Abstract. This paper documents experiences of stress among people 18+ (N = 500) in Beirut, Lebanon. We investigate the extent to which social relations function as a stabilizing factor for psychological health. Regression analyses indicate a curvilinear link between stress and psychological health. Both low and high levels of stress predict higher depressive symptoms. Among those aged 18–39 years, there is no buffering effect of social relations yet for those aged 40–59 years positive support quality buffers the effect of stress on depressive symptoms. Among those 60+ years old, negative support quality buffers the effect of stress on depressive symptoms. The function of social relations varies both in its main and buffering effects at different points in the life course.

Keywords: Lebanon, life course, psychological health, social relations, stress

The phenomenon of aging is drawing increasing attention worldwide as populations from every corner of the globe experience a growing proportion of their society living into old age. Lebanon is a country in the Arab world undergoing a demographic transition that includes declining fertility and high migration rates among younger segments of the population (Abyad, 2001; Sibai, Sen, Baydoun, & Saxena, 2004). Indeed, the age distribution in Lebanon is expected to change rapidly over the next 40 years, with the number of those aged 65 years and over predicted to comprise 25% of the country by 2050. Moreover, political instabilities characterizing Lebanon since its independence in 1943 have undoubtedly served as an ever-present stressful force over the life course. Older adults today experienced first-hand the civil war (1975–1990) as well as ongoing political strife. Such events not only produce stress, but have additionally diminished the government’s ability to provide security in old age. As a result, social relations, especially the family, are the major resource available to meet the social and health needs of older people. Recent political events continue to impinge on the experiences of all Lebanese, providing an important context for social relations. War, political strife, and migration all serve as a critical backdrop to the aging experience.

Age is of central interest in considering experiences and effects of stress on psychological health. Older adults report lower levels of stress than younger adults from both individual (Birditt & Fingerman, 2003; Windsor & Anstey, 2010) and societal level stressors (Acierno, Ruggiero, Kilpatrick, Resnick, & Galea, 2006; Sabbah, Le Vuitton, Droubi, Sabbah, & Mercier, 2007), yet cumulative adversity suggests older adults may experience more deleterious effects of stress than younger adults (Dannefer, 2003; Umberson, Williams, Powers, Liu, & Needham, 2006). This paper investigates the prominence of stress from political instabilities over the life course by examining age-related differences in the extent to which such events are reported as stressful. We then test whether stress predicts depressive symptoms, and the degree to which social relations ameliorate links between stress and depressive symptoms for young, middle-aged, and older adults. Our goal is to consider whether social relations function as a stabilizing factor for psychological health differentially across the life course.
The overarching theoretical framework we employ in this study builds from the life course convoy model of social relations (Antonucci, 2001; Kahn & Antonucci, 1980, see Figure 1). Social relations are multidimensional, including network structure, support type, and support quality. Convoys are dynamic and lifelong, changing in some ways, but remaining stable in others, across time and situations. We extend this conceptualization to include a stress-buffering component (Antonucci, Ajrouch & Janevic, 2003; Cohen & Wills, 1985). Social support is often considered a critical resource that influences psychological health (Antonucci & Jackson, 1987; Berkman, Glass, Brissette, & Seeman, 2000; Cohen & Syme, 1985). The potential for social relations to offset negative effects of stress has been widely discussed and demonstrated over the past several decades (see Thoits, 2010, for a recent review).

Multiple dimensions of stress related to Lebanese political conflict are included in the model as key constructs to facilitate a comprehensive understanding of links between context-specific stress and well-being. Personal (age, sex, etc.,) and situational (country, cultural values, etc.) factors influence one another, as well as stress, the structure, type, and quality of social relations and well-being. For instance, culture-specific value orientations inform the extent to which the self links with others. Many describe Lebanon as a country that depends on close connections with others, especially family, for well-being and for accessing resources (Barakat, 1976; Joseph, 2011; Khalaf, 1971, 2001). We focus on links between age, stress, social relations, and well-being for the present investigation (indicated by the solid lines in Figure 1). A buffering effect signifies key social relations as a critical resource, attenuating the damaging influence of stress on well-being. For instance, following the tenets of the convoy model, multiple dimensions of social relations are recognized. Social network characteristics such as the number of people designated as close and important and geographic proximity of members are identified as structural aspects of social relations, and distinct from positive and negative quality aspects. Each may potentially influence support exchanges that occur, especially in times of need. Having a large number of close and important people who live within close geographic proximity in a network may ameliorate stress because the need for support can be disbursed among many people — and hence result in the recipient being buffered from the negative effects of stress. Moreover, in the presence of high levels of positive quality support, the effects of stress on psychological health would be minimized, while in the presence of high negative support, the effects of stress on psychological health would be exacerbated. An examination of the convoy model within the context of Lebanon serves to identify patterns where social relations operate in ways that support or challenge hypothesized effects of social relations on the stress-psychological health link and presents one of the first extensions of the convoy model to consider country and sociopolitical events as situational characteristics.

