
Research Article

Social Relations in Lebanon: Convoys Across the Life Course

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Abstract

Objectives: This study systematically analyzed convoys of social relations to investigate the ways in which gender and income shape patterns of social relations across the life course in Lebanon.

Methods: Data were drawn from a representative sample of adults aged 18 and older in Greater Beirut, Lebanon ($N = 500$). Multiple linear regression and multilevel models were conducted to examine main and interactive effects of age, gender, and income on social relations.

Results: Findings indicate main effects of age, income, and gender on network structure and relationship quality. Older age was associated with larger network size, greater proportion of kin in network, higher positive and lower negative relationship quality. Higher income was associated with larger network size and decreased contact frequency. Female gender was also associated with decreased contact frequency. Gender interacted with income to influence network size and network composition. Higher income was associated with a larger network size and higher proportion of kin for women.

Discussion: Findings suggest diversity in the experience of social relations. Such nuance is particularly relevant to the Lebanese context where family is the main source of support in old age. Policy makers and program planners may need to refrain from viewing social relations simplistically.

Key Words: Culture, Social support, Social networks

Social relations are a universally recognized key resource over the life course (Antonucci & Ajrouch, 2007; Haller & Hadler, 2006; Nilsson, Grafstrom, Zaman, & Kabir, 2005). Acknowledged as multidimensional and complex, social relations have far-reaching effects on health

and well-being. Yet, age differences in social relations may vary depending on interlocking structural positions such as gender and socioeconomic status (SES) (Ajrouch, Blandon, & Antonucci, 2005; Broese van Groenou & van Tilburg, 2003). Men and women who exhibit comparable

SES characteristics might, on the one hand, report similar types of social relations (e.g., Moore, 1990); but assuming that their relations are the same denies gendered experiences within roles and the resulting opportunities for establishing social networks (Moen, 2001). Moreover, diversity in the aging experience may manifest differently depending on cultural contexts (Badr, Shah, & Shah, 2012; Calasanti, 1996). We know that cultural ideals often shape expectations associated with social relations over the life course (Kagitcibasi, 2005; Triandis, 1989). Indeed, cultural worldviews might directly influence social network composition (Vaisey & Lizardo, 2010). Given advancements made in the scientific study of social relations and increased global diversity of aging populations, understanding the ways in which social relations vary by gender and SES over the life course remains an area in need of further research.

Lebanon is a country undergoing a demographic transition indicative of population aging while at the same time experiencing significant social and political changes (Abyad, 2001; Sibai, Sen, Baydoun, & Saxena, 2004). Currently, Lebanon has the highest percentage of older adults in the Arab region, comprising 10% of the total population of men and 11% of the total population of women (United Nations, 2010). It also has experienced a modern civil war (1975–1990) with continuing political instability (Ajrouch, Abdulrahim, & Antonucci, 2013), diminishing the government's ability to provide security in old age. Social relations, especially the family, are therefore the foremost resource available to meet the needs of older people. In an effort to stimulate systematic study of social relations in Lebanon, this paper seeks to document convoys of social relations over the life course with a particular focus on patterns by gender and SES.

Convoys of Social Relations

Convoy Model of Social Relations (Antonucci, 2001; Antonucci, Birditt, & Ajrouch, 2011; Kahn & Antonucci, 1980) provides a guiding framework for the present study. According to the convoy model, individuals are surrounded by supportive others who move with them throughout the life course. These relationships vary in their closeness, their quality, their function, and in their structure, for example, size, composition, contact frequency, geographic proximity. The convoy model elaborates the multidimensional nature of social relationships to differentiate social networks, social support, and support quality. The structure, function, and quality of convoys are influenced by personal (e.g., age, gender) and situational (e.g., role, values) characteristics, while having significant implications for health and well-being. The convoy measure involves placing close and important individuals into three concentric circles representing three levels of closeness including those to whom you feel close, closer, and closest. Later elaborations of the convoy model considered country and values as key

situational elements that affect social relations (Ajrouch, Abdulrahim et al., 2013).

Cultural context holds special significance in applications of the convoy model. As a situational characteristic, it influences personal (age, gender, income) factors, as well as the structure, type, and quality of social relations and well-being. For instance, many describe Lebanon as a country that depends on close connections, especially family, for well-being and to access resources (Barakat, 1976; Joseph, 2011; Khalaf, 2001). Such connections hold special significance because of a weak welfare state and continuing political instabilities (Ajrouch, Abdulrahim et al., 2013). As a result, the assumptions and ideals that underpin social relationships may arise through instrumental as opposed to emotional motivations (Ajrouch, Akiyama, & Antonucci, 2007). An examination of the convoy model within the context of Lebanon will extend theoretical understandings of social relations as it examines various relationship dimensions across the life course.

