



HAL
open science

Like-Grandparent Like-Grandchild: Strengthening Emotional Closeness Through Affectionate Communication and Personality Similarities

Mathilde Duflos, Daniel H Mansson, Pierre Cès, Caroline Giraudeau

► **To cite this version:**

Mathilde Duflos, Daniel H Mansson, Pierre Cès, Caroline Giraudeau. Like-Grandparent Like-Grandchild: Strengthening Emotional Closeness Through Affectionate Communication and Personality Similarities. *Journal of Intergenerational Relationships*, In press, 10.1080/15350770.2023.2215225 . hal-04174359

HAL Id: hal-04174359

<https://hal.science/hal-04174359>

Submitted on 31 Jul 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**Like-Grandparent Like-Grandchild: Strengthening Emotional Closeness Through
Affectionate Communication and Personality Similarities**

Mathilde Duflos, PhD¹, Daniel Mansson, PhD², Pierre Cès¹, Caroline Giraudeau, PhD¹.

1. Laboratoire PAVeA, Université de Tours, France

2. Department of Communication Arts & Sciences, Penn State Hazleton, Hazleton, PA, USA

Emails:

Mathilde Duflos, Mathilde.duflos@univ-tours.fr

Daniel Mansson, dhm14@psu.edu

Pierre Cès, pierre.ces@univ-tours.fr

Caroline Giraudeau, caroline.giraudeau@univ-tours.fr

Please, cite as follows:

Duflos, M., Mansson, D. H., Cès, P., & Giraudeau, C. (2023). Like-Grandparent Like-Grandchild : Strengthening Emotional Closeness Through Affectionate Communication and Personality Similarities. *Journal of Intergenerational Relationships*.
<https://doi.org/10.1080/15350770.2023.2215225>

THE VERSION OF RECORD OF THIS MANUSCRIPT HAS BEEN PUBLISHED AND IS
AVAILABLE IN THE *JOURNAL OF INTERGENERATIONAL RELATIONSHIPS*. Published
online on May 17, 2023. Accessible at <https://doi.org/10.1080/15350770.2023.2215225>

Abstract

Framed using affection exchange theory, this study aimed to provide a better understanding of grandparent-grandchild relationships during adolescence and emerging adulthood by testing the mediating role of affectionate communication between the grandchild's perception of grandparent-grandchild personality trait similarities and grandchildren's emotional closeness with their grandparents. 710 French adolescents and emerging adults completed surveys in the context of their relationship with a specific grandparent. Results indicated that adolescents perceived more similarity in their agreeableness, conscientiousness, and neuroticism with their grandparents compared to emerging adults, but no significant difference was found for received grandparental affectionate communication. Adolescents also reported greater emotional closeness with their grandparents compared to emerging adults. Mediation analyses partially supported the hypothesized role of received grandparental affection between personality traits similarities and emotional closeness. These findings highlight the role of similarity in personality traits and the importance of affectionate communication to enhance emotional closeness.

Keywords: grandparenting, personality, affectionate communication, emotional closeness, affectionate exchange theory

Like-Grandparent Like-Grandchild: Strengthening Emotional Closeness Through

Affectionate Communication and Personality Similarities

In France, the average age to become a grandmother is 54 years old and the average age to become a grandfather is 56 years old, the role of grandparent being experienced for 25 years on average (INSEE, 2014). The approximate 25 years that French grandparents share with their grandchildren enables researchers to examine the grandparent-grandchild (GP-GC) relationship over a long period of time and to better understand the specificities related to this intergenerational relationship. The GP-GC relationship has received scholarly attention from a wide range of academic disciplines in non-French contexts. Gerontologists have examined the effects of grandparenting on older persons' mental health (Chung & Park, 2018; Tsai, 2016) and how extended lifespan influenced grandparents' and adult grandchildren's roles within the family (Monserud, 2011) while sociologists have explored the evolution of normative expectations and symbolism associated with the role of grandparenting in line with societal evolutions (Bengtson, 1985; Kemp, 2004), including the importance of maintaining emotional closeness in the GP-GC relationship (Bengtson, 1985).

More recently, communication scholars and psychologists have examined the GP-GC relationship. Communication scholars have focused on the importance of affectionate communication in strengthening the GP-GC relationship (e.g., Mansson et al., 2017) while psychologists have extended the study of personality traits in the GP-GC relationship (Hakoyama & MaloneBeach, 2013). Nonetheless, a common focal variable among these researchers is the GP-GC emotional closeness and the extent to which structural and behavioral aspects of the GP-GC relationship influence GP-GC emotional closeness. Thus, to bridge these lines of GP-GC relationship research, the purpose of this study is to examine grandchildren's received affectionate communication as a mediator between GP-GC

personality trait similarities and perceived GP- GC emotional closeness from the perspective of adolescent and emerging adult grandchildren.

Personality

Personality has been extensively studied in psychology, mainly through the five “facets” of the Big Five (Costa & McCrae, 1995) which are: extraversion, agreeableness, conscientiousness, neuroticism, openness. Extraversion is associated with having a lot of energy and being enthusiastic as well as with higher levels of affectionate communication in interpersonal relationships (Floyd, 2002). Agreeableness is associated with being altruistic, kind, and loving (Marsh et al., 2013) but also with the ability to establish positive relationships (DeYoung, 2015). Conscientiousness is associated with having organizational skills, perseverance as well as with preference for long-term goals (Liu & Campbell, 2017) and with facilities to regulate negative affect (Javaras et al., 2012). Neuroticism is associated with, anxiety, hostility, frequent worries, emotional instability, and depression (Costa & McCrae, 1980). Openness is associated with creativity, curiosity and novelty thinking (Marsh et al., 2013). These facets varies across individuals and across ages (Soto et al., 2011).

Individuals’ personality traits have been found to influence the perception of the quality of interpersonal relationships (Mund et al., 2018), thus, we can expect that grandchildren’s perceptions of grandparents’ personality will influence their level of emotional closeness. Family studies outlined that personality traits influenced the parent-child relationship in that parent-child neuroticism and agreeableness was associated with a better relationship (Werneck et al., 2014). Higher levels of neuroticism in mothers are associated with more frequent negative emotional expressions toward their children (Smith et al., 2007), which suggests that grandchildren may feel more emotionally distant from grandparents with higher levels of neuroticism. Additionally, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism have been linked to more

positive parent-child interactions (Prinz et al., 2009), thus, we expect grandchildren to perceive higher levels of emotional closeness and affectionate communication with grandparents expressing similar levels in these personality traits.

In 1991, Kennedy reported that emerging adult grandchildren felt closer with grandparents whose personality they appreciated. In 2013, Hakoyama and Malone-Beach highlighted that similarity in personality between grandchildren and grandparents influenced the grandchildren's perception of relational closeness with their grandparents; they also reported that grandchildren tended to perceive all their personality traits as similar to their grandparents' traits. However, their study did not precisely if specific similarity of personality traits (i.e., differentiating each dimension of the personality) predicted more emotional closeness. Therefore, the examination of the multiple traits of personality as influencing the intergenerational emotional closeness appears to be a fruitful area of scholarly inquiry.

Emotional Closeness

Emotional closeness is an important indicator of relational closeness. In fact, it is considered as the strongest indicator of relationship strength (Marsden & Campbell, 1984). Emotional closeness can be defined as a "sense of shared experiences, trust, concern, and enjoyment of the relationship" (Lee et al., 1990, p. 433). A strong emotional closeness between grandparents and their adolescent and emerging adult grandchildren was found to be associated with high contact frequency, mutual engagement, mother's perception of the grandparent as a good grandparent, received grandparental affection (see Duflos et al., 2022 for a review). Therefore, in line with Mansson et al. (2017), we expect to highlight a relationship between emotional closeness and affectionate communication in the GP-GC relationship.

