

# Social Loneliness after Divorce: Time-Dependent Differential Benefits of Personality, Multiple Important Group Memberships, and Self-Continuity

Charikleia Lampraki<sup>a, c</sup> Daniela S. Jopp<sup>a, c</sup> Dario Spini<sup>b, c</sup> Davide Morselli<sup>b, c</sup>

<sup>a</sup>Institute of Psychology, University of Lausanne, Lausanne, Switzerland; <sup>b</sup>Institute of Social Sciences, University of Lausanne, Lausanne, Switzerland; <sup>c</sup>Swiss National Centre of Competence in Research LIVES, University of Lausanne, Lausanne, Switzerland

## Keywords

Social groups · Identity · Divorce phases · Adaptation

## Abstract

**Background:** Critical events in the second half of life, such as divorce, pose a significant threat to well-being. Individuals undergoing divorce often experience feelings of social loneliness and may benefit differently from available resources depending on how much time has passed since the event. Personality traits have been found to be related to adaptation, with particularly strong effects immediately after the critical event. Other resources, such as identity-stabilizing mechanisms (i.e., valued social groups and self-continuity), may play a role only later in adaptation. However, little is known about the benefits of these resources and their potentially time-dependent effects on social loneliness when one is overcoming later-life divorce. **Objectives:** This study investigates the role of psychological (e.g., personality, self-continuity, multiple important group memberships) and social resources (e.g., new partner, having someone to help deal with divorce) for social loneliness in two post-divorce phases, using a married group as the reference, controlling for sociodemographic aspects and health. **Methods:** A representative sample of 850 divorced (aged 40–79 years) and

869 married individuals (aged 40–78 years) living in Switzerland were compared, using multiple regression analyses. **Results:** Differential predictive patterns for social loneliness between the two divorced groups and the married group were observed. For the short-term divorced (up to 2 years after divorce), higher extroversion and agreeableness and lower neuroticism were associated with lower levels of loneliness. For the long-term divorced (2–5 years after divorce) and for those who remained married, extroversion was similarly important for loneliness. Additionally, higher levels of self-continuity and multiple group memberships predicted lower loneliness, but the short-term divorced did not benefit from them. Having someone to help overcome the divorce benefited members of both divorced groups. A new partner was related to less loneliness, but only in the long-term divorced group. **Conclusions:** Our findings demonstrate that the effects of psychological and social resources on social loneliness vary by adaptation phase. Although extroversion is beneficial for all divorced and married individuals, other personality traits play a more decisive role in the initial adaptation phase. Identity-promoting resources (i.e., multiple group memberships, perceived self-continuity) are beneficial only later in the adaptation process. To be successful, professional interventions must be tailored as needed.

© 2019 S. Karger AG, Basel

## Introduction

Losing one's spouse through divorce represents an important critical life event and its frequency is rising among older adults [1]. Social loneliness can be one of the negative consequences of divorce [2], increasing the chances of outcomes such as poorer health and higher mortality [3]. Although time heals some wounds and many divorcees can accept their new realities and recover their pre-divorce levels of well-being [4, 5], not everyone can adapt to and accept the changes (e.g., personal, social) that divorce may impose on their lives, often leading to prolonged feelings of social loneliness [6]. Adaptation refers to regaining the level of well-being that one had before the occurrence of the critical life event [7]. Investigation of the factors that may affect the adaptation process is of great importance to identify why some individuals remain vulnerable while others successfully overcome divorce and move on with their lives.

When people face dissolution of marriage at a later point in their lives, coming to terms and coping with divorce may be particularly challenging. For example, many of them had for much of their lives a social identity of husband or wife. Finding a new partner may also become more difficult. As only a few studies have addressed divorce in the second half of life [6], not much evidence exists about predictors that help in adaptation to divorce at that age. Divorcees may also experience various post-divorce phases, during which, depending on the time passed since this critical life event, specific resources may be particularly beneficial for adaptation. According to Amato's [4] divorce-stress-adjustment model, divorce is a three-phase process. It starts with separation and/or dissolution of marriage, followed by a first post-divorce adaptation period, which lasts about 2 years and is primarily characterized by distress, and the final adaptation phase, during which the individual no longer feels divorce-related distress and returns to pre-divorce levels of well-being. Empirical evidence for these specific adaptation phases (i.e., less than 2 years vs. more than 2 years since divorce) has been found in several longitudinal studies that examined adaptation to partner loss either through divorce [8, 9] or bereavement [5, 10]. Following this model, it is likely that specific factors are responsible for coping in the various post-divorce phases. Although some resources may be beneficial regardless of the divorce phase (e.g., social resources), other resources (e.g., identity-enhancing mechanisms) may be differentially important during these post-divorce phases. In the acute adaptation phase after divorce, well-established cognitive and behavioral ten-

dencies may regulate how the individual adapts while staying busy reorganizing urgent practical aspects to ensure that everyday life continues as well as possible. After sorting out immediate pressing issues, the individual may have more time and energy in the later adaptation phase to consider divorce-related changes more broadly, including reevaluating one's identity and integrating aspects of the new situation into the self.

Yet specific adaptation resources' time dependency has received little attention. This study aims at addressing these research gaps by investigating how various psychological and social resources are related to social loneliness as indicators of successful adaptation to divorce in later life and whether their usefulness varies across post-divorce adaptation phases.

### *Later-Life Divorce and Loneliness*

Divorce in advanced age represents a new phenomenon associated with recent demographic changes [1]. Individuals in the second half of life experience divorce as a highly distressing event and as a crisis that is "off-time" even if the divorce is a voluntary dissolution of marriage [5]. Additionally, divorce often leads to the disruption of social relationships, as friends of the formerly married couple usually tend to feel closer to one of the partners and choose sides [11]. The resulting shift in social networks contributes to the feeling of distress that is common among divorcees [5, 8]. In later life, the distress may become even greater as it is more challenging for older individuals to find new social partners. Although research has mainly focused on dissolution of marriage at younger ages, the limited findings on late-life divorce indicate poorer adjustment compared to that of younger individuals [12], suggesting that divorce is a more stressful or a more difficult experience to cope with in older age.

Many individuals who go through divorce feel lonely. Although long-term married individuals can also experience social loneliness [4] and a decreasing social network over time [13], divorcees have been found to be more prone to social loneliness, particularly due to disruptions of social relationships associated with divorce [14]. Research has shown that feelings of loneliness in the second half of life remain relatively stable or even diminish in advanced age, and they are not caused by isolation but by being unable to meet one's need for socializing with valued partners [15, 16]. However, the empirical evidence is still inconclusive regarding loneliness in the context of critical life events in the second half of life, such as divorce [17, 18]. When people grow older, their social circles are likely to diminish due to loss of loved ones and other so-

cial partners; also, health and mobility issues contribute to the reduction of social contacts [18]. However, it is not only the quantity of social contacts that affects social loneliness but also their quality [19]. Therefore, individuals may have fewer social partners with advancing age, but the remaining relations may be of higher quality [18]. In the context of divorce, losing valued social partners and the inability to replace them with others of equal importance can have long-term consequences regarding social embeddedness and well-being in later life. In his theory of loneliness, Weiss [20] suggested that social loneliness is experienced when individuals lack an engaging social environment – for instance, when they have only limited and unsatisfying contact with family, friends, or community members. Therefore, dissolution of marriage in the second half of life can result in additional loss of important social partners [14], leading more generally to maladaptation to divorce and, more specifically, to greater social loneliness.

