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Original Article

Cohort Differences in Received Social Support in Later Life: The Role of Network Type

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Abstract

Objectives: The objective is to assess cohort differences in received emotional and instrumental support in relation to network types. The main guiding hypothesis is that due to increased salience of non-kin with recent social change, those in friend-focused and diverse network types receive more support in later birth cohorts than earlier birth cohorts.

Method: Data from the Longitudinal Aging Study Amsterdam are employed. We investigate cohort differences in total received emotional and instrumental support in a series of linear regression models comparing birth cohorts aged 55–64, 65–74, 75–84, and 85–94 across three time periods (1992, 2002, and 2012).

Results: Four network types (friend, family, restricted, and diverse) are identified. Friend-focused networks are more common in later birth cohorts, restrictive networks less common. Those in friend-focused networks in later cohorts report receiving more emotional and instrumental support. No differences in received support are evident upon diverse networks.

Discussion: The increased salience of non-kin is reflected in an increase in received emotional and instrumental support in friend-focused networks in later birth cohorts. The preponderance of non-kin in networks should not be perceived as a deficit model for social relationships as restrictive networks are declining across birth cohorts.

Keywords: Cohort analysis—Social change—Social support—Social networks

We investigate cohort differences in received instrumental and emotional support in relation to network types. Social networks have strong effects on health (Berkman, Glass, Brisette, & Seeman, 2000), well-being (Pinquart & Sörensen, 2000), and utilization of health and social services (Litwin, 2004) in later life. Social network types are relatively new constructs (Litwin & Stoeckel, 2014; Wenger, 1991). They are composite social network structure and interaction measures that characterize meaningful social environments of individuals. Network types determine potential for social support (Messerli, Silverstein, & Litwak, 1993; Wenger, 1991). Although previous studies have not assessed cohort differences in received social support in relation to network types, it is especially timely to do so now.

The rationale is as follows: There is a decline in the number of close family members, who have traditionally provided the most support across cohorts (Ajrouch, Akiyama, & Antonucci, 2007; Suanet, Van Tilburg, & Broese van Groenou, 2013) and changing societal conditions have resulted in a larger salience of non-kin relationships (Allan, 2008). The support from friend-focused networks might be greater in later birth cohorts than in earlier cohorts. This proposition has not yet been studied empirically. The research questions studied are threefold: (a) to determine how total received social support varies by network type (diverse, friend focused, family focused, and restrictive), (b) how network types have changed across birth cohorts, and (c) whether the relationship between network type and

support changes across birth cohorts. To study differences in social support across birth cohorts, understanding the age, period, and cohort (APC) model is vital (Alwin, 2002; Riley, 1973). Age effects refer to age-related life-course changes. Period effects are changes unique to specific time periods, whose effects are relatively uniformly distributed across individuals of all ages. Birth cohort effects consider the effects of early life conditions and continuous exposure to sociohistorical factors. Research on APC changes should be guided by theoretical concerns. In this article, we are interested in cohort differences in social support received in different network types rather than age-related trajectories in support. To disentangle cohort effects from age effects, we compare sets of homogeneous age groups: 55–64, 65–74, 75–84, and 85–94 years, and examine differences in support received by individuals in the same age group but in different birth cohorts.

Network Types

In the convoy model, individuals are depicted as going through life embedded in a personal network of individuals (Kahn & Antonucci, 1980). This network provides a protective and supportive base that moves with individuals through time, space, and the life course. The structure, function, and quality of the convoy vary in response to individual (such as age, gender, and socioeconomic status [SES]) and situational (e.g., role demands, norms, and values) characteristics (Antonucci, Ajrouch, & Birditt, 2014). The network structure refers to, for example, total network size, proximity, frequency of contact with network members, and marital status. The functions of the network refer to the exchange of support among network members. Convoys are also shaped by the societal context, such as the social structure and cultural norms of specific historical periods and locations.

Network types are derived based on varying criteria. These include, among others, availability of close kin, and degree of interaction with family, friends, and neighbors, community groups (Fiori, Antonucci, & Akiyama, 2008; Wenger, 1991). Studies of network types in different contexts and/or countries (Fiori et al., 2008; Litwin & Landau, 2000) identify several relatively robust network types: (a) *diverse* networks encompassing close kin, neighbors, and many friends; (b) *family-focused* networks that include close kin and few non-kin; (c) *friend-focused* networks with few proximate kin and a high salience of friends; and (d) *restricted* networks having no local kin, minimal contact with neighbors and other non-kin, and few friends. Further distinction was sometimes found between restricted in kin or friends, respectively (Fiori et al., 2008). In the current study, we include information on a broad range of potential supportive social relationships and environments to comprehensively assess potential support providers as we know that different types of relationships tend to provide different types of support with varying efficacy (Messeri et al., 1993).

Social Support: The Effects of Network Type

The network type determines access to social support to a large extent. Social support can be defined as the giving and receiving of a support, often further specified as emotional and instrumental support. Emotional support involves behaviors that demonstrate liking, empathy, love, respect, and trust (Kahn & Antonucci, 1980). Instrumental support involves the provision of tangible goods, services, and aids. If individuals do not receive any support, this does not imply that they do not have a potentially supportive network of relationships. Supportive potential in a network is often dormant until need arises (M. W. Riley & J. W. Riley, 1993).

