Research Article

An Investigation into the Multifaceted Relationship between Gratitude, Empathy, and Compassion

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Abstract

The virtues of gratitude, empathy, and compassion are associated with various psychological and relational benefits. Past research suggests that gratitude and empathy are correlated and that compassion is in fact derived from empathy. However, limited research exists concerning the direct relationship between gratitude and compassionate love (i.e., a more enduring form of compassion). This study examined the relationship between the two constructs, with empathy as a potential mediator in this relationship. Two hundred undergraduate students from a religiously affiliated university were recruited and completed an online, multi-section questionnaire that includes measures of gratitude, empathy, and compassionate love. Statistical analyses revealed a significant partial mediation effect, with gratitude being both directly and indirectly (via empathy) associated with compassionate love. In other words, higher levels of gratitude produced greater compassionate love through increased feelings of empathy. Further analyses indicated that among the three types of empathy explored (cognitive empathy, emotional contagion, and emotional disconnection), cognitive empathy best mediated the relationship between gratitude and compassionate love. These findings have important implications in both a clinical and research context, including the utilization of gratitude and empathy interventions to increase protection against clinician burnout and improve client health and well-being. Future research is warranted in further exploring the relationship among these variables utilizing more objective forms of measurement.

Keywords

Gratitude, empathy, compassion, compassionate love.

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Gratitude is a key virtue that many individuals have attempted to cultivate across time and culture. Over the past decade and a half, an interest in gratitude and life satisfaction has increased exponentially in the general public and social science research. Moreover, gratitude is considered an essential component of the core beliefs and values of many religions, including Christianity and Judaism (Carman & Streng, 1989). Additionally, considering that majority of the United States population considers themselves religious (Association of Religion Data Archives, 2014), gratitude directed toward God has also risen as an area of interest in the research literature (e.g., see Krause, 2006). General findings in existing studies suggest that gratitude (in a general sense and/or directed to God) promotes relationship formation, altruism, and psychological and physical health and well-being (Gordon, Arnett, & Smith, 2011; Krause, 2006; McCullough et al., 2002).

Further, previous literature shows that gratitude is associated with other constructs that promote well-being, namely—other virtues such as humility and empathy (Krause & Hayword, 2015). In this study, we reason that gratitude may also be related to yet another virtue—compassion. Research on different forms of compassion has revealed its many potential benefits, such as promoting well-being and health (Fingerman, 2004). Individuals who are compassionate not only benefit others by listening empathically and easing others' distress, but they also experience benefits themselves, as compassion is related to better mental health, lower stress, and greater well-being (Holt-Lunstad & Smith, 2012).

Taking a closer look at the virtues of gratitude and compassion, it seems evident that these virtues share seemingly similar components (as we will outline later). Although there is currently a lack of research investigating the specific relationship between gratitude and compassion, the relationship that each construct has with empathy makes it plausible that gratitude and compassion may be related, and that this relationship may in fact be accounted for by empathy. The purpose of this study is to examine this relationship between gratitude and compassion with empathy as a construct that potentially mediates this relationship.

Gratitude

McCullough, Emmons, and Tsang (2002) define gratitude as an affective trait that disposes one to acknowledge unearned benevolence from another and respond with grateful emotions. It is posited that individuals have varying levels of frequency and intensity in experiencing grateful feelings, or dispositional gratitude, which is a positive psychological trait that orients an individual to have either a more or less positive outlook of the world (Emmons & Mishra, 2011). Furthermore, studies that examine the correlates of gratitude and personality traits indicate that the effects gratitude has on well-being, relationships, and health exceed the effects of Big Five traits. Although gratitude is indeed related to components of the Big Five, it is not equivalent to these factors, suggesting that it has unique effects on social relations and personal/relational well-being that is not simply a manifestation of such constructs (McCullough et al., 2002; Wood et al., 2008).

Research indicates that gratitude interventions can support various positive life outcomes, such as general well-being, life satisfaction, and physical health (McCullough et al., 2002; Wood et al., 2008). Moreover, gratitude is not limited to supporting positive effects in individual lives, but can impact social relationships as well. Krause and Hayword (2015) found that individuals with higher

gratitude provided more emotional support to those in need. Further, Algoe, Haidt, and Gable (2008) discovered that gratitude in relationships promotes greater relationship formation and maintenance of new bonds. Gratitude is of great value in intimate relationships, as it enhances feelings of being appreciated and being appreciative of one's partner, which is crucial in maintaining healthy romantic relationships (Gordon et al., 2011; Gordon, Impett, Kogan, Oveis, & Keltner, 2012).

Interestingly, the social benefits of gratitude seem to extend beyond reciprocal relationships (Barlett & DeSteno, 2006). Gratitude has shown to be related to prosocial behavior, in situations where reciprocity of contributed help by the recipient is not expected. A popular explanation of this phenomenon is that benefactors of prosocial acts may have received undeserved help from others in the past, which subsequently led to increased gratitude, and ultimately, unreciprocated helping behaviors toward others at their own expense (Barlett & DeSteno, 2006).

Empathy

Social interactions typically require people to observe and respond to the gestures, expressions, and postures of others and engage in a process called mirroring, in which the observer's brain reflects the internal experiences of the other (Gerdes, Lietz, & Segal, 2011). Taking this a step further, individuals may experience empathy for the other, which involves a process of personally feeling and understanding the feelings and views of others (Carré, Stefaniak, D'Ambrosio, Bensalah, & Besche-Richard, 2013). In fact, empathy is essential for people to accurately respond to the needs of others, and in order to do this, one must have the capacity to recognize and be attentive to one's own emotions (Decety & Jackson, 2004). In a broad sense, empathy is the ability to react to the experiences that one observes in another. However, it is important to note that empathy does not have a direct, causal relationship to helping behaviors (Verhofstadt et al., 2016). In other words, although individuals may observe and share the pain and suffering of another, it does not necessarily lead them to take action to help relieve this pain.