Affectionate Communication

Floyd and Morman (1998) conceptualized affectionate communication as “an individual’s intentional and overt enactment or expression of feelings of closeness, care, and fondness for another” (p. 145). Affectionate communication plays an important role in maintaining satisfying and close relationships (Floyd, 2019) and can thus be expected to be related to relational closeness. Indeed, in a series of affectionate grandparent studies, Mansson (2013a, 2013c) outlined that among emerging adult grandchildren, there were positive association between affectionate communication received from their grandparents and grandchildren’s relational satisfaction, communication satisfaction, liking, and trust with their grandparents. These positive effects of received grandparental affection may, in part, not only explain why grand- children actively maintain their relationships with affectionate (Mansson, 2014) and emotionally close (Mansson et al., 2010) grandparents, but also remain open to the idea of caring for their grandparents in the future (Mansson, 2020). These studies also indicate that affection exchange theory (AET, Floyd, 2001) is applicable in the context of GP-GC relationships.

Affection Exchange Theory

AET was developed by Floyd (2001) who posited that affectionate communication is “an adaptive behavior that contributes to humans’ long-term viability and procreative success” (p. 40). Accordingly, both the sender and receiver of affectionate communication benefit from it as it contributes to enhance relational, psychological, and physiological well-being (see Floyd, 2019 for a review). Since 2011, AET has been applied to GP-GC relationships in several studies (e.g., Bernhold & Giles, 2019; Mansson et al., 2017; Mansson, 2013a, 2013b, 2013c, 2014). These studies suggest that grandparental affection is expressed through four types of affectionate communication (i.e., love and esteem, caring, memories and humor, and celebratory affection).

Rationale

In the present study, we examine the influence of GP-GC personality trait similarities on adolescent and emerging adult grandchildren's perceived emotional closeness with their grandparents as well as the mediating role of received grandparental affection between the aforementioned variables in a French context. Given the importance of grandparents during adolescence and emerging adulthood as source of unconditional support and in helping grandchildren to transition into adulthood (Duflos & Giraudeau, 2021), better understanding the specificities of that relationship might help to facilitate intergenerational relationships. To date, no study has established the link between similarity of specific personality traits between grandparents and grandchildren, and emotional closeness nor with affectionate communication and the GP-GC relationship in the French context. Based on previous studies, we know that, from a developmental perspective, the GP-GC relationship can play a major role in adolescents' and emerging adults' development and well-being (Duflos et al., 2022). Emerging adulthood is considered as an age of identity exploration, of instability, of feeling in-between, of possibilities, and as the most self-focused age (Arnett, 2004), which makes it a unique period to study in order to understand intergenerational relations. Despite disagreement among researchers about recognizing emerging adulthood as a developmental stage, previous research on grandparenting pointed out specific features of this period in terms of intergenerational relationship, stressing the importance to distinct emerging adulthood from adolescence and from adulthood when studying family relationships.

As grandchildren grow older, their relationships with grandparents is bound to change (Bangerter & Waldron, 2014). Parental influence will decrease (Roberto & Stroes, 1992), grandparents will adopt a norm of non-interference in their grandchildren's lives (Kemp, 2004), and contact frequency often declines (Geurts et al., 2009; Silverstein & Marengo, 2001). Moreover, a possible decline in grandparents' general health might interfere with GP-GC closeness (MaloneBeach & Hakoyama, 2015), inducing changes in the types of contact

and activities they share. Additionally, the similarity in personality has been found to influence emotional closeness between grand- parents and grandchildren (Hakoyama & MaloneBeach, 2013) and grand- children's received grandparental affection has been related to higher levels of emotional closeness in the GP-GC relationship (Mansson et al., 2017).

Despite exponentially growing interests in the GP-GC relationship, scholars generally limit their studies to traditional variables within their disciplines while neglecting to draw on the work conducted outside their specific disciplines. To address this limitation, this study is conducted to merge the work conducted by previous scholars in communication and psychology by examining the interplay among personality traits, affectionate communication, and emotional closeness in the GP-GC relationship with specific attention paid to how grandchildren perceive their relationship with their grandparents at different periods of life. For instance, according to Soto et al. (2011), emerging adults and older adults exhibit higher levels of openness, conscientiousness, and agreeableness than adolescents do and lower levels of extraversion. On the opposite, adolescents and emerging adults exhibit higher levels of neuroticism than older adults. Therefore, we hypothesize that:

H₁ Compared to adolescents, emerging adults will perceive greater similarity in four personality traits (i.e., openness, conscientiousness, agreeableness, and extraversion) with their grandparents, but no significant difference should be found for neuroticism.

Based on extant literature, emotional closeness between grandchildren and grandparents tends to decrease over time (Furman & Buhrmester, 1992; Hakoyama & MaloneBeach, 2013). Therefore, we expect adolescents to report greater emotional closeness with their grandparents compared to emerging adults, which prompted the following hypothesis:

*H*₂ Compared to emerging adults, adolescents will report greater emotional closeness and affection received from their grandparents.

As sharing similar personalities has been found to improve the quality of a relationship (Byrne et al., 1967; Gonzaga et al., 2007), we expect that sharing similar personalities will also be related to greater emotional closeness and affectionate communication in the GP-GC relationship. Moreover, received grandparental affection has been associated with greater GP-GC emotional closeness (Mansson et al., 2017). Thus, to corroborate and extend this body of literature we posit that:

*H*_{3a} Grandchildren's perceived grandparent-grandchild personality trait discrepancies will be related negatively to grandchildren's emotional closeness with grandparents.

*H*_{3b} Grandchildren's perceived grandparent-grandchild personality trait discrepancies will be related negatively to grandchildren's received grandparental affection.

*H*_{3c} Grandchildren's received grandparental affection will be related positively to grandchildren's emotional closeness with grandparents.

*H*_{3d} Affectionate communication will mediate the relationships between personality traits similarities and emotional closeness with grandparents.

Methods

Participants and Procedures

The sample consisted of 710 French adolescents (11-18 years old) and emerging adults (19-25 years old) ($M = 18.29$, $SD = 2.90$) who were in contact with at least two biological grandparents. Emerging adults were recruited from a public university and from social networks; adolescents were recruited from high schools and middle schools. Most of the sample (i.e., 65.36%) was comprised of women and 34.64% men. Following the approval of the ethics committee (n°2019-05-04), we administered the questionnaire between September 2020 and March 2021. Participants aged 16 and older completed online-surveys, participants

aged between 11 and 15 years old answered paper-surveys after submitting a parental consent form. All participants included in this study were volunteers and where applicable, we separated parental consents from the questionnaires to process the data anonymously. Participants answered thinking about their closest grandparent in one part, thinking about their least close grand- parent in another part. The order of presentation of these two parts of the survey was randomly presented to participants. At the end, we divided the sample and selected the closest grandparent for half of the sample and the least close grandparent for the other half. This step minimizes bias related to responses based on the favorite grandparent as it is a common limitation in studies on grandparenthood. The grandparents on whom the partici- pants reported were mostly maternal grandmothers (34.56%), followed by paternal grandmothers (25.39%), maternal grandfathers (20.17%), and paternal grandfathers (19.89%). The survey, which on average took 23 minutes to complete consisted of three measures detailed below.

Measures

Participants answered demographic questions followed by the three scales presented below.