Different relationship types tend to provide different types and/or intensity of social support (Messeri et al., 1993). Close kin ties provide the majority of instrumental support, particularly long-term time-intensive personal care (Litwin & Attias-Donfut, 2009). These ties are guided by stronger normative expectations for contact and support than non-kin ties (Finch & Mason, 1990). Close kin are usually densely interconnected and seen as “ascribed” rather than “achieved” (Plickert, Côte, & Wellman, 2007). Interconnectedness and norms for help are much weaker among extended kin. Friends are important companions as well as cognitive and affective resources that can help people in later life to adapt to life events and changing conditions (Allan, 2008; Hartup & Stevens, 1997). Because friend ties are achieved and voluntary, it is considered more problematic to count on non-kin for social support (Wellman, 1992). One must preserve these ties more carefully and there is concern about reciprocity of support. Friends are, however, just as likely to provide support as siblings and much more likely than other extended kin (also Wellman & Wortley, 1990). Extended kin are least likely to give any type of support. Neighbors tend to provide short-term contingent help in emergencies due to their immediate geographic proximity (Campbell & Lee, 1992), but these are often relatively weak ties (Wellman, 1992). Larger social networks give more support and individual members tend to be more supportive in larger networks (Plickert et al., 2007; Wellman, 1992).

There is suggestive empirical evidence regarding the association between network type and social support. Litwin and Landau (2000) found that among the oldest old adults (75+) in Tel Aviv, those in family-focused networks, encompassing both close and extended kin, received the most support as assessed by their combined emotional and instrumental support measure, followed by the diverse networks. Networks that were friend focused or only entailed very close kin and no others were less supportive. Litwak and Landau suggested that in old-old age maintaining a balance with friends is more difficult and those with only close kin might have denser networks but that not necessarily more supportive. Litwin (1998) showed that those in the religious family-focused networks had a higher likelihood of receiving help from children with household chores and errands than those in diverse networks.

Cohort Differences in Network Types: Instrumental and Emotional Support

It has not yet been explored how received instrumental and emotional support varies between different birth cohorts or whether there are differences resulting from rapidly changing societal conditions. The life-course perspective holds that individuals from different birth cohorts are exposed to different historical conditions, thereby shaping their respective life courses (Elder, 1994). Societal changes since the 1970s include sociodemographic differences such as the reduction in the number of children in each family and a weakening of traditional communities (detraditionalization), such as churches and extended families, and an emphasis on self-fulfillment (Giddens, 1990). These developments are likely to have intensified the importance of non-kin relationships because these relationships are voluntary and sustained through feelings of solidarity or affection rather than obligation (Komter & Vollenbergh, 1997). Family relationships have also changed over the last decades. Family relationships are more complex and less robust through divorce and remarriage as well as the rise of cohabitation and living-apart together relationships (Cherlin, 2010; Latten, 2004). Some question whether the distinction between family and friends is as clear as it was previously (Pahl & Pevalin, 2005). There has also been an increase in educational attainment, increasing migration due to a global economy, and a growth in workforce participation by women (Liefbroer & Dykstra, 2000). The rise of the Internet, e-mail, Facebook, and other social network sites since the 1990s facilitates interaction with distant members of the network (Wang & Wellman, 2010). These societal changes are likely to have affected all people in terms of network type and informal support and care, but late birth cohorts more strongly than early birth cohorts. The earliest cohort in our study (1908–1917) was between the ages 53–62 in 1970, so often past the stage of paid work and child rearing, rendering it unlikely that they have been affected strongly by these societal changes. The latest birth cohort (born 1948–1957) was between the ages 13–22 in 1970 in a period in which societal changes are assumed to have a substantial effect on shaping worldviews and attitudes (Inglehart, 1990; formative period: 15–25 years). Non-kin increases in later birth cohorts have been documented (Ajrouch et al., 2007; Suanet et al., 2013). We can expect diverse and friend-focused networks to become more numerous across birth cohorts.

As outlined above, previous studies of support have found different norms and behaviors concerning social support from close kin and others and have shown that friends can only partly substitute for support from (close) kin (Wellman & Wortley, 1990). The question is whether this is still true among later birth cohorts. Due to increasing salience, non-kin ties could provide more social support to later birth cohorts. Those in diverse and friend-focused networks might thus receive more support across birth cohorts. As friends are important emotional resources, this

is predicted to pertain mostly to emotional support. If fewer close kin are available and/or normative expectations and obligations have lost strength, social support from close kin might decrease. Nevertheless, most recent studies show that close kin remain very important sources of support (e.g., Plickert et al., 2007). If support received from close kin decreases, it might be compensated by extended family (e.g., cousins, stepfamily), but we know that is unlikely to be sufficient as extended kin is less supportive. Support received in restricted networks is unlikely to differ, as there is only limited support potential at any time. In sum, we expect that social support received by those in friend-focused and diverse networks increases in late birth cohorts compared with early birth cohorts, whereas social support received by those in family-focused and restricted networks is likely to be stable across birth cohorts.

Other Factors Explaining Cohort Differences in Social Support

Next to network type, other factors could explain cohort differences in received emotional and instrumental support. Having functional limitations is a powerful predictor of receiving more instrumental support in old age (Litwin & Attias-Donfut, 2009). The prevalence of (mild) disability increases in more recent birth cohorts (Van Gool et al., 1990). Effects of functional limitations on emotional support are likely to be small. Cognitive functioning has increased significantly across birth cohorts (Piccinin et al., 2013), which is likely to diminish the use of instrumental and emotional support (Holtzman et al., 2004). Education is an indicator of human capital, providing more cognitive resources and skills to sustain and develop personal relationships (Broese van Groenou & Van Tilburg, 2003). Low-SES people receive more instrumental support from children, mostly due to physical and financial difficulties, but receive less support from non-kin. Finally, it is known that women give and receive social support to a wider range of network members, including children and friends than men (Antonucci & Akiyama, 1987). It is unclear how gender differences in social networks and support differ between birth cohorts.