Furthermore, empathy is understood as being comprised of two major dimensions: affective empathy and cognitive empathy (Topcu & Erdur-Baaker, 2012; Verhofstadt et al., 2016). The affective component of empathy involves sharing similar feelings and emotions of the other (Caravita, Di Blasio, & Salmivalli, 2009). Cognitive empathy, on the other hand, is the ability to take on the perspective of another and understand his/her thoughts and feelings (Verhofstadt et al., 2016). Furthermore, while affective empathy is more spontaneous and immediate, cognitive empathy tends to be more intentional and voluntary and is typically cultivated with age and maturity (Hodges & Wegner, 1997). Research on the two dimensions of empathy in spousal support indicates that individuals with higher cognitive empathy are less likely to offer negative support, such as criticism and blame, and more likely to give positive advice and provide assistance to their spouses (Verhofstadt et al., 2016). Individuals with higher affective empathy can be moved to either genuine concern for their partner or self-oriented distress due to excessive feelings of empathy. Those in the former category show greater altruistic motivation to reduce the partner distress, while those in the latter group are motivated to help their partners for egotistic reasons or may even withdraw and avoid the situation as a whole (Verhofstadt et al., 2016).

Gratitude and Empathy

While developing an interpersonal gratitude scale, Fujiwara et al. (2014) found that empathy was positively associated with feelings of gratitude. This was in line with Worthen and Isakson's (2007) study, which suggested that empathy is an essential part of experiencing gratitude, and that individuals who have lowered capacities for empathy have difficulty experiencing the positive effects of gratitude. This tendency may be the case because those who have difficulty empathizing with others cannot recognize the sacrifices and efforts others make on their behalf and instead perceive the motivations behind these actions to be self-serving. On the other hand, cultivating empathy can enhance the recognition of benevolent actions given by others.

Cultivating gratitude can potentially increase empathy, leading to a positive cycle of experiencing gratitude and having empathic responses to others (Worthen & Isakson, 2007). Lazarus and Lazarus (1994) found that when children experienced gratitude toward police and firefighters, their gratitude stemmed from the feelings of empathy they shared with the grateful individuals who directly benefited from civil service providers. In research conducted on the effect of September 11th on children, researchers suggested that a possible coping strategy for children struggling with the negative effects of terrorism, may in fact be to foster empathy toward those who were affected and express gratitude toward helpers (Gordon, Musher-Eizenman, Holub & Dalrymple, 2004). These researchers asserted that this positively reinforcing cycle of gratitude and empathy may diminish the negative feelings that stem from the overwhelming sadness and anger that the children experience (Gordon et al., 2004).

Further, gratitude cultivated through empathy appears to be positively correlated with prosocial behavior (Batson, 1998). Batson suggests that when recipients express gratitude towards helpers, these gratitude expressions raise helpers' empathy toward the recipients, and ultimately increase the likelihood that helpers will exhibit prosocial behaviors. These feelings of empathy coupled with altruistic acts, result in compassion.

Compassion

Compassion is defined as having feelings of concern and care for those who are suffering and carrying out altruistic acts to help alleviate their burdens and fill their needs (Holt-Lunstad & Smith, 2012). Compassionate love (CL), the construct used to measure compassion in this study, illustrates a sustained orientation or disposition toward caring and helping of the other and produces similar benefits to compassion (Sprecher & Fehr, 2005). CL appears to be more advantageous than compassion, due to its enduring emphasis on altruism, care, and concern for the well-being of the other. CL does not expect reciprocity, but is freely given and involves being moved by another's suffering or need. The four characteristics of CL involve concern for the well-being of others, openness towards their experience, respect and admiration, and understanding and acceptance (Reis, Maniaci, & Rogge, 2014). Although CL is related to empathy, it is more closely associated with a prosocial orientation that is longer lasting than empathy alone (Batson, 2009). Moreover, CL involves a disposition toward performing self-sacrificial acts (Fehr & Sprecher, 2009). CL can be directed toward humanity as a whole, strangers, close others, and specific individuals (Sprecher & Fehr, 2005). CL directed toward humanity/strangers in particular, has been found to increase

individual well-being, as it involves contributing to one's environment and the happiness of others (Fingerman, 2004). Similarly, CL for humanity/strangers is also related to greater enactment of prosocial acts, such as volunteerism, compared to CL for close others. Additionally, higher CL is correlated with greater spiritual experiences (Underwood, 2002) and higher religious service attendance (Sprecher & Fehr, 2005).

Research on intimate relationships demonstrate that greater enactment of compassion between partners is related to increases in relationship satisfaction for both recipients and participants (Reis et al., 2014), while an absence of compassion within the relationship is associated with decreased relationship satisfaction (Clark, Lemay, Graham, Pataki, & Finkel, 2010). This may be because individuals who are higher in CL are more attuned to partner distress, experience greater empathy for their partners, and provide more affectionate and caring messages to support them (Collins et al., 2014). Moreover, individuals who both provide and receive greater CL experience increased well-being, better mental health, and lower mortality rates (Holt-Lunstad & Smith, 2012).

