

AGING AND SOCIETY AGING AND SOCIETY AGING AND SOCIETY

FAMILY RELATIONS AND HEALTH OVER THE LIFE COURSE

A Lebanese Perspective

<http://www.lebanesemedicaljournal.org/articles/63-1/original1.pdf>

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Ajrouch KJ, Abdulrahim S, Antonucci TC. Family relations and health over the life course: A Lebanese perspective. *J Med Liban* 2015 ; 63 (1) : 8-14.

Ajrouch KJ, Abdulrahim S, Antonucci TC. Relations familiales et santé au cours de la vie : Une perspective libanaise. *J Med Liban* 2015 ; 63 (1) : 8-14.

ABSTRACT • The link between family relations and well-being in old age has received ample attention in the international literature, but remains least examined in the Arab region where cultural ideals assume positive intergenerational relations within families as the norm. In this paper, we employ survey data collected in Greater Beirut in 2009 to explore associations between family relations and health over the life course. We tested 1) the extent to which age and social relation characteristics predict health; and 2) whether the association between age and health is stronger for those who report smaller social networks and poorer relationship quality. We employed self-rated health and self-reported chronic illness as the health outcome measures and social network size, positive quality and negative quality with family members as the social relations measures. Our findings suggest that social relations are differentially important depending on the health status indicator examined. The single dimension that influenced both self-rated health and the probability of reporting a chronic illness was positive relationship quality with spouse. Further, social relations, particularly having a negative relationship quality with spouse and adult child, exert stronger effects on both self-rated health and chronic illness for older compared to younger adults. The findings of the present study are important for clinical practitioners who often consider the role and importance of available social resources as they address the health needs of older adults.

Keywords: family relations, self-rated health, older adults, relationship quality.

INTRODUCTION

The phenomenon of aging draws increasing attention worldwide as populations from every corner of the globe experience a growing proportion of their society living into old age. Aging signals positive developments in population health, but also raises concerns about the quality of life and well-being of older adults. In countries with absent or weak aging policies, family relations

RÉSUMÉ • Le lien entre les relations familiales et le bien-être des personnes âgées a été amplement traité dans la littérature internationale, mais reste néanmoins moins étudié dans le monde arabe où les idéaux culturels considèrent les relations intergénérationnelles positives au sein des familles comme étant la norme. Dans cet article, nous utilisons les données recueillies au cours d'une enquête menée dans la région du Grand Beyrouth en 2009 pour étudier les associations entre les relations familiales et la santé au cours de la vie. Nous avons testé: 1) dans quelle mesure les variables âge et relations sociales prévoient la santé, et 2) si l'association entre âge et santé est plus forte pour les sujets appartenant à des réseaux sociaux plus restreints et des relations familiales de qualité inférieure. Nous avons utilisé en guise de variables pour mesurer l'état de santé l'auto-évaluation des participants et l'auto-déclaration des maladies chroniques encourues ; et pour les relations sociales, la taille du réseau social, la qualité positive et la qualité négative des relations interfamiliales. Nos résultats suggèrent que les relations sociales revêtent une importance différentielle en fonction de l'indicateur de l'état de santé concerné. La seule dimension qui semble influencer à la fois l'auto-évaluation de la santé et la probabilité de déclarer une maladie chronique fut la relation positive avec le conjoint. En outre, les relations sociales, en particulier le fait d'avoir une relation négative avec le conjoint et les enfants adultes, exercent des effets plus importants à la fois sur l'auto-évaluation de la santé et les maladies chroniques pour les personnes âgées par rapport aux personnes adultes moins âgées. Les conclusions de la présente étude sont importantes pour les cliniciens qui prennent souvent en considération le rôle et l'importance des ressources sociales disponibles en examinant les besoins de santé des personnes âgées.

play a critical role in shaping older adults' physical and psychological health. Of particular importance is the recognition that people do not age in a vacuum, but usually live within social and family units. Perhaps no one issue better captures the social context of aging and health than the nature of family relations.