Personality. We measured participants' personality traits and their perceptions of their grandparent's personality traits using the Ten-Item Personality Inventory (TIPI, Gosling et al., 2003) which was translated and validated in French by Storme et al. (2016). This instrument assesses the big five personality traits (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness). Each dimension was measured by two items, including one reverse-coded item. Responses were rated on a 7-point Likert-scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Similar to Hakoyama and MaloneBeach (2013), we calculated GP-GC personality discrepancy by subtracting the lowest score from the highest score for the

five dimensions of personality for each participant and their chosen grandparent. Lower discrepancy scores indicated greater similarities in a personality trait.

Affectionate Communication. We measured grandchildren's received grandparental affection using the Grandchildren's Received Affection Scale (GRAS) which is a 17-item instrument (Mansson, 2013b, 2013c). This is a four-dimensional scale (i.e., love and esteem, caring, memories and humor, and celebratory). This scale was validated in French by Duflos et al. (2021). Responses were rated on a 7-point Likert-scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Higher scores indicate greater levels of received affectionate communication from grandparents. The alpha coefficients in this study were .93 for love and esteem, .93 for caring, .90 for memories and humor, and .79 for celebratory affection.

Emotional closeness. We measured the grandparent-grandchild emotional closeness using three 7-point semantic differential items (i.e., *detached-intimate*, *close-distant*, *warm-cold*) measure proposed by Bernhold and Giles (2019). The second and third items were reverse coded. Higher scores indicate greater level of emotional closeness. The alpha coefficient in this study was .87.

Statistical Analyses

A MANOVA was used to compare adolescents and emerging adults levels of similarity in personality traits with their grandparents as well as affectionate communication received from grandparents. An independent samples t-test was used to compare adolescents' and emerging adults' levels emotional closeness with their grandparents. SPSS 27.0 was used to conduct all the statistical analyses described in this paper.

Pearson correlational analyses were performed to examine the relationships between personality traits discrepancies, affectionate communication, and emotional closeness.

Mediation analyses were performed using model 4 of the PROCESS macro (version 3.5.3) for SPSS. Five multiple mediation analyses were performed using the same four

mediator variables (M; the four dimensions of grandchildren's received affection). The independent variables (X) were the similarity in personality (i.e., similarity in extraversion, agreeableness, conscientiousness, neuroticism, and openness) and the dependent variable (Y) was emotional closeness. Unstandardized regression coefficients were calculated for each path in the mediation model. In mediation analyses, the direct effect of X on Y is designated as the "c-path", the indirect effect of X on Y is designated as the "c'-path", the effect of X on M is the "a-path" and the effect of M on Y is designated as the "b-path". The indirect effect of X on Y through M is the product of a and b (ab). In the current analyses, the bootstrapping method was used to produce 95% bias-corrected confidence interval (CI), based on 10,000 bootstrapped resamples (Hayes, 2013). If zero was not included in a BC 95% CI, then, in 95% of the bootstrapped samples the effect of X (similarity in personality trait) on Y (emotional closeness) was mediated through M (affectionate communication), and if zero was included, then the effect of X on Y was not mediated through M.

Results

For the first and second hypotheses, the sample ($N = 710$) was divided into two subsamples, adolescents (11–18 years old, $n = 333$) and emerging adults (19–25 years old, $n = 377$). The first hypothesis posited that, compared to adolescents, emerging adults would perceive greater similarity in four personality traits (i.e., openness, conscientiousness, agreeableness, and extraversion) with their grandparents, but no significant difference was expected for neuroticism. The results of a MANOVA revealed a significant model, *Wilk's Λ* = .98, $F(1,708) = 3.51$, $p < .01$, $\eta^2 = .004$, power = .92. Significant univariate effects were found for the similarity in agreeableness, $F(1,708) = .49$, $p = .001$, $\eta^2 = .00$, power = .11, in conscientiousness, $F(1,708) = 8.75$, $p = .003$, $\eta^2 = .01$, power = .84, and neuroticism, $F(1,708) = 6.22$, $p = .01$, $\eta^2 = .01$, power = .70. However, no significant univariate effects were found for the similarity in extraversion, $F(1,708) = .11$, $p = .74$, $\eta^2 = .00$, power = .06

and for the similarity in openness, $F(1,708) = 1.52, p = .22, \eta^2 = .002, \text{power} = .23$. An examination of the mean personality discrepancy scores indicated that, compared to emerging adults, adolescents perceived themselves as more similar to their grandparents (i.e., lower discrepancy scores) for extraversion (adolescent $M = 1.60$, emerging adult $M = 1.63$), for agreeableness (adolescent $M = 1.51$, emerging adult $M = 1.57$), for conscientiousness (adolescent $M = 1.37$, emerging adult $M = 1.64$) and neuroticism (adolescent $M = 1.69$, emerging adult $M = 1.93$), but not for openness for which one there was significant effect (adolescent $M = 1.67$, emerging adult $M = 1.55$), indicating a greater similarity in adolescents' personality traits with their grandparents compared to emerging adults. Therefore, the first hypothesis was not supported.

The second hypothesis posited that compared to emerging adults, adolescents would report greater emotional closeness and received grandparental affection. Concerning emotional closeness with the grandparent, the independent samples t-test [$t(707) = -2.27, p = .024$] indicated a significant difference between adolescent ($M = 4.77; SD = 1.64$) and emerging adult grandchildren ($M = 4.48; SD = 1.72$). Concerning received grandparental affection, the results of a MANOVA did not reveal a significant model, *Wilk's $\Lambda = .92, F(1,705) = 1.46, p = .21, \eta^2 = .008, \text{power} = .46$* . Thus, there is no significant difference between adolescents and emerging adults in affectionate communication they receive from their grandparents. Therefore, the second hypothesis was partially supported.

H3a posited that grandchildren's perceived GP-GC personality trait discrepancies would be related negatively to grandchildren's emotional closeness with grandparents. As indicated in Table 1, extraversion ($r = -.09, p = .02$), agreeableness ($r = -.22, p < .001$), conscientiousness ($r = -.21, p < .001$), and openness ($r = -.16, p < .001$) were related negatively to grandchildren's emotional closeness with grandparents while neuroticism (r

$r = .05, p = .23$) was not related to grandchildren's emotional closeness with grandparents. Thus, H3a was partially supported.

H3b posited that grandchildren's perceived grandparent-grandchild (GP-GC) personality trait discrepancies would be related negatively to grandchildren's received grandparental affection. As indicated in Table 1, extraversion was related negatively to love and esteem ($r = -.09, p = .02$), caring ($r = -.08, p = .03$), memories and humor ($r = -.11, p = .005$), and celebratory affection ($r = -.09, p = .013$), agreeableness was related negatively to love and esteem ($r = -.14, p < .001$), caring ($r = -.19, p < .001$), memories and humor ($r = -.16, p < .001$), and celebratory affection ($r = -.11, p = .004$), conscientiousness was related negatively to love and esteem ($r = -.15, p < .001$), caring ($r = -.20, p < .001$), memories and humor ($r = -.13, p = .001$), and celebratory affection ($r = -.14, p < .001$), neuroticism was positively related to love and esteem ($r = .11, p = .002$), caring ($r = .13, p = .001$), and to celebratory affection ($r = .12, p = .002$), but not to memories and humor ($r = .05, p = .23$), and openness was negatively related to love and esteem ($r = -.10, p = .009$), caring ($r = -.19, p < .001$), memories and humor ($r = -.16, p < .001$), and celebratory affection ($r = -.14, p < .001$). Thus, H3b was partially supported.

H3c posited that grandchildren's received grandparental affection would be related positively to grandchildren's emotional closeness with grandparents. As indicated in Table 1, emotional closeness was related positively to love and esteem ($r = .63, p < .001$), caring ($r = .65, p < .001$), memories and humor ($r = .49, p < .001$), and celebratory affection ($r = .50, p < .001$). Thus, H3c was supported.