Method

Data

Data were taken from the Longitudinal Aging Study Amsterdam (LASA), a longitudinal and multidisciplinary research program focused on physical, cognitive, social, and emotional functioning of older adults (Huisman et al., 2011). This program employs a stratified random sample of men and women born between 1908 and 1957. The oldest participants, particularly the oldest men, were overrepresented in the sample. The LASA sample was drawn from the population registers of 11 municipalities varying in religious climate and level of urbanization. The LASA sample

was initially recruited for the Living Arrangements and Social Networks of Older Adults (LSN) study. A total of 3,107 respondents born in 1908–1937 took part in the first LASA observation (1992–1993). Response rate was 63%. Follow-ups were conducted in 1995–1996 ($N = 2,545$), 1998–1999 ($N = 2,076$), 2001–2002 ($N = 1,691$), 2005–2006 ($N = 1,257$), 2008–2009 ($N = 835$), and 2011–2012 ($N = 614$). In 2002 ($N = 1002$, born 1938–1947) and in 2012 ($N = 1023$, born 1948–1957), new cohorts aged 55–64 years were added following an identical sampling frame to study cohort differences in functioning. Response rates were 62% and 63%, respectively. Follow-ups on these cohorts are also conducted every 3 years. Additional information on the LASA cohort study can be found elsewhere (Huisman et al., 2011). For the present study, we use data from all birth cohorts. We omitted data for 906 observations from 598 respondents who were institutionalized at the time of observation. In total, data from 4,872 respondents are studied.

Measures

Total emotional and instrumental support from network members

In each wave, a domain-specific network delineation was employed that encompasses the following classification of personal relationships: household members, children and their partners, other family members, neighbors, contacts through work and school, members of associations, and other non-kin relationships. For each of the seven domains, the following question was asked: “Name the people you have frequent contact with and who are also important to you” (Van Tilburg, 1998). The criterion of importance was left to the interpretation of the respondent and only persons older than 18 years could be considered. For all identified relationships, the contact frequency was asked. Because of time constraints, questions concerning support were collected only for nine relationships (excepting with spouse) with the highest contact frequency. For each of the (maximum) nine network members, one question on received emotional support and one question on received instrumental support were posed. The question on emotional support received was “How often in the past year did you tell...about your personal experiences and feelings?” The answer categories ranged from “never” (1), “seldom,” “sometimes,” to “often” (4). The question asked about received instrumental support (same answer categories) was “How often in the past year did...help you with daily chores in and around the house, such as preparing meals, cleaning the house, transport, small repairs, or filling in forms?” The aggregate scores for emotional and instrumental support range from 0 to 36 with a higher score reflecting more support received. Correlation between total received support and network size at the respondent level (at baseline) is weak to moderate, respectively, $r = .43$ for emotional support and $r = .34$ for instrumental support.

Network type

We selected nine indicators that resembled structural measures used to derive network types in previous studies. First, we employed a variable specifying whether the person is *partnered* (0 = no, 1 = yes). Second, we calculated the *total network size* by summing all relationships mentioned (range 0–80). Third, we included the *number of (biological) children*. Fourth, we calculated the *average contact frequency* for the following categories: (1) children (biological), (2) other kin (e.g., siblings, aunts and uncles), (3) friends, and (4) other non-kin (e.g., neighbors, contacts from work and school, contacts from organizations; 1 = never, 8 = daily/household member). If respondents did not name any network member in a category, average contact frequency was coded as 1 “never.” Fifth, we identified the *frequency of church attendance* (1 = yearly or less, never; 5 = weekly or more). Finally, we identified whether the respondent has indicated to do any *volunteering* (0 = does not volunteer, 1 = does volunteering). Correlations between all eight network variables at the respondent level (at their first observation) are weak to moderate ($r \leq .38$).

We included a discrete variable for actual *age at the interview* to separate cohort differences from age differences. *Educational level* was measured as the nominal years (ranging from 5 = *elementary not completed* to 18 = *university education*) to complete a level. We measured *functional capacities* with six questions about activities of daily living, based on Katz, Ford, Moskowitz, Jackson, and Jaffe (1963), such as “Can you walk up and down stairs?” The five answers categories were not at all (1), only with help, with a great deal of difficulty, with some difficulty, and without difficulty (5). The item scores were summed to obtain a scale score ranging from 6 (*poor*) to 30 (*good*). The *number of chronic diseases* was summed from 0 to 7, but recoded in a series of dummy variables 0 (ref.), 1, and 2+ chronic disease(s) to capture skewedness. We also included *self-rated health* as a dummy variable (0 = [very] good [= ref.], 1 = fair/poor) and *cognitive functioning* using the Mini Mental State Examination (range 0–30; Folstein, Folstein, & McHugh, 1975).

