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# From suffering to caring: a model of differences among older adults in levels of compassion

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**Objective:** Compassion is an important contributor to pro-social behavior and maintenance of interpersonal relationships, yet little is known about what factors influence compassion in late life. The aim of this study was to test theories about how past and current stressors and emotional functioning, resilience, and demographic indicators of life experiences are related to compassion among older adults.

**Methods:** One thousand and six older adults (50–99 years) completed a comprehensive survey including self-report measures of compassion, resilience, past and present stress, and emotional functioning (i.e., stressful life events, perceived stress, and current and prior depression and anxiety), and demographic information. The sample was randomly split, and exploratory and confirmatory regression analyses were conducted testing hypothesized relationships with compassion.

**Results:** Exploratory stepwise regression analysis ( $n = 650$ ) indicated that participants who reported higher levels of compassion were more likely to be female, not currently in a married/married-like relationship, reported higher resilience levels, and had experienced more significant life events. Age, income level, past and current mental distress, and interactions between resilience and other predictors were not significantly related to compassion. The associations between greater self-reported compassion and being female, having greater resilience, and having experienced more significant life events were supported by a confirmatory stepwise regression analysis ( $n = 356$ ).

**Conclusions:** Older women report more compassion than older men. Resilience and significant life events, independently, also appear to facilitate a desire to help others, while current stress and past and present emotional functioning are less relevant. Specificity of findings to older adults is not yet known. Copyright © 2014 John Wiley & Sons, Ltd.

**Key words:** depression; anxiety; aging; resilience; life events/stress

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Our human compassion binds us the one to the other – not in pity or patronizingly, but as human beings who have learnt how to turn our common suffering into hope for the future. – Nelson Mandela

Over the last century, a demographic revolution has occurred, which has drastically increased the number of individuals over the age of 65 years, and the current number is expected to almost double by the year 2030

(e.g., Administration on Aging (AOA), 2011). This rise in the number of older adults has created new concerns for society and health services (Hendrie *et al.*, 2010) and a need to conduct research that focuses on factors that can potentially increase health-related quality of life (HRQoL) among older adults.

Compassion may be one of those factors; it is often associated with approach-related behavior and appears

relevant to understanding pro-social behaviors and the maintenance of interpersonal relationships across the lifespan (Eisenberg and Fabes, 1990; Schutte *et al.*, 2001; Sprecher and Fehr, 2005; Van Doesum *et al.*, 2013). Compared with empathy, which is defined as the ability to understand and share the feelings of another person, compassion is defined as having empathy for the suffering of another and additionally having a desire to lessen that persons' suffering (Merriam-Webster, 2014a, 2014b). To date, very little is known about what contributes to compassion in late life. Using self-report methods, the objective of this study was to test several theories about why some older adults may report higher levels of compassion than others.

"I cannot appreciate your pain until I have walked a mile in your shoes" is a common adage in our society that refers to being able to have empathic concern for and intrinsically relate to the suffering of another person. For example, alcoholics often turn to recovered alcoholics for support, veterans turn to other veterans for support, and cancer patients seek support from cancer survivors, suggesting implicit or explicit beliefs that people who have experienced similar situations will provide the most compassionate care. However, there is limited empirical evidence to support the notion that compassionate responding is facilitated by past suffering. Stigma literature has touched on this idea, with some findings that those who have been severely stigmatized report recognizing and developing compassion toward other stigmatized groups (e.g., Tomura, 2009).

A recent study by Stellar *et al.* (2012) found that lower-status undergraduates (lower status measured by a self-ranking of oneself as lower income, education, and job status relative to one's peers) exhibited greater compassion towards others than upper-status individuals in terms of trait and state self reports of compassion as well as physiological responses to observing suffering of others. The authors attribute their findings to the theory that lower-status individuals, based on their own life experiences, are more attuned to negative external stressors and able to more accurately perceive others as in need of support as they have shared similar experiences. Further support for greater compassionate behavior in lower socioeconomic status (SES) individuals has been found in national surveys that indicate that the poorest fifth in the USA donates the largest percentage of their income to charity (Greve, 2009; Piff *et al.*, 2010). Thus, there is theoretical support for the idea that past suffering may lead to present compassion, but this has only rarely been tested, and not specifically in older adults. On the basis of these theories, we examined demographic features as indices of life experiences (e.g., income

level, race/ethnicity, education, and marital status) and also assessed recent stressful life events and history of mental disorders (anxiety and depression). We hypothesized that those reporting more negative experiences and history of mental distress would report the most compassion. To the extent that those older adults who have lived the longest have also experienced more of life's ups and downs, we also examined older age as a possible predictor of greater compassion.