Empathy and Compassion

At first glance, it may be difficult to distinguish compassion, including compassionate love, from empathy. Indeed, compassion is similar to empathy, as it is derived from empathy. When researchers studied the effects of adversity and hardship on empathy and compassion, they found that increased adversity was correlated with greater empathy, which ultimately led to more compassion. (Lim & Desteno, 2016). However, though these two constructs are related, they are distinct in important ways and produce different effects (Lim & DeSteno, 2016; Steffen & Masters, 2005). Like empathy, compassion encompasses having a deep affective and cognitive understanding of another's pain, but the constructs diverge as compassionate feelings derive costly, altruistic behaviors to fill the needs of others, while empathy does not (Batson, 2002; Lim & DeSteno, 2016; Steffen & Masters, 2005). Moreover, studies on empathy illustrate that sharing feelings of pain with those who are suffering can lead to empathic distress, which can produce strong desires to protect oneself by withdrawing from the suffering individual, which in turn decreases likelihood of engaging in helping behaviors (Singer & Klimecki, 2014). Compassion, on the other hand, is not necessarily characterized by sharing the same feelings of the sufferer. Instead, it involves feeling concern and love for the individual, which then produces a strong motivation to alleviate pain and improve the other's well-being (Singer & Klimechi, 2014). Batson (2009) discovered that individuals with high empathy that led to compassion, engaged in more helping behaviors than those who only experienced empathy that led to empathic distress. Compassion is also distinguished from empathy through the ways it can help overcome empathic distress. Vachon (2016) found that compassion training can be used as a coping strategy to reverse the negative effects of empathic distress. Similarly, in a study conducted by Klimecki, Leiberg, Ricard, and Singer (2014), researchers discovered that after increasing negative affect through empathy trainings that produced empathic distress, compassion training could reverse these effects by lowering negative affect to baseline and increasing positive affect.

Neuroimaging studies have also provided distinction of the two constructs on both a neural and experiential level. When individuals had empathic responses to others' pain, this activated the anterior midcingulate cortex (aMCC) and anterior insula, which are areas associated with negative

affect. They also reported an increase of negative affect on an experiential level (Klimecki et al., 2014; Singer & Klimecki, 2014). Brain networks involved in compassion differed from those involved in empathy; compassion was related to activation in the medial orbitofrontal cortex (mOFC), insula, and ventral striatum, which are areas associated with reward and positive affect, such as love and affinity (Beauregard, Courteanche, Paquette, St-Pierre, 2009; Singer & Klimecki, 2014).

Gratitude, Empathy, Compassion

There are currently no studies that have investigated the direct relationship between gratitude and compassion. However, there is reason to believe that compassion may in fact be related to gratitude. To start, in a study exploring character development in adolescence, Malin, Liauw, and Damon (2017) reported a positive correlation among various character virtues, including gratitude and compassion. Further, the literature on gratitude and compassion suggests that both share similar correlates; namely, they are associated with well-being and health (Holt-Lunstad & Smith, 2012; Krause, 2006; McCullough et al., 2002). Although it is difficult to understand the intricate relationship gratitude and compassion may have, there are conceptual similarities between the two constructs that indicate a potential relationship between the constructs. The reasoning behind this assertion is two-fold.

First, individuals with high dispositional gratitude engage in more prosocial behavior (Barlett & DeSteno, 2006). Similarly, high CL for humanity/strangers is associated with greater volunteerism and prosocial acts. There are various explanations for why gratitude and altruistic behavior are related, and one of the more prominent theories is that the acknowledgement of receiving unearned benevolence from another may encourage individuals to engage in benevolent actions for others as well (Barlett & DeSteno, 2006). The authors suggest the emotion of gratitude helps direct social exchange in relationships. When an individual receives a favor from another, he/she will be encouraged to reciprocate the favor, even when it is costly to him/her. This produces a cycle of reciprocal helping behavior, which leads to trust within the relationship.

We add to this theory by suggesting that experiencing undeserved benevolence in one's time of need may trigger feelings of compassion for others who are in need of help as well. As a result, these individuals choose to provide assistance through prosocial acts.

Second, gratitude plays an important role in relationship formation and maintenance. Benefactors and recipients of gratitude tend to form closer bonds that are longer lasting (Algoe et al., 2008), and partners who experience more gratitude in their relationships experience greater relationship satisfaction and successful maintenance. Similarly, compassion also promotes relationship satisfaction and well-being, as partners experience greater support and empathy in the relationship (Collins et al., 2014). Individuals who experience greater appreciation and gratitude from partners may form more intimate bonds with them, creating an atmosphere that allows for the cultivation of greater empathy and compassion for one another. Also, partners who experience high compassion may experience more gratitude once they recognize the compassion and support they have received from their significant other, producing a healthy cycle, involving gratitude and compassion.

In all, both empirical as well as conceptual evidence support the proposition that gratitude and compassion are indeed strongly related constructs. Specifically, the relationship between gratitude and empathy has received empirical support (Fujiwara et al., 2014; Gordon et al., 2004; Lazarus & Lazarus; Worthen & Isakson, 2007), and while no studies to date have empirically investigated the relationship between gratitude and compassion, a strong conceptual justification exists for doing so. Therefore, the purpose of our study is to empirically investigate the relationship between gratitude, compassion, and empathy—with empathy hypothesized to mediate the relationship between gratitude and compassion. Accordingly, the following hypothesis was derived for the present study: General gratitude will predict greater compassion, with empathy mediating this relationship.

Method

Participants

The sample consisted of 200 undergraduate students recruited from a religiously oriented Evangelical undergraduate institution in the Southwestern United States. The religious majority of the sample self-identified as Christian (95.5%), followed by Catholic (4%), and Greek or Russian Orthodox (.5%). Majority of participants were 18 to 24 years of age (96.5%), though there were some participants who were 25 to 34 years of age (3.5%). Means and standard deviations of the sample's years of age were not obtained. The racial majority of the sample was White (41.5%), followed by Asian/Pacific Islander (21.5%), Hispanic (19.5%), Multiracial (12.5%), Black or African American (2.5%), American Indian (1%), Chinese-Indonesian (1%), Arab (.5%), and Bermudian (.5%).