Method

In a first step of the analyses, we used cluster analysis to determine the nature and range of network types. We standardized the variables to z scores to eliminate effects caused by scale differences. For the cluster analyses, we used information on these birth cohorts from all waves. First, we employed hierarchical clustering using Ward's method (minimal square approach). The pseudo- F statistic and the pseudo- T^2 statistic (based on the J1/J2 statistic) were evaluated to determine the optimum number of clusters. The pseudo- F statistic specifies the separation of clusters in the current step, whereas the pseudo- T^2 statistic shows the dissimilarity of the two clusters newly joined (Milligan & Cooper, 1987). The network type is assessed

for each wave separately. Second, we employed *K*-means clustering to assign cases (observations) to clusters.

In a second step, we studied cohort differences in instrumental and emotional support. First, we determined whether network types differ significantly across birth cohorts. Second, we investigate cohort differences in total received emotional and instrumental support in a series of linear regression models comparing birth cohorts across three time periods (see Table 1).

Results

Network Types

A four-cluster solution that is reflective of findings in the literature was the best fit (a family-focused, friend-focused, diverse, and restricted network). The family-focused network is the most prevalent network type (45%), followed by diverse and restricted networks (each 21%) and the friend-focused network (13%; Supplementary Table 1). The diverse network type consists of individuals who are all married, have the largest networks, have relatively high frequencies of contact with children, friends, and other non-kin, and have above high rates of volunteering. Those in the family-focused network have relatively large networks, are often married, have a large number of children, and high frequency of contact with children and other kin, but have moderate to low levels of contact with friends and other non-kin and generally do not volunteer. Those in the friend-focused network also have relatively large networks (albeit smaller than diverse and family-focused networks), often have no children, and have the highest contact frequency with friends and relatively high levels of contact with other non-kin and volunteering. Those in the restricted networks have the smallest networks and relatively low contact with children, friends, and other non-kin.

Table 2 shows how social support received varies by network type (RQ1). Those in diverse and family-focused networks receive the most emotional support ($M = 24.18$ and $M = 23.81$, respectively). Individuals in friend-focused and restrictive networks receive less emotional support ($M = 20.35$ and $M = 17.33$). Those in a family-focused network also receive most instrumental support ($M = 16.02$), followed by those in diverse networks ($M = 15.88$), friend-focused networks ($M = 12.41$), and restricted networks ($M = 11.48$). Network types that on average have largest size thus give most social support. Those in family-focused

and restricted networks are older, more often female and have worse health, whereas those in friend-focused and diverse networks on average have the highest level of education and better cognitive functioning.

Cohort Differences in Network Types, Education, and Health

Cohort comparisons can only be made when multiple cohorts are compared at the same age, over historical time (RQ2). An example of such overlap is at ages 55–64 for cohorts 1928–1937, 1938–1937, and 1948–1957 in 1992, 2002, and 2012 (Table 3). There is a large and sudden drop in restricted networks in the latest birth cohort (21% of respondents in cohort 1928–1937, 20% in 1938–1947; 13% in 1948–1957). A friend-focused network is more common in the latest birth cohorts than in earlier birth cohorts (12% in cohort 1928–1937; 10% in 1938–1947; 19% for 1948–1957). Diverse networks are also slightly more common in later birth cohorts (26% in 1928–1937; 29% in 1938–1947; and 28% in 1947–1958). Family-focused networks remain stable across birth cohorts. There is a significant difference between birth cohorts in the distribution of network types as indicated by the significant chi-square statistic, although differences are most visible in the latest birth cohort.

We also investigated how the social support variables and covariates for those aged 55–64 years in 1992, 2002, and 2012 differ (Supplementary Table 2). Both total received emotional and instrumental support increase across birth cohorts, and although these differences are significant, they are relatively small in size. We also found small differences across cohorts in health and resources. Respondents in later birth cohorts have a slightly higher level of education and better cognitive functioning. Functional capacity was better across birth cohorts, whereas the percentage with two or more chronic diseases is slightly higher in the latest birth cohort (1948–1957) than in the two preceding birth cohorts (1928–1937; 1938–1947). Subjective health is only slightly better in later birth cohorts.

Cohort Differences in Social Support: The Role of Network Type

We compare social support received by 10-year birth cohorts in four homogenous age groups (55–64, 65–74, 75–84, and 85–94 years) to determine whether the effect of network types on social support differs across birth cohorts (RQ3).

In Table 4, three cohorts of 55–64 year olds are compared (1928–1937 in 1992, 1938–1947 in 2002, and 1948–1957 in 2012). Those in restricted and friend-focused networks receive less emotional support than those in family-focused networks (reference category), when controlled for relevant covariates ($B = -5.66$ and $B = -5.32$). The effect of having a friend-focused network on total received emotional support

Table 1. Description of the Cohort Analysis

| | 1992 | 2002 | 2012 |
|------------------|-------|-------|-------|
| Cohort 1908–1917 | 75–84 | 85–94 | |
| Cohort 1918–1927 | 65–74 | 75–84 | 85–94 |
| Cohort 1928–1937 | 55–64 | 65–74 | 75–84 |
| Cohort 1938–1947 | | 55–64 | 65–74 |
| Cohort 1948–1957 | | | 55–64 |