#### *Factors Related to Post-Divorce Loneliness*

Investigation of factors related to loneliness is important, as lonely individuals have substantial mental and physical health risks ranging from depression to premature mortality [21, 22]. Specifically, individuals experiencing marital instability, those with unsupportive social networks [23], those without children, and most specifically women [4] are at risk of feeling socially lonely, underscoring the importance of social resources. In countries with strong societal norms, such as in Switzerland, gender is an important factor to consider, as the dissolution of marriage is more challenging for women than for men [24]. Women are encouraged to reduce their employment rates or stop any work activity after marriage or motherhood, leading to poorer financial and social resources. Thus, in Switzerland and other conservative societies, the re-partnering rate is higher than in other countries, such as the USA or Germany [25], since being divorced may come with greater financial and social challenges. Finding a new partner may be an essential part of overcoming the divorce, as it can protect against social loneliness [4] but also against financial and societal strains. However, re-partnering in later life may be a challenge for some individuals. In divorce, other social partners, such as children or close friends, can provide more readily available social support. Hence, we hypothesize (H1) that, among both divorced groups, having a new partner, children, and someone helping to overcome divorce will be related to a lower level of social loneliness.

Besides social aspects, psychological resources, such as personality, also play a role in adaptation to divorce. Personality traits influence how individuals cope with critical life events [26], and they are responsible for how a person engages in social life [27], influencing post-divorce loneliness levels. More neurotic individuals tend to experience emotional instability and relational deficits [28]. Higher levels of neuroticism are then likely to lead to more emotional vulnerability, unsatisfied needs for socialization, and social loneliness. Individuals who are more extroverted and more agreeable feel less socially lonely, as, for them, it is easier to approach compatible social partners and create meaningful relationships [27]. Being conscientious entails some personal qualities that are appreciated and valued by others, such as being hard-working, reliable, and self-disciplined [29], making conscientious individuals more likely to be surrounded by social partners or embedded in groups. Finally, being more open to new experiences offers more possibilities to meet new people [27] and therefore to satisfy the need for social connectedness. Regarding personality and divorce, middle-aged women undergoing divorce showed higher adaptability when they had higher levels of extroversion and openness and low levels of neuroticism [5]. Besides being linked to enhanced coping with critical events, extroversion and neuroticism have also been found to be related to lower social loneliness in the general population [28]. Regarding personality, we therefore expect (H2) that higher extroversion, openness, agreeableness, and conscientiousness, as well as lower neuroticism, will be related to lower social loneliness.

Other psychological resources, such as identity mechanisms, may promote adaptation to critical events. Continuity theory suggests that during life changes, a person seeks to maintain or protect a sense of identity [30]. To do so, individuals engage in cognitive strategies to experience continuity, remembering persistent inner-psychological aspects (e.g., lasting ideas, preferences, expectations; self-continuity) and continuous social-environmental aspects (e.g., activities and roles; social continuity) [30]. Experiencing high self-continuity has been found to contribute to adaptation after critical life events [31] and may therefore prove similarly important in the context of divorce. Divorce may raise identity questions such as, “Who am I now?” or, “Am I the same person as before the divorce?” Chandler and Proulx [32] suggest that self-continuity enables individuals to connect the various pieces of their past, present, and future into a coherent story that reflects a sense of identity stability. As being a spouse represents a central element of many older adults’ self-defi-

nitions, particularly when favoring traditional life forms as is common in Switzerland [33], the need for self-continuity in divorce can be high. Feeling like the same person as before the divorce may be important for maintaining a clear sense of who one is, which represents a central prerequisite for social interactions and, specifically, for the development and the maintenance of a supportive social network of family and friends. Hence, in line with this reasoning, we hypothesize that (H3) high perceived self-continuity contributes to feeling less social loneliness after divorce.

Individuals who interact with familiar people and groups, and engage in well-known environments [30], are more likely to perceive social continuity, the second cognitive mechanism proposed by continuity theory. Perceived membership in important social groups is a psychological resource that reflects social continuity and is associated with various positive factors such as well-being, health promotion, and mental and physical health [30, 34]. Additionally, perceived membership in important social groups has been found to lead to positive outcomes such as well-being over and above social interactions outside of valued social groups [35]. Although belonging to such groups may also encourage social engagement, facilitate shared social activities, and provide the individual with access to multiple social partners who could provide support, being a member of valued social groups may also provide the “space” for individuals to create positive social identities and “merge” them into their sense of self [36]. According to the social cure theory [36], it is not the activities and tasks performed in the context of the group that strengthen social identity in times of transitions, but the symbolic relationship with that group of high value. People tend to assimilate the characteristics of social groups that are important to them (e.g., religious beliefs). These valued social groups act as anchors for identity and may have particular beneficial effects in times of life transitions, such as divorce, during which individuals lose their (potentially valuable) self-definition of being a wife or a husband. Therefore, in contrast to other nonimportant social groups, the important groups may allow people to experience parts of their social identities as stable and feel socially embedded, despite divorce-related changes. We hypothesize that (H4) more important group memberships will be related to feeling less socially lonely in divorced individuals, but that having valued social groups, given their nature, will also benefit married individuals.

Last, as these two mechanisms promote identity stability [37], feeling a greater continuity of self and having

more valued social groups may indicate a specific resilient profile of less lonely divorcees. Additionally, an excess in one of the mechanisms may compensate for a lack in the other one (H5). For instance, one may not feel like the same person as before the divorce, but by being embedded in many social groups, one may feel less lonely. However, the concurrent absence of valued social groups and self-continuity may suggest higher loneliness of divorcees, as they cannot benefit from any of the two identity mechanisms. A lack of valued social groups and self-continuity, may, in addition, be a risk factor for married individuals in terms of loneliness.

#### *What Helps When?*

Depending on the adaptation phase, different factors may facilitate the process of coping with divorce [6, 38]. Personality aspects, for instance, may be of utmost importance during early phases of adaptation, and having social resources in any adverse circumstances has been found to be beneficial for mental health [4, 23].

Caspi and Moffitt [26] suggest that in new and ambiguous situations, the individual seems more likely to rely on well-established cognitive and behavioral tendencies captured by personality traits. High stress levels may emerge more often during the initial adaptation phase, as divorcees have to deal with immediate and pressing demands regarding their novel life conditions, yet they do not know how [26]. As the individual tries to cope with the new reality, automatic and well-known behavioral tendencies may emerge more frequently, rather than the person employing more cognitively demanding processes that require excessive mental energy. For instance, more neurotic divorcees may more often reject social interactions, which will not satisfy their need for relatedness with others and will increase the feelings of social loneliness. An extrovert may, instead, interact more often with others in that phase, with an immediate positive effect in return. Nevertheless, the social support associated with the bonds created in this interaction may become beneficial at a later stage, as time is needed to develop supportive relationships.