Stress and Social Relations

Stressful experiences at the societal level influence health and the ways that social relations impinge on well-being (Elder, 1974; Pearlin, 2010). Of particular concern in this study is how stress is experienced by different age groups. Whether older adults react more or less to stress continues to be an issue of debate (see Carstensen, Isaacowitz, & Turk-Charles, 1999; and Mroczek & Almeida, 2004 for opposing viewpoints), and may play out differently in the context of political instabilities. Little is known about the
Lebanese experience, which has a unique and varied history. Stress from war in particular may exert unique effects. Lebanon experienced a civil war from 1975 to 1990, the effects of which have been identified as the most stressful sociopolitical event for older adults today (Sibai, Kanaan, Chaaya, & Campbell, 2007). Whereas the civil war primarily affects those who have lived through it, recent scholarly works have focused on post memory experiences of the civil war among Lebanon’s youth, that is, “a recollection of an event not personally experienced but socially felt” (Larkin, 2010, p. 618). Moreover, the south of Lebanon was occupied by Israel from 1982 until 2000, leading to massive internal migrations to the southern suburbs of Beirut as well as several waves of emigration among youth toward safer places and in search of economic opportunities. Indeed, changing lifestyles stemming from war and political strife negatively affected the health of a large proportion of people for more than a decade (Sabbah et al., 2007). During the summer of 2006, Lebanon faced a war with Israel, which led to the destruction of public infrastructures and private homes. Over one million people (one quarter of the Lebanese population) were displaced (Yamout & Jabbour, 2010). Finally, on May 7, 2008, Greater Beirut experienced 24 hours of gun-fighting between political factions in Lebanon vying for dominance. The situation quickly abated with a truce orchestrated by a neutral party (the country of Qatar), but the threat of another civil war was evident for the majority of Lebanese. It should also be noted that current political situations in neighboring Arab countries affect political stability in Lebanon. The cumulative impact of such stress may induce greater negative health effects at older ages (Dannefer, 2003; Umberson et al., 2006). Whether or not such experiences are perceived as stressful differentially across the life course remains an area in need of examination.

To fully understand how sociopolitical stressors affect psychological health, it is critical to consider how different age groups experience these stressors, and moreover how social relations may serve as key resources under such conditions. A considerable amount of research has examined the significance of social relations for well-being. This link was first demonstrated in early empirical work indicating that social integration decreased the incidence of suicide (Durkheim, 1951) and mortality across adulthood (Berkman & Syme, 1979). The links between social relations and health have since been clearly demonstrated (Antonucci & Jackson, 1987; Cohen & Syme, 1985; House, Landis, & Umberson, 1988; Stewart & Hays, 1997; Umberson & Montez, 2010). Close relationships are usually with family members, i.e., spouse, parents, grandparents, and children. While these relations are often sources of positive assistance, they can also be the source of frustration, conflict, and guilt, or at the very least ambivalence (Connidis & McMullin, 2002; Luescher & Pillemier, 1998). Although relationships clearly vary in quantity (e.g., number of people in network), it is the quality of relationships that contribute most significantly to well-being (Antonucci, Fuhrer, & Dartigues, 1997; George, Blazer, Hughes, & Fowler, 1989; Oxman, Berkman, Kasl, Freeman, & Barrett, 1992).

Strong, community based affective ties characterize family relations in Lebanon (Joseph, 1993; Sibai et al., 2004), yet we know little about the nature of social ties across age groups, or whether differences regarding social ties vary by age group.

Social relations hold an added layer of significance in Lebanon. Socialization within the family circle is highly encouraged, and indeed social support from immediate and extended family, as well as friends, provide important resources, and still are considered “the axis of Lebanese values, beliefs and culture” (Farhood et al., 1993, p. 1566; see also Sabbah, Drouby, Sabbah, Retel-Rude, & Mercier, 2003). In Lebanon, family is an older adult’s main source of security in later life, with the government offering little to no support (Abyad, 2001; Sabbah et al., 2007).

Due to the sacred position of family relations in Lebanon, detailed analyses of social networks as well as positive and negative aspects of relationships are critical. Social relations in Lebanon are often described in the aging literature as an amorphous entity with only positive aspects. We seek to move beyond this somewhat superficial assessment to distinguish structural characteristics of social relations from qualitative characteristics, and moreover to examine both positive and negative quality attributes. In so doing, we hope to gain a better understanding of how relationships influence stress and psychological health at various points in the life course.

**Present Study**

Given the importance of understanding age-related differences in experiences of stress, with a specific focus on the Lebanese context, we tested the following hypotheses:

1. Older adults report more stress overall from political conflict than do younger adults.

We also explored the following hypotheses for each age group:

2. High levels of stress from political instabilities predict higher levels of depressive symptoms.

3. Social relations are associated with psychological health. With regard to network structure larger networks and networks that are more geographically proximal predict lower levels of depressive symptoms. Quality of social relations influence psychological health so that high levels of positive quality, and low levels of negative quality predict lower levels of depressive symptoms.

According to the moderating hypothesis to be tested, the quantity and quality of social relations are not necessarily linked to stress in a systematic way; however, the presence of these resources among individuals in the most vulnerable groups may mitigate the negative effects on psychological health. The following hypotheses were tested:

4. Network characteristics (network size and geographic
proximity) have no buffering effect on the stress-health link.
5) The quality of social relations is differentially associated with stress: Positive quality relationships buffer the stress-health link, and negative quality relationships exacerbate it.

In sum, the present study investigates the impact of social relations on the stress-health link among a regionally representative sample of Lebanese at different ages and at different points in the life course.