Table 2. Description of Dependent Variables and Covariates by Network Type, at Respondents' First Observation (N = 4,872)

| | Family-focused network (N = 2,187) | Restricted network (N = 1,005) | Diverse network (N = 1,038) | Friend-focused network (N = 642) | Post hoc comparisons of means |
|---|---------------------------------------|-----------------------------------|--------------------------------|-------------------------------------|----------------------------------|
| | 1 | 2 | 3 | 4 | Statistic (F/χ ²) |
| Total emotional support (0–36) | 23.81 (6.77) | 17.33 (9.21) | 24.18 (6.21) | 20.35 (8.58) | 212.80*** |
| Total instrumental support (0–36) | 16.02 (6.48) | 11.48 (6.67) | 15.88 (5.59) | 12.41 (6.24) | 158.76*** |
| Age in 1992 (35–84 years) | 60.26 (14.62) | 61.64 (14.00) | 53.32 (11.99) | 57.28 (15.53) | 75.92*** |
| Female | 59% | 46% | 41% | 53% | 108.52*** |
| Educational level attained (5–19 years) | 9.24 (3.35) | 9.18 (3.42) | 10.64 (3.27) | 10.98 (4.14) | 74.94*** |
| Functional capacity (6–30) | 27.74 (4.12) | 27.77 (4.04) | 29.23 (2.05) | 28.02 (3.93) | 41.17*** |
| Chronic diseases | | | | | |
| 0 | 39% | 40% | 48% | 39% | 45.09*** |
| 1 | 37% | 38% | 36% | 38% | |
| 2+ | 24% | 23% | 15% | 23% | |
| Fair/poor subjective health | 37% | 39% | 26% | 34% | 44.53*** |
| Cognitive functioning (MMSE, 0–30) | 27.35 (2.42) | 27.07 (2.77) | 28.12 (1.73) | 27.62 (2.54) | 38.07*** |

Notes: MMSE = Mini Mental State Examination. Cohorts 1908–1937 were entered in 1992, cohorts 1938–1947 in 2002, and cohorts 1948–1957 in 2012. For the variables, standard deviations are given in parentheses. **p* < .05. ***p* < .01. ****p* < .001.

differs across birth cohorts, as indicated by the significant positive interaction terms for birth cohort 1938–1947 (*B* = 2.57, *B* = 3.15). The negative effect of having a friend-focused network on emotional support is thus less strong in the cohort 1938–1947 than in the cohort 1928–1937. Those who are younger, female, higher educated, and have better functional capacity and cognitive functioning receive more emotional support. For instrumental support, those in the later birth cohort receive more instrumental support, irrespective of network type (*B* = 0.86). Those in restricted and friend-focused networks receive less instrumental support (*B* = –3.80 and *B* = –3.81, respectively), but this effect does not differ across birth cohorts. Those with lower functional capacity receive more instrumental support.

Second, we compare three birth cohorts of 65–74 years old (1918–1927 in 1992, 1928–1937 in 2002, and 1938–1947 in 2012; Supplementary Table 3a). Those in restrictive and friend-focused networks receive less emotional support (*B* = –4.33 and *B* = –3.78, respectively) and instrumental support (*B* = –3.80 and *B* = –4.12) than those in the family-focused network. Those in restricted networks in the birth cohort 1938–1947 receive even less emotional support than in the birth cohort 1918–1927 (*B* = –2.16) and also less instrumental support (*B* = –1.76). No further significant differences in the effect of network type on emotional and instrumental support across birth cohorts were found. Again, females, higher educated, those with high functional capacity and better cognitive functioning receive more emotional support. Those with a lower functional capacity receive more instrumental support.

Third, we compare three birth cohorts aged 75–84 in 1992 (1908–1917), 2002 (1918–1927), and 2012 (1928–1937; Supplementary Table 3b). Those in the cohort 1928–1937 receive somewhat less emotional support than cohort 1908–1917 (*B* = –0.20), although the effect size is small. Those in restricted and friend-focused networks receive less emotional (*B* = –6.78 and *B* = –5.92) and instrumental support (*B* = –5.10 and *B* = –5.45). There are significant interactions between being in a friend-focused and the birth cohort 1928–1937 for both emotional (*B* = 3.34) and instrumental support (*B* = 3.07), showing that in this birth cohort, differences between those in family and friend-focused networks in emotional support received are smaller than in 1908–1917. Females, people with a higher educational level, higher functional capacity, good subjective health, and better cognitive functioning receive more emotional support. Those have a lower functional capacity receive less instrumental support.

Finally, we compare two birth cohorts aged 85–94 (1908–1917 in 2002 and 1918–1927 in 2012; Supplementary Table 3c). It should be noted that the sample is relatively small due to the older ages (*N* = 180 for 1908–1917 and *N* = 116 for 1918–1927), which causes larger standard errors. Those in restricted and family-focused networks receive less emotional (*B* = –8.20 and *B* = –5.74) and instrumental support (*B* = –7.27 and *B* = –5.73). We do not

Table 3. Description of the Network Types by Cohort, Age 55–64 Years

| | 1992 | 2002 | 2012 | Statistic |
|------------------------|----------------------------|----------------------------|------------------------------|------------------------|
| | Cohort 1928–1937 (N = 958) | Cohort 1938–1947 (N = 988) | Cohort 1948–1957 (N = 1,013) | |
| Family-focused network | 41% | 40% | 41% | $\chi^2 = 51.28^{***}$ |
| Restricted network | 21% | 20% | 13% | |
| Diverse network | 26% | 29% | 28% | |
| Friend-focused network | 12% | 11% | 19% | |
| Total | 100% | 100% | 100% | |