The link between family relations and well-being in old age is least examined in Arab countries where entrenched cultural ideals assume positive intergenerational relations within families as the norm. Yet, Arab families have been undergoing major structural changes due to a number of demographic and political factors; these changes will surely influence the care and well-being of older adults. Continuing political instabilities and poor

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economic growth in the region have led to high out-migration rates among younger segments of the population [1]. This has reduced older adults' ability to access support provided by their adult children and grandchildren. Moreover, the past few decades have seen a transition from the extended to the nuclear Arab family model [2]. Whereas the nuclear family continues to retain traditional kinship ties, lower expectations for care and support for older family members within this modified family structure are inevitable.

Similar to other countries in the Arab region, Lebanon has been undergoing a demographic transition that includes declining fertility and increasing life expectancy [3]. This is accompanied by an epidemiological transition where chronic illness dominates as a major health concern. Rapid population aging is becoming a major concern in Lebanon [4], with the proportion of older adults expected to exceed 15 percent by 2025 [5]. The Lebanese Civil War from 1975 to 1990 prevented the full development of a national social-security program that would aid families in need of health coverage and pensions in old age [6]. Ongoing political events in Lebanon and neighboring countries continue to impinge on the experiences of older adults [7]. Against this backdrop, the family remains the main institution expected to meet the health and social needs of an expanding older adult population.

In this paper, we explore links between family relations and health over the life course. We employ survey data collected in Greater Beirut in 2009 to empirically investigate the following research questions: 1) Is there an association between health and age, as well as between health and relationship quality with spouse, adult child, or sibling? and 2) Is the association between age and health stronger for those who report smaller social networks and poorer relationship quality? In this study, we focus on self-rated health and self-reported health conditions as the two health outcome measures.

Social Relations and Health

The concept of "social relations" has received ample attention in the social science and public health literatures on aging. Social relations are a core element of human life and include multiple dimensions ranging from the general notion of a social tie or network, to social support type and quality of relations [8]. Moreover, social relations are complex. Support type and quality happens within the context of a network, and sources of support are often diverse, including immediate and extended family, as well as friends. Close relationships are usually with family members, i.e. spouse, parents, grandparents, and children. While these relations are often sources of positive assistance, they are also the source of frustration, conflict, and guilt, or at the very least ambivalence [9]. The complex and dynamic nature of social relations now is widely accepted, and each dimension may influence health in unique ways.

A considerable amount of research has examined the

significance of social relations for health in the United States. This link was first demonstrated in early empirical work indicating that social integration decreased mortality across adulthood [10]. Social relations and social support enhance health through a number of pathways, one of which underscores the role intimacy and attachment play in reducing stress and loneliness [11]. Supportive social connections enhance physiologic functioning, such as decreasing blood pressure [12]. Further, social relations can operate through reducing unhealthy behaviors such as smoking and unhealthy eating. Although relationships clearly vary in quantity, it is their quality that seems to contribute most significantly to health and well-being [13].

Though social relations have a clear link with health outcomes, evidence suggests that social relations influence health differentially depending on age. For instance, social relations have been found to have particular benefits to health at the oldest ages [14]. Moreover, as people age, the size of their social network gets smaller, presumably because they retain in their lives only those with whom they have a positive relationship [15]. As such, negative social interactions may have stronger effects on health than do positive support in later life [16]. Network size and the source of various relationships, therefore, may be especially significant for older adult health in Lebanon.

Family Relations and Health in Lebanon

Family relations, encompassed under the broader umbrella of social relations, hold an added layer of significance in Lebanon. Socialization within the family circle is highly encouraged. Indeed social support from immediate and extended family provide important resources, and still are considered "the axis of Lebanese values, beliefs and culture" [17]. Moreover, as noted above, family is an older adult's main source of security in later life, with the government offering little to no support [6]. Due to the sacred position of family relations in Lebanese society, critical analyses of social networks, as well as positive and negative aspects of family relationships, are warranted.