Gender differences in compassion have been noted in studies of younger adults (e.g., Mercadillo *et al.*, 2011), with a tendency to find greater compassion among women. Less is known about whether such differences persist in old age. Viewing oneself as caring and nurturing is important to many women's self-concept and fits societal norms; however, many older women have spent a lifetime caring for others and some may experience burnout (Takai *et al.*, 2011), which could reduce their reported compassion levels. Our large sample allowed us to powerfully test whether older women reported more compassion than older men.

How current suffering (i.e., current depression, current anxiety, and perceived stress) relates to compassion is unknown, and the direction of the association between current distress and compassion is somewhat difficult to predict. On the one hand, one might expect that current suffering (similar to past suffering) promotes compassion by making it easier to understand the troubles of others and come up with possible solutions ("I should do for him what I would want done for me"). On the other hand, one could imagine that those who are currently experiencing stress, depression, and anxiety may be overwhelmed with these personal difficulties and unable to devote resources to caring about the well-being of others. Thus, we explored the relationship between compassion and current levels of perceived stress, depression, and anxiety in our large sample of older adults without an a priori hypothesis regarding the direction of the relationship.

Protective factors are also an important consideration when attempting to understand the development and maintenance of compassionate behaviors. In the literature, the concept of resilience has been used to help understand individual differences in the ability to bounce back after experiencing significant life events and/or adversity (Campbell-Sills and Stein, 2007; Rutten *et al.*, 2013). Additionally, resilience is believed to be an ongoing process that is fostered throughout the lifespan. When faced with a significant hardship, such as depression, anxiety, stress, or a traumatic or stressful life event, it is quite possible for a person to experience a decline in mental health functioning and overall HRQoL. However, it is also possible to develop

a new perspective and grow from a psychologically distressing experience (Zautra *et al.*, 2010). To our knowledge, the possible link between resilience and compassion has not been examined in older adults. Given that resilience is positively related to life satisfaction, health, and longevity (Tugade *et al.*, 2004; Zeng and Shen, 2010; Bowling and Iliffe, 2011; Jeste *et al.*, 2013), we expected that it would also relate to greater compassion for others and may interact with past and/or current emotional function, such that those who suffer but bounce back may be most motivated to help others do the same.

On the basis of these theories about possible factors influencing compassion, we aimed to explore and test hypotheses about how past and current suffering, resilience, and demographic factors indicative of life experiences are related to self-reported compassion levels among older adults. Our large sample allowed us to conduct exploratory analyses on a majority of the sample and then test the robustness of the findings on the remaining subsample.

## Method

### Participants

One thousand and six middle-aged and older adults (mean age = 77.3, standard deviation = 12.2) enrolled in the Successful Aging Evaluation (SAGE) study. This investigation used a structured multi-cohort longitudinal design to study randomly selected, community-dwelling residents of San Diego County, aged 50 years or older, with an overrepresentation of those in their 80s and 90s (Jeste *et al.*, 2013); baseline data were used in this analysis. All assessments were self-report surveys, which were mailed to participants, and stamped addressed envelopes were included for survey returns. In total, 1300 surveys were mailed, yielding a 77% response rate. Of the 1006 participants who completed the SAGE survey, 48 are not included in the present analyses because they did not complete the compassion inventory and 55 because they did not report their psychiatric history, resulting in a final sample size of 903.

