Having a Good Time Together: The Role of Companionship in Older Couples’ Everyday Life

Janina Lüscher\textsuperscript{a} Theresa Pauly\textsuperscript{a} Denis Gerstorf\textsuperscript{b} Gertraud Stadler\textsuperscript{c} Maureen C. Ashe\textsuperscript{d} Kenneth M. Madden\textsuperscript{d} Christiane A. Hoppmann\textsuperscript{e}

\textsuperscript{a}Department of Psychology, University of Zurich, Zurich, Switzerland; \textsuperscript{b}Department of Psychology, Humboldt University, Berlin, Germany; \textsuperscript{c}Institute of Gender in Medicine, Charité Universitätsmedizin, Berlin, Germany; \textsuperscript{d}Department of Medicine, University of British Columbia, Vancouver, BC, Canada; \textsuperscript{e}Department of Psychology, University of British Columbia, Vancouver, BC, Canada

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Abstract

Introduction: Companionship (i.e., enjoyable shared activities) is associated with higher emotional and relational well-being. However, the role of companionship for emotional well-being and relationship satisfaction in older couples’ everyday life is not well understood. This article studies time-varying associations of companionship with emotional and relational well-being as older couples engage in their everyday life. Methods: Participants provided three data points a day over 7 days using electronic surveys that were simultaneously completed by both partners. A total of 118 older heterosexual couples reported momentary companionship, positive and negative affect, and closeness. Data were analyzed using an intensive longitudinal dyadic score model. Results: Couples with higher average companionship showed lower overall negative affect, more overall positive affect, and higher overall closeness. During moments of elevated momentary companionship, partners reported more positive affect, less negative affect, and higher closeness. Regarding between-couple partner differences, i.e., when the female partner’s momentary companionship was higher on average than the male partner’s momentary companionship, the female partner also showed less negative affect, more positive affect, and higher closeness than the male partner. During moments in which the female partner’s momentary companionship was higher than the male partner’s momentary companionship, the female partner showed less negative affect, more positive affect, and higher closeness than the male partner. Discussion: Older couples show a consistent link between companionship and emotional well-being and closeness in everyday life emphasizing the importance of studying companionship in close relationships.

Introduction

Everyday life does not take place in isolation; most people interact with others to some extent [1, 2]. Social relationships and social interactions matter for health and well-being and they have important protective functions...
(i.e., [3–5]). Romantic partners typically represent the closest and most important relationship across the adult lifespan (e.g., [2, 6–9]), and they shape both physical health and emotional well-being (i.e., [10–16]). This manuscript focuses on older adulthood, where partners share significant portions of their life together [2]. As they live in the same environment, it is likely that older couples have many joint experiences in their everyday life [2]. Importantly, older adults often report greater relational well-being (i.e., relationship satisfaction) than younger adults do (i.e., [13]) in part because they prioritize close, emotionally meaningful social interactions [17]. One form of emotionally meaningful social interaction with a close other is companionship (i.e., enjoyable shared activities; [18, 19]). To date, few studies have examined companionship in older couples, although it has high relevance for emotional (i.e., high positive and low negative affect) and relational well-being (i.e., high relationship satisfaction and closeness) (cf. [18, 20–22]). The purpose of this study was to examine the relationship between companionship and emotional and relational well-being in older couples’ everyday life using repeated daily life assessments. We apply a dyadic intensive longitudinal approach to examine between-couple and within-couple associations [2].

Social Relationships and Emotional Well-Being in Old Age

Emotional well-being is closely linked in couples as demonstrated by evidence from cross-sectional, long-term longitudinal, and daily life studies (cf. [2]). Older adults optimize their emotional well-being by prioritizing emotionally meaningful social interactions with close others [7, 17] and according to the social input model by actively engaging in positive social interactions [23]. In line with this notion, social interactions with close others such as the respective partner play a particularly important role in shaping emotional well-being in old age [7, 17]. Furthermore, it has been shown that older adults appraise their partner’s behaviors more positively than an objective observer might do [24] and that they report less conflict in their relationship than middle-aged partners [25, 26]. In other words, several lines of research converge in suggesting that older adults capitalize on positive social interactions with their spouse to optimize emotional and relational well-being. Building on this literature, this study targets an understudied yet potentially important form of positive social interaction in old age (see [18] for an exception), namely companionship to shed further light on potential mechanisms through which older partners achieve high emotional and relational well-being in old age.