The Influence of Age, Gender, and Income on Social Relations

Age, gender, and income are personal characteristics that reflect interlocking structural positions and shape the experience of social networks and relationship quality, both independently but also in interaction with one another. Previous research in the United States suggests aging differences in that older age is associated with smaller, less proximal, and less diverse social networks (Ajrouch, Antonucci, & Janevic, 2001; Cornwell, Laumann, & Schumm, 2008). Furthermore, older age is associated with more positive and less negative quality support exchanges (Akiyama, Antonucci, Takahashi, & Langfahl, 2003; Birditt & Fingerman, 2003; Carstensen, Isaacowitz, & Charles, 1999). We aim to test whether similar age patterns are prevalent in Lebanon, and whether such patterns vary by two important indicators of stratification: gender and income (see Calasanti, 2010).

The scant evidence that does exist suggests gender patterns in social relations in Lebanon may not resemble patterns found in the West. A study that focused on a national sample of adults aged 65 and older in Lebanon, Algeria, and Palestine found that men and women reported similar patterns with regard to quantity and prevalence of social relations both within the family and with others (Ajrouch, Yount, Sibai, & Roman, 2013). Only one exception was noted, financial support, where women received more. Such findings lend support to the assumption that there are no gender differences in relationality in Lebanon (Joseph, 1993). Yet, more detailed measures would provide deeper insights into links between gender and social relations.

Moreover, access to resources in Lebanon is often influenced by a complex interplay of factors including family name and occupation, where income dictates position above and beyond education level (Khuri, 1975; Makhoul

& Harrison, 2002). An area in need of examination concerns the ways in which income influences patterns of social relations as well as whether such patterns vary by gender across the life course. Research carried out in the United States suggests that SES does indeed influence social relations (Krause & Borawski-Clark, 1995; McPherson, Smith-Lovin, & Cook, 2001). For instance, among both men and women higher SES was associated with larger networks, yet among women higher SES was also associated with lower geographic proximity (Ajrouch, Blandon, & Antonucci, 2005). Higher SES may influence women's networks more than men's due to the notion that masculine ideals likely do not vary by income level, for example, men play similar roles in society regardless of income, whereas women's roles often expand with higher SES (Kimmel, 2011). Hence, SES may interact with gender to influence convoys of social relations. An examination of how gender and SES influence social relations in the Lebanese context will likely provide insight into cultural expressions of social relations.

Present Study

The present research aims to move the field forward in important ways, identifying distinct elements regarding the multiple dimensions of social relations as they relate to unique contextual circumstances. This advancement will allow greater specification of how societal variations in social exchanges and/or social interactions may be understood. Social relations refer to a universal human experience, yet increasingly are recognized as both complex and culturally distinct. This research examined whether convoys of social relations vary by age, gender, and income in Lebanon. In this paper, we examine the following four hypotheses:

1. Literature in the United States shows clear age effects in that older age is associated with smaller networks, more positive, and less negative relationship quality (Ajrouch, Antonucci, & Janevic, 2001; Akiyama, Antonucci, Takahashi, & Langfahl, 2003; Birditt & Fingerman, 2003; Carstensen, Isaacowitz, & Charles, 1999; Cornwell, Laumann, & Schumm, 2008). Because of the importance of family in Lebanon, we do not hypothesize age differences in social network characteristics. However, we do hypothesize that the quality of social relations will be similarly affected by age in that there will be an increase in positive and a decrease in negative relationship quality.
2. Although gender differences in social relations are prevalent in the United States (Antonucci, Akiyama, & Lansford, 1998), the dominance of family life in social relations are hypothesized to reduce the probability of gender differences in structure and quality of social relations in Lebanon (Ajrouch, Yount et al., 2013; Joseph, 1993). We investigate the ways in which gender affects convoys but hypothesize that there will be few

gender differences in either structure or quality of social relations.