Therefore, the more prototypical personality-associated behavior will not only be more frequent; its explanatory value may be accentuated under more challenging times, such as those closer to divorce, but the benefits of other factors, such as social participation, may become more pronounced later [26]. These trait-related behaviors and cognitions may be more strongly associated with well-being than other available resources, particularly when the person is still in the acute stress phase following

the event, when struggling with adaptation is more likely. Findings are, however, still inconclusive regarding which specific personality traits may be accentuated in divorce [27]. Hence, aiming to close this research gap, we extend the more specific hypothesis that personality plays a role in adaptation (H2), by assuming a time dependency of this effect: we expect that (H2a) when people are closer to divorce, high levels of neuroticism and lower levels of extroversion, agreeableness, openness, and conscientiousness will be related to high levels of social loneliness, following previous research on the association of specific personality traits with loneliness [27–29].

After the initial stressful phase, and when individuals have dealt with the actual and emotional loss of the partner and the immediate consequences of divorce (e.g., financial), they may be ready to advance to the next phase of adaptation. In this later phase, divorcees may work on restructuring their social lives and identities. Therefore, psychological resources such as self-continuity, representing inner-psychological continuity, and membership in valued social groups representing social continuity may become more important for adaptation. Although individual-based interactions may be beneficial regardless of the adaptation phase, as they are more direct in nature and easier to achieve, social groups may require a certain level of connectedness with other group members, which is accomplished with time. For self-continuity, the adaptation time is very relevant, as individuals may need time to determine whether the divorce was a truly disruptive event, and whether they may ever accept it as part of who they are. Hence, it is likely that (H3a) self-continuity and (H4a) important social group memberships, as well as their (H5a) interaction, may explain more variance in social loneliness at a later stage, helping individuals return to pre-divorce levels of social loneliness that more closely resemble those of married individuals (H6) [7, 8]. To our knowledge, the beneficial effects of multiple important group memberships (MIGM) and self-continuity on well-being outcomes have not yet been investigated in the context of divorce.

### *The Present Study*

This study investigates the importance of psychological and social resources for adaptation to divorce, as indicated by the experience of social loneliness. As time since divorce is associated with adaptation progress [9], we compared (a) individuals who were in an earlier post-divorce phase, coping with the new reality after divorce (short-term group), (b) individuals who were in a later post-divorce phase, when adaptation should have ad-

vanced (long-term group), and (c) married individuals who had never experienced a divorce, serving as a control group. In particular, we examined the role of social resources (H1: i.e., having children, a new partner, or someone to help deal with the divorce is related to lower social loneliness in divorce), personality (H2 and H2a: e.g., higher neuroticism in the short-term divorced is related to more loneliness), and identity-promoting mechanisms (H3 and H3a; H4 and H4a: e.g., higher self-continuity and more important group memberships are associated with less social loneliness for the long-term divorced; H5 and H5a: e.g., excess in one of the mechanisms may compensate for a lack in the other one) for social loneliness, expecting differential predictive patterns across groups (H6: i.e., outcomes for the long-term divorced will resemble those of the married) while controlling for subjective health and sociodemographic aspects (i.e., age, gender, and financial status) that have been found to be associated with adaptation to divorce in prior studies.

## **Methods**

### *Sample and Procedure*

The present study included a total of 1,719 individuals aged 40–92 years who were either married (and had never been divorced) or had been divorced or separated within the past 5 years. The data derived from the LIVES Intimate Partner Loss Study. The sample was stratified by age, gender, and marital status. Participants were selected by the Federal Office of Statistics [for details, see 39]. Divorced and separated individuals were combined into one group (“divorced”) in line with previous research [5]. These 850 divorced individuals (40–79 years old) were split into two subgroups according to the adaptation phase: the short-term divorced group ( $n = 425$ ) consisted of individuals who had experienced divorce up to 2 years ( $M = 1.2$ ) prior to study participation, and the long-term divorced group ( $n = 425$ ) consisted of individuals who had experienced divorce 2–5 years ( $M = 4.0$ ) prior to study participation. We compared the divorced groups with an age-matched group of married people ( $n = 869$ ,  $M = 24.0$  years of marriage duration) who had never experienced a divorce.

### *Measures*

The participants filled out a paper-and-pencil or online questionnaire, including the measures described below, and they received no compensation.

### *Grouping Variable*

To separate married and short-term and long-term divorced individuals, the participants indicated whether they had ever experienced a separation or divorce, and if so, when this had happened. Years since the divorce were then calculated to create the following categories: 0 = married, 1 = up to 2 years after the event, and 2 = 2–5 years since the event. The 2-year cutoff was used based on the findings regarding adaptation to divorce by Booth and Amato [8] and Lucas [9].

**Table 1.** Descriptive statistics of the central study variables, split by study group, and mean-level or frequency difference tests ( $N = 1,719$ )

	Short-term divorced ( $n = 425$ )		Long-term divorced ( $n = 425$ )		Married ( $n = 869$ )		Difference test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>
Age, years	52.33 <sup>b</sup>	8.07	52.89 <sup>b</sup>	7.88	59.55 <sup>a</sup>	11.29	108.18***
Income adequacy	1.95 <sup>b</sup>	0.51	1.93 <sup>b</sup>	0.50	2.10 <sup>a</sup>	0.47	22.22***
Subjective health	3.87	0.92	3.98	0.81	3.97	0.72	2.16
Neuroticism	2.69	0.99	2.66	0.92	2.71	0.92	0.43
Extraversion	3.40 <sup>a</sup>	1.07	3.36	1.05	3.26 <sup>b</sup>	1.01	3.33*
Conscientiousness	4.23	0.74	4.14 <sup>a</sup>	0.72	4.27 <sup>b</sup>	0.69	4.80**
Agreeableness	3.57	0.80	3.52	0.77	3.50	0.79	1.29
Openness	3.75 <sup>b</sup>	1.00	3.73 <sup>b</sup>	0.93	3.51 <sup>a</sup>	0.98	11.43***
MIGM	1.44 <sup>a</sup>	1.46	0.93 <sup>b</sup>	1.26	1.15 <sup>c</sup>	1.39	14.66***
Self-continuity	1.78 <sup>a</sup>	1.11	2.11 <sup>b</sup>	1.15	2.66 <sup>c</sup>	0.97	108.34***
Social loneliness	1.22 <sup>b</sup>	1.09	1.19 <sup>b</sup>	1.07	0.89 <sup>a</sup>	0.92	20.95***

Short-term divorced: up to 2 years since divorce; long-term divorced: 2–5 years since divorce. MIGM, multiple important group memberships. a, b, c: Scheffé's post hoc tests indicating differences between specific groups (e.g., a vs. b, b) with at least  $p < 0.01$ . Categorical variables include the following frequencies: gender (women): short-term divorced  $n = 303$  (71.3%), long-term divorced  $n = 242$  (57.1%), married  $n = 484$  (55.8%),  $\chi^2 = 30.58^{***}$ ; children (yes): short-term divorced  $n = 334$  (79.0%), long-term divorced  $n = 323$  (76.7%), married  $n = 777$  (90.7%),  $\chi^2 = 53.62^{***}$ ; new partner (yes): short-term divorced  $n = 104$  (24.7%), long-term divorced  $n = 193$  (46.4%),  $\chi^2 = 43.01^{***}$ ; someone to count on (yes): short-term divorced  $n = 370$  (89.2%), long-term divorced  $n = 307$  (75.1%),  $\chi^2 = 28.36^{***}$ . \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

### Outcome

Social loneliness was measured using the corresponding items of the short De Jong Gierveld Loneliness Scale [40]. It consists of three items (i.e., "There are plenty of people with whom I feel closely connected," "There are enough people on whom I can rely in case of problems," and "I know many people on whom I can depend") that are answered on a 5-point scale (1 = no, 2 = rather no, 3 = more or less, 4 = rather yes, or 5 = yes). A mean score was built to represent social loneliness, with higher values indicating higher loneliness (Cronbach's  $\alpha = 0.86$ ).