Companionship and Emotional and Relational Well-Being

Companionship is a positive social exchange process that involves pleasurable social interactions or the participation in shared activities aiming at providing mutual enjoyment [18, 19]. The present study operationally defines companionship by pleasurable and enjoyable interactions with the respective spouse and not by general leisure activities per se [19, 27]. For example, when both partners play a board game together, for this activity to qualify as companionship they would both have to find the activity enjoyable and rate it as pleasant. Companionship is a fundamental feature of close relationships and may be seen as reflecting a lifelong desire to be involved with a partner in mutually enjoyable and satisfying interactions [27, 28]. The term companionship thus refers to shared leisure and other interactions with the romantic partner that are undertaken primarily for the intrinsic goal of enjoyment [18].

Previous studies indicate that companionship with significant others is associated with both physical and mental health benefits [28, 29]. For example, lack of companionship was associated with a higher likelihood of having a heart condition in an older adult sample [30]. To better understand potential intermediaries linking companionship with physical and mental health, this study focuses on everyday manifestations of emotional and relational well-being. For the present study, we operationally define emotional well-being by examining positive and negative affect [31]. Positive affect and relationship satisfaction have been found to have health-protective effects [29]. Relational well-being includes aspects of relationship quality such as relationship satisfaction (defined as the evaluation of whether things are going well in the relationship or not [32]) and closeness (defined as the feeling of connectedness with a romantic partner [33]). Relationship satisfaction and companionship may map into an overlapping conceptual space as relationship satisfaction to the extent that they are both based on positive social interactions. Closeness is not contingent on the presence of positively valenced activities with the partner. Thus, we chose to focus on closeness as relational well-being outcome to reduce the potential of conceptual overlap. Hence, for the purpose of the present study, we examined the role of companionship for positive affect, negative affect, and closeness as older partners engaged in their typical daily life routines and environments.

Previous cross-sectional evidence suggests that companionship may be associated with low negative affect and high relationship satisfaction [18, 34–37]. One facet...
of companionship are self-expanding activities defined as novel, rewarding, arousing, and activating [20, 38]. This facet has been studied somewhat more extensively showing positive effects on affect and relationship dimensions such as relationship satisfaction and closeness [20, 21, 39, 40].

As previous studies from the self-expansion context have not demonstrated consistent gender differences in the association between self-expansion and emotional and relational well-being (cf. [20, 40]), we treat companionship as a dyadic construct characterized by overlapping variance because both partners experience moments of pleasurable social interactions together. The two partners in a couple are treated as one unit because the wife’s report and the husband’s report cannot be assumed to be independent [41]. Moreover, the dyadic level represents the shared variance in companionship between wives and husbands belonging to the same couple [41].

Most of the studies investigating self-expanding activities as one facet of companionship have been conducted in the lab. However, as pointed out more than a decade ago [29], companionship is an everyday phenomenon that is difficult to recreate in the lab and that should be investigated in daily life. Pleasurable social interactions or activities occur in everyday life and are a question of how a couple is experiencing daily life situations. Recreating such positive social interactions in the lab is difficult without jeopardizing ecological validity because on the one hand interactions or activities reported as pleasurable are idiosyncratic and on the other hand they often occur spontaneously. Repeated daily life assessment designs that capture life as it is lived [1, 42] allow to investigate how companionship fluctuates naturally from moment to moment in a natural setting allowing the researcher to examine systematic links with emotional and relational well-being by quantifying how much of the variability in companionship originates at the couple level compared to the momentary level.

Despite the fact that companionship is a common phenomenon in everyday life with high relevance for emotional and relational well-being [19, 29], there are few studies using repeated daily life assessments capturing time-varying associations between companionship and emotional and relational well-being. Stadler et al. [43] took an important first step in this direction using three intensive longitudinal dyadic studies with young and middle-aged couples. They capitalized on recent methodological innovations that facilitate the simultaneous examination of within- and between-couples processes. Specifically, engaging in pleasurable social interactions with a romantic partner was associated with higher levels of and positive changes in emotional and relational well-being in all three studies [43]. These studies with young and middle-aged couples thus provide initial insights into beneficial associations between companionship, positive and negative affect as well as relationship satisfaction in a daily life context. Considering the prominent role of positive social interactions in old age and given the above-described initial evidence from younger couples, we wanted to extend this line of work to older couples.

**The Present Study**

We aimed to examine the role of momentary companionship for older partners’ emotional well-being in terms of positive and negative affect and their relational well-being in terms of closeness. Therefore, we examine variability in partner averages and differences of companionship at the between-couple level and with regard to momentary fluctuations [43].

Figure 1 shows the conceptual model, which is an extension of the Dyadic Score Model [41]. This model differentiates the relatively stable between-couple level over the study period from the momentary level of fluctuations in the predictor. It also includes both partner averages and partner differences for all predictors and outcomes. Partner averages emphasize a joint level (e.g., what level of companionship couples report), while partner differences emphasize a within-dyad contrast (e.g., how much higher or lower the female partner is in companionship than the male partner [41]). Both partner averages and partner differences can operate dynamically over time and thus we can examine different levels of analysis by distinguishing between companionship partner averages and differences in the between-couple level and in momentary fluctuations.