Empirical work on social relations in Lebanon, and the Arab region in general, focuses in large part on describing family ties, particularly intergenerational relationships. For instance, Joseph coined the term patriarchal connectivity to depict relations between family members [18]. She argued that both men and women in Lebanese society are socialized to view themselves relationally. Families are patriarchal insofar as feminine and masculine selves are organized according to a gender and age hierarchy, in which the men and more senior women carry disproportionate privilege and power. Connectivity refers to an activity or intention to facilitate closeness, which includes the ability to anticipate the needs of another, answer for others, and shape likes and dislikes in accordance with one another. These norms shape the nature of key family relations, holding special signifi-

cance for the ties between the parent and child.

Yet, research that links family relations to health in Lebanon remains scant. On the one hand, a descriptive analysis carried out by Ajrouch and colleagues examined intergenerational relations and demonstrated that over half of Lebanese aged 60 and over reported seeing their child weekly or more, three quarters reported receiving financial support from their children, and less than 1% reported negative aspects of relationships with either family or non-family [19]. On the other hand, studies on living arrangements have shown that an unexpectedly large proportion of Lebanese older adults live alone as opposed to with family [20]. Family in Lebanon is often described in the aging literature as a fluid entity, with relations between older parent and adult children constituting the preponderance of empirical research. In this study, we seek to move beyond this trend to look at the size of social networks generally, as well as distinguish between positive and negative relationship quality, with spouse, child, and sibling. In so doing, we hope to gain a better understanding of how relationships with multiple significant others influence health status among older Lebanese adults. Based on the literature, we hypothesize the following:

1. Individuals who are older in age, report a small social network size and less positive/more negative relationship quality with spouse, adult child, and sibling are more likely to report poor self-rated health and at least one chronic illness.
2. The association between age and reporting poor self-rated health and having at least one chronic illness is stronger for individuals who report a small social network and less positive/more negative relationship quality with spouse, adult child, and sibling.

METHODS

Sample

Data for the present examination come from the Family Ties and Aging Study collected in 2009. The population sampled included the three administrative districts of Beirut in addition to Aley (Choueifat and Aley), Baabda (Dahiyeh, Hadath, etc.) and Metn (Borj Hammoud, Sin el Fil, Zalqa, etc.). 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. Given the challenges associated with obtaining an accurate demographic profile in Lebanon [21], the adopted design allowed for a probability sample representative of the age, socioeconomic, and religious diversity of the population.

The full sample size was 500 adults aged 18 years and above from Greater Beirut, with an oversampling of those age 60+. Participants completed face-to-face survey interviews in their homes; on average, interviews lasted for approximately an hour. The response rate was 64%. For the purposes of the current study, we draw

from the sample aged 40 and above, to yield a study sample size of $N = 369$.

Measures

Dependent measures • Health was assessed in two ways to access both subjective and objective aspects. The subjective dimension was measured using self-rated health where participants were asked “How would you rate your health at the present time? Would you say it is excellent, fairly good, average, not very good, or poor?” The response categories were coded so that 1 = poor and 5 = excellent. The objective dimension of health was assessed by asking whether or not the participant has a chronic illness: “Are you suffering at the moment from any chronic diseases, illness, or health problem requiring either a doctor’s attention, prescription medication, or rehabilitation treatment (Please do not include colds).” The variable was dummy-coded so that 0 = no and 1 = yes.

Predictors • Age was measured continuously (in years) based on a request to indicate date of birth. A number of questions were asked on the questionnaire to capture three dimensions of social relations: network size, positive relationship quality (with spouse, child, and sibling), and negative relationship quality (with spouse, child, and sibling). Network size was assessed using the hierarchical mapping technique. Participants were asked to complete three concentric circles naming important people in their lives who are closest (inner circle), close (middle circle), and somewhat close (outer circle). Details of this approach are described elsewhere [22]. Network size represents the total number of people the participant included on his/her diagram (i.e., inner, middle and outer circles combined) with possible values ranging from 0-17.