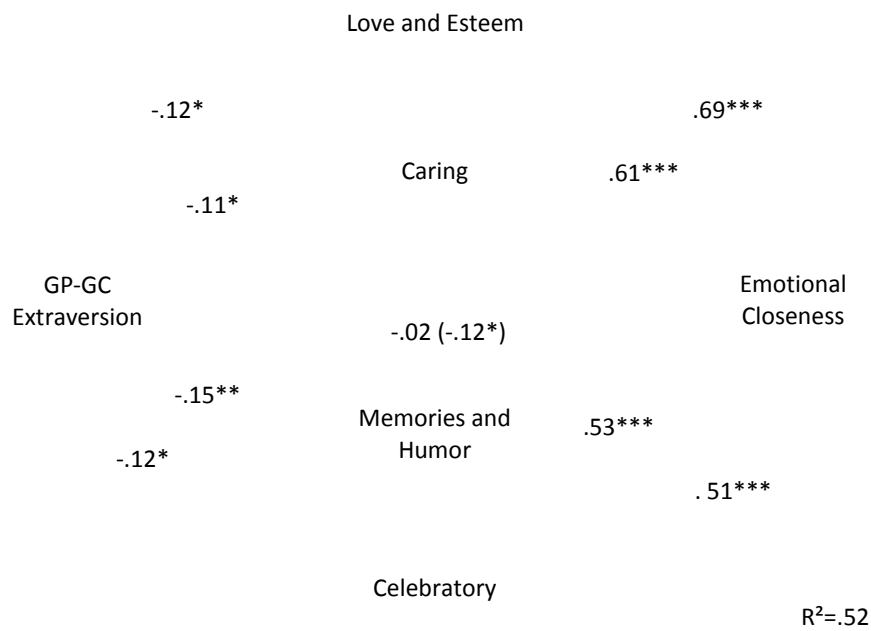
Table 1. Means, Standard Deviations, and Correlations among all Variables.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. GP-GC Extraversion	1.62	1.02	-									
2. GP-GC Agreeableness	1.54	.96	.12**	-								
3. GP-GC Conscientiousness	1.51	.98	.07*	.26***	-							
4. GP-GC Neuroticism	1.83	1.08	.02	.05	-.01	-						
5. GP-GC Openness	1.60	1.00	.11**	.14***	.13**	.01	-					
6. Love and Esteem	4.14	1.57	-.09*	-.14***	-.15***	.11**	-.10**	-				
7. Caring	5.38	1.26	-.08*	-.19***	-.20***	.14***	-.19***	.63***	-			
8. Memories and Humor	4.42	1.53	-.11**	-.16***	-.13**	.05	-.16***	.46***	.56***	-		
9. Celebratory	5.21	1.37	-.09*	-.11**	-.14***	.12**	-.14***	.55***	.66***	.44***	-	
10. Emotional Closeness	4.62	1.42	-.09*	-.22***	-.21***	.12**	-.16***	.63***	.65***	.49***	.50***	-

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

H3d posited that received grandparental affection would mediate the relationships between personality traits similarities and emotional closeness with grandparents, multiple mediations models were used to test this hypothesis. Testing for the effect of the similarity in extraversion on emotional closeness, the effect was not found to be significant [$B = -.02$, 95% CI (-.09 to .05), $p = .56$]. The first model (Figure 1), $R^2 = .52$, $F(5,703) = 151.59$, $p < .001$, revealed that love and esteem ($ab = -.04$, 95% CI (-.08 to -.01), caring ($ab = -.04$, 95% CI (-.08 to -.01) and memories and humor ($ab = -.02$, 95% CI (-.04 to -.01) were full mediators between the similarity in extraversion between a grandparent and a grandchild and their emotional closeness, but celebratory affection was not found to be a significant mediator celebratory affection ($ab = -.004$, 95% CI (-.02 to .01).

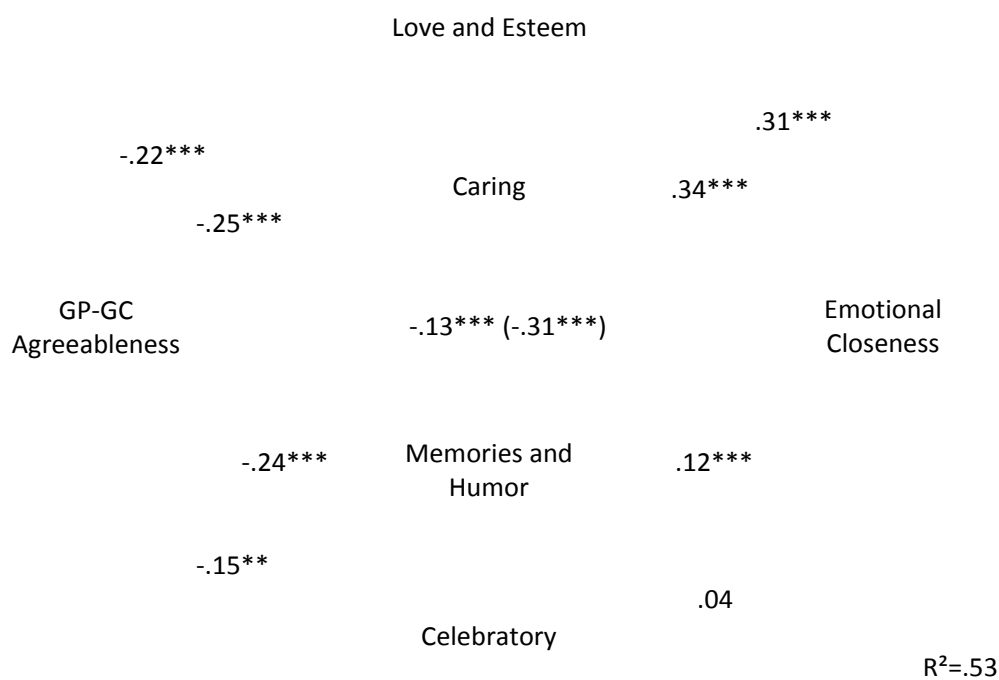
Figure 1. Multiple mediation of different forms of affectionate communication as mediators of grandparents' and grandchildren's similarity in extraversion on grandchildren's perceived emotional closeness. Total-effect (c-path) is given in parentheses.



Note. * = $p < .05$. ** = $p < .01$. *** = $p < .001$. A non-continuous line indicates a non-significant effect. Total effect (c-path) is indicated in parentheses.

Testing the effect of the similarity in agreeableness on emotional closeness, the effect was found to be statistically significant [$B = -.13$, 95% CI $(-.20$ to $-.05)$, $p < .001$]. The third model (Figure 2), $R^2 = .53$, $F(5, 703) = 156.23$, $p < .001$, revealed that love and esteem ($ab = -.07$, 95% CI $(-.11$ to $-.03)$), caring ($ab = -.09$, 95% CI $(-.13$ to $-.04)$), memories and humor ($ab = -.03$, 95% CI $(-.05$ to $.01)$) were partial mediators between the similarity in conscientiousness and emotional closeness but not celebratory affection ($ab = -.01$, 95% CI $(-.02$ to $.01)$).