The specific hypotheses underlying this project were preregistered (https://osf.io/evjc2/) as follows: Hypothesis 1a: Regarding between-couple partner averages across the study period, couples with higher companionship will show lower negative affect and higher positive affect and closeness. Hypothesis 1b: Regarding momentary fluctuations in couple averages, in moments in which couples report higher companionship than usual, they will show lower negative affect, more positive affect, and higher closeness. Hypothesis 2a: Regarding between-couple partner differences across the study period, we assume that differences in companionship on the between-couple level will be associated with differences in negative affect, positive affect, and closeness. Specifically, in couples where the female partner’s companionship is higher on
average than the male partner's companionship in line with the difference score used (female partner minus male partner), the female partner will also show less negative affect and more positive affect and closeness than their male partner. Hypothesis 2b: Regarding momentary fluctuations in partner differences, we assume that differences in companionship on the momentary level will be associated with differences in negative affect, positive affect, and closeness. Specifically, in moments in which the female partner's companionship is relatively higher than the male partner's companionship, female partners will also show less negative affect, more positive affect, and higher closeness than male partners. Several covariates that have been linked with the central outcomes over and above our primary indicators are considered in the analysis, including age and self-rated health of both partners (i.e., [2]), presence of other partner when filling out the questionnaire, and years married (i.e., [40]).

Methods

Study Design and Participants

This study used data from 118 older couples who participated in a larger project investigating spousal health dynamics. The goal of the larger project was to better understand the social and psychological factors underlying spousal health dynamics (for further details please see [44]). Older couples were recruited using advertisements in the media (e.g., local papers, online forums, etc.), posters displayed in local senior and community organizations (e.g., community centers, public libraries, senior centers), existing subject pools, and Facebook ads.

Participants were excluded from the participation for the following reasons: (1) aged less than 60 years, (2) not currently in a long-term relationship, or if only one partner wanted to participate, (3) unable to read English or Mandarin/Cantonese proficiently, (4) unable to read newspaper-sized print (subjects would have been unable to read the questionnaires), (5) unable to hear an alarm clock (subjects would have been unable to hear the beeps letting them know that it is time to complete the daily questionnaires), (6) having suffered any cardiac, respiratory, musculoskeletal, or neurological conditions for which exercise is contradicted (i.e., that limits their physical activity), and (7) diagnosed with any neurodegenerative disease (e.g., Alzheimer’s or Parkinson's) or brain dysfunction (e.g., stroke).

From an original sample of 129 older couples entering the study, 9 couples discontinued after the baseline session. Data from one couple were excluded due to limited command of the study language, and one couple was excluded due to missing data on key study variables. The majority of the participants were Caucasian (women: 64.1%; men: 60.0%), with 36.8% of all participants being Asian and 0.9% Hispanic. The mean age of the women was $M = 69.37$ years (SD = 5.15), and the mean age of the men was $M = 71.58$ years (SD = 5.93). They were married with their current partner on average for $M = 40.35$ years (SD = 13.57). Many participants reported having a university degree (women: 40.2%; men: 40.8%) and most were presently retired (women: 88.6%; men: 85.2%). Overall, participants rated their health as good (women: $M = 3.30$, SD = 0.93; men: $M = 3.23$, SD = 0.90; on a scale from 1 = poor, 5 = excellent). Participants provided informed consent and received USD 100 CAD per partner as reimbursement for study participation. The study was approved by the Clinical Research Ethics Board of the University of British Columbia.

Participants answered short surveys and were instructed in how to complete the electronic survey (iDialogPad; G. Mutz, Cologne, Germany) for daily life assessments on separate password protected devices. In the following, we describe the measures relevant to this project. This manuscript focuses on simultaneous current positive and negative affect and closeness ratings, and retrospective assessments on how pleasurable their most important interaction since the previous assessment was if it had occurred with the respective spouse three times a day (at approximately 11:00 a.m., 4:00 p.m., 9:00 p.m.) over a 7-day period. Out of 2,206 social interactions for female partners since the previous assessment and 2,139 social interactions for male partners since the previous assessment, 1,066 (49%) were with the respective spouse. Out of those 1,066 interactions, only 20 (1.9%) for female partners and 11 (1.0%) for male partners did involve quarreling, arguing, or having conflict. Out of all social interactions, female partners interacted with other family members (20.3%), friends (29.1%), service providers (9.0%), and others (9.6%), whereas male partners interacted with other family members (15.2%), friends (19.1%), service providers (10.9%), and others (9.8%).
Table 1. Descriptive statistics of variables of interest