3. The U.S. literature suggests that those with higher SES have clear advantages in their social relations (Krause & Borawski-Clark, 1995; McPherson, Smith-Lovin, & Cook, 2001). Given the importance of income as an indicator of SES in Lebanon, we examine its association with social relations and hypothesize that higher income will be associated with both structural aspects of social relations, such as larger convoys, as well as quality of social relations, that is, more positive and less negative social relations.
4. Finally, we hypothesize that interlocking structural positions (interactions between age, gender, and income) will shape convoys of social relations over the life course in Lebanon. We predict SES differences for women and not men because higher SES may offer more varied roles and opportunities among women (Kimmel, 2011). Thus, we predict that higher SES women will report greater social integration (i.e., larger networks, lower contact frequency, lower geographic proximity) and better relationship quality (i.e., more positive, less negative relationship quality) than lower SES women. We predict no differences for men. Given the relatively little research on life course patterns in Lebanon, we explore whether such patterns vary by age.

A critical analysis of social relations in this unique Middle Eastern culture will offer notable extensions in theoretical understandings concerning social relations. It will also provide an important basis for practical applications.

Methods

Sample

Data are drawn from the Family Ties and Aging Study (see Abdurahim, Ajrouch, Jammal, & Antonucci, 2012). Participants included 500 adults aged 18 years and older from the Greater Beirut area, with an oversampling of those aged 60 and older. The population sampled included the three administrative districts of Beirut (Aley, Baabda, and Metn). These areas were chosen to represent a sample of geographic clusters from each directorate in Greater Beirut, followed by a random selection of households within each cluster. Participants completed face-to-face survey interviews, which occurred at the participants' homes and lasted for approximately 1 hr. The response rate was 64%. Data were collected in 2009.

Measures

Social Relations—Structure and Quality

Structure and quality of convoy relationships were assessed. The structural dimension is measured using the hierarchical mapping technique (Antonucci, 1986) where participants are shown a diagram of three concentric circles with the

word “you” placed in the center. Participants were asked to name people closest (inner circle), close (middle circle), and somewhat close (outer circle). The first and last name initials are written on the diagram in the order indicated by the respondent. Respondents are then asked a series of questions concerning social network characteristics about the 10 people closest to “you” on the diagram.

Network Structure

Total network size represents a count of the total number of people the respondent included on his/her diagram (i.e., inner, middle, and outer circles combined) with possible values ranging from 0 to 17. Information about contact, proximity, and relationship to the participant was then assessed about the closest 10 people nominated as network members. Only data on network members aged 13 and older were used for analyses because we were interested in adult, rather than child, relations.

Contact frequency is assessed by asking how often the participant has any type of contact (e.g., in person, telephone, electronic) with each of their network members (up to 10 members) on a five-point scale: irregularly, once a year or more often, once a month or more often, once a week or more often, or everyday (1 = irregularly, 5 = everyday). Though we recognize that in-person contact holds more direct care implications than telephone or electronic contact, we nevertheless wished to have a global sense of whether or not contact occurred because any type of contact is certain to leave the individual feeling more connected than no contact at all.

Geographic proximity is a dichotomous measure that assessed whether each network member lives in Lebanon (1 = yes; 0 = no). A count of the number of network members who live in Lebanon was obtained and then divided by the total number of network members (up to 10) nominated to create a percentage of people in the network who live in Lebanon (range 0%–100%).

Proportion of kin in network refers to the percentage of kin identified in the network. Participants were asked to identify their relationship with each of their network members, and all relationships that are familial (including in-laws and more distant relatives) were counted and then divided by the total number of network members nominated (up to 10) to create a percentage of people in the network who are family (range 0%–100%, with higher numbers indicating a higher percentage of family members).

Relationship Quality

Quality of social relations was measured along two dimensions: positive and negative, with up to seven key relationships including, spouse, mother, father, child, sibling, best friend, and one other important relationship if the person closest to them is not one of the previously stated relationships. In rating relationship quality, participants were asked to identify the child and sibling upon whom they rely most.

Positive relationship quality includes instrumental and emotional dimensions of social support where participants were asked to state whether they agree, somewhat agree, neither agree nor disagree, somewhat disagree, or disagree (1 = disagree; 5 = agree) with the following five statements: I can share my very private feelings and concerns with my (spouse/parent(s)/child/sibling/friend); I feel my _____ would help me out financially if I needed it; I feel my _____ would take care of me when I'm sick; My _____ always understands me; My _____ always appreciates the things I do for him/her. A mean composite of the five responses was created for each relationship (mother, child, etc). Alpha values for these scales are .88 (spouse), .78 (mother), .74 (father), .72 (child), .60 (friend), .66 (sibling), and .75 (other).