Methods

Sample

Data are drawn from the Family Ties and Aging Study (see Abdurahim, Ajrouch, Jamal, & Antonucci, 2012). The population sampled included the three administrative districts of Beirut in addition to Aley (Choueifat and Aley), Baabda (e.g., Dahiyeh, Hadath) and Metn (e.g., Borj Hammoud, Sin El Fil, Zalqa). 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. Challenges abound in obtaining an accurate demographic profile in Lebanon due to a political system based on a “delicate sectarian balance,” whereby data on religion and other social indicators are highly contentious (El Khoury & Panizza, 2005). The design adopted allowed for a probability sample representative of the age, socioeconomic, and religious diversity of the population. Data were collected in 2009.

Participants included 500 adults aged 18 years and above from the greater Beirut area, with an oversampling of those age 60+. 39% of the sample were aged 60+ (n = 195), approximately 35% were middle aged ranging from 40–59 (n = 174) years old, and the remaining 26% (n = 131) were young adults between the ages of 18 and 39. Participants completed face-to-face survey interviews done in the participants’ homes which lasted for approximately an hour. The overall response rate was 64%.

Measures

Psychological health was measured using an 11-item sum composite of the Center for Epidemiologic Studies Depression Scale (CES-D) (Cronbach’s $\alpha = .86$), taken from the validated Arabic-version 20-item CES-D (Kazarian & Taher, 2010). The CES-D was originally developed in the United States by Radloff (1977) to screen for depressive symptomatology. Individual items (“I was bothered by things that usually don’t bother me”; “I did not feel like eating: My appetite was poor”; “I felt that I could not shake off the blues even with help from my family or friends”; “I had trouble keeping my mind on what I was doing”; “I felt depressed”; “I felt that everything I did was an effort”; “I thought my life had been a failure”; “I felt fearful”; “My sleep was restless”) were measured by asking if such situations had occurred during the past week, on a scale ranging from 0 (rarely/none of the time) to 3 (mostly/all of the time). Two positively worded items (“I felt that I was just as good as other people”; “I felt hopeful about the future”) were reverse coded.

On stress, respondents were asked to provide a retrospective account of their experience of Lebanese conflicts. There were a series of questions beginning with the civil war up to more recent events. Participants were asked: “How much – if at all – has the civil war (1975–1990) disturbed your own personal sense of safety and security? How much – if at all – have the events relating to the conflict between Israel and Lebanon disturbed your own personal sense of safety and security?” “How much – if at all – has the July 2006 war disturbed your own personal sense of safety and security?” “How much – if at all – has the conflict of May 7, 2008 disturbed your own personal sense of safety and security?” Participants rated their stress using a 5-point response scale ranging from 1 = not at all; 2 = a little bit; 3 = moderately; 4 = quite a bit; 5 = extremely.

Participants were also asked to name the Lebanese conflict they deemed most stressful: civil war, July 2006 war, or May 7, 2008 conflict.

Social relations were assessed in two ways to ascertain both structure and quality. The structural dimension was measured using the hierarchical mapping technique (Antonucci, 1986), where participants were shown a diagram of three concentric circles and 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 were written on the diagram in the order indicated by the respondent. Respondents were then asked a series of demographic questions about the individuals included in their social networks.

Total network size represents the number of people the respondent included on his/her diagram (i.e., inner, middle, and outer circles combined) with possible values ranging from 0–17. Information about proximity to the participant was asked about the first ten people nominated as network members. Geographic proximity is a dichotomous measure which assessed whether each network member lives in Lebanon (yes/no). The proportion of their social network that lives in Lebanon was calculated, with a possible value range from 0–1.

The quality of social relations was measured along two dimensions, positive and negative, reflecting up to seven key relationships including, spouse, mother, father, child upon whom they rely most, sibling upon whom they rely most, best/closest friend, and the first person mentioned in the diagram (if not already included). Each scale was created by first averaging the items for each relationship and then averaging all reported relationships in order to mini-
mize attrition (losing cases who do not have data for all relationships).

Positive relationship quality was assessed as a mean composite, with participants 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 share my very private feelings with my (spouse/parent(s)/child/sibling/friend/first person mentioned)”; “I feel my (spouse/parent(s)/child/sibling/friend/first person mentioned) would help me out financially if I needed it”; “I feel my (spouse/parent(s)/child/sibling/friend/first person mentioned) always understands me”; “My (spouse/parent(s)/child/sibling/friend/first person mentioned) always appreciates the things I do for him/her.” α values ranged from .60–.88.

Negative relationship quality was assessed as a mean composite, with participants 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/parent(s)/child/sibling/friend/first person mentioned) gets on my nerves”; “My (spouse/parent(s)/child/sibling/friend/first person mentioned) takes care of me when I’m sick”; “My (spouse/parent(s)/child/sibling/friend/first person mentioned) always tries to control me or tell me what to do.” α values ranged from .45–.75.

Control variables included sex and family income. Sex was coded 1 = male, 2 = female. Family income was measured by asking respondents “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?” They were then presented with the following possible categories, and asked to choose: Less than $500, $501–1000, $1001–2000; $2001–3000, $3001–5000, $5001–10,000, more than $10,000. Responses were coded as follows: 1 = less than $500; 2 = $501–$1000; 3 = $1001–$2000; 4 = $2001–$3000; 5 = $3001–$5000; 6 = $5001 or more.