| Measure                  | M   | SD  | SDW | KF  | C  |
|-------------------------|-----|-----|-----|-----|----|
| Companionship           |     |     |     |     |    |
| Partner average         | 78.35 | 14.79 | 9.22 | –  | –  |
| Partner difference      | 0.04  | 9.76  | 7.09 | –  | –  |
| Negative affect         |     |     |     |     |    |
| Partner average         | 15.35 | 11.78 | 5.41 | 1.00 | 0.79 |
| Partner difference      | 1.77  | 8.44  | 4.30 | 0.99 | 0.72 |
| Positive affect         |     |     |     |     |    |
| Partner average         | 71.85 | 11.83 | 5.77 | 1.00 | 0.82 |
| Partner difference      | −1.26 | 8.63  | 4.80 | 0.99 | 0.77 |
| Closeness               |     |     |     |     |    |
| Partner average         | 97.11 | 15.88 | 7.18 | –  | –  |
| Partner difference      | −1.58 | 10.62 | 5.84 | –  | –  |

N = 118 (236) couples (individuals) with a maximum of n = 1,066 observations. We report the means of the person-specific mean levels (M), the average standard deviation (SD), and the average within-couple standard deviation (SDW). N, number of couples (individuals); n, number of available diary days; KF, between-couple reliability; C, within-couple reliability.

Measures

Descriptive statistics of variables of interest are reported in Table 1. Momentary companionship during the most important recent interaction with the partner was assessed after the following instruction: “Please vividly picture your most important interaction when answering the following questions. Try to imagine yourself in the situation. An interaction can be important because it comes to mind easily or because it took up a large amount of time.” with the item “How pleasant was this interaction?” adapted from Furman and Buhrmester [45] ranging from 0 (not at all) to 100 (very much) three times/day. Data were used only when both partners reported that they interacted with their partner since the last assessment which was in 49% of all reported social interactions.

Momentary affect was reported using eight common high and low arousal negative affect (sad, overwhelmed, irritated, lonely, anxious, tired, nervous) and positive affect items (happy, calm, alert, relaxed, content, enthusiastic, interested, excited, satisfied [46, 47]) ranging from 0 (not at all) to 100 (very much). Reliability scores are reported in Table 1. Momentary closeness was assessed with a single item asking “How close do you currently feel to your partner?” with a response format ranging from 0 (not at all) to 100 (very much).

Statistical Analysis

Accommodating the nested nature of the data set (repeated occasions nested within individuals within dyads), hypotheses were tested within a multilevel modeling framework using an intensive longitudinal dyadic score model (LDSM; [43]) extending the cross-sectional dyadic score model described by Tida et al. (DSM; [41]). On the left are the four dyadic predictor variables: (a) partner averages on the between-couple level, (b) fluctuations in partner averages on the momentary level, (c) differences between partners at the between-couple level, and (d) fluctuations in partner differences on the momentary level. On the right are the two dyadic outcome variables for each outcome (positive and negative affect and closeness), one reflecting the partner averages and the other reflecting the partner differences (e.g., female partner minus male partner). The LDSM emphasizes dyadic level variables as well as dyadic contrasts for both the predictor and the outcome variables [41]. Therefore, reports by both partners of couples were transformed into partner averages and differences for both the predictor variables (i.e., momentary companionship) and the outcome variables (i.e., momentary negative and positive affect and closeness). All partner differences were calculated as female partner’s score minus male partner’s score.

For descriptive purposes, reliabilities for partner averages and differences of the positive and negative affect scales were computed in line with Stadler et al. [43]. For variables assessed with at least two items, reliabilities on the between-couple level (KF) and the daily level (C) were computed [48, 49].

Multilevel modeling was employed using IBM SPSS Statistics Version 25.0 to account for couple members’ momentary observations [1]. To predict partner averages and differences of outcome variables, a general linear mixed model was used. To examine momentary fluctuations of partner averages and differences of momentary companionship on partner averages and differences of outcome variables unconfounded with between-couple partner averages and differences, the predictor variables were decomposed into between-couple partner average and difference predictors and momentary fluctuations of partner average and difference predictors [1, 43]. Separate LDSM was conducted for partner averages and differences of each outcome variable to facilitate model convergence and the specification of maximal random effects. Two different time variables were included in the model: a linear time trend across all time points of the study, coded from 0 = first momentary assessment to 20 = 21st momentary assessment, and time of day, coded 0 = 11:00 a.m., 1 = 4:00 p.m., and 2 = 9:00 p.m. Additionally, a maximal random effects structure was specified for each model including random slopes of all within-couple predictors. In case of nonconvergence, the random effect structure was successively reduced until convergence was met. Finally, as a sensitivity analysis, the models were rerun, adjusting for both partners’ age (grand mean centered), self-rated health, presence of partner when filling out the questionnaire, and years married. The sensitivity analysis of all the models revealed that the pattern of results did not change after inclusion of these covariates. Therefore, the more parsimonious models are reported.