Negative relationship quality included negative dimensions of social support where participants were asked to state whether they agree, somewhat agree, neither agree nor disagree, somewhat disagree, or disagree (1 = disagree; 5 = agree) with the following two statements: My (spouse/parent(s)/child/sibling/friend) gets on my nerves; My _____ makes too many demands on me. A mean composite of the two responses was created for each relationship (mother, child, etc). Alpha values for these scales are .72 (spouse), .74 (mother), .55 (father), .53 (child), .54 (friend), .73 (sibling), and .80 (other, i.e., first person mentioned).

We recognize value in testing positive and negative quality measures by relationship type, but for the purposes of this analysis, where we seek to establish a more global assessment of relationship quality, we include each relationship type for a global assessment. This seemed appropriate both as a first examination of the quality of social relations in Lebanon and for parsimony of presentation. Future work should explore these relationships separately. All social relations measures were developed, tested, and refined after completion of a pilot study conducted in Lebanon during 2007.

Predictors

Age is measured continuously (in years) based on date of birth. Gender is assessed as 1 = male; 2 = female. Income is measured by asking: “Considering income from all sources—from jobs, remittances, interest, rents, and so forth—for you and all family members living with you, what would you say was your total family income last month? Less than \$500, \$501–1000, \$1001–2000; \$2001–3000, \$3001–5000, \$5001–10,000; more than \$10,000?” Income was truncated into six categories, so that the top category is \$5,001 or more because only one participant indicated earning more than \$10,000 the previous month.

Method of Analysis

Descriptive analyses were conducted first to ascertain sample characteristics both demographically and with regard to social relations. To explore the main and interactive effects of age, gender, and income on network structure,

that is, network size, geographic proximity, proportion of kin, we performed multiple linear regression analysis using SPSS 20. To explore the main and interactive effects of age, gender, and income on contact frequency and relationship quality, we conducted multilevel models using SAS PROC MIXED. Multilevel models were used because participants differed in how many relationships they rated for quality and contact, and multilevel analysis accounts for within participant error. Two-level multilevel models were used in which the average quality relationship score for each relationship is conceptualized as the Level 1 variables that are nested within individual participants who serve as the Level 2 variables. Only significant models are reported in tables.

For all analyses, age and income were centered and gender was coded as 1 = male, 2 = female. For the multilevel models, total network size was centered and included as a control to eliminate potential bias from participants who have larger networks. Interactions are products of the centered predictor and the centered or dichotomous moderator(s). All main effects were entered in the step 1 analyses. All potential interactive effects between age, gender, and income were tested for significance at step 2, with each interaction entered separately. If a significant amount of additional variance is accounted for by the interaction term in these last steps, a moderating effect may be inferred and further explored through post hoc tests; only significant interactions are reported in tables. Post hoc analysis of significant interaction effects was conducted using procedures recommended by Holmbeck (2002).

Results

We begin with a descriptive presentation of the study variables. Table 1 presents the means and sample distribution

Table 1. Sample Characteristics

	N = 500	
	M (SD)	% (N)
Demographics		
Age (18–91)	52 (17.6)	
Women		51 (255)
Income		
<\$500 per month		19 (90)
\$501–\$1,000 per month		53 (257)
\$1,001–\$2,000 per month		19 (93)
\$2,001–\$3,000 per month		5 (23)
\$3,001–\$5,000 per month		3 (14)
\$5,001 or more per month		1 (5)
Convoy characteristics		
Network size (0–17)	5.5 (2.8)	
Contact frequency (1–5)	4.4 (0.77)	
% Live in Lebanon		91 (22.0)
% Family		86 (25.0)
Positive quality (1–5)	4.6 (0.47)	
Negative quality (1–5)	1.6 (0.58)	

of age, gender, income, and social relations for the total sample. The average age of participants was just less than 52 years ($SD = 17.6$). Fifty-one percent of the sample was female participants. Approximately one fifth of the total sample reported income of less than \$500/month, a little over half reported household income of between \$500–\$1,000/month, and more than 25% of the overall sample reported a household income of more than \$1,000/month. Participants reported an average network size of 5.5 ($SD = 2.8$), ranging from 0 to 17. Contact frequency was 4.4 ($SD = 0.77$), that is, between once a week and daily. On average, 91% of the networks of participants lived in Lebanon with 86% of the networks comprised of family. Positive support quality was on average high ($M = 4.6$; $SD = 0.47$) and negative support quality on average low ($M = 1.6$; $SD = 0.58$). In terms of closeness with key others, results indicated high levels of closeness with all relationships; the closest relationship reported was with children ($M = 7.7$; $SD = 0.9$), followed by spouse ($M = 7.3$; $SD = 1.5$), then siblings ($M = 6.3$; $SD = 2.1$). The least close relationship reported was with friends ($M = 5.2$; $SD = 2.1$).