Results

Characteristics of the sample are presented in Table 1 and include the means and sample distribution of age, sex, and income as well as marital status, social relations, and depressive symptoms. Descriptive statistics are reported for the total sample as well as by age group. In the total sample, the average age of participants was just under 52 years (SD = 17.6); 51% of the sample was women. Approximately a fifth of the total sample reported income of less than $500/month (the official minimum wage in Lebanon), a little over half reported an annual household income of between $500–$1000/month, and a little over one quarter of the overall sample reported a household income of more than $1000/month. More than half (58%) of the sample were married. Respondents reported an overall network size of 5.5 (SD = 2.8), and almost 91% of their network lived in Lebanon. They reported mean positive relationship quality of 4.6 (.5) and mean negative relationship quality of 4.6 (.5).
The average depressive symptom (CES-D) score was 10 (SD = 7.9).

Age patterns in the demographics of interest provide important insights. Among those between the ages of 18–39, the average age was 30 (SD = 5.8), and 48% were women. Some 6% of those aged 18–39 reported income of less than $500/month, a little over half reported an annual household income of between $500–$1000/month, and almost 40% of the 18–39 sample reported a household income of more than $1000/month. The average total network size was 5.2 (SD = 2.1), and more than 94% of their network lived in Lebanon. Respondents 18–39 rated positive aspects of their relationships 4.5 (SD = .4), and negative aspects 1.7 (SD = .6). The average depressive symptom score for those aged 18–39 was 7.2 (SD = 7.3). Among those between the ages of 40–59, the average age was 50 (SD = 5.7), and 52% were women. About 15% of those aged 40–59 reported income of less than $500/month, a little over half reported an annual household income of between $500–$1000/month, and almost one third of the 40–59 sample reported a household income of more than $1000/month. The average total network size was 4.9 (SD = 2.6), and more than 90% of their network lived in Lebanon. Respondents 40–59 rated positive aspects of their relationships 4.6 (SD = .5), and negative aspects 1.7 (SD = .6). The average depressive symptom score for those aged 40–59 was 10.6 (SD = 8.5). Among those aged 60+, the average age was 70 (SD = 7.6), and 52% were women. About 30% of those aged 60+ reported income of less than $500/month, a little over half reported an annual household income of between $500–$1000/month, and 17% of the 60+ sample reported a household income of more than $1000/month. The aver-

Table 1. Sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total (N = 500)</th>
<th>Age 18–39 (N = 131)</th>
<th>Age 40–59 (N = 174)</th>
<th>Age 60+ (N = 195)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD) % (N)</td>
<td>M (SD) % (N)</td>
<td>M (SD) % (N)</td>
<td>M (SD) % (N)</td>
</tr>
<tr>
<td>Age (18–91)</td>
<td>52 (17.6) 51 (255)</td>
<td>30 (5.8) 48 (63)</td>
<td>50 (5.7) 52 (90)</td>
<td>70 (7.6) 52 (101)</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt; $500/mo.</td>
<td>19 (90) 90 (90)</td>
<td>6 (8) 15 (25)</td>
<td>15 (25) 30 (57)</td>
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</tr>
<tr>
<td>$500–$1000/mo.</td>
<td>53 (257) 257 (257)</td>
<td>55 (69) 53 (89)</td>
<td>53 (89) 53 (99)</td>
<td></td>
</tr>
<tr>
<td>&gt; $1000/mo.</td>
<td>28 (153) 153 (153)</td>
<td>39 (49) 32 (54)</td>
<td>32 (54) 17 (32)</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>58.4 (292) 292 (292)</td>
<td>57.3 (75) 69.5 (121)</td>
<td>69.5 (121) 49.2 (96)</td>
<td></td>
</tr>
<tr>
<td>Total Network Size</td>
<td>5.5 (2.8)</td>
<td>5.2 (2.1)</td>
<td>4.9 (2.6)</td>
<td>6.1 (3.3)</td>
</tr>
<tr>
<td>% Network in Lebanon</td>
<td>90.6 (22.0)</td>
<td>94.3 (15.4)</td>
<td>90.5 (22.4)</td>
<td>88.2 (24.9)</td>
</tr>
<tr>
<td>Positive relationship quality</td>
<td>4.6 (.5)</td>
<td>4.5 (.4)</td>
<td>4.6 (.5)</td>
<td>4.7 (.5)</td>
</tr>
<tr>
<td>Negative relationship quality</td>
<td>1.6 (.6)</td>
<td>1.7 (.6)</td>
<td>1.7 (.6)</td>
<td>1.4 (.5)</td>
</tr>
<tr>
<td>Depressive symptoms (0–33)</td>
<td>10 (7.9)</td>
<td>7.2 (7.3)</td>
<td>10.6 (8.5)</td>
<td>11.3 (7.3)</td>
</tr>
</tbody>
</table>

Table 2. ANOVAs of stressful life events evaluations by age group controlling for sex and income (N = 500)*