Measures

Gratitude. Gratitude was measured by the Gratitude Questionnaire-6 (GQ-6) by McCullough et al. (2002). The GQ-6 consists of six items measuring the frequency and intensity of participants' experiences of gratitude (i.e. "If I had to list everything that I felt grateful for, it would be a very long list") on a Likert scale of "1" (strongly disagree) to "7" (strongly agree). Scores for the GQ-6 are calculated by summing all individual item scores, after reverse scoring items 3 and 6. Possible scores range from 6 to 42, with higher total scores indicating greater gratitude. In its initial validation study by McCullough et al., the GQ-6 demonstrated good reliability ($\alpha = .82$) and discriminant validity, as a one-factor model combining the GQ-6 and various other measures (e.g., vitality, life satisfaction, and happiness) fit the data poorly.

Empathy. Empathy was measured by the Basic Empathy Scale (BES), a 20-item scale that measures cognitive and affective components of empathy and the four basic emotions of anger, fear, sadness, and happiness (Jolliffe & Farrington, 2006). Although the BES was initially created for adolescents, researchers have validated the scale in an adult population (BES; Carré et al., 2013). Further, the current study utilized a three-factor model, as suggested by Carré et al., for the BES: emotional contagion (items 2, 4, 5, 11, 15, 17; e.g., "After being with a friend who is sad about something, I usually feel sad"), cognitive empathy (items 3, 6, 9, 10, 12, 14, 16; e.g., "I can understand my friend's happiness when they do well at something"), and emotional disconnection (items 1, 7, 8, 13, 18, 19; e.g., "I am not usually aware of my friend's feelings"). Participants respond to each item on a Likert

scale ranging from "1" (strongly disagree) to "7" (strongly agree). The BES is scored by summing individual item scores, after items 1, 6, 7, 8, 13, 18, 19, and 20 are reverse scored. Possible scores range from 20-140, with higher total scores on items indicating greater empathy. Carré et al. reported internal consistency Cronbach's alphas of .69 (cognitive empathy), .72 (affective empathy), and .81 (emotional disconnection) for the BES. The test retest correlation was $r = .56$ ($p < .001$) for the cognitive empathy subscale, $r = .74$ ($p < .001$) for the emotion contagion subscale, and r = .70 ($p < .001$) for the emotional disconnection subscale. Additionally, the BES demonstrated good convergent validity with the Interpersonal Reactivity Index (IRI; Davis, 1983), a widely used measure for empathy.

Compassion. Compassion was measured through Sprecher and Fehr's (2005) Compassionate Love Scale. There are three separate versions for the Compassionate Love Scale: Compasionate Love for Close Others, Compassionate Love for Specific Close Other, and Compassionate Love for Stranger/Humanity. For the purpose of the current study, the Compassionate Love Scale for Close Others (CLSCO) has been used. The scale is composed of 21 items (i.e. "I feel a selfless caring for my friends and family") and has a one-factor structure. Participants respond to each item on a Likert scale ranging from "1" (not at all true of me) to "7" (very true of me). Possible scores range from 21 to 147, with higher total scores on the CL scale indicating greater compassionate love. Sprecher and Fehr, reported an internal consistency coefficient of .95 for the close others version. Convergent validity was established through its significant correlations with prosocial behavior and empathy.

Procedure

The participants completed an online questionnaire in exchange for course credit towards an undergraduate psychology course upon completion of the task. The multi-section questionnaire consisted of three total sections measuring gratitude, empathy, and compassion (i.e., GQ-6, BES, CLSCO), along with a demographics questionnaire. Participants were instructed to fill out the multi-section questionnaire as accurate as possible; time to completion for participants averaged approximately 20 minutes.

Data Analyses

Mediation analyses were tested through the Andrew Hayes PROCESS Macro. 2.6 The PROCESS Macro is an add-on program for SPSS and SAS that allows for "conducting a mediation, moderation, or conditional process analysis… into one simple-to-use procedure," rather than utilizing multiple tools, such as INDIRECT, SOBEL, and MODMED (Hayes, 2012; p. 3). The PROCESS Macro includes various models that can be used in accordance with the type of moderation, mediation, or integration of both forms needed for analysis. For our analysis, we utilized Model 4, which tests the direct and indirect effects (through one mediator) of an independent variable on a dependent variable. In our case, gratitude was the independent variable, empathy was the mediator variable, and compassionate love was the dependent variable. The first step of PROCESS tested the association between gratitude and empathy when all demographic variables are controlled for (path a). Next, the coefficient for empathy as a predictor of compassionate love when all other variables were controlled for was established (path b). Third, the direct effect of gratitude as a predictor of compassionate love,

when all variables are controlled for, was established (path c'). Fourth, the total indirect effect (path c) was found, through the product of path a and path b coefficients. Further information regarding the PROCESS macro can be found in Hayes (2013).

Results

Preliminary Analyses

Before analyzing the main hypotheses, preliminary analyses were conducted to deal with missing data, blatant response sets, and outliers. Of the original 226 participants of the study, nine were excluded from the study, due to their response sets having more than 10% of items missing. After reviewing reverse worded items, calculating the questionnaire start and end time, and searching for random response patterns, we excluded 17 more response sets due to blatant random response patterns and a completion time of less than six minutes. As such, the final number of cases analyzed was 200.

