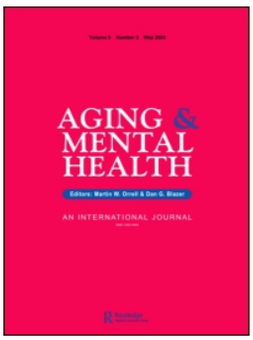

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Gratitude and coping among familial caregivers of persons with dementia

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ABSTRACT

Objectives: Gratitude is widely perceived as a key factor to psychological well-being by different cultures and religions. The relationship between gratitude and coping in the context of familial dementia caregiving has yet to be investigated.

Design: This study is the first to examine the associations among gratitude, coping strategies, psychological resources and psychological distress using a structural equation modelling approach.

Results: Findings with 101 Chinese familial caregivers of persons with dementia (mean age = 57.6, range = 40–76; 82% women) showed that gratitude was related to the greater use of emotion-focused coping (positive reframing, acceptance, humour, emotional social support seeking, religious coping) and psychological resources (caregiving competence and social support). Psychological resources and emotion-focused coping in turn explained the association between gratitude and lower levels of psychological distress (caregiving burden and depressive symptoms).

Conclusion: The present results indicate the beneficial role of gratitude on coping with caregiving distress and provide empirical foundation for incorporating gratitude in future psychological interventions for caregivers.

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KEYWORDS
Gratitude; caregiving; Alzheimer's disease; dementia; coping

Introduction

Gratitude has been proposed as a key factor for subjective well-being by major religions (e.g., Christianity, Buddhism, Muslim) and philosophers in different cultures (Confucius, Marcus Tullius Cicero, Adam Smith; Emmons & Crumpler, 2000; Emmons & Shelton, 2002; Wood, Froh, & Geraghty, 2010). People characterized by a grateful personality tend to be thankful and appreciative more frequently as well as to a wider array of people and events in daily life (McCullough, Emmons, & Tsang, 2002; Wood, Maltby, Stewart, Linley, & Joseph, 2008). A rich corpus of studies has demonstrated the robust associations between a grateful personality (or *gratitude*) and indicators of subjective well-being, such as life satisfaction and positive affect (Froh, Kashdan, Ozimkowski, & Miller, 2009; McCullough et al., 2002; Watkins, Woodward, Stone, & Kolts, 2003; Wood, Joseph, & Maltby, 2009). Gratitude was also inversely related to depressive symptoms (Lambert, Fincham, & Stillman, 2012; McCullough et al., 2002; Ruini & Vescovelli, 2013; Watkins et al., 2003; Wood, Joseph, & Linley, 2007), anxiety (McCullough et al., 2002; Vernon, Dillon, & Steiner, 2009), and a plethora of negative emotions including exhaustion, disappointment, and anger (DeWall, Lambert, Pond, Kashdan, & Fincham, 2012; Kashdan, Mishra, Breen, & Froh, 2009; Kashdan, Uswatte, & Julian, 2006; McCullough et al., 2002). These negative emotions are common among dementia caregivers (Pinquart & Sörensen, 2003; Schulz, O'Brien, Bookwala, & Fleissner, 1995). However, the role of gratitude on relieving emotional distress, such as perceived burden, has yet to be systematically examined in the context of familial caregiving for persons with dementia (PWDs).

The association of gratitude with distress through resources and coping

Psychologists have proposed two hypotheses to explain the salutary effects of gratitude. The first hypothesis (Fredrickson, 2004) puts forward that a grateful personality builds psychological resources in halcyon times. These psychological resources may include a greater sense of meaning, mastery, competence, perceived, and received social support (Kashdan, Mishra, Breen, & Froh, 2009; Lambert, Graham, Fincham, & Stillman, 2009; Lanham, Rye, Rimsky, & Weill, 2012; Wood et al., 2009). In turn, the accrued psychological resources may help reduce psychological distress in stressful times.

Algoe's (2012) find-remind-and-bind theory postulates how gratitude fosters social support. Specifically, gratitude signals the responsiveness of the benefactor to the beneficiary's needs. The grateful emotion elicited, therefore, enables the beneficiary to locate high-quality social partners (i.e., the benefactor) who care for their well-being, and forms supportive interpersonal relationships. Algoe and her team replicated the effect of gratitude on relationship quality and social support among populations facing various stressors, including college freshmen adjusting to their new school life as well as women living with breast cancer (Algoe, Haidt, & Gable, 2008; Algoe & Stanton, 2012).

Wood, Maltby, Stewart, Linley, and Joseph (2008) proposes that grateful individuals are inclined to regard benefits from others as more costly, valuable, and altruistic. Although this socio-cognitive account is not formulated to explain specifically how gratitude would facilitate appraisals of psychological resources, these gift perceptions may enable grateful individuals to perceive their lives as more favourably

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endowed. The study by Wood et al. (2009) indicates that gratitude is associated with enhanced autonomy, environmental mastery, purposefulness, personal growth, and self-acceptance, even after controlling for the effects of personality. Gratitude has also been found to be associated with higher levels of perceived mastery, internal locus of control, and perceived competence (Kashdan et al., 2009; Kashdan et al., 2006; Watkins et al., 2003).

Several literature reviews have also proposed coping strategies as the mediator for the association between gratitude and reduced psychological distress (Emmons & Mishra, 2011; Wood et al., 2010). These reviews put forward that grateful individuals tend to cope with stress using a more adaptive repertoire of coping strategies (e.g., more positive reframing, more social support seeking, less self-blame), and therefore experience less distress in stressful encounters.