<table>
<thead>
<tr>
<th>Stressful life events</th>
<th>Age</th>
<th>Age</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18–39 (N = 131)</td>
<td>40–59 (N = 174)</td>
<td>60+ (N = 195)</td>
</tr>
<tr>
<td>The civil war (1975–1990) (Adj. R² = .27)</td>
<td>2.7 (1.5)</td>
<td>4.2 (1.2)</td>
<td>4.5 (1.0)</td>
</tr>
<tr>
<td>F(2, 471) = 80.77, p = .000</td>
<td>Posthoc sign. p &lt; .05: 1 v 2; 1 v 3; 2 v 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The July 2006 war (Adj. R² = .01)</td>
<td>4.0 (1.3)</td>
<td>4.0 (1.2)</td>
<td>4.0 (1.2)</td>
</tr>
<tr>
<td>F(2, 472) = .10, p = .907</td>
<td>Posthoc sign. p &lt; .05: none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The conflict of May 7, 2008 (Adj. R² = .01)</td>
<td>3.0 (1.5)</td>
<td>3.4 (1.5)</td>
<td>3.4 (1.4)</td>
</tr>
<tr>
<td>F(2, 471) = 2.75, p = .065</td>
<td>Posthoc sign. p &lt; .05: 1 v 3 (p = .05)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *Posthoc comparison of 1, 2, and 3, refer to age groups 18–39, 40–59, and 60+ years, respectively.
Table 3. ANOVAs of most stressful life event evaluations by age group controlling for sex and income (N = 500)

<table>
<thead>
<tr>
<th>Most stressful life event</th>
<th>Agea</th>
<th>Ageb</th>
<th>Agec</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>18–39</td>
<td>40–59</td>
<td>60+</td>
</tr>
<tr>
<td>The civil war (1975–1990)</td>
<td>16% (N = 21)</td>
<td>49% (N = 84)</td>
<td>58% (N = 113)</td>
</tr>
<tr>
<td>The July 2006 war</td>
<td>57% (N = 75)</td>
<td>28% (N = 48)</td>
<td>23% (N = 45)</td>
</tr>
<tr>
<td>The conflict of May 7, 2008</td>
<td>12% (N = 15)</td>
<td>15% (N = 26)</td>
<td>9% (N = 17)</td>
</tr>
<tr>
<td>Otherc</td>
<td>15% (N = 20)</td>
<td>9% (N = 15)</td>
<td>10% (N = 19)</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>69.33***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Posthoc analysis (by age group)

18–39 vs. 40–59 42.40***
18–39 vs. 60+ 60.89***
40–59 vs. 60+ 5.54

Notes. ***p < .001. Column percentages are presented so that the percentages within age group total 100%. A \( \chi^2 \) test was conducted to examine the relationship between Age group and the Most stressful life event. A \( p \)-value of .000 indicates a significant difference across the age groups on which event was the most stressful. Posthoc analyses were conducted to examine all possible pairs of age groups. Respondents listed as other (N = 54): all of them (events) (N = 26); sectarian conflicts in general (N = 15); Hariri and Saudi Arabia interference (N = 11); Israeli invasion in 1982 (N = 2); none of them (N = 26); sectarian conflicts in general (N = 14).

Age and Stress

The hypothesis that older adults report more stress overall from Lebanese conflicts than younger adults was supported in part (see Table 2). Interestingly, the age differences were differentially associated with the specific sociopolitical stressful event. Age differences, controlling for sex and income, are most prominent regarding the civil war. Posthoc analyses reveal that older adults rated the civil war as extremely stressful (M = 4.5; SD = 1.0), compared to middle-aged adults, who rated the civil war slightly, but significantly, less stressful (M = 4.2; SD = 1.2) and younger adults who rated it much less stressful (M = 2.7; SD = 1.5). There were no age differences, however, concerning the July 6 war and May 7, 2008 conflict. In terms of the most stressful political conflict identified, older and middle-aged adults reported the civil war as the most stressful event, while younger adults rated the July 2006 war as the most stressful event. The most recent political conflict, the May 7, 2008 conflict, was less often rated as most stressful in all age groups (see Table 3).

Predicting Psychological Health

The hypothesis that high levels of stress from political instabilities predict a higher level of depressive symptoms was supported. These links varied within each age group (see Table 5). Results illustrate that, for the youngest age group, the more recent political instabilities (July 2006 war and May 7, 2008 conflict) predicted depressive symptoms, with a curvilinear association (see Table 4, Model 1, for those aged 18–39). Those who reported both low and high levels of stress from each event reported higher depressive symptoms, while those who reported moderate levels of stress reported lower depressive symptoms. In the middle-aged, both the civil war and the May 7, 2008 conflict predicted depressive symptoms (see Table 4, Model 1, for those aged 40–59). The association between stress from the civil war and depressive symptoms was curvilinear. Those who reported either low or high levels of stress also reported higher depressive symptoms. On the other hand, the effect of the May 7, 2008 conflict was linear. Those who reported more stress also reported higher levels of depressive symptoms. Finally, in the oldest age group, those aged 60+, stressful reactions to the civil war were curvilinearly associated with depressive symptoms (see Table 4, Model 1, for those aged 60+). In other words, older adults who reported moderate levels of stress reported experiencing fewer depressive symptoms than those who reported higher or lower levels of stress.

The hypothesis that larger, more geographically proximal social networks, with high levels of positive quality and low levels of negative quality, are associated with lower levels of depressive symptoms was partially supported. The main effects of social relations on depressive symp-
Toms were evident only for the youngest (18–39) and oldest (60+) age group, but not the middle (40–59) age group. The associations were curvilinear. Among those aged 18–39, low and high levels of positive quality relations predicted higher depressive symptoms. In other words, if young people felt their relationships with others were either highly positive or low positive, they were more likely to indicate experiencing higher levels of depressive symptomology.

This same pattern is evident among those aged 60+, with both low and high levels of positive quality relations. Interestingly, among people aged 60+, both high and low levels of negative relationship quality was also associated with higher depressive symptoms.

The structure of social relations (size, geographic proximity) was not significantly associated with depressive symptoms in any age group.

