und Migranten in Deutschland: eine Untersuchung auf Basis der Haupt- und Zusatzbefragung des Generations and Gender Survey der ersten Welle. ProBusiness, Berlin
- Ip D, Lui CW, Chui WH (2007) Veiled entrapment: a study of social isolation of older Chinese migrants in Brisbane, Queensland. *Ageing Soc* 27(5):719–738
- Jennifer Yeh S-C, Lo SK (2004) Living alone, social support, and feeling lonely among the elderly. *Soc Behav Pers Int J* 32(2): 129–138
- Joseph AE, Hallman BC (1998) Over the hill and far away: distance as a barrier to the provision of assistance to elderly relatives. *Soc Sci Med* 46(6):631–639
- Korporaal M, Broese van Groenou MI, van Tilburg TG (2008) Effects of own and spousal disability on loneliness among older adults. *J Aging Health* 20(3):306–325
- Lawton L, Silverstein M, Bengtson V (1994) Affection, social contact, and geographic distance between adult children and their parents. *J Marriage Fam* 56(1):57–68
- Lee GR, Dwyer JW, Coward RT (1990) Residential location and proximity to children among impaired elderly parents. *Rural Soc* 55(4):579–589
- Lindert J, Schouler-Ocak M, Heinz A, Priebe S (2008) Mental health, health care utilisation of migrants in Europe. *Eur Psychiatry* 23: 14–20
- Litwak E, Kulis S (1987) Technology, proximity, and measures of kin support. *J Marriage Fam* 49(3):649–661
- Masi CM, Chen HY, Hawkey LC, Cacioppo JT (2011) A meta-analysis of interventions to reduce loneliness. *Pers Soc Psychol Rev* 15(3):219–266
- Merz EM, Özeke-Kocabas E, Oort FJ, Schuengel C (2009) Intergenerational family solidarity: value differences between immigrant groups and generations. *J Fam Psychol* 23(3):291
- Micheel F, Naderi R (2009) Subjektive Einschätzung der ökonomischen Lage älterer Türkinnen und Türken im Zusammenhang mit ihrer sozialen Einbindung. *Zeitschrift für Bevölkerungswissenschaft* 34(1):165–197
- Mulder CH, van der Meer MJ (2009) Geographical distances and support from family members. *Popul, Space Place* 15(4):381–399
- Mullins LC, Dugan E (1990) The influence of depression, and family and friendship relations, on residents' loneliness in congregate housing. *Gerontologist* 30(3):377–384
- O'Rand AM (2001) Stratification and the life course: the forms of life-course capital and their interrelationships. In: Binstock RH, George LK (eds) *Handbook of aging and the social sciences*, 5th edn. Academic Press, New York, pp 197–213
- ÓLuanaigh C, Lawlor BA (2008) Loneliness and the health of older people. *Int J Geriatric Psychiatry* 23(12):1213–1221
- Patsios D (2006) Pensioners, poverty and social exclusion. *Poverty and social exclusion in Britain: the millennium survey*. Policy Press, Bristol
- Peplau LA, Perlman D (1982) Perspectives on loneliness. In: Peplau LA, Perlman D (eds) *Loneliness: a sourcebook of current theory, research and therapy*. Wiley, New York, pp 1–18
- Pinquart M (2003) Loneliness in married, widowed, divorced, and never-married older adults. *J Soc Pers Relatsh* 20(1):31–53
- Pinquart M, Sörensen S (2001) Influences on loneliness in older adults: a meta-analysis. *Basic Appl Soc Psychol* 23:245–266
- Prieto-Flores ME, Fernandez-Mayoralas G, Forjaz MJ, Rojo-Perez F, Martinez-Martin P (2011) Residential satisfaction, sense of belonging and loneliness among older adults living in the community and in care facilities. *Health Place* 17:1183–1190
- Pronk M, Deeg DJH, Smits C, van Tilburg TG, Kuik DJ, Festen JM, Kramer SE (2011) Prospective effects of hearing status on loneliness and depression in older persons: Identification of subgroups. *Int J Audiol* 50(12):887–896
- Rosenmayr L, Köckeis E (1963) Propositions for a sociological theory of aging and the family. *Int Soc Sci J* 15(3):410–426