Do Convoys of Social Relations Vary by Age, Gender, and Income in Lebanon?

Regression results indicate that age and income were significantly associated with network structure (see Step 1, Table 2). Contrary to findings in the literature that show older age is associated with smaller networks; our results show that older age in Lebanon was instead associated with larger social networks. Parallel to the extant literature, older age was also associated with a high percentage of kin in the network and higher income was associated with larger networks. Multilevel model results show that gender and income were significantly associated with network contact frequency. Being female and higher income were both associated with less contact frequency. There were no significant associations between gender and network structure. Models predicting geographic proximity were not statistically significant.

Multilevel model results indicate that only age was significantly associated with relationship quality. Mirroring findings in the literature, older age was associated with higher levels of positive and lower levels of negative relationship quality (see Table 3). There were no significant gender or income associations with support quality (positive or negative).

Do Interlocking Structural Positions Shape Convoys of Social Relations Over the Life Course in Lebanon?

Regression results showed that gender and income interacted to influence convoys of social relations regardless of age (see Step 2 of Table 2). Post hoc analyses were conducted to explore the significant gender \times income interactions

Table 2. Multiple Linear Regressions: Network Structure

	Total network size			Proportion of kin		
	<i>B</i> (<i>SE</i>)	β	<i>t</i>	<i>B</i> (<i>SE</i>)	<i>B</i>	<i>t</i>
Step 1						
Age	0.02 (0.01)	0.15***	3.27	0.24 (0.06)	0.18***	3.81
Gender	0.01 (0.26)	0.00	0.04	3.84 (2.18)	0.08	1.76
Income	0.43 (0.14)	0.15***	3.21	0.30 (1.15)	0.01	0.26
Step 2						
Gender \times income	0.51 (0.26)	0.28*	1.94	6.22 (2.23)	0.40**	2.79
<i>R</i> ²		Step 1 = .03 Step 2 = .04			Step 1 = .04 Step 2 = .05	
ΔR^2		.01*			.01**	
<i>F</i>		Step 1 = 5.75*** Step 2 = 5.28***			Step 1 = 5.92*** Step 2 = 6.44***	
ΔF		3.76*			7.75**	

Notes: Age, gender, and income were entered as controls for step 2.

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

Table 3. Multilevel Models: Contact Frequency and Relationship Quality

	Contact frequency		Positive relationship quality		Negative relationship quality	
	<i>B</i> (<i>SE</i>)	<i>t</i>	<i>B</i> (<i>SE</i>)	<i>t</i>	<i>B</i> (<i>SE</i>)	<i>t</i>
Intercept	4.56 (0.11)***	40.53	4.52 (0.07)***	67.94	1.84 (0.10)***	18.46
Age	-0.00 (0.00)	-1.66	0.00 (0.00)**	2.80	-0.01 (0.00)***	-4.32
Gender	-0.14 (0.07)*	-1.95	0.04 (0.04)	0.92	-0.11 (0.06)	-1.72
Income	-0.09 (0.04)*	-2.39	-0.01 (0.02)	-0.43	-0.01 (0.03)	-0.32
Network size	-0.03 (0.01)*	-2.37	-0.01 (0.01)	-0.78	-0.00 (0.01)	-0.31
Covariance parameters						
Between participants	0.38 (0.04)***		0.04 (0.01)**		0.12 (0.03)***	
Within participants/residual	0.88 (0.03)***		0.45 (0.02)***		0.92 (0.04)***	
-2 log likelihood	7,321.3		2,813.4		3,784.3	

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

predicting total network size and proportion of kin in network. Gender was conceptualized as the moderating variable in both interactions. Specifically, we conducted simple slope analysis using the technique described by [Holmbeck \(2002\)](#) and [Aiken and West \(1991\)](#). First, because the original gender variable was coded as male = 1 and female = 2, we created two new conditional gender variables: a male group variable (male = 0, female = 1) and a female group variable (male = -1, female = 0). This was done to facilitate manipulation of the zero point of gender to allow for the examination of the conditional effects of income on network size and proportion of kin in network separately for male and female participants. Second, we created product terms by multiplying each of the two conditional gender variables by the centered predictor variable (e.g., male \times income, female \times income). We then conducted two regression analyses for

each outcome, one with the male group variable and the other with the female group variable. Each regression analysis included the conditional gender variable, the centered predictor (income), the centered control (age), and the interaction of the conditional gender variable with the centered predictor.