### Table 4. Impact of sociopolitical stress and social relations on depressive symptoms by age group

<table>
<thead>
<tr>
<th></th>
<th>Age 18–39 (N = 120)</th>
<th>Age 40–59 (N = 165)</th>
<th>Age 60+ (N = 179)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>2.09</td>
<td>1.15</td>
<td>.63</td>
</tr>
<tr>
<td>Family income</td>
<td>-2.26**</td>
<td>.65</td>
<td>-2.38***</td>
</tr>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil war</td>
<td>.59</td>
<td>.39</td>
<td>-6.96*</td>
</tr>
<tr>
<td>Civil war$^2$</td>
<td></td>
<td></td>
<td>1.12*</td>
</tr>
<tr>
<td>July 2006 war</td>
<td>-7.87*</td>
<td>2.99</td>
<td>-.19</td>
</tr>
<tr>
<td>July 2006 war$^2$</td>
<td>1.10*</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>May 7, 2008</td>
<td>-6.78**</td>
<td>2.35</td>
<td>1.01*</td>
</tr>
<tr>
<td>May 7, 2008$^2$</td>
<td>1.29**</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Social network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>.20</td>
<td>.29</td>
<td>.23</td>
</tr>
<tr>
<td>% Living in Lebanon</td>
<td>.07</td>
<td>.04</td>
<td>-.05</td>
</tr>
<tr>
<td>Support quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>-89.01**</td>
<td>33.46</td>
<td>-1.90</td>
</tr>
<tr>
<td>Positive$^2$</td>
<td>10.09**</td>
<td>3.80</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>1.69</td>
<td>1.04</td>
<td>.89</td>
</tr>
<tr>
<td>Negative$^2$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>.33</td>
<td>.13</td>
<td>.25</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001.

Figure 2. Civil war$^2$ × Positive relationship quality among those 40–59 years old.

Figure 3. Civil war × Negative relationship quality among those 60 years and older.
Social Relations as a Buffer

Based on results of the initial analyses, testing the buffering hypotheses was only examined in relation to the stress indicator that significantly predicted psychological health within each age group (see Table 5). In the youngest age group (18–39), social relations exerted no buffering effect. In the middle-aged group (40–59), a significant interaction \( (p < .05) \), arose with regard to positive quality relations. Those with high positive quality report relatively stable and low levels of depressive symptomology, regardless of stress level, indicating a buffering effect (see Figure 2). Finally, in the oldest age group (60+), a significant interaction \( (p < .05) \), arose with regard to negative quality relations, though the effect was counterintuitive. Those who rated their relations as highly negative reported relatively stable, and low, depressive symptoms, regardless of stress level, indicating a buffering effect of negative quality relations (see Figure 3).

Structure of social relations (size, geographic proximity) had no interactive effect to ameliorate the effect of stress on depressive symptoms in any age group.

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Table 5. Sociopolitical stress × social relations interactions on depressive symptoms by age

<table>
<thead>
<tr>
<th></th>
<th>18–39 ((N = 120))</th>
<th>40–59 ((N = 165))</th>
<th>60+ ((N = 179))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil war × Total network size</td>
<td>–.09 .19</td>
<td>.15 .19</td>
<td>.10 .15</td>
</tr>
<tr>
<td>Civil war × % living in Lebanon</td>
<td>.04 .02</td>
<td>–.01 .03</td>
<td>.01 .04</td>
</tr>
<tr>
<td>Civil war × Positive</td>
<td>.63 1.07</td>
<td>–1.35 1.25</td>
<td>–1.24 1.12</td>
</tr>
<tr>
<td>Civil war × Positive(^2)</td>
<td>–.88 3.01</td>
<td>1.33 2.07</td>
<td></td>
</tr>
<tr>
<td>Civil war × Negative</td>
<td>–.09 .70</td>
<td>.50 .87</td>
<td>1.84* .90</td>
</tr>
<tr>
<td>Civil war × Negative(^2)</td>
<td></td>
<td></td>
<td>.47 1.69</td>
</tr>
<tr>
<td>Civil war(^2) × Total network size</td>
<td></td>
<td></td>
<td>.33 .19 (p &lt; .05)</td>
</tr>
<tr>
<td>Civil war(^2) × % Living in Lebanon</td>
<td></td>
<td></td>
<td>.02 .03</td>
</tr>
<tr>
<td>Civil war(^2) × Positive</td>
<td></td>
<td></td>
<td>–2.87* 1.29</td>
</tr>
<tr>
<td>Civil war(^2) × Positive(^2)</td>
<td></td>
<td></td>
<td>.29 .31</td>
</tr>
<tr>
<td>Civil war(^2) × Negative</td>
<td></td>
<td></td>
<td>.66 .85 (p &lt; .05)</td>
</tr>
<tr>
<td>Civil war(^2) × Negative(^2)</td>
<td></td>
<td></td>
<td>2.00 1.26</td>
</tr>
</tbody>
</table>