### Measures

Measures from the survey that were included in this study were the following:

**Compassion.** The Santa Clara Brief Compassion Scale (SCBCS) is a five-item adaptation of the Compassionate Love Scale (Hwang *et al.*, 2008). The scale is presented in Table 1. Scores were averaged, with

Table 1 Santa Clara Brief Compassion Scale (Hwang *et al.*, 2008)

- |    |   |
|----|---|
| 1. | When I hear about someone (a stranger) going through a difficult time, I feel a great deal of compassion for him or her.      |
| 2. | I tend to feel compassion for people, even though I do not know them.   |
| 3. | One of the activities that provide me with the most meaning to my life is helping others in the world when they need help.    |
| 4. | I would rather engage in actions that help others, even though they are strangers, than engage in actions that would help me. |
| 5. | I often have tender feelings toward people (strangers) when they seem to be in need.  |

Responses made on a scale ranging from 1 = *not at all true of me* to 7 = *very true of me*.

higher scores indicative of greater compassion. The Compassionate Love Scale was designed to measure compassionate love in both intimate relationships and for people in general (Sprecher and Fehr, 2005), and the brief version was developed to assess only compassion towards non-intimate others (i.e., strangers). Our decision to use a brief self-report measure of compassion was in line with large scale survey research. Normed on a sample of college students, internal reliability of this scale is very strong ( $\alpha = 0.90$ ), as is the correlation between the original and brief version ( $r = 0.96$ ) (Hwang *et al.*, 2008).

**Stressors and emotional functioning.** Participants were asked to report whether a doctor had ever diagnosed them with depression (yes or no), the year they were diagnosed, and if they were currently depressed (yes or no). The same questions were asked about anxiety. The way the questions were phrased resulted in every participant with current symptomatology having also had a history of depressive or anxious symptoms.

The Life Events Scale (Holmes and Rahe, 1967) asks participants to report how many stressful life events they experienced during the past year (e.g., death, divorce) and how much they were upset by each event. Higher scores indicate a greater number of stressful life events and greater distress as a consequence of recent life events. The Perceived Stress Scale (Cohen *et al.*, 1983) was used to evaluate participants' thoughts and feelings during the past month in regard to statements such as, "How often have you felt nervous or stressed?" Statements are rated on a five-point Likert scale from 1 = *never* to 5 = *very often*. Higher scores indicate greater perceived stress.

**Resilience.** The Connor-Davidson Resilience Scale 10-item (Campbell-Sills and Stein, 2007) was used to assess resilience. This scale asks participants to indicate how confident they are in dealing with challenges in life (e.g., "I am able to adapt to change;" "I believe

coping with stress strengthens me”) on a scale from 1 = *not at all true* to 5 = *true nearly all of the time*. Higher scores on this scale indicate greater resilience.

### Data analysis

International Business Machines (IBM) SPSS Statistics version 20 was used to conduct all analyses. SPSS’s random selection data function was used to split the sample into two independent samples of two-thirds ( $n = 650$ ) for the exploratory analysis and one-third ( $n = 356$ ) for the confirmatory analysis. Sample comparisons were conducted to ensure that the samples did not statistically differ on key variables of interest, including demographic variables, compassion, resilience, and emotional distress variables. Data were screened for outliers and violation of statistical assumptions, and variables were centered prior to model entry to facilitate interpretation of coefficients. For the exploratory analysis, compassion was the dependent variable and the following independent variables were entered into a stepwise regression analysis: age, gender, education, marital status, race/ethnicity, income, resilience, history of depression, history of anxiety, significant life events, current depression, current anxiety, and perceived stress. In order to investigate the potential for interactions between resilience and past suffering, we reran this model three times, each time including one of the following interaction terms: resilience x life events, resilience x history of depression, and resilience x history of anxiety. Next, using the remaining subsample of participants, the variables that were significant in the exploratory analysis were entered into a regression model (enter method) to confirm the findings.

## Results

### Sample 1: exploratory analysis ( $n = 650$ )

Sample characteristics are presented in Table 2. Compassion scores followed a normal curve.