Notes: * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Linear Regression of Total Received Emotional and Instrumental Support: Age 55–64 Years (1928–1937 in 1992, N = 958; 1938–1947 in 2002, N = 988; 1948–1957 in 2012, N = 1,013)

| | Emotional support | Instrumental support |
|---|-------------------|----------------------|
| | B | B |
| Constant | 13.21*** | 26.50 (3.16)*** |
| Cohort 1928–1937 (reference category) | | |
| Cohort 1938–1947 | -0.43 | 0.47 (0.43) |
| Cohort 1948–1957 | -0.46 | 0.86 (0.43)* |
| Age at the interview (55–64 years) | -0.09* | -0.12 (0.04)** |
| Female | 4.17 (0.25)*** | -0.42 (0.23) |
| Family-focused network (reference category) | | |
| Diverse network | 0.10 (0.54) | -0.13 (0.49) |
| Restricted network | -5.66 (0.58)*** | -3.80 (0.52)*** |
| Friend-focused network | -5.32 (0.70)*** | -3.81 (0.95)*** |
| Diverse network × cohort 1938–1947 | -0.28 (0.75) | 0.07 (0.67)* |
| Restricted network × cohort 1938–1947 | -1.57 (0.82) | -1.41 (0.73) |
| Friend-focused network × cohort 1938–1947 | 2.57 (1.02)*** | 0.94 (0.92) |
| Diverse network × cohort 1948–1957 | 0.01 (0.75) | 0.44 (0.67) |
| Restricted network × cohort 1948–1957 | 0.28 (0.89) | -0.58 (0.80) |
| Friend-focused network × cohort 1948–1957 | 3.15 (0.92)*** | 1.46 (0.83) |
| Educational level (5–18) | 0.26 (0.04)*** | -0.03 (0.04) |
| Functional capacities (6–30) | 0.12 (0.05)* | -0.21 (0.05)*** |
| Chronic diseases | | |
| 0 (reference category) | | |
| 1 | 0.04 (0.28) | 0.21 (0.26) |
| 2+ | 0.22 (0.38) | 0.04 (0.34) |
| Fair/poor subjective health | -0.38 (0.30) | 0.33 (0.27) |
| Cognitive functioning (0–30) | 0.31 (0.06)*** | 0.08 (0.06) |
| Adjusted R ² | .22 | .10 |

Notes: Standard errors are given in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

find evidence that this effect differs between the two birth cohorts. Females receive more emotional support. We did not find any other significant predictors of emotional and instrumental support in this comparison.

Conclusion and Discussion

Cohort differences in instrumental and emotional support received by Dutch people in relation to (differences in) network types were investigated. A four-cluster solution involving a diverse, friend-focused, family-focused,

and restricted network was the best fit. People in family-focused and diverse networks (also the largest networks on average) receive more emotional and instrumental support than those in friend-focused and restricted networks (RQ1). Restricted networks become less numerous across birth cohorts (particularly in the latest cohort 1948–1957) and friend-focused networks more numerous (RQ2). Consistent with our hypothesis, those in friend-focused networks in later birth cohorts receive more emotional and instrumental support (RQ3). This is particularly visible in the birth cohorts 1928–1937, 1938–1947, and 1948–1957

that differ from earlier cohorts with whom they have been compared (1908–1917, 1918–1927). No cohort differences in received social support are found for diverse networks. People in restricted networks receive the least emotional and instrumental support across all birth cohorts. The exception was among those 65–74 years old, in which this effect is less strong for the birth cohort 1938–1947 than 1918–1927. Those in family-focused networks do receive high levels of support (partially in response to higher needs due to worse health and a lower level of education), but their level of support remains stable.

Findings hint at more opportunities for sociability outside of close kin in the current society, resonating with earlier findings on network structure and contact (Ajrouch et al., 2007; Stevens & Van Tilburg, 2011). Clearly, trends of less traditional family structures have transformed rather than decreased solidarity. The rise of friend-focused networks seems not solely due to declining fertility and less durable family relationships. Family-focused networks have remained relatively stable in frequency across birth cohorts and continue to provide many people in later life with substantial levels of social support. Instead, it was the most disadvantaged network in terms of diversity of social ties, that is, the restricted network, that is becoming less numerous. Combined with an increase in social support received in friend-focused networks in later birth cohorts, the trend toward a preponderance of non-kin in networks should not solely be perceived as a deficit model of social relationships, but rather as an imminent source of social support that is available to a larger portion of the population.

The expectation that an increase in social support in friend and diverse networks should pertain to emotional support only was not sustained. This provides evidence for the proposition that functions of friends and family are less distinct (Pahl & Pevalin, 2005). It is yet unclear whether mechanisms resulting in receiving social support from kin and non-kin in old age have changed. It has long been assumed that support from (close) kin is motivated strongly by (filial) normative expectations for help (Finch & Mason, 1990), whereas social support and care from friends and other non-kin is more dependent on reciprocal assistance and ongoing satisfaction (Antonucci, 1990). Recently, the voluntary aspects of all support relationships have been increasingly emphasized, whereas normative expectations, for example, regarding family, seem to be declining. With these changes, ongoing satisfaction and reciprocity might become more important.

Future studies should examine how cohort differences in network types and social support differ by gender and educational level. The social lives of women have changed rapidly in response to societal changes in Western societies, for example, increased labor force participation. Women's social networks might contain more (ex-)colleagues and non-kin than before. Changes in men's social lives have been more modest, although also worthy of examination. Those in friend-focused and diverse networks are on average higher

educated. Given this finding and the increase in educational attainment in recent birth cohorts, it might be fruitful for future research to further examine the role of education in the cohort, network-type, and social support association.