The measure of positive relationship quality was a mean composite where participants were asked to state whether they agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree (1 = disagree; 5 = agree) with the following five statements: • I can share my very private feelings and concerns with my (spouse/child/sibling) • I feel my (spouse/child/sibling) would help me out financially if I needed it • I feel my (spouse/child/sibling) would take care of me when I’m sick • My (spouse/child/sibling) always understands me • My (spouse/child/sibling) always appreciates the things I do for him/her.

Similarly, the measure of negative relationship quality was a mean composite where participants were asked to state whether they agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree (1 = disagree; 5 = agree) with the following three statements: • My (spouse/child/sibling) bothers me • My (spouse/ child/sibling) makes too many demands on me • My (spouse/child/sibling) always tries to control me or tell me what to do. In rating relationship quality, participants were asked to identify the child and sibling upon whom they rely most.

Controls • Gender was included in the analyses as a dummy variable with 0 representing male and 1 representing female. Marital status was measured by asking the question: “Are you married, widowed, divorced, separated, or have you never been married?” Marital status was dummy-coded such that 1 indicates married/living with a partner, and 0 represents the rest. Education was treated as a continuous variable representing the number of years of schooling completed, which ranged from 0 up to 17+. Respondents were asked to state the highest grade of school or year of college that they completed.

Analysis

Descriptive analyses were conducted first to ascertain sample characteristics both demographically and with regard to social relations and health. To explore the main effects of age and social relations on self-rated health, we performed a hierarchical regression analysis; on the probability of having a chronic illness, we conducted a logistic regression. The variables of age and social relations were centered in order to reduce potential problems with multicollinearity. Furthermore, we constructed a regression model for each dependent variable of interest, and sought to investigate the impact of social network size, as well as positive and negative relationship quality concerning each relationship type. We also included network size in statistical models where support quality predicted health status, recognizing that network size may influence relationship quality differentially depending on the relationship (e.g., spouse, child, or sibling) under study. The first model involved testing for possible effects of age and social relations, controlling for gender, education, and marital status. In order to determine whether social relations influenced health outcomes differentially in later life, we added the interaction term (age x social relations) in a second model to discern whether this interaction term accounted for a significant amount of additional variance ($p < .05$) in the dependent variable. Only statistically significant results are presented.

TABLE I
SAMPLE CHARACTERISTICS

STUDY VARIABLES	MEAN or %	(SD)
Gender (% Female)	51%	(.50)
Education (0-17 years)	7.9	(4.4)
Married (1 = no / 2 = yes)	59%	(.49)
Age (40-91 years)	60.5	(12.4)
Network size (0-17)	5.5	(3.1)
Positive support quality (1-5)		
Spouse	4.4	(1.0)
Child	4.8	(.42)
Sibling	4.6	(.56)
Negative support quality (1-5)		
Spouse	2.0	(1.1)
Child	1.4	(.64)
Sibling	1.4	(.77)
Self-rated health		
(1 = poor / 5 = excellent)	3.4	(1.0)
Chronic illness		
(1 = no / 2 = yes)	50%	(.50)

RESULTS

We present first a descriptive analysis of the sample, followed by study findings.