### Independent Variables

Independent variables included demographic variables, health, social resources, personality, MIGM, and perceived self-continuity. Demographic variables included respondents' age and gender, as well as income adequacy (from 1 = "I do not have enough money to support myself" to 3 = "I have more than enough money to support myself"). Subjective health was assessed with one item asking for the current health status (from 1 = very bad to 5 = very good). The availability of social resources was measured with three single items: children yes/no ("Do you have common children/adopted children with your [ex-]partner?"; 1 = yes, 0 = no), new partner ("Are you currently in a relationship?"; 1 = yes, 0 = no; applies to divorcees only), and someone to count on ("Were you able to count on the help of someone to deal with the separation/divorce better?"; 1 = yes, 0 = no; applies to divorcees only).

Personality traits were measured with the short version of the Big Five Inventory (BFI-10; [41]). The items were evaluated on a 5-point scale (from 1 = strongly disagree to 5 = strongly agree), and

responses were combined into a mean score for each personality trait: neuroticism, extroversion, conscientiousness, openness, and agreeableness [6]. Higher scores indicate higher levels of the personality traits.

MIGM and self-continuity were measured with the Exeter Identity Transition Scales [42]. Individuals were asked to report up to six different social groups that they belonged to and to rate how important these groups were to them using a 5-point scale (from 1 = not important to 5 = very important). An MIGM sum score was calculated, using only the groups that were rated as important (4) or very important (5), with higher values indicating a higher number of valued social groups. Although, previously, Jetten and colleagues [36] had created an indicator for MIGM by multiplying average importance with the number of groups mentioned, for the present paper we used specifically those groups evaluated as important or very important to ensure that this construct reflected membership in highly valued groups only. Self-continuity was measured with the following three items: "I am the same person as I always was," "With time a lot of things have changed, but I'm still the same person," and "I'm a different person than I was in the past." These items were evaluated on a 5-point scale (from 1 = "Does not apply to me at all" to 5 = "Fully applies to me"). The mean score of the three items was computed, with higher values indicating higher perceived self-continuity (Cronbach's  $\alpha = 0.82$ ).

### Analytical Strategy

We conducted between-group analyses of variance (ANOVA) with Scheffé's post hoc tests to examine mean-level differences between married and divorced (short-term vs. long-term divorced)

**Table 2.** Correlations of the study variables for the short-term divorced (below diagonal;  $n = 425$ ) and long-term divorced individuals (above diagonal;  $n = 425$ ).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Social loneliness	1	0.03	-0.15**	0.23***	-0.35***	-0.05	-0.16**	-0.33***	0.24***	-0.37***	-0.16**	-0.10*	-0.14**	-0.22***	-0.12*
2 Age	0.06	1	-0.13**	-0.02	-0.01	0.07	-0.19***	-0.10*	-0.05	-0.04	0.01	0.06	0.08	0.11*	0.10*
3 Gender	-0.06	-0.13**	1	-0.05	-0.07	0.04	-0.18***	0.20***	0.17***	0.12*	0.11*	0.16***	0.11*	-0.10*	-0.11*
4 Income adequacy	-0.19***	0.06	-0.03	1	0.29***	-0.03	0.15**	0.02	-0.18***	0.04	-0.06	-0.05	-0.02	0.10*	0.04
5 Subjective health	-0.28***	-0.03	-0.06	0.24***	1	-0.05	0.10*	0.07	-0.31***	0.09 <sup>+</sup>	0.09 <sup>+</sup>	0.09 <sup>+</sup>	0.06	0.15**	0.09 <sup>+</sup>
6 Children	-0.01	-0.02	0.08 <sup>+</sup>	-0.07	-0.07	1	-0.03	0.21***	-0.01	0.08	0.004	-0.02	-0.01	0.01	-0.04
7 New partner	-0.09 <sup>+</sup>	-0.11*	-0.22***	0.10 <sup>+</sup>	0.19**	-0.00	1	0.01	-0.14**	0.08	0.01	-0.15**	-0.01	0.04	0.02
8 Someone to count on	-0.38***	-0.08	0.16**	0.01	0.04	-0.03	0.02	1	-0.02	0.22***	0.05	0.11*	0.07	0.18***	-0.11*
9 Neuroticism	0.33***	0.06	0.20***	-0.13**	-0.36***	0.04	-0.12*	-0.11*	1	-0.26***	-0.18***	-0.10*	-0.04	-0.14**	-0.13**
10 Extraversion	-0.38***	-0.02	0.08 <sup>+</sup>	0.13***	0.18***	-0.08	0.06	0.21***	-0.18***	1	0.09 <sup>+</sup>	0.06	0.20***	0.13**	-0.06
11 Conscientiousness	-0.09 <sup>+</sup>	-0.02	0.08	-0.01	0.03	-0.05	-0.03	0.20***	-0.08 <sup>+</sup>	0.11*	1	0.06	0.23***	0.06	0.03
12 Agreeableness	-0.19***	0.03	-0.02	0.04	-0.03	-0.08 <sup>+</sup>	-0.07	0.10*	-0.18***	0.07	0.18***	1	0.11*	0.07	0.01
13 Openness	-0.16**	0.11*	0.10*	0.02	-0.01	-0.03	-0.01	0.04	-0.09 <sup>+</sup>	0.25***	0.09 <sup>+</sup>	0.06	1	0.13*	-0.17***
14 MIGM	-0.20**	0.14**	-0.03	0.11*	0.27***	0.01	-0.03	0.05	-0.13**	0.17***	-0.03	0.16**	0.22***	1	-0.07
15 Self-continuity	-0.03	0.14**	-0.09 <sup>+</sup>	0.02	0.03	-0.05	-0.06	0.01	-0.07	-0.04	0.02	0.05	-0.09 <sup>+</sup>	-0.03	1

Short-term divorced: up to 2 years since divorce; long-term divorced: 2–5 years since divorce. MIGM, multiple important group memberships. <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

groups in social loneliness and its predictors. Regression analyses were then conducted separately for each of the three groups using demographic variables, health, social resources, personality, self-continuity, MIGM, and the interaction between self-continuity and MIGM as predictors, and social loneliness as the outcome. The data were examined for univariate and multivariate outliers and multicollinearity. Bootstrapping was used to test the robustness of the models.

In order to test whether the standardized regression coefficients, examined in separate analyses, were significantly different across groups and, therefore, confirm our theoretical assumptions about differences and similarities between the divorced groups and the married control group, we conducted follow-up regression analyses with the whole sample to test interaction effects (i.e., group indicator  $\times$  centered predictor [43]). For the interpretation of the results, we used standardized coefficients ( $\beta$ ),  $F$  values, and  $R^2$  values. All statistical analyses were conducted with SPSS version 23.