The overall stepwise regression model predicting compassion levels was significant (adjusted  $R^2 = 0.13$ ,  $p < 0.001$ ). Female gender ( $t(398) = -4.01$ ,  $p < 0.01$ ), not married ( $t(398) = -3.00$ ,  $p < 0.01$ ), greater resilience ( $t(398) = 4.91$ ,  $p < 0.01$ ), and a greater number of significant life events ( $t(398) = 2.01$ ,  $p = 0.045$ ) were strong predictors of greater compassion. Refer to Table 3 for full regression results. Age, income level, race/ethnicity, and past or current depression and anxiety diagnosis were not significant predictors in the model, and no significant interactions with resilience were found.

Table 2 Demographic and sample characteristics of participants

	Sample 1 ( $n = 650$ )	Sample 2 ( $n = 356$ )
Demographic characteristics		
Age (years)	77.2 (12.1)	77.5 (12.3)
Sex (% female)	48.2	49.2
Race/Ethnicity (% Caucasian)	81.1	80.1
Marital status (% presently married or living in a marriage-like relationship)	49.5	53.9
Income (%):		
\$0–\$34,999	20.6	24.1
\$35,000–74,999	27.7	32.3
\$75,000+	29.4	27.3
Education (%):		
1–12 years or GED	18.4	17.4
Vocational training or 13–15 years	36.0	40.2
Bachelor’s degree or above	45.4	41.3
Compassion		
Santa Clara Brief Compassion Scale	4.8 (1.3)	4.8 (1.2)
Resilience		
Connor-Davidson Resilience Scale	30.9 (6.3)	31.5 (6.4)
Past stress and emotional functioning		
History of depression, n(%)	29 (4.5)	36 (10.1)
History of anxiety, n(%)	44 (6.8)	27 (7.6)
Life Events Scale	3.2 (5.4)	3.5 (3.5)
Current stress and emotional functioning		
Current depression, n(%)	29 (4.5)	11 (3.3)
Current anxiety, n(%)	20 (3.1)	5 (1.4)
Perceived Stress Scale	12.2 (5.4)	12.4 (5.5)

GED, General Educational Development.

\* $p < 0.05$ ;

\*\* $p < 0.01$ .

### Sample 2: confirmatory analysis ( $n = 356$ )

Characteristics of this sample are presented in Table 2. As with the first sample, compassion scores followed a normal curve.

A linear regression model that included only the significant predictors from the initial analysis was significant overall (adjusted  $R^2 = 0.08$ ,  $p < 0.001$ ). Significant individual predictors of greater compassion were female gender ( $t(290) = -3.49$ ,  $p < 0.01$ ), greater resilience ( $t(290) = 2.80$ ,  $p < 0.01$ ), and more life events ( $t(290) = 2.77$ ,  $p < 0.01$ ). Marital status did not load in the confirmatory model. Full regression results are presented in Table 4.

## Discussion

In a large sample of older adults, we tested how factors that are theoretically linked to compassion, such as life

Table 3 Regression results from exploratory sample ( $n = 650$ )

	B	SE	Beta	95% lower	95% upper	<i>t</i>	<i>p</i> -value
Gender	-0.54	0.13	-0.20	-0.80	-0.27	-4.01	<0.01
Resilience	0.05	0.01	0.23	0.03	0.07	4.91	<0.01
Marital status	-0.40	0.13	-0.15	-0.66	-0.14	-3.00	<0.01
Life events	0.04	0.02	0.10	0.00	0.08	2.01	0.045

Variables are displayed in the order they entered the model. Gender: negative value indicates female gender; marital status: negative value indicates not currently married; life events was measured with the Life Events Scale; resilience was measured with the Connor-Davidson Resilience Scale-10.