**July 2006 war × Total network size** | \(-.12 .21\) | \(.00 .20\) | \(.07 .12\) |
**July 2006 war × % Living in Lebanon** | \(.03 .02\) | \(.02 .04\) | \(-.02 .02\) |
**July 2006 war × Positive** | \(.26 1.10\) | \(.29 1.19\) | \(-.59 .94\) |
**July 2006 war × Positive\(^2\)** | \(-2.92 2.63\) | | \(.35 1.55\) |
**July 2006 war × Negative** | \(-.07 .69\) | \(.12 .84\) | \(.76 .68\) |
**July 2006 war × Negative\(^2\)** | | | \(.60 1.16\) |
**July 2006 war\(^2\) × Total network size** | \(-.03 .21\) | | |
**July 2006 war\(^2\) × % Living in Lebanon** | \(.02 .03\) | | |
**July 2006 war\(^2\) × Positive** | \(-.77 1.03\) | | |
**July 2006 war\(^2\) × Positive\(^2\)** | \(-.07 .12\) | | |
**July 2006 war\(^2\) × Negative** | \(.90 .66\) | | |
**May 7, 2008 × Total network size** | \(-.10 .21\) | \(.15 .16\) | \(.07 .11\) |
**May 7, 2008 × % Living in Lebanon** | \(.02 .02\) | \(-.04 .02\) | \(.00 .02\) |
**May 7, 2008 × Positive** | \(-.21 .91\) | \(.24 1.00\) | \(-.24 .82\) |
**May 7, 2008 × Positive\(^2\)** | \(1.57 2.48\) | | \(-.49 1.11\) |
**May 7, 2008 × Negative** | \(-.02 .58\) | \(-.49 .78\) | \(1.13 .67\) |
**May 7, 2008 × Negative\(^2\)** | | | \(.15 1.06\) |
**May 7, 2008\(^2\) × Total network size** | \(-.03 .17\) | | |
**May 7, 2008\(^2\) × % Living in Lebanon** | \(.01 .03\) | | |
**May 7, 2008\(^2\) × Positive** | \(-.14 .80\) | | |
**May 7, 2008\(^2\) × Positive\(^2\)** | \(.43 .42\) | | |
**May 7, 2008\(^2\) × Negative** | \(.43 .60\) | | |

*Notes.* Each interaction was tested in a separate regression model controlling for all main effects. For interactions with quadratic terms, all lower order terms were included as controls. \(*p < .05, **p < .01, ***p < .001.\)
Discussion

The results of the analysis suggest that (1) the experiences of stress from sociopolitical events varies with age; (2) sociopolitical stress and social relations are curvilinearly associated with psychological health; and (3) quality of social relations moderate the association between stress and psychological health. The implications of these findings are considered below.

Age and Stress

Older adults reported somewhat more stress overall from political conflict than younger adults. We examined societal stresses that everyone experiences at the same time and in a similar fashion. It may be that these types of stresses have a cumulative effect (Dannefer, 2003; Umberson et al., 2006). The experience of multiple stresses over the life course intensifies and is evaluated in conjunction with earlier incidents. Moreover, the event labeled most stressful varied by age, with middle-aged and older adults identifying the civil war as most stressful and younger adults the July 2006 war. This finding illustrates an intersection between life course and life span development with different age groups experiencing the same events, yet reporting different reactions. Indeed, it makes sense that experiencing war at 2 years of age has a different effect than at, say, age 22 or 42. Developmentally, at age 2 the difference between the occurrence of war and no war may not register the same as it does for a 22-year-old, whose schooling may be interrupted, or a 42-year-old whose employment opportunities may disappear. Moreover, the most recent sociopolitical event, on May 7, 2008, was rated equally stressful by each age group, which may illustrate a case where cohort, age and period effects combine to yield the same stress outcomes. The similar stress ratings may be a result of the recency of the conflict.

Predicting Psychological Health

The hypothesis that high levels of stress from political instabilities predict higher levels of depressive symptoms was partially supported. Indeed, the association was curvilinear so that both high and low levels of stress predicted higher levels of depressive symptoms for all age groups. This finding may signify that those experiencing extreme reactions (suppressing and/or excessive experiences of stress) are most vulnerable to poor psychological health. Indeed, low stress may indicate an inability to experience any kind of emotions in line with high levels of depressive symptoms. An average stress reaction, on the other hand, may help regulate the effects of stress (Lazarus & Folkman, 1984), enabling growth and development (Thoits, 1995). Similar to the physical benefits (Dhabhar, 2009), moderate stress levels may also protect psychological health. It seems likely that moderate stress reactions reflect a realistic, manageable, and appropriate response.

The effect of social relations on psychological health varied within the age groups, with a curvilinear main effect of positive quality on depressive symptoms evident for both the youngest and oldest age groups. The fact that relationship quality, and not structural aspects of social relations, link to psychological health suggests that quality of social relations matters most. This supports the notion that it is not necessarily how many people one lists as close and important, nor whether they are geographically proximal that affects psychological health, but rather whether the quality of support is positive (Antonucci et al., 1997; George et al., 1989; Oxman et al., 1992). Interestingly, however, too high or low positive quality does not seem to be as beneficial as moderate levels of positive quality relations. In the Lebanese context, social relations often reflect exceedingly close connections that imply an overlapping sense of self (Ajrouch, Antonucci, Akiyama, & Abdulrahim, 2008). As a result, extremes in positivity may signify less than optimal social relations, indicating overcompensation for some apparent or displayed vulnerability. Heightened expectations for closeness in Lebanese ties involve expectations of having some control over another in a close social relationship (e.g., Joseph, 1993). Low relationship quality (both negative and positive) may also indicate an inability to maintain or achieve control, and hence present obstacles that results in high levels of depressive symptoms. Moderate positivity, on the other hand, may indicate a healthy and stable relationship.