## Results

### Descriptive Statistics

Mean levels and standard deviations are presented in Table 1. Divorced individuals felt more lonely than married individuals, regardless of the time passed since divorce (short-term divorced:  $M = 1.22$ ; long-term divorced:  $M = 1.19$ ; married:  $M = 0.89$ ;  $F(2, 1,708) = 20.95$ ,  $p < 0.001$ ). Long-term divorced individuals had the lowest MIGM score (short-term divorced:  $M = 1.44$ ; long-term divorced:  $M = 0.93$ ; married:  $M = 1.15$ ;  $F(2, 1,716) = 14.66$ ,  $p < 0.001$ ). In terms of self-continuity, the three groups were significantly different from each other, with the married having the highest and the short-term divorced the lowest levels (short-term divorced:  $M = 1.78$ ; long-term divorced:  $M = 2.11$ ; married:  $M = 2.66$ ;  $F(2, 1,704) = 108.34$ ,  $p < 0.001$ ).

The correlational analyses (Tables 2, 3) revealed moderate associations in the expected directions. Expected correlations with loneliness were found for the short- and long-term divorced groups (e.g., for short-term divorced: social loneliness with neuroticism,  $r = 0.33$ \*\*\*; for long-term divorced: social loneliness with MIGM,  $r = -0.22$ \*\*\*). However, age and children in both groups, and gender, conscientiousness, and self-continuity only in the short-term divorced group, were not significantly associated with loneliness. Furthermore, for the married individuals, greater social loneliness was significantly negatively associated with all other variables, except for neuroticism, for which the association was positive.

### Factors Associated with Social Loneliness

Multiple regression analyses were performed to investigate the predictors of social loneliness separately for the short-term divorced, long-term divorced, and married individuals (Table 4). For the short-term divorced group, the model explained 34% of the individual differences in loneliness. In this group, individuals with fewer financial resources ( $\beta = -0.09$ \*) and poorer subjective health ( $\beta = -0.15$ \*\*) felt lonelier, as well as those who were less extroverted ( $\beta = -0.22$ \*\*\*), less agreeable ( $\beta = -0.12$ \*), and more neurotic ( $\beta = 0.17$ \*\*\*). Having someone to count on in overcoming the divorce was also associated with lower social loneliness ( $\beta = -0.27$ \*\*\*). Importantly, MIGM ( $\beta = -0.04$ ) and self-continuity ( $\beta = -0.01$ ) did not explain any individual differences in loneliness.

For the long-term divorced, the model explained 39% of the total variance in loneliness. Men felt lonelier than women in this group ( $\beta = -0.15$ \*\*), as well as those who did not have a new partner ( $\beta = -0.12$ \*\*). Similar to the

**Table 3.** Correlations of study variables for continuously married individuals ( $n = 869$ )

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Social loneliness	1												
2 Age	-0.08*	1											
3 Gender	-0.11**	-0.08*	1										
4 Income adequacy	-0.17***	-0.01	0.00	1									
5 Subjective health	-0.20***	-0.19***	-0.09*	0.19***	1								
6 Children	-0.08*	-0.05	0.01	0.02	0.06 <sup>+</sup>	1							
7 Neuroticism	0.15***	-0.04	0.20***	-0.08*	-0.22***	-0.02	1						
8 Extraversion	-0.29***	-0.06	0.06 <sup>+</sup>	0.02	0.05	0.05	-0.16***	1					
9 Conscientiousness	-0.17***	0.09**	0.05	-0.002	0.12***	-0.02	-0.06 <sup>+</sup>	0.14***	1				
10 Agreeableness	-0.15***	0.01	0.09**	0.02	0.06 <sup>+</sup>	0.06 <sup>+</sup>	-0.13***	0.06 <sup>+</sup>	0.07*	1			
11 Openness	-0.11**	0.01	0.07*	0.10**	0.6	-0.06 <sup>+</sup>	-0.09**	0.21***	0.14***	0.04	1		
12 MIGM	-0.18***	0.04	-0.05	0.10**	0.09*	0.05	-0.12***	0.17***	0.02	0.06 <sup>+</sup>	0.11**	1	
13 Self-continuity	-0.13***	0.20***	-0.03	-0.08*	0.07*	-0.01	-0.12***	0.03	0.11**	0.13***	-0.05	-0.06	1

The “new partner” and “someone to count on” variables do not apply to the married. MIGM, multiple important group memberships. <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 4.** Predictors of social loneliness (standardized regression coefficients,  $N = 1,719$ )

	Short-term divorced ( $n = 425$ )	Long-term divorced ( $n = 425$ )	Married ( $n = 869$ )
Age	0.04 <sup>a</sup>	-0.01 <sup>a</sup>	-0.10** <sup>b</sup>
Gender (female = 1)	-0.05 <sup>a</sup>	-0.15** <sup>b</sup>	-0.12*** <sup>b</sup>
Income adequacy	-0.09*	-0.13**	-0.12***
Subjective health	-0.15** <sup>a</sup>	-0.23*** <sup>b</sup>	-0.15***
Children (yes = 1)	-0.06	-0.003	-0.05
New partner (yes = 1)	-0.05	-0.12**	-
Someone to count on (yes = 1)	-0.27***	-0.22***	-
Neuroticism	0.17*** <sup>a</sup>	0.04 <sup>b</sup>	0.05 <sup>b</sup>
Extraversion	-0.22***	-0.25***	-0.23***
Conscientiousness	0.03 <sup>a</sup>	-0.06 <sup>b</sup>	-0.09** <sup>b</sup>
Agreeableness	-0.12**	-0.02	-0.08*
Openness	-0.06	-0.04	-0.003
MIGM	-0.04 <sup>a</sup>	-0.20* <sup>b</sup>	-0.36*** <sup>c</sup>
Self-continuity	-0.01 <sup>a</sup>	-0.20*** <sup>b</sup>	-0.16*** <sup>b</sup>
MIGM × self continuity	-0.04 <sup>a</sup>	0.11 <sup>b</sup>	0.27** <sup>b</sup>
$R^2$	0.34	0.39	0.21

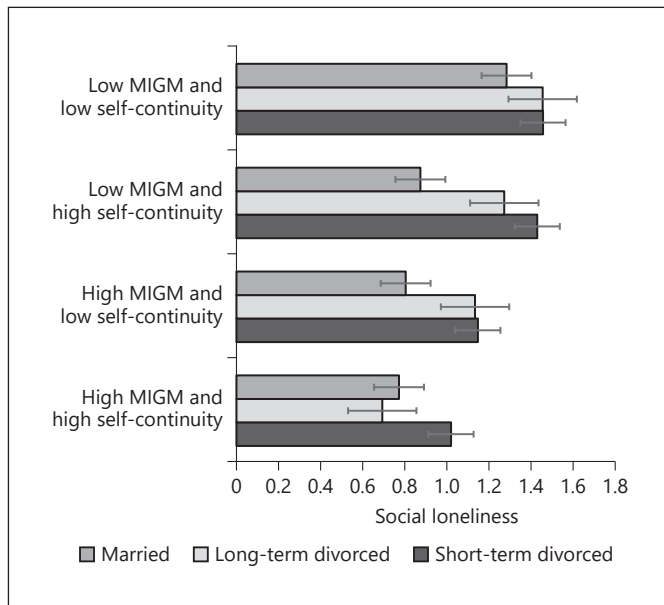
Short-term divorced: up to 2 years since divorce; long-term divorced: 2–5 years since divorce. MIGM, multiple important group memberships. a, b, c: differences between specific groups (e.g., a vs. b, b) for predictors based on follow-up analyses for group differences. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

short-term divorced, having fewer financial resources ( $\beta = -0.13^{**}$ ), being in poorer health ( $\beta = -0.23^{***}$ ), not having someone to help deal with divorce ( $\beta = -0.22^{***}$ ), and being less extroverted ( $\beta = -0.25^{***}$ ) were associated with higher loneliness. In contrast to the short-term divorced, having MIGM was linked to less loneliness ( $\beta = -0.20^*$ ), whereas lower self-continuity was linked to higher loneliness ( $\beta = -0.20^{***}$ ).