Table 4 Regression results from confirmatory sample ( $n = 356$ )

	B	SE	Beta	95% lower	95% upper	<i>t</i>	<i>p</i> -value
Gender	-0.54	0.16	-0.22	-0.85	-0.24	-3.49	<0.01
Resilience	0.03	0.01	0.16	0.01	0.05	2.80	<0.01
Life events	0.06	0.02	0.16	0.02	0.09	2.77	<0.01

Gender: negative value indicates female gender; life events was measured with the Life Events Scale; resilience was measured with the Connor-Davidson Resilience Scale-10.

experiences, current emotional functioning, and resilience, were associated with older adults' views of their own level of compassion. The results of the exploratory regression analysis suggested that older adults who are female, are not married or in a marriage-like relationship, are more resilient, and have experienced a higher number of significant life events report the most compassion. The robustness of these findings was tested in a second, independent sample, and all variables but marital status were confirmed to be associated with compassion levels. The findings were generally consistent with our hypotheses about the potential role of past suffering and protective psychological factors in promoting current compassion in that more significant life events and higher resilience were related to greater compassion. Also consistent with our prediction, as well as with findings in younger samples (e.g., Mercadillo *et al.*, 2011), women reported higher levels of compassion than men. That this strong gender difference was observed in an older adult sample suggests that the life experiences of women either bolster or maintain levels of compassion. However, contrary to our hypotheses, we did not find associations with demographic factors such as age, income, race/ethnicity, or education, which could serve as proxies for lifetime experiences that might enhance compassion. In addition, our prediction that history of mental disorders would promote compassion was not supported, and current depression and anxiety were also unrelated. Finally, we had expected that individuals with both past suffering and resilience might have the highest reported compassion, but interactions between

resilience and past depression or anxiety or recent life events were not significant contributors to the model.

Our findings suggest that when a person has experienced significant life events over the past year (e.g., divorce, death of a loved one, or job loss), they are also likely to report a desire to provide support to others. The relationship we found with stressful life events may be driven by heightened awareness of the potential for suffering in others or could be a reaction to the compassion (or lack thereof) that the older adult received following these life events. Those who received adequate help might be motivated to "pay it forward" and/or might feel more equipped to give effective assistance after seeing what did or did not help them cope with their own negative events.

We also found that older adults who report higher levels of resilience, independent of the level of recent stressful events, are more motivated to help others. It may be that people who are themselves adept at overcoming hardships report more willingness to assist others because they predict a tangible benefit from doing so on the basis of their own experience. Said another way, people who are less resilient may not believe that recovery from adversity is possible and therefore are not motivated to engage in useless helping behavior.

Age was not related to compassion within this sample of older adults. More years alive may not be a good proxy for greater number of compassion-promoting life experiences. Also, factors such as cognitive and physical decline in some older adults might have the opposite effect of reducing compassion, making it difficult to see any trends with age. Our results differ from some

studies that have demonstrated a diminished empathic and compassionate understanding in older adults (Labouvie-Vief *et al.*, 1989; Phillips *et al.*, 2002; Labouvie-Vief and Marquez, 2004) but are consistent with others that have not found evidence for age-related differences (Carstensen *et al.*, 2000; Keightley *et al.*, 2006; Grünh *et al.*, 2008). We also failed to see a strong relationship with income, which differs from studies showing that lower SES adults engage in a greater number of pro-social behaviors than their high SES counterparts (Greve, 2009; Piff *et al.*, 2010; Stellar *et al.*, 2012). Possibly, current income of older adults is not an accurate proxy for lifetime economic hardship. There was also not a relationship of compassion with race/ethnicity in the context of the model, again potentially due to this being only an indirect indicator of lifetime experiences.

Surprisingly, history of diagnosed depression and anxiety, as well as currently suffering from these mental health problems, did not relate to compassion levels. The numbers of people in these categories were small, and we did not measure severity or verify these diagnoses. However, there does not seem to be strong support for the idea that experiencing significant mental distress encourages compassion (e.g., Gleichgerrcht and Decety, 2013). Perhaps for some, mental distress acts like life events and resilience to make one more willing to help, but in others who are more severely affected by the deficits in motivation and strain on psychological resources that accompany depression, anxiety, and stress, compassionate responding is too difficult. Future work should examine how severity of current psychological distress relates to compassion.