- Savikko N, Routasalo P, Tilvis RS, Strandberg TE, Pitkälä KH (2005) Predictors and subjective causes of loneliness in an aged population. *Arch Gerontol Geriatr* 41(3):223–233
- Scharf T, de Jong Gierveld J (2008) Loneliness in urban neighbourhoods: an Anglo-Dutch comparison. *Eur J Ageing* 5(2):103–115
- Scharf T, Smith AE (2004) Older people in urban neighbourhoods: addressing the risk of social exclusion in later life. *Social networks and social exclusion: sociological and political issues*. Ashgate, Aldershot
- Scharf T, Phillipson C, Smith AE (2004) Poverty and social exclusion: growing older in deprived urban neighbourhoods. *Growing older: quality of life in old age*. Open University Press, Buckingham
- Scheppers E, van Dongen E, Dekker J, Geertzen J, Dekker J (2006) Potential barriers to the use of health services among ethnic minorities: a review. *Fam Pract* 23(3):325–348
- Smith GC (1998) Residential separation and patterns of interaction between elderly parents and their adult children. *Prog Hum Geogr* 22(3):368–384
- Solé-Auró A, Crimmins EM (2008) Health of immigrants in European Countries. *Int Migr Rev* 42(4):861–876
- Statistisches Bundesamt (1973) *Bevölkerung und Kultur. Reihe 1: Bevölkerungsstand und -entwicklung. Ausgewählte Strukturdaten für Ausländer*. Kohlhammer, Stuttgart
- Statistisches Bundesamt (2012) *Bevölkerung und Erwerbstätigkeit. Ausländische Bevölkerung. Ergebnisse des Ausländerzentralregisters 2011, vol 1*. Wiesbaden
- Stevens N, Westerhof GJ (2006) Marriage, social integration, and loneliness in the second half of life: a comparison of Dutch and German men and women. *Res Aging* 28(6):713–729
- Theeke LA (2007) Sociodemographic and health-related risks for loneliness and outcome differences by loneliness status in a sample of US older adults. West Virginia University, Morgantown
- Tomassini C, Glaser K, Wolf DA, Broese van Groenou MI, Grundy E (2004) Living arrangements among older people: an overview of trends in Europe and the USA. *Popul Trends* 115:24–34
- Treas J, Mazumdar S (2002) Older people in America's immigrant families: dilemmas of dependence, integration, and isolation. *J Aging Stud* 16(3):243–258
- Uslucan HH (2004) *Kulturelle Werte und Identität. Die Situation der türkischstämmigen Bevölkerung in Deutschland (Gutachten im Auftrag des Sachverständigenrates für Zuwanderung und Integration)*. Study Commissioned by the Expert Commission for Immigration and Integration, Berlin
- van der Meer MJ (2006) *Older adults and their sociospatial integration in the Netherlands*. Amsterdam, Netherlands
- van Gaalen RI, Dykstra PA (2006) Solidarity and conflict between adult children and parents: a latent class analysis. *J Marriage Fam* 68(4):947–960
- Victor C, Scambler S, Bond J, Bowling A (2000) Being alone in later life: loneliness, social isolation and living alone. *Rev Clin Gerontol* 10(4):407–417
- Victor CR, Burholt V, Martin W (2012) Loneliness and ethnic minority elders in Great Britain: an exploratory study. *J Cross-Cult Gerontol* 27(1):65–78
- Vikat A, Spéder Z, Beets G, Billari F, Bühler C, Désesquelles A, Fokkema T, Hoem JM, MacDonald AL, Neyer GR (2007) *Generations and Gender Survey (GGS): towards a better*

- understanding of relationships and processes in the life course. *Demogr Res* 17(14):389–440
- Wang H, Amato PR (2000) Predictors of divorce adjustment: stressors, resources, and definitions. *J Marriage Fam* 62(3):655–668
- Weiss RS (1974) The provisions of social relationships. In: Rubin Z (ed) *Doing unto others: joining, molding, conforming, helping, loving*. Prentice Hall, Englewood Cliffs, pp 17–26