For the married individuals, the amount of total variance in social loneliness explained by the regression model was substantially smaller (21%). In this group, age was a significant predictor: younger married individuals felt lonelier ( $\beta = -0.10^{**}$ ). Similar to the long-term divorced group, men were also lonelier than women ( $\beta = -0.12^{***}$ ). Lower income adequacy ( $\beta = -0.12^{***}$ ) and poorer health ( $\beta = -0.15^{***}$ ) were linked to higher loneliness, similar to the divorced groups. Aside from the beneficial effect of extroversion ( $\beta = -0.23^{***}$ ), which was also present in both divorced groups, being less agreeable ( $\beta = -0.08^*$ ) and less conscientious ( $\beta = -0.09^{**}$ ) were associated with higher loneliness. Similar to the long-term divorced group, having less MIGM ( $\beta = -0.36^{***}$ ) and a lower sense of self-continuity ( $\beta = -0.16^{***}$ ) were related to higher loneliness among the married individuals. Additionally, the interaction between self-continuity and MIGM was significant in this group ( $\beta = 0.27^{**}$ ).

The three-way interaction between the grouping variable (short-term divorced, long-term divorced, married), MIGM, and self-continuity was also tested (Table 4), suggesting that the interaction was positively associated with





**Fig. 1.** Mean levels and standard errors for social loneliness illustrating the significant three-way interaction grouping variable  $\times$  group identification  $\times$  self-continuity ( $n = 1,719$ ).

social loneliness only in the married group ( $\beta = 0.27^{**}$ ). Indeed, as presented in Figure 1, the levels of social loneliness were lower for the married than for the divorced individuals in any combination of MIGM with self-continuity (e.g., low MIGM and high self-continuity), except when having more group memberships and high self-continuity, which was particularly beneficial. With this combination, the long-term divorced resembled the married in levels of social loneliness. However, in all three groups, the combination that best protected against social loneliness was being a member of multiple important groups and perceiving high levels of self-continuity, while the lack of those factors (low MIGM and low self-continuity) was associated with higher levels of loneliness in all three groups. Regarding the other two combinations, namely, having high MIGM with low self-continuity or low MIGM with high self-continuity, the levels of social loneliness differed significantly only between the married and the two divorced groups. These findings indicate that having high levels in either self-continuity or MIGM can compensate for the lack of the other in all groups, but having high levels in both is most beneficial.

To further confirm these findings, the analyses were replicated with bootstrapping to check for the robustness of the model, producing an average bias estimation of  $<0.007$ , leading to the same results as reported above. The

reliability of the differential predictive patterns across groups was tested with additional regression analyses conducted for the whole sample, including the group variable and interaction effects (e.g., self-continuity  $\times$  grouping variable). The results confirmed the findings reported above and our hypothesis regarding the different predictive patterns across groups (H6).

## Discussion

This study investigated the importance of psychological and social resources as predictors of social loneliness in the context of later-life divorce, with a particular focus on time-dependent differences and a special interest in identity-promoting aspects. Our study contributes to existing research on adaptation to divorce with the following findings: we confirmed differential time-dependent associations of personality (e.g., neuroticism), identity-promoting mechanisms (e.g., multiple memberships in valued social groups and self-continuity), and social resources (e.g., new partner) with social loneliness, comparing two post-divorce groups (short-term, up to 2 years since divorce, and long-term, 2–5 years since divorce) and married individuals.

### *The Central Role of Personality in the First Post-Divorce Phase*

Early after divorce, personality factors had a particularly important role in explaining individual differences in social loneliness. For the recently divorced individuals, extroversion had the strongest effect among the investigated personality aspects, with higher extroversion being associated with lower loneliness. Also, being more agreeable and less neurotic was related to less social loneliness. These findings replicate Pudrovska and Carr's [5] results, showing that more extroverted individuals cope better with divorce, and partly confirm our hypothesis regarding the effect of different personality traits on social loneliness in the context of divorce (H2). Although extroversion was also associated with lower loneliness in the long-term divorced, suggesting that being more open to social contact and enjoying social interactions are also beneficial later, agreeableness and neuroticism were not linked to loneliness in this group. These results confirm our hypothesis (H2a) that during acute transitions, such as right after the divorce, the contribution of personality in overcoming difficulties is more important than other resources, supporting the accentuation model of Caspi and Moffitt [26].

*Identity-Promoting Mechanisms Are Beneficial, but Only for Long-Term Divorced and Married Individuals*

Confirming our hypothesis (H4a) that identity-promoting resources may explain interindividual differences in a later adaptation phase of divorce, we found that being a member of multiple highly valued social groups was associated with lower social loneliness in long-term divorced individuals. These findings support the assumption that belonging to such social groups may be beneficial due to not only accessing social partners but also a context that promotes a person's identity through the importance that they place on those groups. Married individuals also benefitted from multiple important groups, which could indicate their protective nature against consequences of age-related social losses, as well as potential issues occurring within their long-term marriage (H4). These findings also seem to be in line with Weiss [20], who argued that individuals lacking an engaging social context are at risk of experiencing social loneliness.

Perceiving higher self-continuity was also associated with experiencing less social loneliness in the long-term divorced, confirming theoretical assumptions about the importance of self-continuity as a crucial identity process and as a means of coping with adversity (H3). As indicated by Atchley [30], self-continuity may enable adaptation in times of change, when previously important identities can no longer be maintained. However, our findings expand the existing knowledge about self-continuity by indicating the time frame in which it becomes particularly important in the divorce process, namely, after the first adaptation phase has passed (H3a). In our study, a positive effect also became apparent in married individuals, suggesting that self-continuity may be beneficial even without specific critical life events. In line with Chandler and Proulx [32], who argued for the importance of identity stabilization, self-continuity was associated with lower loneliness. The similar predictive patterns (H6) among the long-term divorced and married groups are in line with Amato's theory [4], providing new insights into how the process of adaptation to divorce is associated with social engagement and identity, as well as adding to the literature regarding the protective role of self-continuity, which seems beneficial regardless of having a life crisis or not.