There are several limitations to this study. The data were cross-sectional in nature, so inferences of causality cannot be made. The design of the SAGE study, however, involves yearly follow-up assessments, which will allow us to examine causal predictors of change in compassion within individuals in future studies. Furthermore, while the compassion scale we used in this study was designed to measure compassion, some of the questions also asked about “feelings toward” others, and the instrument is likely to also measure an individual’s self assessment of empathy. Therefore, we are unable to report with certainty whether our results are solely specific to compassion or whether they represent a combination of compassion and empathy. In future studies, we plan to measure empathy and compassion with other suitable instruments and behavioral scenarios, to explore more carefully the factors that influence ability to “feel with” and tendency to “do for” others. The SCBCS is a self-report measure of compassion, and outside informant ratings of the participants’ compassion were not obtained, which is another limitation. Future studies would benefit from having family members or close

friends complete the SCBCS about the participant to see if differences in self report and report from others emerge. Finally, expanding the age range to include younger adults would enhance the ability to examine age-related differences in relationships with compassion.

## Conclusion

Older adults are often in a unique position to contribute to the greater good given their amassed resources, including life experience, financial resources, greater availability of time to spend on helping behaviors, and a greater value of generativity and affiliation in late life (Harlow and Cantor, 1996). Understanding why older adults differ in their level compassion is complicated, as the human empathic experience and response is unique for each individual (Kerem *et al.*, 2001). Our findings indicate several factors—gender, stressful life events, and resilience—that should be examined further. In order to improve HRQoL among older adults, interventions that capitalize on associations between resilience and compassion should be tested, either by promoting caring acts or by fostering resilience. Stressful life events in late life are inevitable and yet may be able to be capitalized upon as opportunities for personal growth and social mastery.

## Conflict of interest

None declared.

### Key points

- Compassion is an important contributor to pro-social behavior and the maintenance of interpersonal relationships, yet little is known about what contributes to compassion in late life.
- In a large sample of relatively healthy community-dwelling older adults, female gender, greater resilience, and more stressful life events were related to higher self-reported levels in compassion in both exploratory and confirmatory analyses. Other demographic factors and emotional functioning (e.g., depression, anxiety, and perceived stress) did not contribute to the model.
- Older women report more compassion than older men. In addition, resilience and significant life events, independently, appear to facilitate a desire to help others, while current stress and past and present emotional functioning are less relevant.