Table 1. Descriptive statistics of gratitude, empathy, and compassionate love

			Range				
Variable	*M*	*SD*	Possible	Actual	Skew	Kurts	Alpha
Gratitude (GQ_6)	36.60	3.97	6–42	17-42	-1.17	2.90	0.67
Basic Empathy (BES)	109.43	14.25	20-140	60-137	-0.60	0.44	0.88
Emotional Contagion	29.75	6.17	6-42	12-42	-0.39	-0.19	0.78
Cognitive Empathy	45.48	5.27	8-56	30-56	-0.54	0.04	0.74
Emotional disconnection	34.21	5.46	6-42	13-42	-0.94	1.01	0.80
Compassionate Love (CLSCO)	124.80	14.21	21-147	83-147	-0.80	0.41	0.93

Note. GQ_6 = Gratitude Questionnaire-6 (McCullough et al., 2002); BES = Basic Empathy Scale (Jolliffe & Farrington, 2006); CLSCO = Compassionate Love Scale for Close Others (Sprecher & Fehr, 2005). Emotional Contagion, Cognitive Empathy, and Emotional disconnection are factors selected from the three-factor model of the BES (Carre et al., 2013).

Next, descriptive statistics of the major constructs in the study were calculated (see Table 1). On average, participants reported high levels of gratitude, and moderately high levels of compassionate love for others and empathy, with the most empathy reported in the emotional disconnection subscale. Next, analyses examining the normality of the data indicated that all variables were within acceptable ranges for skewness and kurtosis (see Table 1). Notably, the observed negative skew was expected as the population consisted of students of a Christian cultural background that likely value gratitude, empathy, and compassion.

Table 2. Zero-order correlations of the major study variables: gratitude, empathy (with subscales), and compassionate love

	1	2	3	4	5	6
1. Gratitude (GQ_6)	1					
2. Basic Empathy (Total BES)	.27**	1				
3. Emotional Contagion (BES)	.09	.83**	1			
4. Cognitive Empathy (BES)	.35**	.81**	.44**	1		
5. Emotional disconnection (BES)	.27**	.89**	.62**	.64**	1	
6. Compassionate Love (CLSCO)	.41**	.67*	.44**	.63**	.64**	1

Note. GQ_6 = Gratitude Questionnaire-6 (McCullough et al., 2002); BES = Basic Empathy Scale (Jolliffe & Farrington, 2006); CLSCL = Compassionate Love Scale for Close Others (Sprecher & Fehr, 2005). Emotional Contagion, Cognitive Empathy, and Emotional disconnection are factors selected from the three-factor model of the BES (Carre et al., 2013).

Third, zero-order correlations of the variables were calculated (see Table 2). Results indicate that gratitude was significantly positively associated with basic empathy, cognitive empathy, and emotional disconnection. Additionally, gratitude was significantly positively associated with compassionate love for close others, and compassionate love was significantly positively associated with basic empathy, emotional contagion, cognitive empathy, and emotional disconnection.

Last, Pearson correlations were assessed for the presence of multicollinearity. Though many variables were significantly correlated with one another (see Table 2), Pearson correlations did not exceed .67 among the major variables of gratitude, empathy, and compassion, demonstrating all correlations were within the acceptable range.

Table 3a. Model coefficients for the simple mediation model for gratitude, empathy, and compassionate love (Path a, b, c')

		Consequent variable						
		M (basic empathy)				*Y* (compassionate love)		
Antecedent variable		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (gratitude)	*a*	0.96	0.26	.000	*c'*	0.89	0.19	.000
M (basic empathy)		–	–	–	*b*	0.60	0.05	.000
Constant	i_1	74.34	9.05	.000	i_2	26.69	7.67	.000
		$R^2 = .07$				$R^2 = .32$		
		$F(1, 198) = 15.20$, $p < .001$				$F(2, 197) = 99.07$, $p < .001$		

Note. $N = 200$. *SE* = standard error. Coeff = unstandardized coefficient. *X* = independent variable (gratitude) *a* = path a; the association between the independent variable (gratitude) and mediator (empathy). *b* = path b; the association between the mediator (empathy) and dependent variable (compassionate love). *c'* = path c'; the direct effect of the independent variable (gratitude) on the dependent variable (compassionate love). i_1 = the intercept, or constant, for the association between gratitude and empathy. i_2 = the intercept, or constant, for the association between empathy and compassion.

Table 3b. Model coefficients for the total effect of gratitude on compassionate love (Path c)

		Y (compassionate love)		
Antecedent variable		Coeff.	*SE*	*p*
X (gratitude)	*c*	1.47	0.23	.000
Constant	i_2	71.07	8.54	.000
			R^2 =.17	
			$F(1, 198) = 40.08$, $p < .001$	

Note. *N* = 200. *SE* = standard error. Coeff = unstandardized coefficient. *X* = independent variable (gratitude). *c* = path c; the total effect of the independent variable (gratitude) on the dependent variable (compassionate love). i_2 = the intercept, or constant, for the association between empathy and compassion.