For those individuals who had more recently been divorced, the positive impact of perceived self-continuity was not confirmed (H3a). In line with Amato [4], the results indicate that time is an important factor to consider: in the first post-divorce phase, individuals may experi-

ence higher psychological distress because they have to deal with the loss and their new life circumstances. During the early post-divorce phase, individuals try to evaluate the new situation, making them less likely to perceive any self-continuity, which is supported by the fact that the short-term divorcees reported the lowest level of self-continuity. Similarly, MIGM did not prove beneficial for the recently divorced (H4a), which partly stands in contrast to the findings by Haslam et al. [36], who showed that multiple group memberships have a positive impact on well-being in times of life transitions, such as in post-stroke rehabilitation. The contrasting findings may suggest that divorce, as a life event, has its particular challenges that are not only bound to the availability of psychological and social resources but also closely related to the time frame. In the context of divorce, it seems to be the case that the "social cure" effects [36] only occur later in the adaptation process. Thus, paralleling Amato's divorce theory [4], MIGM and self-continuity may not be helpful during divorce in the short run, but they become important after some time.

Regarding the interplay between self-continuity and multiple group memberships, individuals who had MIGM and high levels of self-continuity were less lonely across all groups (H5). However, there were differential associative patterns for each group. In the married group, individuals with concurrent low self-continuity and few group memberships had a significantly higher risk of experiencing loneliness. Being prone to loneliness, even in the context of marriage, is in line with prior studies [2, 4]. Married individuals may experience other transitions, such as loss of shared interests, or personal or partner health issues, which could be additional risk factors for loneliness. Previous research [36] has suggested that individuals who have MIGM in times of transitions are better able to find new social roles and adjust them to their identity, which may, according to our findings, also be important for older married adults. Additionally, self-continuity allows these changes to be perceived as additions to their life story rather than disruptions [30]. Thus, our findings make an important contribution to the understanding of the interplay of social group memberships and self-continuity, as well as how they are associated individually with adverse outcomes, such as social loneliness, in post-divorce phases in later life (H5a), as well as in the context of marriage. This is the first study to address both variables together; future studies may replicate the interplay between MIGM and self-continuity in different contexts with or without critical life events.

### *Social Resources Associated with Feeling Less Lonely in Both Post-Divorce Phases*

Having someone to help deal with the divorce was important for short- and long-term divorced individuals – as was having a new partner, although only for the long-term divorced group – and was associated with lower social loneliness levels, partially confirming our hypothesis (H1), because children did not explain any variance in social loneliness. For the recently divorced in particular, having a person to help them overcome the divorce was the most powerful factor examined in this study. These findings indicate the beneficial role that the availability of social partners can play after divorce, especially in the recently divorced group. Haslam et al. [35] previously reported that only group social engagement (i.e., group membership) and not individual social engagement (i.e., one-on-one interactions) was important as a longitudinal predictor in the context of age-associated cognitive decline. However, individual and group social engagement may both have independent beneficial effects in the context of loneliness. Thus, our results add to the literature regarding the importance of individual ties and group engagement during a life crisis such as divorce.

### *Age and Social Loneliness*

Being older and married seems to be beneficial in terms of social loneliness, in line with previous research indicating that with advancing age, individuals generally feel as lonely as or less lonely than they did at younger ages [15, 16, 44]. The fact that age was not negatively related to social loneliness in any of the two divorced groups suggests that individuals, independent of their age, may experience loneliness due to the challenges they face in adapting to divorce. These findings indicate that individuals who have experienced a critical life event, such as divorce, in later life may be at risk of not experiencing the same normative reduction in social loneliness levels as their married counterparts do with advancing age. They may also experience stability in social loneliness, but at significantly higher levels than the married individuals do, as indicated by our results. Nevertheless, the relationship between age and social loneliness may be stronger when examined with prospective longitudinal data, where the pre-divorce levels of social loneliness could also be considered.

### *Limitations*

Despite the various strengths of this study (i.e., novel research question, unique measures, large representative sample), various limitations deserve mention. One limita-

tion is that we used the moment when separation or divorce was declared as the main marker of the transition. However, separation or divorce is a long-lasting process that may begin well before it is publicly declared [4]. Defining the start of a transition is always difficult, which may particularly be true for divorce. Thus, the definition of the three groups, despite the clear-cut results, may hide some heterogeneity. Another limitation is that we used cross-sectional data, meaning that changes in predictors and outcome before and after divorce could not be examined. Causal inferences were not possible, and only longitudinal data would help disentangle the dynamics of the coping process. Nevertheless, the results provide an important starting point for future prospective longitudinal research and the development of interventions. Lastly, we were interested in performing additional gender analyses for each group because the literature indicates that further research would contribute to a better understanding of the differences and similarities between men and women in how they experience changes to identity [45, 46]. However, this was not possible because the subsamples of men and women were too small for the number of predictors entered in the regression, leading to unreliable findings.

### **Conclusions**

In conclusion, the presence of social and psychological resources, including valued social groups and self-continuity, seems to be beneficial for both divorced and married individuals, in order to prevent social loneliness. Although some resources have similarly positive effects in all groups, such as health and financial means, other resources were more important under certain circumstances – such as personality right after divorce, and group memberships and self-continuity only at a later post-divorce phase. These differential effects highlight the necessity of carefully considering time frames when studying adaptation and creating divorce interventions that take life circumstances and the adaptation phase into account. Furthermore, interventions that target social loneliness in later life should focus on the beneficial effects of important social group memberships and perceived self-continuity for married and long-term divorced individuals. Strengthening the person through the development of self-continuity (e.g., through established programs such as reminiscence therapy) and group social engagement (e.g., enhanced access to community and social skills), with and without divorce experience, seems an effective way to prevent social loneliness in the second half of life.

## Acknowledgements

This work was supported by the Swiss National Centre of Competence in Research LIVES – Overcoming Vulnerability: Life Course Perspectives, which is financed by the Swiss National Science Foundation (grant No. 51NF40-160590). The authors are grateful to the Swiss National Science Foundation for its financial assistance.

## Statement of Ethics

The authors declare that no statement of ethics is needed.

## Disclosure Statement

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Author Contributions

C. Lampraki performed all statistical analyses and wrote and revised the paper. D.S. Jopp supervised the data analyses and revised the paper. D. Spini planned the study, supervised the data analyses, and revised the paper. D. Morselli helped revising the manuscript and supervising the data analyses.