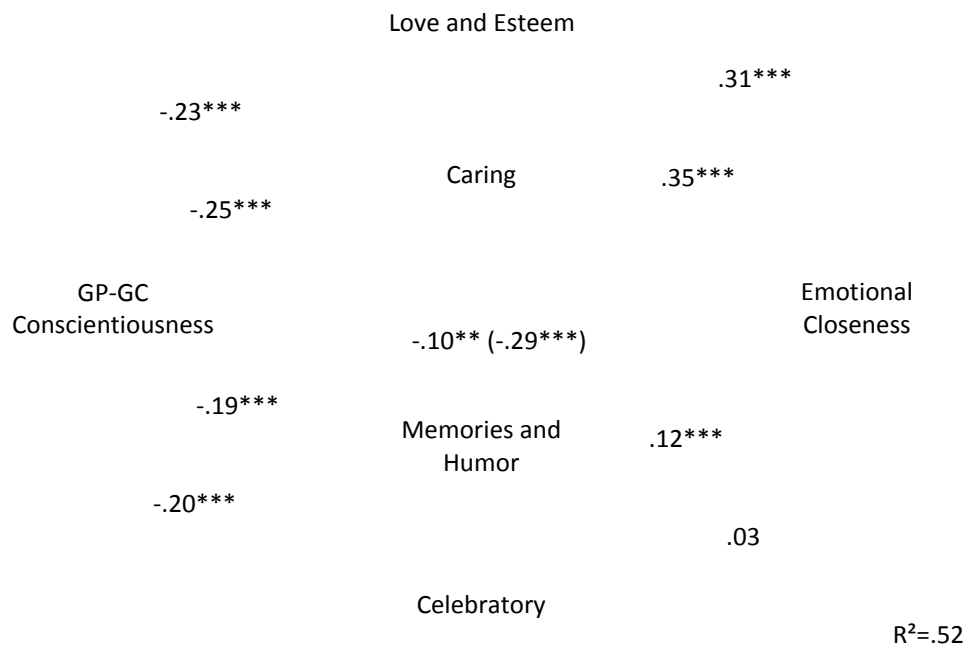
Figure 2. Multiple mediation of different forms of affectionate communication as mediators of grandparents' and grandchildren' similarity in agreeableness on grandchildren's perceived emotional closeness with grandparents. Total-effect (c-path) is given in parentheses.



Note. $*$ = $p < .01$. $***$ = $p < .001$. A non-continuous line indicates a non-significant effect. Total effect (c-path) is indicated in parentheses.

Testing the effect of the similarity in conscientiousness on emotional closeness, the effect was found to be statistically significant [$B = -.10$, 95% CI $(-.17$ to $-.03)$, $p < .01$]. The third model (Figure 3), $R^2 = .52$, $F(5,703) = 154.63$, $p < .001$, revealed that love and esteem ($ab = -.07$, 95% CI $(-.11$ to $-.04)$), caring ($ab = -.08$, 95% CI $(-.14$ to $-.04)$), memories and humor ($ab = -.02$, 95% CI $(-.04$ to $-.01)$) were partial mediators between the similarity in conscientiousness and emotional closeness but not celebratory affection ($ab = -.01$, 95% CI $(-.02$ to $.01)$).

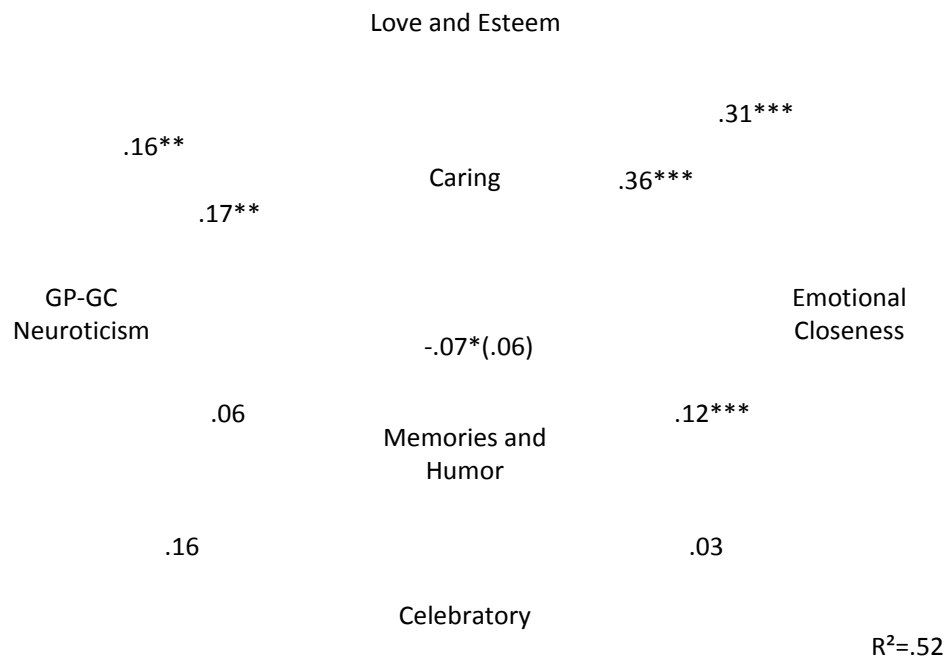
Figure 3. Multiple mediation of different forms of affectionate communication as mediators of grandparents' and grandchildren's similarity in conscientiousness on grandchildren's perceived emotional closeness. Total-effect (c-path) is given in parentheses.



Note. *** = $p < .001$. Total effect (c-path) is indicated in parentheses.

Testing the effect of the similarity in neuroticism on emotional closeness, the effect was found to be statistically significant [$B = -.07$, 95% CI $(-.14, -.003)$, $p < .05$]. In the fourth model (Figure 4), $R^2 = .52$, $F(5,703) = 153.18$, $p < .001$, revealed that love and esteem ($ab = .05$, 95% CI $(.02$ to $.08)$), and caring ($ab = .06$, 95% CI $(.03$ to $.09)$) were partial mediators between the similarity in neuroticism and emotional closeness but not memories and humor ($ab = .01$, 95% CI $(-.004$ to $.02)$) nor celebratory affection ($ab = .01$, 95% CI $(-.01$ to $.02)$).

Figure 4. Multiple mediation of different forms of affectionate communication as mediators of grandparents' and grandchildren's similarity in neuroticism on grandchildren's perceived emotional closeness. Total-effect (c-path) is given in parentheses.

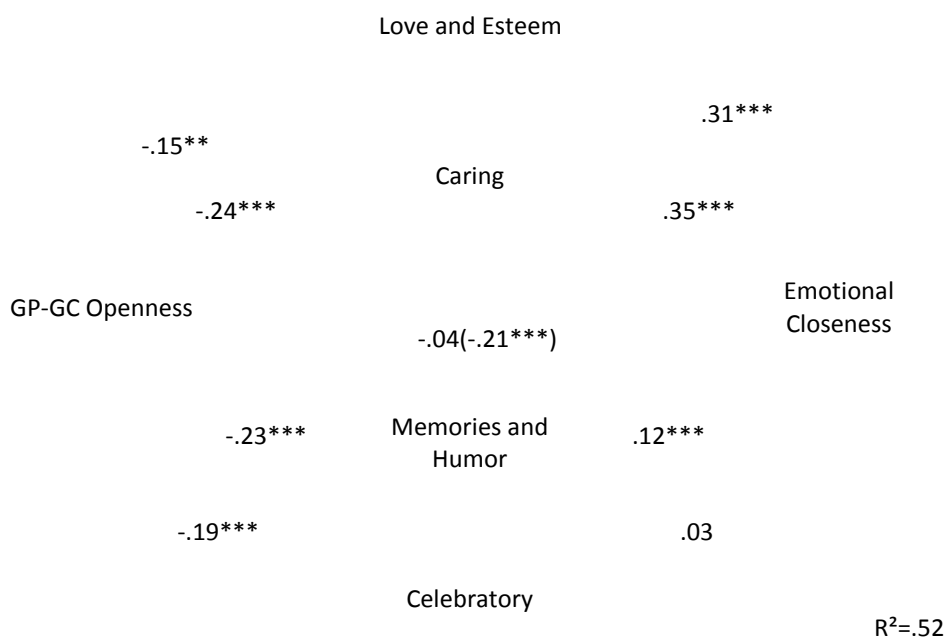


Note. $** = p < .01$. $*** = p < .001$. A non-continuous line indicates a non-significant effect. Total effect (c-path) is indicated in parentheses.