Several methodological issues should be noted. First, total received instrumental and emotional support is not measured completely independent of network size. Degree of support exchange was asked only for the nine network members with the highest contact frequency. The correlation between network size and total emotional and instrumental support is weak to moderate. Second, we were not able to include density and strength of ties (such as closeness and multiplexity) due to our ego-focused network assessment (Wellman, 1992). Third, we study people in later life living independently who are relatively healthy compared with the institutionalized population. We lack detailed information on institutionalized respondents' networks.

In the present research, we examined cohort effects. The LASA study has information on sociostructural cohort characteristics such as education. Incorporating information on sociocultural factors such as norms and values (e.g., filial responsibility expectations) could provide more insight into how societal change has shaped the social functioning in the last decades. With new data collections planned, LASA will offer a unique opportunity to study cohort differences in age-related change in network types. Having multiple observations over individual time across five 10-year birth cohorts, societal change in aging over decades can be studied.

In sum, we found that friend-focused networks are more numerous among later birth cohorts and that those with friend-focused networks receive more social support in later birth cohorts than earlier birth cohorts. Clearly, societal dynamics have had implications for the types of networks people have in later life and the social support that they receive from these networks.

Supplementary Material

Supplementary data is available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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References

- Antonucci, T. C. (1990). Social supports and social relationships. In R. H. Binstock & L. K. George (Eds.), *The handbook of aging and the social sciences* (3rd ed, pp. 205–226). Orlando, FL: Academic Press.
- Ajrouch, K. J., Akiyama, H., & Antonucci, T. C. (2007). Cohort differences in social relations among the elderly. In H.-W. Wahl, C. Tesch-Roemer, & A. Hoff (Eds.), *Emergence of new person-environment dynamics in old age: A multidisciplinary exploration* (pp. 43–64). Amityville, NY: Baywood.
- Allan, G. (2008). Flexibility, friendship, and family. *Personal Relationships*, *15*, 1–15. doi:10.1111/j.1475-6811.2007.00181.x
- Alwin, D. F. (2002). The age-period-cohort model. In D. A. Eckard (Ed), *Encyclopedia of aging*. New York, NY: Macmillan Publishing Co.
- Antonucci, T. C., Ajrouch, K. J., & Birditt, K. S. (2014). The convoy model: Explaining social relations from a multidisciplinary perspective. *The Gerontologist*, *54*, 82–92. doi:10.1093/geront/gnt118
- Antonucci, T. C., & Akiyama, H. (1987). An examination of sex differences in social support among older men and women. *Sex Roles*, *17*, 737–749. doi:10.1007/BF00287685
- Berkman, L. F., Glass, T., Brisette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine*, *51*, 843–857. doi:10.1016/S0277-9536(00)00065-4
- Broese van Groenou, M. I., & Van Tilburg, T. G. (2003). Network size and support in old age: Differentials by socio-economic status in childhood and adulthood. *Ageing & Society*, *23*, 625–645. doi:10.1017/S0144686X0300134X
- Campbell, K. E., & Lee, B. A. (1992). Sources of personal neighbor networks: Social integration, need or time? *Social Forces*, *70*, 1077–1100. doi:10.2307/2580202
- Cherlin, A. (2010). Demographic trends in the United States: A review of research in the 2000s. *Journal of Marriage and the Family*, *72*, 403–419. doi:10.1111/j.1741-3737.2010.00710.x
- Elder, G. H. (1994). Time, human agency and social change: Perspectives on the life-course. *Social Psychology Quarterly*, *57*, 4–15.
- Finch, J., & Mason, J. (1990). Filial obligations and kin support for elderly people. *Ageing & Society*, *10*, 151–175. doi:10.1017/S0144686X00008059
- Fiori, K. L., Antonucci, T. C., & Akiyama, H. (2008). Profiles of social relations among older adults: A cross-cultural approach. *Ageing & Society*, *28*, 203–231. doi:10.1017/S0144686X07006472
- Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). “Minimal state”: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, *12*, 189–198. doi:10.1016/0022-3956(75)
- Giddens, A. (1990). *The consequences of modernity*. Cambridge, UK: Polity Press.
- Hartup, W. W., & Stevens, N. (1997). Friendship and adaptation in the life course. *Psychological Bulletin*, *121*, 355–370. doi:10.1037/0033-2909.121.3.355
- Holtzman, R. E., Rebok, W. E., Sackinzy, J. S., Kouzis, K. C., Wilcox-Doyle, K., & Eaton, W. W. (2004). Social network characteristics and cognition in middle-aged and older adults. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *56*, 278–284. doi:10.1093/geronb/59.6.P278
- Huisman, M., Poppelaars, J., Van der Horst, M., Beekman, A. F. T., Brug, J., Van Tilburg, T. G., & Deeg, D. J. H. (2011). Cohort profile: The Longitudinal Aging Study Amsterdam. *International Journal of Epidemiology*, *40*, 868–876.
- Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton, NJ: Princeton University Press.
- Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. B. Baltes & O. B. Brim (Eds.), *Life-span development and behavior* (Vol. 3, pp. 253–268). New York, NY: Academic Press.
- Katz, S., Ford, A. B., Moskowitz, R. W., Jackson, B. A., & Jaffe, M. W. (1963). Studies of illness in the aged: The index of ADL. *Journal of the American Medical Association*, *185*, 914–919. doi:10.1001/jama.1963.03060120024016
- Komter, A., & Vollenbergh, W. (1997). Gift-giving and the emotional significance of family and friends. *Journal of Marriage and Family*, *59*, 747–757. doi:10.2307/353958
- Latten, J. J. (2004). Trends in samenwonen en trouwen: De schone schijn van burgerlijke staat [Trends in cohabitation and marriage: The false appearance of marital status]. *Bevolkingstrends*, *4e kwartaal*, pp. 46–60.
- Liefbroer, A. C., & Dykstra, P. A. (2000). *Levenslopen in verandering: Een studie naar ontwikkelingen in de levenslopen van Nederlanders geboren tussen 1900 en 1970 [Changing lives: The life courses of the 1900–1970 Dutch birth cohorts]*. Den Haag, The Netherlands: Sdu Uitgevers.
- Litwin, H. (1998). Support network type and patterns of help giving and receiving among older people. *Journal of Social Service Research*, *24*, 83–100. doi:10.1300/J079v24n03_04
- Litwin, H. (2004). Social networks, ethnicity and public home care-utilisation. *Ageing & Society*, *24*, 921–939. doi:10.1017/S0144686X04002491
- Litwin, H., & Attias-Donfut, C. (2009). The inter-relationship between formal and informal care: A study in France and Israel. *Ageing & Society*, *29*, 71–91. doi:10.1017/S0144686X04002491
- Litwin, H., & Landau, R. (2000). Social network type and social support among the old-old. *Journal of Aging Studies*, *14*, 213–228. doi:10.1016/S0890-4065(00)80012-2
- Litwin, H., & Stoeckel, K. J. (2014). Confidant network types and well-being among older Europeans. *The Gerontologist*, *54*, 762–772. doi:10.1093/geront/gnt056
- Messeri, P., Silverstein, M., & Litwak, E. (1993). Choosing optimal support groups: A review and reformulation. *Journal of Health and Social Behavior*, *34*, 122–137. doi:10.2307/2137239
- Milligan, G. W., & Cooper, M. C. (1987). Methodology review: Clustering methods. *Applied Psychological Measurement*, *11*, 329–354. doi:10.1177/014662168701100401
- Pahl, R., & Pevalin, D. J. (2005). Between family and friends: A longitudinal study of friendship choice. *The British Journal of Sociology*, *56*, 433–450. doi:10.1111/j.1468-4446.2005.00076.x
- Piccinin, A. M., Muniz-Terrera, G., Clouston, S., Reynolds, C. A., Thorvaldsson, V., Deary, I. J., ... Hofer, S. M. (2013). Coordinated analysis of age, sex, and education effects on change in MMSE