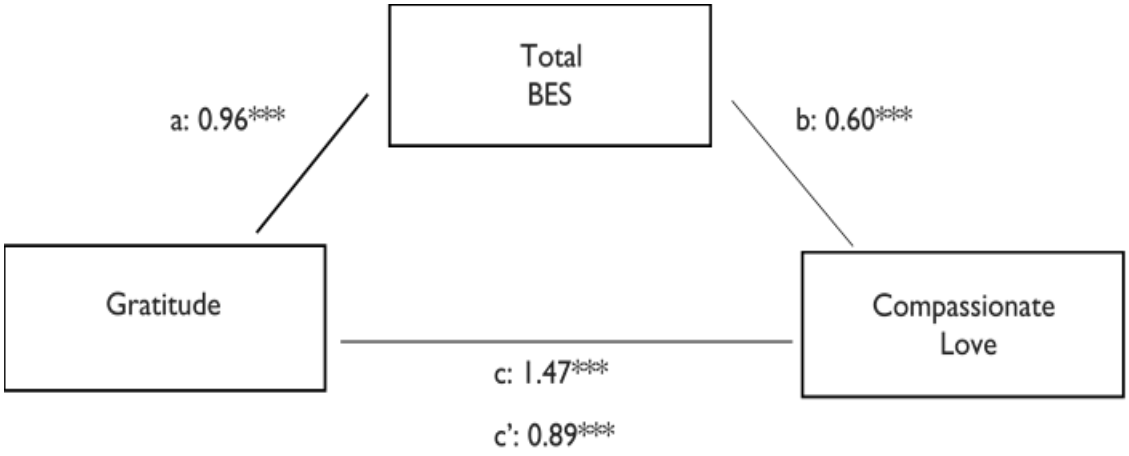

Figure 1. Total BES as the mediator between gratitude and compassionate love

Hayes Mediation Analysis

Hypothesis. Hayes's (2013) PROCESS macro 2.16 was used to examine the indirect influence of gratitude on compassionate love through empathy (see Table 3a & Table 3b). Using an ordinary least squares regression-based path analysis, it was found that gratitude indirectly influenced compassionate love through its relationship with the mediator, empathy. Table 3a illustrates that individuals with higher levels of gratitude also had higher levels of empathy (a = 0.96, p < .001), and those who had higher levels of empathy had more compassionate love for close others (b = 0.60, p < .001). Table 3a and 3b illustrate that the total effect of gratitude on compassionate love for close others (c = 1.47 p < .001) decreased when the mediator, empathy, was controlled for (c' = 0.89, p < .001). A 95% bias-corrected bootstrap confidence interval for the indirect effect of gratitude on

compassionate love based on 1,000 bootstrap samples, did not include zero (0.19 to 0.92), and the Sobel test (normal theory test) also indicated that the mediation effect was significant ($Z = 3.68$, $p < .001$, $R^2 = .11$). Therefore, the results provide evidence that empathy partially mediates the influence that gratitude has on compassionate love for close others.

Table 4. Model coefficients for the mediation model for gratitude, three factors of the BES, and compassionate love (Path a, b, c')

		Consequent variable						
		M (BES factors)				*Y* (compassionate love)		
Antecedent variable		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (gratitude)	*a*	0.13	0.11	.232	*c'*	1.35	0.21	.000
M (emotional contagion)		–	–	–	*b*	0.93	0.13	.000
X (gratitude)	*a*	0.37	0.09	.000	*c'*	0.93	0.19	.000
M (emotional disconnection)		–	–	–	*b*	1.48	0.14	.000
X (gratitude)	*a*	0.46	0.09	.000	*c'*	0.78	0.20	.000
M (cognitive empathy)		–	–	–	*b*	1.50	0.15	.000

Note. $N = 200$. *SE* = standard error. Coeff = unstandardized coefficient. *X* = independent variable (gratitude) *a* = path a; the association between the independent variable (gratitude) and mediator (empathy). *b* = path b; the association between the mediator (empathy) and dependent variable (compassionate love). *c'* = path c'; the direct effect of the independent variable (gratitude) on the dependent variable (compassionate love). i_1 = the intercept, or constant, for the association between gratitude and empathy. i_2 = the intercept, or constant, for the association between empathy and compassion.

After the initial analysis, the three factors of the BES (emotional contagion, emotional disconnection, and cognitive empathy) were examined to gain greater understanding of empathy's role in mediating the relationship between gratitude and compassionate love (see Table 4). Table 4 illustrates that there was no significant association between gratitude and emotional contagion ($a = 0.13$, $p = .232$), suggesting that emotional contagion does not mediate the relationship between gratitude and compassionate love. Next, gratitude was positively associated with emotional disconnection ($a = 0.37$, $p < .001$) and emotional disconnection was positively associated with compassionate love for close others ($b = 1.48$, $p < .001$). Thus, the total effect of gratitude on compassionate love for close others ($c = 1.47$ $p < .001$) decreased when the mediator, emotional disconnection, was controlled for ($c' = 0.93$, $p < .001$). Lastly, Tables 4 and 5a illustrate that individuals with higher levels of gratitude also had higher levels of cognitive empathy ($a = 0.46$, $p < .001$), and those who had higher levels of cognitive empathy had more compassionate love for close others ($b = 1.50$, $p < .001$). Table 5a and 5b indicate that the total effect of gratitude on compassionate love for close others ($c = 1.47$ $p < .001$) decreased when the mediator, cognitive empathy, was controlled for ($c' = 0.78$, $p < .001$). Results from the total BES and the three BES factors demonstrate that cognitive empathy accounts for the mediation effect to a greater degree than emotional disconnection, emotional contagion, and the total

BES. A 95% bias-corrected bootstrap confidence interval for the indirect effect of gratitude on compassionate love (via cognitive empathy) based on 1,000 bootstrap samples, did not include zero (0.38 to 1.05), and the Sobel test (normal theory test) also indicated that the mediation effect was significant ($Z = 4.58$, $p < .001$, $R^2 = .13$).

Table 5a. Model coefficients for the simple mediation model for gratitude, cognitive empathy (BES factor), and compassionate love (Path a, b, c')

		Consequent variable						
		M (cognitive empathy)				*Y* (compassionate love)		
Antecedent variable		Coeff.	*SE*	*p*		Coeff.	*SE*	*p*
X (gratitude)	*a*	0.46	0.09	.000	*c'*	0.78	0.20	.000
M (cognitive empathy)		–	–	–	*b*	1.50	0.15	.000
Constant	i_1	28.59	3.26	.000	i_2	28.29	8.28	.000
		$R^2 = .12$				$R^2 = .44$		
		$F(1, 198) = 27.20$, $p < .001$				$F(2, 197) = 77.28$, $p < .001$		

Note. $N = 200$. *SE* = standard error. Coeff = unstandardized coefficient. *X* = independent variable (gratitude) *a* = path a; the association between the independent variable (gratitude) and mediator (empathy). *b* = path b; the association between the mediator (empathy) and dependent variable (compassionate love). *c'* = path c'; the direct effect of the independent variable (gratitude) on the dependent variable (compassionate love). i_1 = the intercept, or constant, for the association between gratitude and empathy. i_2 = the intercept, or constant, for the association between empathy and compassion.