Table I presents the means and sample distribution of control variables, main predictors of age and social relations, and the two health measures. Approximately, 50% of the sample were women. Participants reported on average completing 7.9 years of education (SD = 4.4), and 59% were married (SD = .49). The average age of the participants was 60.5 years (SD = 12.4). Participants reported a social network size that on average consisted of 5.5 people (SD = 3.1), as well as relatively high levels of positive and low levels of negative support quality with spouse, adult child, and sibling. Interestingly, the relationship with the spouse was rated with lowest positive (M = 4.4; SD = 1.0)

TABLE II
SELF-RATED HEALTH – MAIN EFFECTS

	NETWORK N = 361		SPOUSE N = 216		SIBLING N = 162		CHILD N = 244	
	B	SE	B	SE	B	SE	B	SE
Constant	5.24	.49	4.54	.81	3.37	1.20	4.65	.96
Gender	-.31**	.11	-.30*	.15	-.24	.17	-.27*	.14
Education	.03*	.01	.02	.02	.01	.02	.03	.01
Married	.01	.12			-.18	.19	.04	.14
Network size	-.02	.02	-.03	.02	.02	.03	-.03	.02
Age	-.02***	.01	-.03***	.01	-.02**	.01	-.02***	.01
Positive quality			.27**	.09	.40*	.17	.20	.15
Negative quality			-.49*	.25	.03	.12	-.80**	.31
Negative quality ²			.12**	.05			.17*	.07
Adjusted R ²	.16***		.12***		.08**		.11***	

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

and highest negative ($M = 2.0$; $SD = 1.1$) quality. The relationship with the adult child, on the other hand, was rated with both highest positive ($M = 4.8$; $SD = .42$) and lowest negative ($M = 1.4$; $SD = .64$) quality. Participants rated their health somewhere between average and fairly good at 3.4 on a Likert scale from 1 to 5 ($SD = 1.0$), and 50% of the sample reported at least one chronic illness ($SD = .50$). The incidence of chronic illness in our sample reflects prevalence levels found in a nationally representative sample of Lebanese aged 65+ where almost 52% report at least one chronic illness [23].

Self-Rated Health: Main and interactive effects of age and social relations

A series of multivariate regression analyses were conducted to test for main effects of age, network size, and social relationship quality on self-rated health (Table II). Age influenced self-rated health in the expected direction; older age was associated with lower self-ratings of health. There were no main effects of network size on self-rated health. There were main effects of positive relationship quality with spouse and sibling; higher positive quality relations with both spouse and sibling were associated with better self-rated health. On the other hand, negative quality relations with spouse and child were associated with better self-rated health, though the association was curvilinear. Those with both higher and lower reports of negative relationship quality reported better self-rated health. In testing for interaction effects between age and family relations, only the age x negative relationship quality with child interaction was significant; we show the significant interaction in Figure 1. As the figure illustrates, older age is associated with lower self-rated health; however, the association between age and self-rated health is much steeper for those who reported high negative relationship quality with child. In other words, high negativity in the relationship with the child is more influential in later years than the middle years with regard to self-rated health.

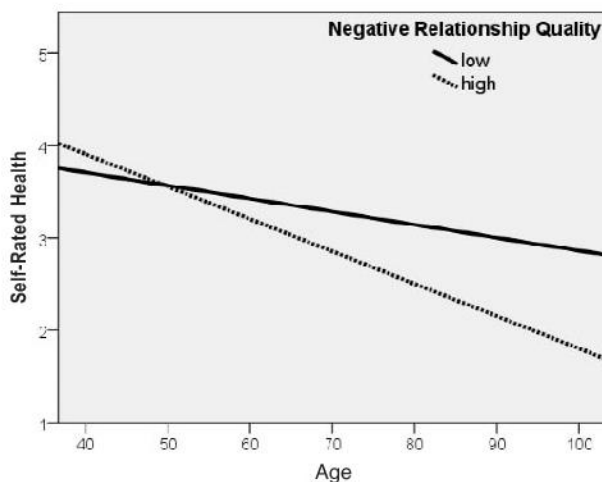


FIGURE 1. Age x Negative relationship quality with child.