Testing the effect of the similarity in openness on emotional closeness, the effect was not found to be statistically significant [$B = -.04$, 95% CI $(-.12$ to $.03)$, $p = .23$]. The fifth model (Figure 5), $R^2 = .52$, $F(5,703) = 152.09$, $p < .001$, revealed that love and esteem ($ab = -.31$, 95% CI $(-.08$ to $-.01)$), caring ($ab = -.09$, 95% CI $(-.13$ to $-.05)$), and memories and humor ($ab = -.03$, 95% CI $(-.05$ to $-.01)$) were partial mediators between the similarity in openness and emotional closeness but not celebratory affection ($ab = -.01$, 95% CI $(-.02$ to $.01)$). In each model, there was a partial of full mediation of two to three dimensions of affectionate

communication but not of all the mediation of two to three dimensions of affectionate communication but not of all the dimensions of affectionate communication. Therefore, hypothesis 3d was partially supported.

Figure 5. Multiple mediation of different forms of affectionate communication as mediators of grandparents' and grandchildren's similarity in openness on grandchildren's perceived emotional closeness. Total-effect (c-path) is given in parentheses.



Note. $*$ = $p < .05$. $**$ = $p < .01$. $***$ = $p < .001$. A non-continuous line indicates a non-significant effect. Total effect (c-path) is indicated in parentheses.

Discussion

From the perspective of grandchildren, the purposes of this investigation were (a) to examine differences between adolescents' and emerging adults' perceptions of grandparent-grandchild personality similarities, received grandparental affection, and emotional closeness with grandparents, (b) to test the relationships among grandparent-grandchild personality similarities, received grandparental affection, and emotional closeness with grandparents, and (c) to test a mediated model in which received grandparental affection (i.e., love and esteem,

caring, memories and humor, and celebratory) mediates the relationships between grandparent-grandchild personality similarities and emotional closeness with grandparents.

Concerning the similarity in personality traits, we predicted that emerging adults would perceive more similarity in openness, conscientiousness, agreeableness, and extraversion with their grandparents than adolescents. However, contrary to our predictions, the results indicate that adolescents perceived greater similarities in agreeableness, conscientiousness, and neuroticism with their grandparents compared to emerging adults. Adolescents' perceptions might be related to the amount of time adolescents spend with their grandparents compared to emerging adults, which would allow them to witness more facets of their grandparents' personality. There could be a mutual influence of time spent together on each other's personality as partners in a relationship tend to become more emotionally similar (Anderson et al., 2003) and their values and attitudes might converge over time (Acitelli et al., 2001). Concerning grandparent-grandchild emotional closeness, our results indicate that, compared to emerging adults, adolescents feel greater emotional closeness with their grandparents. These findings are consistent with the literature as a decrease of relational closeness between grandparents and emerging adults could, in part, be due to grandchildren gaining independence and geographical distance (Bangerter & Waldron, 2014) which tends to increase when starting college or working life. A decline in emotional closeness between emerging adults and grandparents could be due to grandchildren's commitments to other relationships like friendships and romantic relationships, which could induce emotional distance with the family. This decrease in emotional closeness could be related to grandchildren's acquisition of independence from the family and therefore be a sign of emancipation.

Our results do not reveal any difference between adolescents' and emerging adults' reports of received grandparental affection, indicating that the level of received grandparental

affection remains stable over time. It is interesting to observe that despite changes in the frequency of contacts, in relationship patterns, and in grandparents' and grandchildren's roles, grandparents continue to express affection toward their grandchildren as they grow up. Previous studies already reported high levels of grandparental affection received by emerging adults (Mansson & Sigurðardóttir, 2019). Affection exchange theory (AET) could bring light on this result as grandchildren who reach emerging adulthood develop strong interpersonal relationships and become more likely to procreate. Thus, grandparents' support through affectionate communication would increase their inclusive fitness and therefore benefit the transmission of the family genetic heritage. It is therefore not surprising that emerging adults continue to perceive similar levels of received grandparental affection as it benefits the two generations.

The second part of our study focused on the relationships among grandparent-grandchild personality trait discrepancies, affectionate communication, and emotional closeness. Our findings indicated that grandchildren's perceived grandparent-grandchild similarities in extraversion, agreeableness, conscientiousness, and openness were related negatively to grandchildren's emotional closeness with grandparents while similarity in neuroticism were not related to grandchildren's emotional closeness with grandparents. This last personality trait is associated with hostility and emotional instability (Costa & McCrae, 1980); therefore, sharing similar levels of neuroticism might not improve the level of emotional closeness.

Our findings also indicated that grandparent-grandchild similarity in extraversion, agreeableness, conscientiousness, and openness were negatively related to love and esteem, caring, memories and humor, and celebratory affection, but that similarity in neuroticism was positively related to love and esteem, caring, and celebratory affection and not significantly related to memories and humor. As neuroticism is associated with hostility, similarity in this

personality trait might alter affectionate communication in the grandparent-grandchild relationship by sharing more negative emotions. In line with Mansson et al. (2017), our findings indicated that received grandparental affection (i.e., love and esteem, caring, memories and humor, celebratory affection) was related positively to emotional closeness. Affectionate communication can be used to express love and enjoyment in the grandparent-grandchild relationship, which are components of emotional closeness.

The third part of our study indicated that there was a direct effect of the similarity in agreeableness, conscientiousness and neuroticism on the level of emotional closeness but not in extraversion and openness. The observed influence of the similarity in agreeableness and neuroticism is consistent with previous research on personality and parenting as Werneck (2014) associated these two personality traits with a closer relationship. Concerning the similarity in conscientiousness, McCrae et al. (1998) associated the similarity in this trait between partners to more relational satisfaction, and the nature of this trait might enhance the desire to build a positive relationship to establish a long-term satisfying relationship. If the contexts differ, it is interesting to notice a similar trend between these studies and the current research. Concerning the non-significant influence of the similarity in extraversion and openness, studies about these traits outlined mixed results. Notwithstanding, extraversion was found to be a predictor of relational intimacy (White et al., 2004) so we expected this trait to be positively related to emotional closeness as these two concepts are closely related.

Goodboy and Booth-Butterfield (2009) found that extraversion and openness were not related to the desire of relational closeness among romantic partners, which would be in line with our findings since there was no direct effect similarity in extraversion and in openness on emotional closeness in the present study. A possible explanation could be that extraversion and openness are personality traits that are directed outwards while agreeableness, conscientiousness and neuroticism might be traits that persons feel more comfortable

expressing with relatives. Therefore, perceiving a similarity in the expression of these three traits might enhance emotional closeness in family. These findings extend the study of Hakoyama and MaloneBeach (2013) by specifying which personality traits' similarity have the most influence on emotional closeness.

Our findings further indicate that grandchildren's received affection from their grandparents partially mediates the effect of the similarity in personality traits on emotional closeness. Consistent with our expectations, there was a mediator effect of love and esteem and caring between each similarity in personality traits and emotional closeness. Notwithstanding, memories and humor was a mediator only in the models with the similarity in extraversion, agreeableness, conscientiousness and openness, but not in neuroticism. Since neuroticism is characterized by negative emotions and hostility, it seems logical that it is not associated with the dimension of affectionate communication that deals with fun in the relationships and positive memories. On the other hand, celebratory affection does not moderate the effect of any similarity in personality traits with emotional closeness. A possible explanation would be that celebratory affection overlaps normative solidarity which corresponds to the sense of obligation related to individual's role within the family. Therefore, the expression of this dimension of affectionate communication could be perceived as related to a sense of duty and familial obligation more than to a desire to build an emotionally close relationship.