Table 5b. Model coefficients for the total effect of gratitude on compassionate love *(Path c)*

		Y (compassionate love)		
Antecedent variable		Coeff.	*SE*	*p*
X (gratitude)	*c*	1.47	0.23	.000
Constant	i_1	71.07	8.54	.000
			$R^2 = .17$	
			$F(1, 198) = 40.08$, $p < .001$	

Note. $N = 200$. *SE* = standard error. Coeff = unstandardized coefficient. *X* = independent variable (gratitude). *c* = path c; the total effect of the independent variable (gratitude) on the dependent variable (compassionate love). i_2 = the intercept, or constant, for the association between empathy and compassionate love.

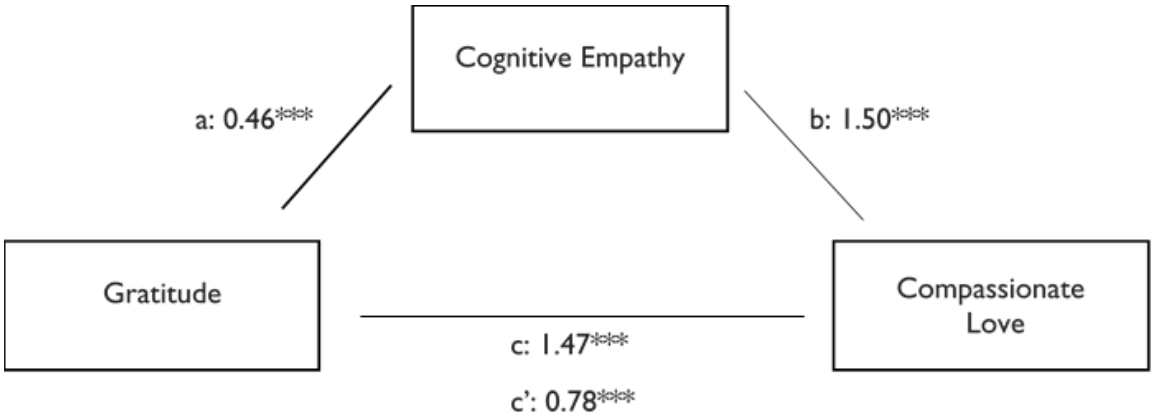

Figure 2. Cognitive empathy as the mediator between gratitude and compassionate love

Discussion

The aim of the current investigation was to test the direct and indirect effects of gratitude on compassionate love. First, means for the BES, GQ-6, and CLSCO illustrated that our sample tended to report high levels of gratitude and moderately high levels of empathy and compassion, which would be expected of a Christian sample, as Christian values emphasize helping behaviors and the virtues of gratitude and compassion. Next, zero-order correlations indicated a positive association between gratitude and empathy, gratitude and compassionate love, and empathy and compassionate love. In other words, those who are more grateful tend to have greater empathy and compassion toward others, and those who are more empathic tend to have greater compassion.

Furthermore, mediation analyses supported our hypothesis that gratitude would have a significant impact on compassionate love both directly and indirectly through the mediator, empathy. Beginning with the significant direct effects observed in our study, our analysis showed that gratitude is significantly and positively associated with empathy. This is consistent with previous literature that indicates that gratitude correlates positively with both cognitive and affective aspects of empathy (McCullough et al., 2002). McCullough et al.'s research on gratitude illustrated a high prosocial nature embedded in gratitude, and the researchers assert that this nature is rooted in traits such as empathy and forgiveness, which allow individuals to be sensitive toward others. Similarly, Worthen and Isakson (2007) suggest that gratitude is essential in cultivating empathy, and vice versa. The researchers suggest that being able to recognize that one has received benevolence from others; helps increase a sense of mutual dependence that leads him/her to have empathy for others. Additionally, Worthen and Isakson argue that a low capacity for empathy can hinder the effects of gratitude, as it reduces the ability to recognize the blessings and benevolence others extend.

Further, empathy is significantly positively associated with compassionate love, which is in line with previous research that suggests that though empathy and compassion are distinct constructs, the two are also related to each other, as they produce an emotional reaction either for or with another's suffering (Lim & DeSteno, 2016). Lim and DeSteno found that when individuals were experiencing adversity, there was increased empathy, specifically cognitive empathy, and this led to greater compassion. Steffen and Masters (2005) similarly argue that compassion naturally arises through

empathy when one sees another's suffering and experiences a desire to alleviate their suffering through altruistic behavior.

Next, results from our study revealed a significant positive direct effect of gratitude on compassionate love. Although research that directly investigates the relationship between the two constructs is limited, there have been a few studies that suggest the possibility of such a relationship. For example, Krause and Hayward (2015) state that those who tend to be more compassionate are likely to provide support to others and derive a deeper sense of meaning to their lives, and this sense of meaning is related to feelings of gratitude. Additionally, Grant and Gino (2010) propose that gratitude is highly related to engagement in prosocial behavior. They found that those who express gratitude more often, are more likely to experience enhanced feelings of empathy and engage in altruistic behavior. Much of the literature indicates that unlike empathy, compassion is directly associated with altruistic behavior and produces increased motivation to ease the other's suffering (Batson, 2009; Lim & DeSteno, 2016).