In each analysis, the regression coefficient for income is the simple slope for the conditional value of gender. We created two figures to depict these slopes using scatter plots with income on the *x*-axis, the outcome on the *y*-axis, and fit lines plotted separately for female and male participants (see [Figures 1 and 2](#)). For female participants, higher income was associated with having a larger network and a higher proportion of kin nominated in the network. For male participants, income was not significantly associated with either outcome.

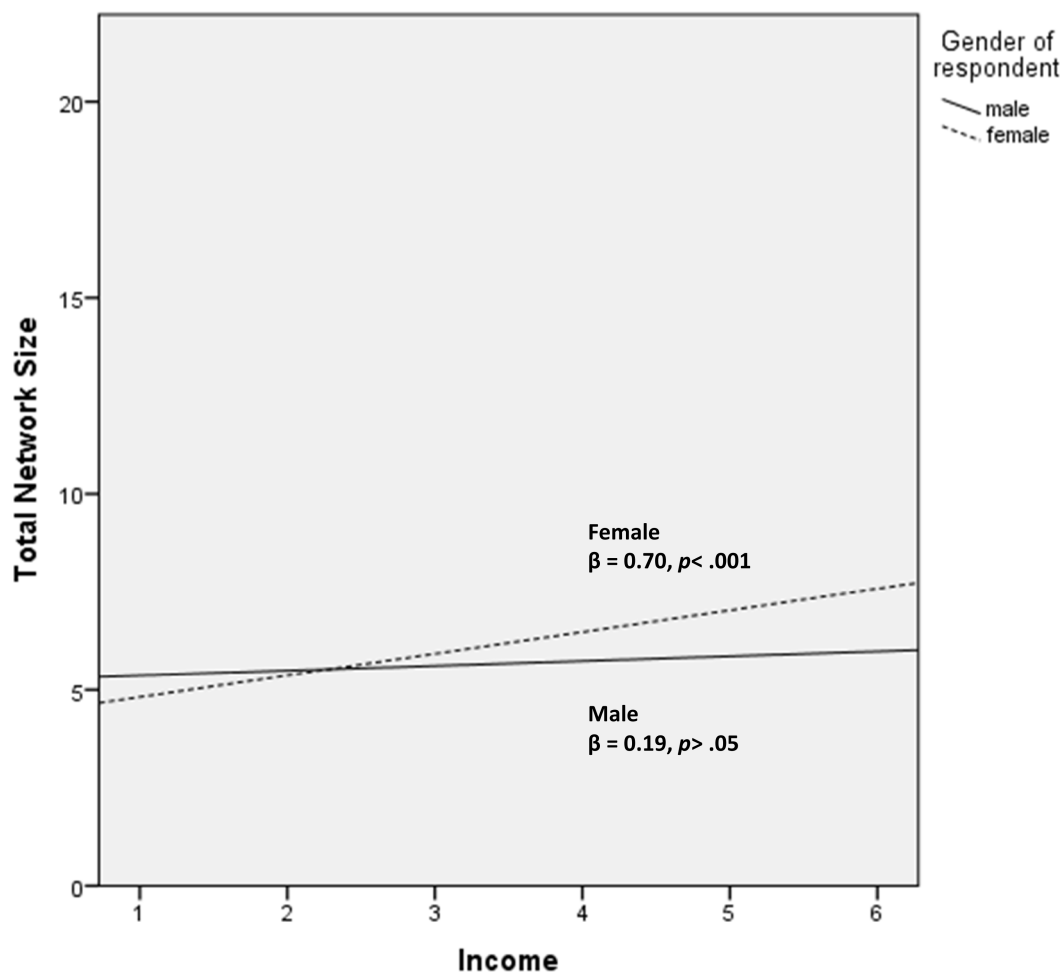


Figure 1. Gender differences in association between income and network size. Male: $\beta = 0.19, p > .05$; female: $\beta = 0.70, p < .001$.

Discussion

This study provided unique insights into convoys of social relations in a Lebanese context. Examining multiple dimensions of convoys in a non-Western context provides an opportunity to better understand the ways in which key social position variables such as age, gender and income, directly and together, shape social relations. Below, we consider the implications of these findings.