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## References

- Administration on Aging (AOA) 2011. A profile of older Americans.
- Bowling A, Iliffe S. 2011. Psychological approach to successful ageing predicts future quality of life in older adults. *Health and Quality of Life Outcomes* **9**: 1–10.
- Campbell-Sills L, Stein M. 2007. Psychometric analysis and refinement of the Connor-Davidson Resilience Scale (CD-RISC): validation of a 10-item measure of resilience. *Journal of Traumatic Stress* **20**: 1019–1028.
- Carstensen LL, Pasupathi M, Mayr U, Nesselrode JR. 2000. Emotional experience in everyday life across the adult lifespan. *Journal of Personality and Social Psychology* **79**: 644–655.
- Cohen S, Kamarck T, Mermelstein R. 1983. A global measure of perceived stress. *Journal of Health and Social Behavior* **24**: 386–396.
- Eisenberg N, Fabes RA. 1990. Empathy: conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion* **14**: 131–149.
- Gleichgericht E, Decety J. 2013. Empathy in clinical practice: how individual dispositions, gender, and experience moderate empathic concern, burnout, and emotional distress in physicians. *PLoS One* **8**: e61526.
- Greve F. 2009. America's poor are its most generous. In *The Seattle Times*. Retrieved from <http://seattletimes.nwsourc.com>.
- Grühn D, Rebucal K, Diehl M, Lumley M, Labouvie-Vief G. 2008. Empathy across the adult lifespan: longitudinal and experience-sampling findings. *Emotion* **8**: 753–765.
- Harlow RE, Cantor N. 1996. Still participating after all these years: a study of life task participation in later life. *Journal of Personality and Social Psychology* **71**: 1235–1249.
- Hendrie HC, Purnell C, Wicklund AH, Weintraub S. 2010. Defining and assessing cognitive and emotional health in later life. In *Successful cognitive and emotional aging*. Depp C, Jeste DV (Eds). American Psychiatric Publishing, Inc.: Arlington, VA.
- Holmes TH, Rahe RH. 1967. The Social Readjustment Rating Scale. *J Psychosom Res* **11**: 213–218.
- Hwang JY, Plante T, Lackey K. 2008. The development of the Santa Clara brief compassion scale: an abbreviation of Sprecher and Fehr's Compassionate Love Scale. *Pastoral Psychology* **56**: 421–428.
- Jeste DV, Savla GN, Thompson WK, et al. 2013. Association between older age and more successful aging: critical role of resilience and depression. *American Journal of Psychiatry* **170**: 188–196.
- Keightley ML, Winocur G, Burianova H, Hongwanishkul D, Grady CL. 2006. Age effects on social cognition: faces tell a different story. *Psychol Aging* **21**: 558–572.
- Kerem E, Fishman N, Josselson R. 2001. The experience of empathy in everyday relationships: cognitive and affective elements. *Journal of Social and Personal Relationships* **18**: 709–729.
- Labouvie-Vief G, DeVoe M, Bulka D. 1989. Speaking about feelings: conceptions of emotion across the lifespan. *Psychology and Aging* **4**: 425–437.
- Labouvie-Vief G, Marquez MG. 2004. Dynamic integration: affect optimization and differentiation in development. In *Motivation, Emotion, and Cognition: Integrative Perspectives on Intellectual Functioning and Development*, Dai, DY, Sternberg, RJ, Erlbaum: Mahwah, NJ; 237–272.
- Mercadillo RE, Diaz JL, Pasaye EH, Barrios FA. 2011. Perception of suffering and compassion experience: brain gender disparities. *Brain and Cognition* **76**: 5–14.
- Merriam-Webster 2014a. Compassion. <http://www.merriam-webster.com/dictionary/compassion>: Merriam-Webster.
- Merriam-Webster 2014b. Empathy. <http://www.merriam-webster.com/dictionary/empathy>: Merriam-Webster.com.
- Phillips LH, MacLean RDJ, Allen R. 2002. Age and the understanding of emotions: neuropsychological and sociocognitive perspectives. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences* **57B**: P526–P530.
- Piff PK, Kraus MW, Cote S, Cheng BH, Keltner D. 2010. Having less, giving more: the influence of social class on prosocial behavior. *Journal of Personality and Social Psychology* **99**: 771–784.
- Rutten BPF, Hammels C, Geschwind N, et al. 2013. Resilience in mental health: linking psychological and neurobiological perspectives. *Acta Psychiatr Scand* **128**: 3–20.
- Schutte NS, Malouff JM, Bobik C, et al. 2001. Emotional intelligence and interpersonal relations. *The Journal of Social Psychology* **141**: 523–536.
- Sprecher S, Fehr B. 2005. Compassionate love for close others and humanity. *Journal of Social and Personal Relationships* **22**: 629–651.
- Stellar JE, Manzo VM, Kraus MW, Keltner D. 2012. Class and compassion: socioeconomic factors predict responses to suffering. *Emotion* **12**: 449–459.
- Takai M, Takahashi M, Iwamitsu Y, Oishi S, Miyaoaka H. 2011. Subjective experiences of family caregivers of patients with dementia as predictive factors of quality of life. *Psychogeriatrics* **11**: 98–104.
- Tomura M. 2009. A prostitute's lived experiences of stigma. *Journal of Phenomenological Psychology* **40**: 51–84.
- Tugade MM, Fredrickson BL, Barrett LF. 2004. Psychological resilience and positive emotional granularity: examining the benefits of positive emotions on coping and health. *Journal of Personality* **72**: 1161–1190.
- Van Doesum NJ, Van Lange DA, Van Lange PAM. 2013. Social mindfulness: skill and will to navigate the social world. *Journal of Personality and Social Psychology* **105**: 86–103.
- Zautra A, Hall JS, Murray KE. 2010. Resilience: a new definition of health for people and communities. The Guilford Press: New York.
- Zeng Y, Shen K. 2010. Resilience significantly contributes to exceptional longevity. *Current Gerontology and Geriatrics Research* **2010**: 1–9.