Additionally, our results indicate that empathy, especially cognitive empathy, significantly mediates the relationship between gratitude and compassion. This finding extends current knowledge in the existing literature, which depicts a positive association between gratitude and empathy (Fujiwara et al., 2014). Notably, this association between gratitude and empathy has been established in several studies, and some suggest that the experience of gratitude would be difficult without empathic skills, and vice versa (Gordon et al., 2004; Lazarus & Lazarus, 1994; Worthen & Isakson, 2007). Moreover, research indicates that individuals with higher dispositional gratitude, as well as those who have taken part in gratitude interventions, engage in more prosocial behavior (Barlett & DeSteno, 2006). This association between gratitude and altruism may in fact represent the key ingredient that helps individuals' empathy evolve into compassion. What we know about compassion is that it is derived from empathy (Lim & DeSteno, 2016), but distinct from empathy as compassion takes one step further from simply having empathic feelings for another's suffering, to engaging in costly, helping behaviors to alleviate pain (Batson, 2002; Steffen & Masters, 2005). Therefore, if the relationship between gratitude and empathy has been established, compassion is derived from empathy, and gratitude is related to altruism, this leads us to believe that gratitude is associated with compassion, with empathy as the mediator, which the current study observed.

Implications on Clinical Work and Research

These results have important implications for the relationships people develop and maintain. Specifically for those involved in clinical work, research indicates that an empathic response may not be as beneficial for the clinician-patient relationship due to the empathic distress that many caregiving professionals experience (Vachon, 2016). Feelings of empathy often involve sharing the feelings of others in their suffering, and excessive engagement in empathy can result in distress that leads to aversion to another's suffering and withdrawal (Singer & Klimecki, 2014).

On the other hand, compassion training has shown to reverse the negative effects of empathic distress by decreasing negative affect back to baseline and increasing positive affect (Klimecki, et al., 2014; Vachon, 2016). Given the knowledge that gratitude directly affects compassion and indirectly moves one toward compassion through empathy, it would be helpful for the clinician to

engage in an integration of gratitude interventions and empathy trainings. By engaging in such interventions, clinicians can improve their well-being, experience greater relationship formation and maintenance through feelings of appreciation for the other, and as the current study suggests, increase compassion and engagement of prosocial behavior (Algoe et al., 2008; Gordon et al., 2011; Wood et al., 2008). Though current compassion trainings may directly increase compassion leading to greater helping intention and lower empathic distress in clinicians, it may be of greater importance for clinicians to engage in an integration of empathy and gratitude interventions to influence compassion for a few reasons. First, in addition to compassion, gratitude interventions can increase a clinician's appreciation for the client and help the clinician experience greater satisfaction of the therapeutic relationship. By experiencing gratitude for the meaning clients bring to the clinician's life, the burden for solely the clinician to pour his/her care to the client will decrease. In addition, Worthen and Isakson (2007) suggest empathy is integral in experiencing gratitude and similarly, gratitude allows for the cultivation of empathy. Therefore, it is important to develop both through an integrated training. Next, since compassion is founded upon empathy, specifically cognitive empathy, it is important to develop strong perspective taking skills, to build the foundation on which to cultivate compassion. Finally, compassion training may be helpful for clinicians, but less applicable to clients who are not in caring professions. Therefore, as clinicians engage in and learn integrated gratitude and empathy interventions and techniques, these skills would also become applicable in their practices, as they can easily teach clients to engage in such interventions to combat relational distress and low personal satisfaction and well-being.

It is also highly important for future research to continue exploring the relationship between gratitude and compassion experimentally, by creating and utilizing an integrated form of gratitude and empathy intervention and compassion training. According to Wood, Froh, and Geraghty (2010), there are currently 12 gratitude interventions, some of which involve listing things one is grateful for, expressing gratitude, and engaging in grateful contemplation. These types of interventions can be incorporated into existing empathy trainings, such as visualizing one's own past suffering and extending the feelings that arise toward the self toward others, to create interventions that target the empathic component embedded in gratitude that influences compassion. By studying the effects that these tangible interventions have on interpersonal and individual well-being and satisfaction, researchers can further develop effective interventions that clinicians can use both for their own well-being and to implement with clients who may benefit from such interventions. Future research can focus on the creation of simple workbook interventions that clinicians and clients can use to increase their gratitude, empathy, and compassion in different settings and relationships.

Limitations

The current study was limited to a convenience sample of undergraduate students from a private religiously-affiliated university located in the Southwestern United States. Therefore, this sample might represent a socio-economic status, education status, age range, and religious affiliation that is not generalizable to a larger population. The study should be replicated on a more generalizable population and non-religious group or a specific population of interest, such as mental health professionals. Another limitation of the study was the absence of key demographic information, such

as participant sex and grade. Further, the current study utilized self-report to measure an individual's level of gratitude, empathy, and compassion. Self-report of these virtues may have led participants to answer questions in a socially desirable manner and may not be an accurate and objective method of assessing these variables. Further investigation using more objective forms of measurement, such as EEG for empathy, behavioral observation, and self and other-report, is necessary to confirm the relationships among these variables found in the current study. In addition, the current study found that empathy partially mediated the relationship between gratitude and compassion, suggesting that there are constructs other than empathy, that may play an integral role in this relationship. Lastly, the mediation models provided implications about causality, but due to the nature of the cross-sectional design that was used, future longitudinal studies are necessary to test the implications evidenced in the current study.

In conclusion, though there is a growing body of research focusing on the virtues of gratitude, empathy, and compassion, little has been done to identify the relationship between these constructs and the implications of such relationships. The current study attempted to better understand this relationship through a mediation analysis, in hopes that future research will test the benefits of utilizing interventions regarding gratitude, empathy, and compassion to increase both clinician and client care and well-being. Findings from such research can help inform trainings that target clinician effectiveness and protection against empathic distress and burnout. They can also help clinicians in finding and implementing appropriate interventions for relevant client presentations.

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