- scores. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 68, 374–390. doi:10.1093/geronb/gbs077
- Pinquart, M., & Sörensen, S. (2000). Influences of socio-economic status, social network and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging*, 15, 187–224. doi:10.1037/0882-7974.15.2.187
- Plickert, G., Côte, R. R., & Wellman, B. (2007). It's not who you know, it's how you know them: Who exchanges what with whom? *Social Networks*, 29, 405–429. doi:10.1016/j.socnet.2007.01.007
- Riley, M. (1973). Aging and cohort succession: Interpretations and misinterpretations. *Public Opinion Quarterly*, 37, 35–49.
- Riley, M. W., & Riley, J. W. (1993). Connections: Kin and cohort. In V. L. Bengtson & W. A. Achenbaum (Eds.), *The changing contract across generations* (pp. 169–190). Hawthorne, NY: Aldine de Gruyter.
- Stevens, N., & Van Tilburg, T. G. (2011). Cohort differences in having and retaining friends in personal networks in later life. *Journal of Social and Personal Relationships*, 28, 24–43. doi:10.1177/0265407510386191
- Suanet, B., Van Tilburg, T. G., & Broese van Groenou, M. I. (2013). Non-kin in older adults' personal networks: More important among later cohorts? *Journal of Gerontology: Social Sciences*, 68, 633–643. doi:10.1093/geronb/gbt043
- Van Gool, C. H., Picavet, H. S. J., Deeg, D. J. H., de Klerk, M. M., Nusselder, W. J., van Boxtel, M. P., ... Hoeymans, N. (1990). Trends in activity limitation: The Dutch older population between 1990 and 2007. *International Journal of Epidemiology*, 40, 1056–1067. doi:10.1093/ije/dyr009
- Van Tilburg, T. G. (1998). Losing and gaining in old age: Changes in personal network size and social support in a four-year longitudinal study. *Journal of Gerontology: Social Sciences*, 53, S313–S323. doi:10.1093/geronb/53B.6.S313
- Wang, H., & Wellman, B. (2010). Social connectivity in America: Changes in adult friendship network size from 2002 to 2007. *American Behavioral Scientist*, 53, 1148–1169. doi:10.1177/0002764209356247
- Wellman, B. (1992). Which types of ties and networks provide what kinds of social support? *Advances in Group Processes*, 9, 207–235.
- Wellman, B., & Wortley, S. (1990). Different strokes from different folks: Community ties and social support. *American Journal of Sociology*, 96, 553–588. doi:10.1086/229572
- Wenger, G. C. (1991). A network typology: From theory to practice. *Journal of Aging Studies*, 5, 147–162. doi:10.1016/0890-4065(91)90003-B