Power analysis was conducted using the SIMR package [50] where simulations based on artificial data were run. Based on previous studies [44, 51, 52], we assumed small effect sizes for fixed effects of predictors of interest (0.2) and control variables (0.1). Effects for random intercepts and random slopes were also estimated to be small for predictors (0.2) and control variables (0.1). Using 1,000 simulations for 3 daily measurement points on 7 days of 236 individuals nested within 118 couples (two-tailed test, α = 0.05), there were 99.0% power to detect between-couples partner averages and 81.0% power to detect between-couple partner differences. Moreover, there were 100.0% power to detect momentary fluctuations in couple averages and 100.0% power to detect momentary fluctuations in couple differences.
Table 2. Correlations between partner averages and differences of momentary companionship, negative and positive affect, and closeness at the between-person level

|   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
|---|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. Companionship couple mean | –   | 0.08 | –   | −0.60*** | −0.18* | 0.71*** | −0.01 | 0.72*** | 0.12 |
| 2. Companionship couple difference | –   | –   | −0.08 | −0.34*** | 0.05 | 0.59*** | 0.15 | 0.67*** |
| 3. Negative affect couple mean | –   | 0.16 | −0.56*** | −0.10 | −0.44*** | −0.09 |
| 4. Negative affect couple difference | –   | −0.23* | −0.37*** | −0.21* | −0.23* |
| 5. Positive affect couple mean | –   | –   | −0.11 | 0.61*** | 0.13 |
| 6. Positive affect couple difference | –   | –   | 0.10 | 0.50*** |
| 7. Closeness couple mean | –   | –   | –   | –   | –   | 0.19* |
| 8. Closeness couple difference | –   | –   | –   | –   | –   | –   |

N = 118 couples (=236 individuals). *p < 0.05, **p < 0.01, ***p < 0.001.

Results

Table 1 presents means, standard deviations, and reliability scores. Reliability analysis for partner averages and differences in positive and negative affect demonstrated very good reliability on the momentary level (R_C = 0.72–0.89) and excellent reliability on the between-couple level (R_CF = 0.99–1.00). In Table 2, bivariate correlations of the main study variables are shown. Partner averages of momentary companionship were negatively associated with partner averages of negative affect (r = −0.60, p < 0.001) and positively associated with partner averages of positive affect (r = 0.71, p < 0.001) and partner averages of closeness (r = 0.72, p < 0.001). Moreover, partner differences in momentary companionship were negatively associated with partner differences in negative affect (r = −0.34, p < 0.001) and positively associated with partner differences in positive affect (r = 0.59, p < 0.001) and partner differences in closeness (r = 0.67, p < 0.001).

In an extension of previous research, we hypothesized that momentary companionship would be associated with reduced negative affect and elevated positive affect and closeness. Table 3 shows an overview of the results of all models. Regarding temporal effects, partner averages and differences in positive affect and closeness remained relatively stable over time in the study. For negative affect, partner averages and differences showed a very small negative time slope. Beyond that, couples did not differ in partner averages and differences of positive and negative affect and closeness between 11:00 a.m. and 4:00 p.m. compared to the 9:00 p.m. period.

Companionship and Emotional and Relational Well-Being

Companionship was indeed related to less negative affect, more positive affect, and closeness. Furthermore, partners with overall higher momentary companionship showed lower negative affect (b = −0.50, p < 0.001) and more positive affect (b = 0.63, p < 0.001) as well as higher closeness (b = 0.89, p < 0.001; Hypothesis 1a). Regarding momentary fluctuations in partner averages, in moments when partners reported higher momentary companionship, they showed lower negative affect (b = −0.18, p < 0.001), more positive affect (b = 0.25, p < 0.001), and higher closeness (b = 0.30, p < 0.001; Hypothesis 1b). Partner differences in momentary companionship on the between-couple level and in momentary fluctuations were unrelated to all partner average outcomes.