Age Differences in Network Structure and Relationship Quality

Contrary to our hypothesis that suggested no age differences in network structure, older age was associated with larger networks. This finding contradicts patterns identified in the United States, where networks are smaller among older adults compared to their younger counterparts (Ajrouch, Antonucci, & Janevic, 2001; Cornwell, Laumann, & Schumm, 2008). Such variation shows a potential cultural difference in age patterns. Network composition of older adults in Lebanon is associated with a higher proportion of kin. This composition pattern is similar to the

United States. The difference in size of network may simply reflect a cohort difference in average family size (Jabbara, 2004; Sibai, Sen, Baydoun, & Saxena, 2004). Specifically, the total fertility rate in Lebanon was 4.6 children in 1970, and 2.9 children in 1995 (Sibai et al., 2004). Interestingly, there were no age differences in contact frequency. On the other hand, consistent with our hypotheses there is an age difference in relationship quality. Even in the face of larger networks in Lebanon, older age is associated with more positivity and less negativity. This suggests that, in the Lebanese context, larger networks are not necessarily emotionally draining, and instead may serve as an important resource, especially in times of need.

Gender Differences in Network Structure and Relationship Quality

We hypothesized that because of the nature and importance of family in Lebanon there would be few gender differences in either network structure or relationship quality. The results are partially consistent with this hypothesis, supporting the notion that men and women in Lebanon may be more equally relational (Joseph, 1993). With respect to

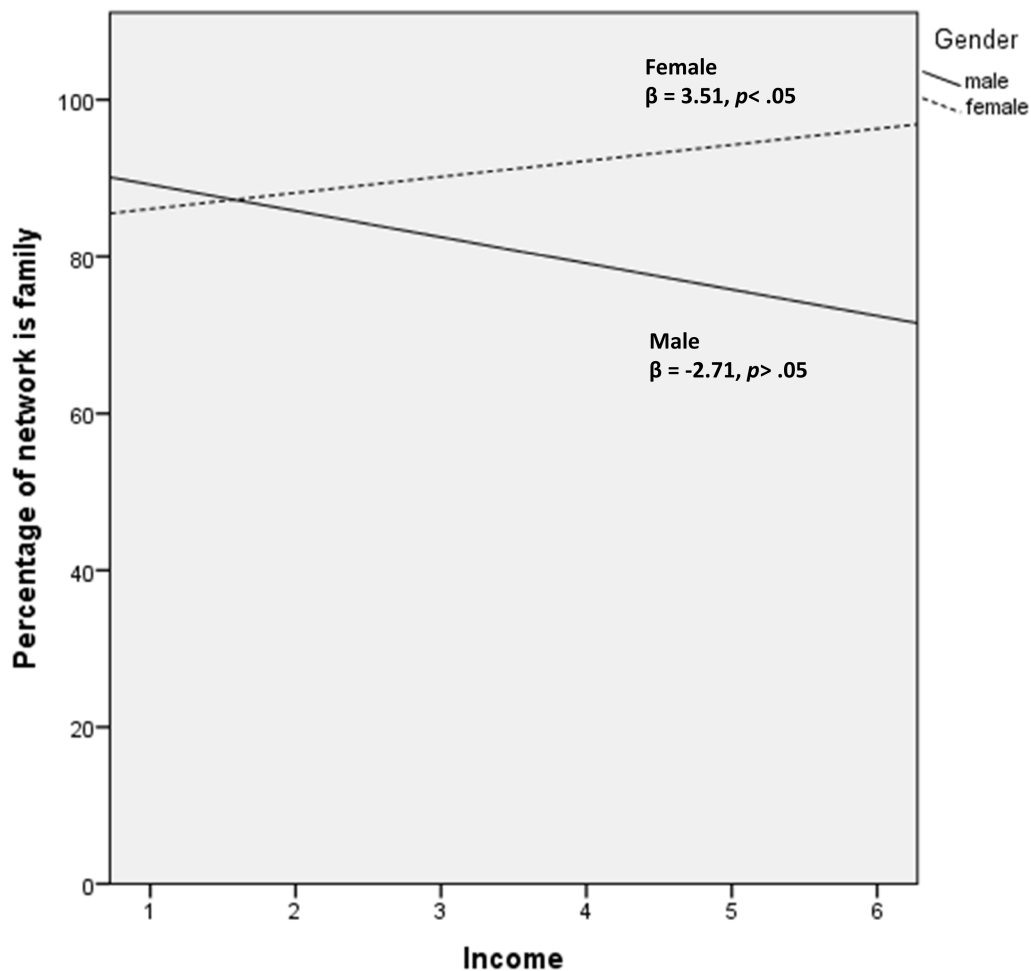


Figure 2. Gender differences in association between income and proportion of kin in network. Female: $\beta = 3.51, p < .05$; male: $\beta = -2.71, p > .05$.

structure, there were no gender differences in network size or proportion of kin in the network but there was a difference in contact frequency. Women reported less frequent contact with their network than did men. This latter finding certainly seems inconsistent with U.S. findings and might be further elucidated by the gender \times income interaction discussed below. With respect to relationship quality and consistent with our hypothesis there were no gender differences in either positive or negative relationship quality. These findings certainly emphasize the importance of the cultural context and suggest that further investigation of the basis of both the presence and absence of gender differences would be informative.