Practical Implications

Our findings have practical implications for families and family workers. Affectionate communication, through love and esteem, caring, and memories and humor, was found to influence the level of emotional closeness. Therefore, recommendations to families to improve their affectionate communication could help strengthen their relationships, especially during adolescence and emerging adulthood as grandchildren need support and advice as they

transition into adulthood. Family practitioners could give tips to grandparents and grandchildren to find ways to share their feelings and to respond to each other when they receive affection. Moreover, our study points out differences between adolescents' and emerging adults' perceptions of their relationship with their grandparents. If adolescents' and emerging adults' perceptions of received affectionate communication remains stable over time, our findings highlight a decrease in grandparent-grandchild emotional closeness. Based on these results, grandparents could be informed and psychologists should be trained to pay increased attention to elders' mental health during this transition, helping them to cope with their emotions and potential feeling of loneliness related to this decrease of emotional closeness with their emerging adult grandchildren.

Limitations and Future Research

This study presents limitations that should be acknowledged. First, a few adolescents reported difficulties understanding the word "extraverted" in the Ten-Item Personality Inventory. The necessity to compare two age groups and the limitations of the available scales in French limited our choice but further studies should develop short personality scales in French suitable in the adolescents' population. Another limitation that has to be raised is that the sample only consisted of grandchildren. Further studies should consider recruiting grandparents to investigate their perspective, and could even recruit grandparent-grandchild dyads to have a more precise understanding of these intergenerational relationships. An additional limit is that this study only focus on grandchildren's relationship with one grandparent while future studies could include all living grandparents. Future studies could also investigate other age groups, by studying younger grandchildren and adult grandchildren but also by identifying different age groups in grandparents..

Conclusion

This study used affection exchange theory to extend the growing literature concerning the grandparent-grandchild emotional closeness. Our study highlights the importance of affectionate communication in mediating the similarity in personality traits and the level of emotional closeness. Therefore, particular attention should be given to affectionate communication when providing advice to grandparents and grandchildren who experience relational difficulties.

References

Acitelli, L., Kenny, D.A., & Weiner, D. (2001). The importance of similarity and understanding of partners' marital ideals to relationship satisfaction. *Personal Relationships*, 8, 167-185. <https://doi.org/10.1111/j.1475-6811.2001.tb00034.x>

Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time. *Journal of Personality and Social Psychology*, 84(5), 1054–1068.

<https://doi.org/10.1037/0022-3514.84.5.1054>

Arber, S., & Timonen, V. (2012). *A new look at grandparenting*. In S. Arber & V. Timonen (Eds.), *Contemporary grandparenting. Changing family relationships in global contexts* (pp. 1–24). The Policy Press.

Arnett, J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. Oxford University Press.

Bangerter, L. R. L. R., & Waldron, V. R. V. R. (2014). Turning points in long distance grandparent-grandchild relationships. *Journal of Aging Studies*, 29(1), 88–97.

<https://doi.org/10.1016/j.jaging.2014.01.004>

Bengtson, V. L. (1985). *Diversity and symbolism in grandparental roles*. In V. L. Bengtson & J. F. Robertson (Eds.), *Grandparenthood* (pp. 11-29). Beverly Hills: Sage.

Bernhold, Q. S., & Giles, H. (2019). Paternal grandmothers benefit the most from expressing affection to grandchildren: An extension of evolutionary and sociological research.

Journal of Social and Personal Relationships, 36(2), 514–534.

<https://doi.org/10.1177/0265407517734657>

Byrne, D., Griffitt, W., & Stefaniak, D. (1967). Attraction and similarity of personality characteristics. *Journal of personality and social psychology*, 5(1), 82–90.

<https://doi.org/10.1037/h0021198>

Chung, S., & Park, A. (2018). The longitudinal effects of grandchild care on depressive symptoms and physical health of grandmothers in South Korea: a latent growth

approach. *Aging and Mental Health*, 22(12), 1556–1563.

<https://doi.org/10.1080/13607863.2017.1376312>

Costa, P. T., Jr, & McCrae, R. R. (1995). Domains and facets: hierarchical personality assessment using the revised NEO personality inventory. *Journal of personality assessment*, 64(1), 21–50. https://doi.org/10.1207/s15327752jpa6401_2

Costa, P. T., & McCrae, R. R. (1980). Somatic complaints in males as a function of age and neuroticism: A longitudinal analysis. *Journal of Behavioral Medicine*, 3(3), 245–257. <https://doi.org/10.1007/BF00845050>

DeYoung, C. G. (2015). Cybernetic Big Five Theory. *Journal of Research in Personality*, 56, 33–58. <https://doi.org/10.1016/j.jrp.2014.07.004>

Duflos, M., Giraudeau, C., Bailly, N., & Mansson, D. H. (2021). Validity and Reliability of the French Version of the Grandchildren's Received Affection Scale. *Journal of Family Communication*, 21(1), 63–69. <https://doi.org/10.1080/15267431.2021.1876694>

Duflos, M., Giraudeau, C., & Ferrand, C. (2022). What is emotional closeness between grandparents and their adolescent grandchildren? A systematic review. *Journal of Family Studies*, 28(2), 762–784. <https://doi.org/10.1080/13229400.2020.1752771>

Floyd, K. (2019). Communicating Affection in Various Relationships. In Floyd, K. (Eds.), *Affectionate Communication in Close Relationships*. Cambridge, UK: Cambridge University Press.

Floyd, K. (2001). Human affection exchange: I. Reproductive probability as a predictor of men's affection with their sons. *The Journal of Men's Studies*, 10(1), 39–50. <https://doi.org/10.3149/jms.1001.39>

- Floyd, K., & Morman, M. T. (1998). The measurement of affectionate communication. *Communication Quarterly*, 46, 144–162. <https://doi.org/10.1080=01463379809370092>
- Floyd, K., & Voloudakis, M. (1999). Affectionate behavior in adult platonic friendships: Interpreting and evaluating expectancy violations. *Human Communication Research*, 25(3), 341–369. <https://doi.org/10.1111/j.1468-2958.1999.tb00449.x>
- Furman, W., & Buhrmester, D. (1992). Age and Sex Differences in Perceptions of Networks of Personal Relationships. *Child Development*, 63(1), 103–115. <https://doi.org/10.1111/j.1467-8624.1992.tb03599.x>
- Geurts, T., Poortman, A.-R., van Tilburg, T., & Dykstra, P. A. (2009). Contact Between Grandchildren and Their Grandparents in Early Adulthood. *Journal of Family Issues*, 30(12), 1698–1713. <https://doi.org/10.1177/0192513X09336340>
- Gonzaga, G. C., Campos, B., & Bradbury, T. (2007). Similarity, convergence, and relationship satisfaction in dating and married couples. *Journal of Personality and Social Psychology*, 93(1), 34–48. <https://doi.org/10.1037/0022-3514.93.1.34>
- Goodboy, A. K., & Booth-Butterfield, M. (2009). Love Styles and Desire for Closeness in Romantic Relationships. *Psychological Reports*, 105(1), 191–197. <https://doi.org/10.2466/PRO.105.1.191-197>
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(6), 504–528. [https://doi.org/10.1016/S0092-6566\(03\)00046-1](https://doi.org/10.1016/S0092-6566(03)00046-1)