Regarding between-couple partner differences across the study period, i.e., when the female partner’s momentary companionship was relatively higher on average than the male partner’s momentary companionship (difference score: female partner minus male partner), the female partner also showed less negative affect (b = −0.32, p < 0.001), more positive affect (b = 0.57, p < 0.001), and higher closeness (b = 0.83, p < 0.001) than the male partner (Hypothesis 2a). Regarding momentary fluctuations in partner differences, we found similar patterns. In moments during which the female partner’s momentary companionship was relatively higher than the male partner’s momentary companionship, the female partner also showed less negative affect (b = −0.10, p < 0.001), more positive affect (b = 0.18, p < 0.001), and higher closeness (b = 0.22, p < 0.001) than the male partner (Hypothesis 2b). The between-couple level and momentary fluctuations in partner averages of companionship were unre-
Table 3. Parameter estimates from linear mixed models testing the associations between partner averages and differences of momentary companionship and negative affect, positive affect, and closeness

|                  | Partner averages |                  |                  | Partner differences |                  |                  |
|------------------|------------------|------------------|------------------|---------------------|------------------|------------------|
|                  | negative affect  | positive affect  | closeness        | negative affect     | positive affect  | closeness        |
|                  | estimate         | SE               | estimate         | SE                  | estimate         | SE               |
| Fixed effects    |                  |                  |                  |                     |                  |                  |
| Intercept        | 15.81***         | 0.85             | 72.46***         | 0.79                | 79.48***         | 0.99             | 3.24***          | 0.70               | −1.99**           | 0.65               | −1.4               | 0.76               |
| Time             | −0.08*           | 0.04             | −0.05            | 0.04                | −0.08            | 0.05             | −0.06*           | 0.03                | 0.001              | 0.03               | −0.01              | 0.04               |
| Daytime (11:00 a.m.)<sup>a</sup> | 0.35             | 0.49             | 0.07             | 0.47                | 0.22             | 0.58             | −0.39            | 0.37                | 0.86               | 0.37               | −0.34              | 0.51               |
| Daytime (4:00 p.m.)<sup>a</sup> | 0.33             | 0.47             | −0.06            | 0.46                | −0.17            | 0.57             | −0.14            | 0.35                | 0.39               | 0.35               | −0.23              | 0.50               |
| Companionship partner averages |                  |                  |                  |                     |                  |                  |
| Between-couple level | −0.50***         | 0.64             | 0.63***          | 0.06                | 0.89***          | 0.07             | −0.09            | 0.05                | −0.04              | 0.05               | 0.03               | 0.05               |
| Momentary fluctuations | −0.18***         | 0.03             | 0.25***          | 0.03                | 0.30***          | 0.04             | −0.004           | 0.02                | 0.03               | 0.02               | −0.01              | 0.03               |
| Companionship partner differences |                  |                  |                  |                     |                  |                  |
| Between-couple level | −0.01            | 0.10             | −0.02            | 0.09                | 0.14            | 0.11             | −0.32**         | 0.08                | 0.57***           | 0.07               | 0.83***            | 0.08               |
| Momentary fluctuations | 0.03             | 0.03             | 0.002            | 0.03                | 0.01            | 0.05             | −0.10**         | 0.03                | 0.18***           | 0.03               | 0.22***            | 0.04               |
| Random effects<sup>b</sup> |                  |                  |                  |                     |                  |                  |
| Level 2 (between-couple variances) |                  |                  |                  |                     |                  |                  |
| Intercept        | 56.29***         | 8.83             | 46.89***         | 7.73                | 73.47***         | 12.07            | 39.02***        | 5.95                | 31.42              | 4.86               | 36.19***           | 6.32               |
| Time             | 0.05*            | 0.02             | 0.06             | 0.02                | 0.06*           | 0.03             | 0.02            | 0.01                | 0.01              | 0.01               | 0.04*              | 0.02               |
| Daytime          | 3.00*            | 1.25             | 2.28*            | 1.16                | 0.59            | 1.76             | 0.96            | 0.65                | 0.33               | 0.74               | 0.64               | 1.46               |
| Momentary fluctuations in partner averages | 0.03***          | 0.01             | 0.03**           | 0.01                | 0.09***         | 0.02             | 0.01            | 0.01                | 0.01              | 0.01               | 0.04**             | 0.01               |
| Momentary fluctuations in partner differences | 0.02             | 0.01             | 0.01             | 0.01                | 0.55            | 0.03             | 0.02*           | 0.01                | 0.02*              | 0.01               | 0.04               | 0.02               |
| Level 1 (within-person) |                  |                  |                  |                     |                  |                  |
| Residual         | 26.73***         | 1.66             | 27.06***         | 1.65                | 46.99***        | 2.76             | 19.58***        | 1.17                | 21.03***          | 1.33               | 36.98***           | 2.11               |
| Autocorrelation  | 0.15**           | 0.06             | 0.13*            | 0.06                | −0.02           | 0.06             | 0.22***         | 0.05                | 0.17               | 0.06               | 0.003              | 0.05               |

N = 118 couples, up to 21 measurement times, 1,066 observations. SE, standard error. *p < 0.05, **p < 0.01, ***p < 0.001. <sup>a</sup> Relative to 9:00 p.m.
lated to all partner differences in affect and closeness. The analysis of random effects revealed that there was considerable variability in all effects, including the intercept, time slope, and time of day, as well as in the link of momentary fluctuations in partner averages and outcomes, and momentary fluctuations in partner differences and outcomes (see Table 3).