Social Relations as Buffer

The buffering effect of social relations varied by age group. In the youngest age group (18–39), social relations exerted no buffering effect. It could be that the type of stress most influential to psychological health in the youngest group, due to either the nature of the conflict, its duration, or its recency, simply was not ameliorated by any dimension of social relations. In addition, the lack of a stress-buffering effect for the most severe sociopolitical stress, i.e., the civil war, is likely due to the fact that young people did not rate this event as highly stressful. This finding is consistent with the literature indicating that the stronger the stress the more likely social support buffers the effect of stress on health (Cohen & McKay, 1984). Further, more recent research (Birditt, Antonucci, & Tighe, 2012) indicates that, under conditions of high but not low stress, buffering effects are more likely to be evident regardless of relationship quality. Therefore since young people did not rate these sociopolitical events as stressful, it is unlikely that a stress-buffering effect would be observed. In the middle (40–59) and oldest (60+) age groups, social relations did moderate the effects of stress from the civil war on psychological health, though...
the dimension of social relations that mattered differed for each age group.

Positive quality mattered for the middle-aged group. Middle-aged people, who were young when the civil war occurred, may benefit most from current positive relations in that it allows them to manage the stressful memories of the civil war and thereby recover psychologically. The fact that positive relationship quality did not buffer the effects of stress on the psychological health for older adults may also reflect developmental processes. Older people who experienced the civil war during their middle age may only be able to make psychological sense of the experience by distancing themselves from significant others with whom they disagreed concerning the civil war. This possibility is particularly relevant considering that Lebanon remains politically unstable (Joseph, 2011), and the threat of war is evident on a continual basis (see Larkin, 2010).

Negative quality mattered for the oldest age groups, introducing a counterintuitive finding. Close social relations in Lebanon, especially within families, incur a quality where individuals feel interconnected and linked in important ways. Such sentiments are illustrated in that family members often call others by invoking their own “role.” For instance, a mother may refer to her child as “mama” or a father refers to his child as “baba” (Joseph, 1993), suggesting an overlapping sense of self (Ajrouch et al., 2008). Given that older adults perceive close and important others as extensions of themselves, negativity in a relationship may pose a profoundly felt stress, difficult to ignore. Moreover, older adults rely on social relations as their primary source of support in old age (Abyad, 2001; Sabbah et al., 2007), signifying that stress from interpersonal relations may be more salient for psychological health than the sociopolitical. Although difficult to interpret definitively, one might argue that those with high negative quality relationships are deeply engaged in family matters. These relations may have a protective effect on the effects of sociopolitical stress. Negativity in close social relations may overshadow stress from sociopolitical events, thereby counterintuitively buffering the effect of sociopolitical stress on psychological health. More directly, although again perhaps counterintuitively, the presence of negativity (as measured by someone making too many demands, getting on one’s nerves, attempting to control), signifies social engagement, which is highly valued among older Lebanese (Joseph, 1993). Moreover, the stress by negative relationship quality interaction patterns indicates that low negative quality relations links to high depressive symptoms in the context of low stress. Such findings may signify a type of disengagement. In other words, the older adult is not connected at the interpersonal or societal level – and hence experiences poor psychological health.

The convoy model of social relations guided the design and analysis of this study. Analysis by age group allowed for a preliminary investigation of life course patterns concerning stress and psychological health. Moreover, we had the advantage of testing how various dimensions of social relations provide a resource depending on stress-type and age group. The opportunity to study effects of sociopolitical stress on psychological health is quite novel. It signifies a macrolevel stressor that societal members experience simultaneously. An entire society endures an event during the same period. This stress experience differs from personal or individual level stress such as daily hassles (e.g., noisy construction) or life events (e.g., death of a loved one), which influence some but not all in a society at any given point in time, the duration of which varies from person to person. Extending the convoy model to account for the stress-buffering role of social relations in a specific country context provided a pioneering opportunity to study sociopolitical stress and the ways in which social relations operate to influence psychological health. This study suggests that quality of social relations emerge as central in times of sociopolitical stress for middle-aged and older participants, though age may shape the ways in which positive and negative quality impinges on the stress–well-being link.

**Future Directions**

Several avenues for future research are evident. Functional approaches to the development of stability across the lifespan would be best examined with longitudinal panel data. Though we presented aspects of stabilization by focusing on the moderating role of social relations in the stress-psychological health link at different points in the life course, having longitudinal data would render a more precise conclusion. Nonetheless, we approached our analysis by positioning social relations to function as a potential stabilizing factor for psychological health in a specific sociopolitical context. Though we had no means to examine age changes, we did have the ability to document age-related differences. Despite the limitations, these findings do provide critical, preliminary evidence about stress, social relations, and psychological health over the life course in an understudied part of the world.

In sum, our findings show that sociopolitical stress takes its toll on well-being differently by age. Overall, by focusing on a regionally representative sample of Lebanese at different ages and at different points in the life course, this study has provided a unique application of the convoy model of social relations, specifying the complexity of social relations as a potentially stabilizing force. Advantages of examining multiple dimensions of social relations are showcased. Quality emerged as a critical aspect to understanding the stress experience, though the forms and extent of its effect vary at different ages and depending on the stress experienced. These findings indicate that the stabilizing potential of social relations is multifaceted, variable, and context specific.
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Declaration of Conflicts of Interest

The authors declare that no conflicts of interest exist.

References


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