- Hakoyama, M., & MaloneBeach, E. E. (2013). Predictors of Grandparent–Grandchild Closeness: An Ecological Perspective. *Journal of Intergenerational Relationships, 11*(1), 32–49. <https://doi.org/10.1080/15350770.2013.753834>
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation and Conditional Process Analysis: A Regression-based Approach*. New York: Guilford Press.
- INSEE (Institut National de la Statistique et des Etudes Economiques). (2014). *Recensement 2011: Résultats sur un territoire, bases de données et fichiers détail*. Rapport. <https://www.insee.fr/fr/statistiques/2044612#consulter>
- Javaras, K. N., Schaefer, S. M., van Reekum, C. M., Lapate, R. C., Greischar, L. L., Bachhuber, D. R., Love, G. D., Ryff, C. D., & Davidson, R. J. (2012). Conscientiousness predicts greater recovery from negative emotion. *Emotion, 12*(5), 875–881. <https://doi.org/10.1037/a0028105>
- Kemp, C. L. (2004). "Grand" Expectations : The Experiences of Grandparents and Adult Grandchildren. *Canadian Journal of Sociology, 29*(4), 499–525.
- Kennedy, G. E. (1991). Grandchildrens Reasons for Closeness with Grandparents. *Journal of Social Behavior and Personality, 6*(4), 697-712.
- Lee, T. R., Mancini, J. A., & Maxwell, J. W. (1990). Sibling Relationships in Adulthood: Contact Patterns and Motivations. *Journal of Marriage and the Family, 52*(2), 431. <https://doi.org/10.2307/353037>
- Liu, D., & Campbell, W. K. (2017). The Big Five personality traits, Big Two metatraits and social media: A meta-analysis. *Journal of Research in Personality, 70*, 229–240. <https://doi.org/10.1016/j.jrp.2017.08.004>

- MaloneBeach, E., & Hakoyama, M. (2015). Reciprocal Effects among Grandparent-Grandchild Contact Frequency, Closeness, and Perceived General Health. *The International Journal of Aging and Society*, 5(3), 23–37. <https://doi.org/10.18848/2160-1909/cgp/v05i03/35149>
- Mansson, D. H. (2013a). Affectionate communication and relational characteristics in the grandparent-grandchild relationship. *Communication Reports*, 26,47–60. <https://doi.org/10.1080/08934215.2013.798670>
- Mansson, D. H. (2013b). Further validity tests of the grandchildren's received affection scale. *Communication Research Reports*, 30, 201–210. <https://doi.org/10.1080/08824096.2013.806253>
- Mansson, D. H. (2013c). The grandchildren received affection scale: Examining affectual solidarity factors. *Southern Communication Journal*, 78,70–90. <https://doi.org/10.1080/1041794X.2012.729124>
- Mansson, D. H. (2014). Grandparents' expressed affection for their grandchildren: Examining the grandparents' own psychological health. *Communication Research Reports*, 31(4), 329–338. <https://doi.org/10.1080/08824096.2014.963218>
- Mansson, D. H. (2020). Relational maintenance and caregiving in the grandparent-grandchild relationship. *Communication Research Reports*, 37(1–2), 1–10. <https://doi.org/10.1080/08824096.2020.1736540>
- Mansson, D. H., & Booth-Butterfield, M. (2011). Grandparents' expressions of affection for their grandchildren: Examining grandchildren's relational attitudes and behaviors.

Southern Communication Journal, 76(5), 424–442.

<https://doi.org/10.1080/1041794x.2010.508554>

Mansson, D. H., Floyd, K., & Soliz, J. (2017). Affectionate communication is associated with emotional and relational resources in the grandparent-grandchild relationship. *Journal of Intergenerational Relationships*, 15(2), 85–103.

<https://doi.org/10.1080/15350770.2017.1294007>

Mansson, D. H., Myers, S. A., & Turner, L. H. (2010). Relational maintenance behaviors in the Grandchild-Grandparent relationship. *Communication Research Reports*, 27(1), 68–79. <https://doi.org/10.1080/08824090903526521>

Mansson, D. H., & Sigurðardóttir, A. G. (2019). A multinational comparison of grandchildren's received affection from their grandparents. *Journal of Intergenerational Relationships*, 17(2), 127–140. <https://doi.org/10.1080/15350770.2018.1535343>

Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces*, 63, 482–501. <http://dx.doi.org/10.1093/sf/63.2.482>.

Marsh, H. W., Nagengast, B., & Morin, A. J. S. (2013). Measurement invariance of big-five factors over the life span: ESEM tests of gender, age, plasticity, maturity, and la dolce vita effects. *Developmental Psychology*, 49(6), 1194-1218.

<http://dx.doi.org/10.1037/a0026913>

McCrae, R. R., Costa, P. T., Del Pilar, G. H., Rolland, J. -P., & Parker, W. D. (1998). Cross-Cultural Assessment of the Five-Factor Model: The Revised NEO Personality Inventory.

Journal of Cross-Cultural Psychology, 29(1), 171–188. <https://doi.org/10.1177/>

0022022198291009

- Monserud, M. A. (2011). Changes in grandchildren's adult role statuses and their relationships with grandparents. *Journal of Family Issues*, 32(4), 1–21.
<https://doi.org/10.1177/0192513X10384466>.
- Mund, M, Jeronimus, B. F., & Neyer, F. J. (2018). Personality and social relationships: as thick as thieves. In C. Johansen (Ed.), *Personality and disease: scientific proof vs. wishful thinking*. San Diego: Academic Press. <https://doi.org/10.1016/B978-0-12-805300-3.00009-8>
- Prinzle, P., Stams, G. J. J. M., Deković, M., Reijntjes, A. H. A., & Belsky, J. (2009). The relations between parents' Big Five personality factors and parenting: A meta-analytic review. *Journal of Personality and Social Psychology*, 97(2), 351-362.
doi:10.1037/a0015823
- Roberto, K. A., & Stroes, J. (1992). Grandchildren and grandparents: Roles, influences, and relationships. *The International Journal of Aging and Human Development*, 34(3), 227–239. <https://doi.org/10.2190/8CW7-91WF-E5QC-5UFN>
- Silverstein, M., & Marenco, A. (2001). How Americans enact the grandparent role across the family life course. *Journal of Family Issues*, 22(4), 493–522.
- Smith, C. L., Spinrad, T. L., Eisenberg, N., Gaertner, B. M., Popp, T. K., & Maxon, E. (2007). Maternal Personality: Longitudinal Associations to Parenting Behavior and Maternal Emotional Expressions toward Toddlers. *Parenting, science and practice*, 7(3), 305–329. <https://doi.org/10.1080/15295190701498710>
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2011). Age differences in personality traits from 10 to 65: Big Five domains and facets in a large cross-sectional sample.

Journal of Personality and Social Psychology, 100(2), 330–348.

<https://doi.org/10.1037/a0021717>

Storme, M., Tavani, J. L., & Myszkowski, N. (2016). Psychometric properties of the French Ten-Item Personality Inventory (TIPI). *Journal of Individual Differences*, 37(2), 81–87.

<https://doi.org/10.1027/1614-0001/a000204>

Tsai, F. J. (2016). The maintaining and improving effect of grandchild care provision on elders' mental health-Evidence from longitudinal study in Taiwan. *Archives of Gerontology and Geriatrics*, 64, 59–65. <https://doi.org/10.1016/j.archger.2016.01.009>

Werneck, H., Eder, M. O., Yanagida, T., & Rollett, B. (2014). Predicting Adolescents' Parent-Child Relationship Quality From Parental Personality, Marital Conflict and Adolescents' Personality. *European Journal of Developmental Psychology*, 11(2), 159–176. <https://doi.org/10.1080/17405629.2013.876914>

White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big five personality variables and relationship constructs. *Personality and Individual Differences*, 37(7), 1519–1530.

<https://doi.org/10.1016/j.paid.2004.02.019>