Discussion

The key objective of this study was to examine momentary associations of between-couple and momentary fluctuations in partner averages and differences in companionship and emotional and relational well-being in old age using an innovative longitudinal dyadic score model. As hypothesized, findings show that momentary companionship is positively associated with between-couple and momentary fluctuations in emotional and relational experiences as older couples engaged in everyday life.

The results on the between-couple level confirm the importance of the association between companionship and affective and relational well-being in older couples. These findings at the between-couple level replicate prior findings from cross-sectional studies linking companionship with higher emotional well-being and relationship satisfaction and closeness (i.e., [19, 20, 38]) as well as the dyadic intensive longitudinal studies of Stadler et al. [43] from younger and middle-aged couples. Therefore, it seems promising to integrate companionship as a positive social interaction factor into theories of emotional and relational well-being, as already suggested by other relationship researchers [18–20, 38].

Overall, positive social interactions are still understudied, and if positive aspects are studied, then the focus is mostly on social support. For future research, it is thus important to broaden the spectrum of positive social interaction factors to add to the understanding of salutatory effects of positive interaction in old age. Especially, given that the results of the present study extend previous research in that companionship in older couples seems to be important for emotional and relational well-being.

In addition to the finding that these relatively stable partner averages and differences in companionship are consequential for older couples, momentary fluctuations in companionship matter as well for affective and relational well-being. These results regarding momentary fluctuations in partner averages and differences of this study in older couples replicate prior findings from dyadic intensive longitudinal studies of Stadler et al. [43] in younger and middle-aged couples. The fact that companionship was associated with better emotional and relational well-being on the momentary level extends findings from prior studies to a more fine-grained temporal grid. Therefore, findings at the momentary level speak significant fluctuations in companionship in daily life. Future research should thus stick to assess companionship several times daily to capture pleasurable interactions when they happen in everyday life.

In line with notions from socioemotional selectivity theory [53], older partners draw a lot of well-being from positive social interactions with their spouse [17, 25, 26]. Companionship might play an important part in that. It is possible that older adults are better at making time for joint pleasurable activities [23]. Furthermore, it could also be that they are better at identifying opportune moments and shared activities that bring them pleasure as they know each other very well [23]. Thus, it is important to investigate how older adults can capitalize on this important social resource to optimize their emotional and relational experiences in everyday life. There, companionship could be a promising factor for future interventions to improve emotional well-being and closeness in older couples' everyday life beyond social support. Future research could build on the present findings and consider implementing an intervention design with one group receiving companionship instructions plus an active control. Besides, in future studies the role of companionship in emotional and relational well-being could be compared in younger, middle-aged, and older couples.

In the present paper, we presented an innovative way to analyze couple data in everyday life. Using a repeated daily life assessment version of the dyadic score model allowed a more in-depth exploration of intensive longitudinal data in couples and is suitable for predictors with shared variance, such as companionship where partners show shared levels and differ meaningfully from each other [41]. As we were interested in shared levels and differences in couples, we did not consider gender differences and focused on the couple level as a particularly meaningful level of analysis. Previous work from the self-expansion context using younger samples has not demonstrated consistent gender differences in the association between self-expansion and emotional and relational well-being [20]. A recent study investigating daily associations with naturally occurring self-expanding activities in younger heterosexual couples tested whether the effects were generalizable across genders [40]. In this study, the link between self-expansion and relationship...
satisfaction did not differ between women and men, indicating that female and male partners of romantic couples benefit from engaging in self-expanding activities. In the present study, a t test for paired samples was used to check whether the female partner differed from the male partner in reporting companionship. Companionship reported by female partners was not significantly lower or higher than male partners \((t(1,065) = 0.14, p = 0.89)\), indicating that also in older couples everyday life self-reports of companionship are not different for female and male partners.

**Strengths and Limitations**

This study has several strengths. We collected repeated daily life assessments from older couples resulting in three data points a day over 7 consecutive days allowing us to examine between-couple and momentary processes and having the advantage of high ecological validity [2]. Furthermore, we applied an innovative repeated daily life assessment version of the dyadic score model [41, 43] that allowed us to replicate previous findings and extend them to older age.