TABLE III
PROBABILITY OF CHRONIC ILLNESS – MAIN EFFECTS

	NETWORK N = 361	SPOUSE N = 216	SIBLING N = 162	CHILD N = 244
	Exp (B)	Exp (B)	Exp (B)	Exp (B)
Constant	.02	.19	.05	.09
Gender	1.57	1.63	1.59	1.85
Education	.96	.98	.96	.98
Married	1.00		1.64	.81
Network size	1.09*	1.08	1.01	1.13**
Age	1.06***	1.06***	1.05**	1.05**
Positive quality		.62*	.84	.74
Negative quality		.82	.87	1.06
Nagelkerke R ²	.19***	.17***	.12*	.15***

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

Self-Reported Chronic Illness: Main and interactive effects of age and social relations

Age influenced the probability of reporting a chronic illness in the expected direction; older age was associated with a higher probability of reporting a chronic illness (Table III). We highlight main effects of social relations on chronic health, which arose only with regard to positive relationship quality with spouse. Higher positive quality relations with spouse were associated with a lower probability of reporting a chronic illness. There were no main effects of network size, relationship quality with child, or sibling on chronic illness. In testing for interaction effects between age and other predictors, two age x social relations interactions were significant: age x network size and age x negative relationship quality with spouse. Figure 2 depicts, perhaps counter intuitively, that larger networks are more predictive than smaller networks of reporting chronic illness in older age. Whether the network is small or large in middle age does not differentially predict the probability of reporting a chronic illness.

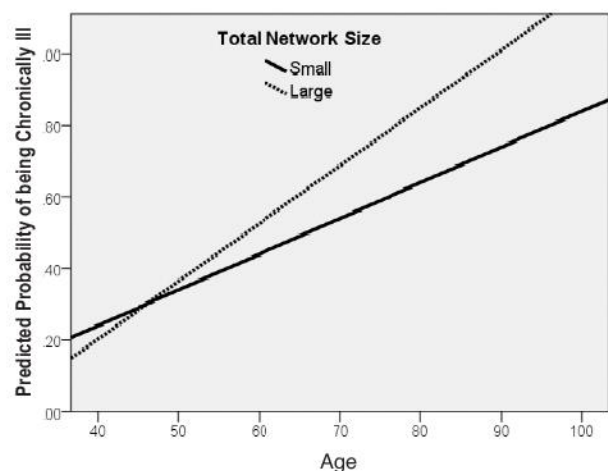


FIGURE 2. Age x Network size.

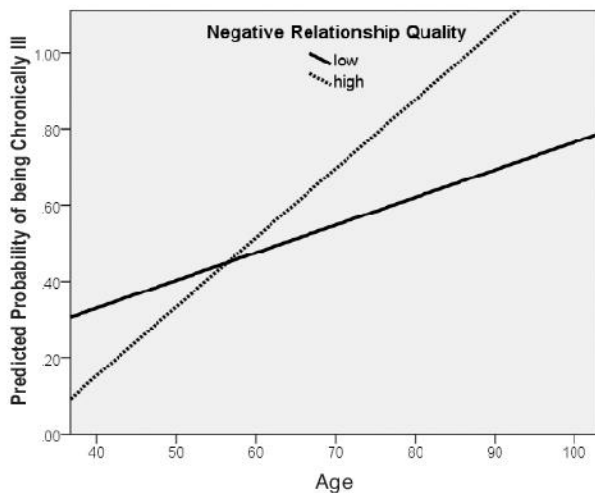


FIGURE 3. Age x Negative relationship quality with spouse.

As Figure 3 illustrates, reports of high negative relationship quality with spouse links to a higher probability of chronic illness among older adults, whereas among those who are middle aged, negative relationship quality with spouse, whether high or low, does not differentially influence chronic illness. In other words, high negativity in the relationship with the spouse is more influential in later years than the middle years with regard to chronic illness.