## References

- 1 Brown SL, Lin IF. The gray divorce revolution: rising divorce among middle-aged and older adults, 1990–2010. *J Gerontol B Psychol Sci Soc Sci*. 2012 Nov;67(6):731–41.
- 2 Dykstra PA, de Jong Gierveld J. Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Can J Aging*. 2004 Summer;23(2):141–55.
- 3 Ong AD, Uchino BN, Wethington E. Loneliness and health in older adults: a mini-review and synthesis. *Gerontology*. 2016;62(4):443–9.
- 4 Amato PR. The consequences of divorce for adults and children. *J Marriage Fam*. 2000; 62(4):1269–87.
- 5 Pudrovska T, Carr D. Psychological adjustment to divorce and widowhood in mid-and later life: do coping strategies and personality protect against psychological distress? *Adv Life Course Res*. 2008;13:283–317.
- 6 Perrig-Chiello P, Hutchison S, Morselli D. Patterns of psychological adaptation to divorce after a long-term marriage. *J Soc Pers Relat*. 2015;32(3):386–405.
- 7 Lucas RE. Adaptation and the set-point model of subjective well-being: does happiness change after major life events? *Curr Dir Psychol Sci*. 2007;16(2):75–9.
- 8 Booth A, Amato P. Divorce and psychological stress. *J Health Soc Behav*. 1991 Dec;32(4): 396–407.
- 9 Lucas RE. Time does not heal all wounds. *Psychol Sci*. 2005 Dec;16(12):945–50.
- 10 Bonanno GA, Wortman CB, Lehman DR, Tweed RG, Haring M, Sonnega J, et al. Resilience to loss and chronic grief: a prospective study from preloss to 18-months postloss. *J Pers Soc Psychol*. 2002 Nov;83(5):1150–64.
- 11 Terhell EL. Changes in the personal network after divorce. Amsterdam: Vrije Universiteit; 2004.
- 12 Wang H, Amato PR. Predictors of divorce adjustment: stressors, resources, and definitions. *J Marriage Fam*. 2000;62(3):655–68.
- 13 Kalmijn M, van Groenou MB. Differential effects of divorce on social integration. *J Soc Pers Relat*. 2005;22(4):455–76.
- 14 Widmer E, Aeby G, De Carlo I. Les recompositions familiales dans une perspective configurationnelle. Working Paper No. 8/2012. Geneva: Université de Genève; 2012.
- 15 Shute R, Howitt D. Unravelling paradoxes in loneliness: research and elements of a social theory of loneliness. *Soc Behav*. 1990;5(3): 169–84.
- 16 Tesch-Römer C, Wiest M, Wurm S, Huxhold O. Einsamkeitstrends in der zweiten Lebenshälfte. *Z Gerontol Geriatr*. 2013 Apr;46(3): 237–41.
- 17 Dykstra PA. Older adult loneliness: myths and realities. *Eur J Ageing*. 2009 Jun;6(2):91–100.
- 18 Antonucci TC, Ajrouch KJ, Birditt KS. The convoy model: explaining social relations from a multidisciplinary perspective. *Gerontologist*. 2014 Feb;54(1):82–92.
- 19 Pinquart M, Sorensen S. Influences on loneliness in older adults: a meta-analysis. *Basic Appl Soc Psych*. 2001;23(4):245–66.
- 20 Weiss RS. Loneliness: the experience of emotional and social isolation. Cambridge (MA): MIT Press; 1973.
- 21 Alpass FM, Neville S. Loneliness, health and depression in older males. *Ageing Ment Health*. 2003 May;7(3):212–6.
- 22 Routasalo PE, Savikko N, Tilvis RS, Strandberg TE, Pitkälä KH. Social contacts and their relationship to loneliness among aged people - a population-based study. *Gerontology*. 2006;52(3):181–7.
- 23 Gierveld JJ, van Groenou MB, Hoogendoorn AW, Smit JH. Quality of marriages in later life and emotional and social loneliness. *J Gerontol B Psychol Sci Soc Sci*. 2009 Jun;64(4):497–506.
- 24 Struffolino E, Bernardi L, Voorpostel M. Self-reported health among lone mothers in Switzerland: do employment and education matter? *Population-E*. 2016;71(2):187–214.
- 25 de Vaus D, Gray M, Qu L, Stanton D. The economic consequences of divorce in six OECD countries. *Aust J Soc Issues*. 2017 Jun;52(2): 180–99.
- 26 Caspi A, Moffitt TE. When do individual differences matter? A paradoxical theory of personality coherence. *Psychol Inq*. 1993;4(4): 247–71.
- 27 Bleidorn W, Hopwood CJ, Lucas RE. Life events and personality trait change. *J Pers*. 2018 Feb;86(1):83–96.
- 28 Saklofske D, Yackulic R. Personality predictors of loneliness. *Pers Individ Dif*. 1989; 10(4):467–72.
- 29 David JP, Suls J. Coping efforts in daily life: role of big five traits and problem appraisals. *J Pers*. 1999 Apr;67(2):265–94.
- 30 Atchley RC. A continuity theory of normal aging. *Gerontologist*. 1989 Apr;29(2):183–90.
- 31 Bluck S, Alea N. Remembering being me: the self continuity function of autobiographical memory in younger and older adults. In: Sani F, editor. *Self continuity: individual and collective perspectives*. New York (NY): Psychology Press; 2008. p. 55–70.
- 32 Chandler MJ, Proulx T. Personal persistence and persistent peoples: continuities in the lives of individual and whole cultural communities. In: Sani F, editor. *Self continuity: individual and collective perspectives*. New York (NY): Psychology Press; 2008. p. 213–26.
- 33 Bodenmann G, Charvoz L, Bradbury TN, Bertoni A, Iafrate R, Giuliani C, et al. Attractors and barriers to divorce: a retrospective study in three European countries. *J Divorce Remarriage*. 2006;45(3-4):1–23.
- 34 Jetten J, Haslam C, Alexander SH. *The social cure: Identity, health and well-being*. New York/Hove: Psychology Press; 2012.

- 35 Haslam C, Cruwys T, Haslam SA. "The we's have it": evidence for the distinctive benefits of group engagement in enhancing cognitive health in aging. *Soc Sci Med*. 2014 Nov;120: 57–66.
- 36 Haslam C, Holme A, Haslam SA, Iyer A, Jetten J, Williams WH. Maintaining group memberships: social identity continuity predicts well-being after stroke. *Neuropsychol Rehabil*. 2008 Oct-Dec;18(5-6):671–91.
- 37 Spini D, Jopp DS. Old age and its challenges to identity. In: Jaspal R, Breakwell GM, editors. *Identity process theory: Identity, social action and social change*. Cambridge (CT): Cambridge University Press; 2014. p. 295–315.
- 38 Knöpfli B, Morselli D, Perrig-Chiello P. Trajectories of psychological adaptation to marital breakup after a long-term marriage. *Gerontology*. 2016;62(5):541–52.
- 39 Perrig-Chiello P, Margelisch K. Partnerschaft in der zweiten Lebenshälfte – Herausforderungen, Verluste und Gewinne: Studiendesign und methodisches Vorgehen. Bern: University of Bern; 2015.
- 40 de Jong-Gierveld J, Kamphuls F. The development of a Rasch-type loneliness scale. *Appl Psychol Meas*. 1985;9(3):289–99.
- 41 Rammstedt B, John OP. Measuring personality in one minute or less: a 10-item short version of the Big Five Inventory in English and German. *J Res Pers*. 2007;41(1):203–12.
- 42 Jetten J, Branscombe NR, Haslam SA, Haslam C, Cruwys T, Jones JM, et al. Having a lot of a good thing: multiple important group memberships as a source of self-esteem. *PLoS One*. 2015 May;10(5):e0124609.
- 43 Aiken LS, West SG, Reno RR. Multiple regression: testing and interpreting interactions. Newbury Park (CA): Sage; 1991.
- 44 Luhmann M, Hawkley LC. Age differences in loneliness from late adolescence to oldest old age. *Dev Psychol*. 2016 Jun;52(6):943–59.
- 45 Calasanti T, Bowen ME. Spousal caregiving and crossing gender boundaries: maintaining gendered identities. *J Aging Stud*. 2006;20(3): 253–63.
- 46 Meyers-Levy J, Loken B. Revisiting gender differences: what we know and what lies ahead. *J Consum Psychol*. 2015;25(1):129–49.