Our findings also need to be interpreted in light of the following limitations: No causality can be established as concurrent associations were analyzed [54]. To establish causality, an experimental design would be needed. A further limitation is that companionship and closeness were both assessed using single items to keep the questionnaires short and participation burden low. It is quite common that in ambulatory assessment research participants report unidimensional constructs in terms of their current experience [55]. This approach is supported by a very high adherence rate. There is evidence that well-chosen single items may serve as valid and useful measures and have been shown as sufficient [56]. This study consistently showed effects as preregistered hypothesized, which is strengthening the validity. Nevertheless, in-depth validation of single items would be advisable. Therefore, researchers should establish common standards for measuring within-person or within-couple variation with one item, which would allow to compare results across studies.

Moreover, we asked participants about the most significant interaction with the partner since the previous assessment. Because the measurement points are several hours apart from each other in our study, it is possible that our couples had several interactions in the time between the assessments and both partners do not reference the same activity when reporting companionship. To address this issue moving forward more fine-grained assessment points would be needed. For example, another study collected audio recordings with a following experience sampling questionnaire once an hour for 7 consecutive days in persons with diabetes type II and their romantic partners to assess positive social interaction factors more fine-grained as well as to make sure that both partners reference the same activity [57].

Additionally, the current study cannot speak to how older couples define companionship, i.e., to which degree these pleasurable interactions include novel and exciting activities versus calm and familiar ones, or if older couples’ companionship differs from younger couples’ companionate activities. Future studies may want to add a qualitative component to elicit such definitions of companionship and also assess companionship behaviorally to avoid potential overlap with positive affect assessment. However, even though there is a positive connotation between companionship and positive affect, we assessed these two constructs differently in that companionship was grounded in a specific interaction and positive affect was measured more generally. Acknowledging that these constructs tap into participating couples’ subjective experiences, we have taken additional measures to separate the constructs on the assessment side by, for example, not including pleasantness in the positive affect scale and also including negative affect. Positive affect and negative affect both cover a broad range of low and high arousal affective states. We have conducted follow-up analyses where we separated high arousal positive affect items (happy, alert, enthusiastic, and excited) from low arousal positive affect items (overwhelmed, irritated, anxious, and nervous) and high arousal negative affect items (overwhelmed, irritated, anxious, and nervous) from low arousal negative affect items (sad, annoyed, lonely, and tired). We found exactly the same pattern of results for partner averages and partner differences for high and low arousal in positive affect as well as in negative affect as when we use high and low arousal items together. These findings speak to the robustness of the effect and they do not suggest that findings are specific to just one outcome that may tap into a related conceptual space (low arousal positive affect).

Regarding some potential disadvantages of using difference scores, we can state that consistent findings across a range of outcomes (positive and negative affect, closeness) at the between-couple and the within-couple level may be seen as alleviating concerns regarding reliability issues with partner difference scores [41].

Another limitation inherent to many volunteer samples is that participants were relatively happy and healthy,
well educated, and married for a long time. Findings may thus not generalize to other samples such as people living in lower socioeconomic contexts [58] or people facing death [59].

Conclusions

This article highlights the importance of studying companionship at a dyadic level and deepens our understanding of how companionship operates in older couples’ everyday life. Our study showed consistent benefits of companionship for affect and closeness at the between-couple level as well as the momentary level. Findings are consistent across three indices, which is in line with the idea that companionship may operate as a resource for positive and negative affect as well as closeness. Therefore, these findings improve our understanding of the role of companionship in older age and render companionship an interesting candidate for interventions to improve relationship functioning. The self-expansion model has generated a considerable body of research that elucidates basic relationship mechanisms. However, to the best of our knowledge, this is the first study investigating companionship in the context of older couples’ everyday life which is important because romantic partners represent the closest and most important relationship across the adult lifespan. The present study is important because it helps to clarify the role of companionship in older couple’s everyday life by applying an intensive longitudinal version of the DSM. Experimental work and intervention studies could complement such findings to ultimately arrive at a better understanding of the beneficial role of companionship for emotional and relational well-being in old age.

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Statement of Ethics

All participating couples were treated in accordance to the ethical guidelines of the Helsinki Declaration 2000. Participating couples have given their written informed consent. The study was approved by the Clinical Research Ethics Board of the University of British Columbia (H12-01854).

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

Christiane A. Hoppmann is the principal investigator of the study. Janina Lüscher analyzed the data and drafted the manuscript. Theresa Pauly co- piloted the analyses. Christiane A. Hoppmann, Theresa Pauly, Gertraud Stadler, Denis Gerstorf, Maureen C. Ashe, and Kenneth M. Madden contributed to the study and the manuscript. All authors read and approved the final manuscript.

Data Availability Statement

In line with transparency of research principles, data analytic methods, data, and study materials will be made available upon request for verification purposes.

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