DISCUSSION

This study provides an opportunity to identify ways that social relations impact health status in later life among those living in the Greater-Beirut area. Detailed assessments of social relations, including network size as well as close and extended family offer insights into the relative importance of relationships to the health of Lebanese adults. Furthermore, we examined two indicators of health status, which allowed us to attend to the multidimensional aspect of health. Below, we discuss the implications of our findings.

Social Relations and Health

First, our findings suggest that social relations are differentially important depending on the health status indicator examined. The single dimension that influenced both self-rated health and the probability of reporting a chronic illness was *positive relationship quality with spouse*. These findings suggest the primacy of the spousal relationship, showing that marital quality may be particularly salient for health status. This finding corroborates previous research findings [24], but now illustrates that the quality of the spousal relationship is also quite critical for health in the Lebanese context. Furthermore, reporting a positive relationship quality with a sibling was associated with better self-rated health, showing that extended family relations also matter in this domain. Finally, the negative side of parent-child as well as spousal relations

is centrally important for self-rated health, signifying the complicated effects of poor relationships on this subjective health measure. Though identifying the reasons behind negative assessments needs more attention, such findings may reflect tenets of patriarchal connectivity. It may be that negativity in the context of relationship with a spouse and adult child incurs a high level of stress on older adults and challenges cultural expectations. As Ajrouch and colleagues point out, norms associated with patriarchal connectivity suppose that the well-being of older adults hinges on younger family members [25]. These expectations govern spousal relations as well, whereby, with age, older adults become increasingly emotionally dependent on their spouse. Ample evidence shows that *self-rated health is a valid predictor of morbidity and mortality* [26]. In light of our findings on the link between relationship quality and self-rated health, complaints by an older adult about negative relationships with spouse or adult children may provide an early warning sign in a clinical setting. Hence, such complaints may warrant more attention on the part of the physician as they can signal a psychosocial risk to future morbidities.

Age Patterns in the Social Relations-Health Association

Our study showed that social relations exert stronger effects on health outcomes in later years compared to younger years for both self-rated health and chronic illness. These findings corroborate previous research that examines functional health outcomes [14]. Furthermore, high negativity in the child relationship is more influential in later years than the middle years with regard to self-rated health and high negativity in the spouse relationship is more influential in later years than the middle years with regard to chronic illness. These findings parallel the notion that negative relationship quality exerts a stronger effect on health in later life [16]. Yet, the effect of negative relationship quality differs by health indicator. Such patterns may reflect the nature of the health indicator measured. Research in the United States has shown that the spouse is usually the first choice for care in times of illness, followed by child [27]. Hence experiencing a negative relationship quality with spouse may weigh heavily on an older adult's health. In this case, psychosocial approaches to strengthening marital and family relations ought to be incorporated in clinical practice as an integral component of chronic illness management. Furthermore, the finding that larger networks are more predictive than smaller networks of chronic illness in older age, while counterintuitive, may signify that people are both more vulnerable to and more protected by social relations with age and when in need. In other words, family members and friends rally around an older person when he or she is ill. Again, such information may be of critical importance for clinical practitioners who must often consider the role and importance of available social resources as they address the health needs of older adults.

CONCLUSION

The present study contributes to a deeper understanding of family relations and health among older adults in Lebanon. The study is grounded in research evidence which highlights that the size and quality of relations with spouse, sibling, and adult children signify the availability of resources that an older adult can draw upon in times of need. Thus, documenting patterns in the association between family relations and health status provides important information for identifying expectations regarding support needs and exchanges related to aging. This represents a critical first step toward developing a more informed body of knowledge regarding the relationship between social context and health. This knowledge can inform clinical practice and promote a holistic approach to the health and well-being of older adults.

ACKNOWLEDGEMENTS

This study was supported by a grant from the Doha International Institute for Family Studies and Development and the Lebanese National Council for Scientific Research. A previous version of this paper was presented at the annual meetings of the Gerontological Society of America, Boston, MA, November 18-22, 2011.

We would like to thank Noah Webster for his help with data analysis.

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