Income Differences in Network Structure and Relationship Quality

We hypothesized that income differences in network structure and relationship quality would mirror findings in the United States. Results partially support these hypotheses. Low income is associated with smaller networks, a finding similar to other parts of the world (Ajrouch, Blandon,

& Antonucci, 2005; Broese van Groenou & van Tilburg, 2003; Krause & Borawski-Clark, 1995). Yet, low income also links to more contact frequency. Perhaps this finding is related to geographic mobility. Though geographic proximity did not vary by any of the study variables, it may be that contact frequency is confounded with residential patterns with multigenerational and cross-generational families (e.g., siblings and families) coresiding, especially among low-income or more traditional families. Furthermore, less mobility might be evident among those with less income, resulting in higher contact frequency among family and other network members who live nearby. The combination of both smaller networks and more contact frequency suggests that network members are likely heavily involved with one another. An important additional finding concerns the lack of association between network quality and income. In other samples, higher income is often associated with more positive and less negative relationships (Connidis & McMullin, 2002). Lebanon offers unique insight into the separation of relationship quality and income that might be instructive for other parts of the world.

Age, Gender, and Income Interactions in Network Structure and Relationship Quality

We examined all possible interactions in separate analyses. Only gender \times income significantly interacted in their effect on network size and proportion family. Although men and women may report similar experiences generally, high-income women, in particular, appear differentially advantaged across the life course compared with men in that they report larger networks with a higher proportion of family. This gender difference by income level contradicts findings in a U.S. sample where higher SES was associated with larger networks regardless of gender (Ajrouch, Yount et al., 2013). The difference in findings may reflect that education and occupation represent different aspects of SES, but also points to the potentially complicated nature of social relations in the context of income differences. Such findings challenge the notion that higher SES leads to more similar network structures between men and women (e.g., Moore, 1990), and instead suggest that women are differentially advantaged with higher income at every age. Further study on the gendered nature of social networks may help to reveal why gender differences are more pronounced among higher SES men and women compared with lower SES men and women in Lebanon.

Limitations

These findings begin to intimate the complex ways in which social relations manifest themselves in the Lebanese context. Yet, the low level of explained variance suggests that social relations may be influenced by factors other than age, gender, and income. Furthermore, findings should be replicated and interpreted with caution given the possibility of a type 1 error. As a result, many areas for future research remain. Moreover, comparative analyses of relationship closeness with key others in various countries will yield new directions to better specify how culture influences convoys of social relations. Longitudinal data are furthermore necessary to help discern whether age differences in social relations result from developmental changes, cohort differences, or period effects. Disentangling age, cohort, and period effects allow for a deeper and more accurate understanding of aging and social relations in Lebanon. Cross-sequential longitudinal panel data is most appropriate; that is, a sample that follows multiple samples of the same people over time (Schaie & Strother, 1968). Notwithstanding these limitations, the current study provided critical initial insights into convoys of social relations in the Lebanese context. Such research is in its infancy in Lebanon and the Middle East so that despite these limitations, our findings offer some basis upon which to conduct future research in this region.

Future Directions

These findings suggest that policy makers and program planners may need to refrain from viewing social relations simplistically. In particular, a consideration of how various

factors influence the social capital available through personal networks need further study. Such nuance is particularly relevant to the Lebanese context where policy makers and government officials assume family ties as the main mechanism through which people seek and receive support in a manner suggesting the uniform availability of high quality care and support. As the results of this study illustrate, social relations across the life course are not only influenced by age. Income, in particular, influences social relations directly and in conjunction with gender, suggesting that the most vulnerable segments of Lebanese society may not view relationships as uniformly available for support. Attention to the nuanced ways in which social relations are experienced in Lebanon should facilitate the enactment of policies that will benefit and be sensitive to the needs of all individuals as they age. And finally, although this research was carried out in Lebanon and findings are most relevant to the Lebanese context, it also suggests that American researchers and policy makers should be mindful of the potential influence on the social relations and aging experience of older Americans from diverse cultural backgrounds.

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