On the basis of the transactional model of stress and coping (Lazarus & Folkman, 1984) and the categorization of coping strategies proposed by Carver, Scheier, and Weintraub (1989), Cooper, Katona, and Livingston (2008) validated a scheme that comprised three subscales for categorizing an array of coping strategies. Problem-focused coping refers to efforts to define a problem, generate alternative solutions, and conduct cost–benefit analysis for devising an action plan (e.g., active coping, planning, seeking instrumental social support). Emotion-focused coping is characterized by efforts to change one's feeling and perceptions about the situation with the goal to lessen the emotional impact of the stressor (e.g., positive reframing, acceptance, seeking emotional support). Dysfunctional coping (e.g., denial, self-blame, behavioural disengagement) describes a cluster of coping strategies that may elicit adverse outcomes, especially when they are used alone or over a prolonged period. The current paper employed this framework to understand the role of coping strategies in mediating the relationship between gratitude and psychological distress.

Through the habitual deployment of emotion-focused coping strategies (e.g., positive reframing, emotional social support seeking), grateful individuals tend to experience less emotional distress despite their stressful experiences (Emmons & Kneezel, 2005; Lambert et al., 2009; Watkins, Cruz, Holben, & Kolts, 2008). According to a study that investigated the link between gratitude and various coping strategies (Wood et al., 2007), gratitude was associated with seeking instrumental and emotional social support, active coping, positive reinterpretation and growth, and planning. Also, the personality trait was related to less use of dysfunctional coping, including behavioural disengagement, self-blame, and denial. In addition, positive reinterpretation and growth partially mediated the relationship between gratitude and perceived stress.

Coping with dementia caregiving

The present study aimed to investigate the role of gratitude on relieving caregiving distress among familial caregivers of PWDs. Taking care of a PWD induces chronic strain among caregivers, and this strain exerts a heavy toll on their mental and physical health (Pinquart & Sörensen, 2003; Vitaliano, Zhang, & Scanlan, 2003). Examining how gratitude facilitates the coping process may advance the understanding of researchers and practitioners on the individual differences in coping with caregiving distress.

According to the caregiving and stress process formulated by Pearlin, Mullan, Semple, and Skaff (1990), multiple factors – the caregiving context, characteristics of stressor, coping style, and coping resources – collectively influence the physical and mental health impacts of caregiving. Empirical evidence regarding the benefits of each category of coping strategies is mixed. Li, Cooper, Bradley, Shulman, and Livingston (2012) conducted a meta-analysis on the relationship between coping strategies and psychological morbidity among familial caregivers of PWDs based on 35 independent studies. Results showed that dysfunctional coping was related to higher levels of anxiety and depression, whereas emotion-focused coping was associated with less psychological morbidity. Problem-focused coping was related to neither depression nor anxiety. In contrast, subsequent studies by Piercy and colleagues (2013) based on the Cache County Dementia Progression Study data-set have revealed that wishful thinking increased, but problem-focused coping reduced depressive symptoms among familial caregivers. Using semi-structured interviews, Au, Shardlow, Teng, Tsien, and Chan (2013) found that Hong Kong Chinese caregivers relied on internal self-regulation and forbearance to cope with their caregiving burdens. This finding resonates with Eastern philosophical teachings that advocate changing one's perception, rather than the external environment, to tackle life stress.

Psychological resources, such as sense of mastery and social support, are imperative to caregiver's adjustment to their caregiving role. An early study by Haley, Levine, Brown and Bartolucci (1987) has demonstrated that social support and self-efficacy in tackling caregiving loads were associated with less depressive symptoms among dementia caregivers. In examining the mediating pathways for the relationship of caregiving stress with depressive symptoms, Mausbach and colleagues (2012) found that personal mastery and self-efficacy were robust mediators. The result is in line with the findings of Chow and Ho (2012) on Hong Kong Chinese caregivers, which demonstrated the predictability of psychological resources on mitigating depression. In a recent systematic review on models of burden in caregiving with 56 reports, Van der Lee, Bakker, Duivenvoorden, and Dröes (2014) underscored caregivers' social functioning and support as well as perceived competence and self-efficacy as robust determinants of both burden and mental health, amongst other stressors including PWDs' behavioural problems and mood disorders, self-care needs, and cognitive function.

Numerous studies have examined the effects of other caregiver characteristics (e.g., ethnicity, relationship with the PWD, personality) on dementia caregiving experience (Hooker, Monahan, Bowman, Frazier, & Shifren, 1998; Sörensen & Pinquart, 2005). However, the current literature has largely neglected the role of malleable character strengths in coping with the caregiving role and tasks (Park, Peterson, & Seligman, 2004). Until recently have researchers begun to acknowledge and investigate the positive aspects of caregiving experience, such as personal growth (Cheng, Mak, Lau, Ng, & Lam, 2015; Tarlow et al., 2004), apart from its negative aspects. Gratitude may support the tendency of benefit finding and facilitate adaptation to the caregiving role. Adopting a grateful orientation to life (Wood, Froh, & Geraghty, 2010) may enable caregivers to appreciate the positive moments of caregiving, from the kind acts of a helpful neighbour to the tiny progress in

self-care made by the PWD. An appreciative and thankful caregiver is less likely to take these positive moments for granted (Wood, Maltby, Stewart, et al., 2008). In other words, gratitude may sharpen the sensitivity of the caregiver to appreciate the positive aspects of caregiving. A grateful person does not only recognize the occurrence of positive events (e.g., happy moments with the PWD), but also generously acknowledges the support from the people around or supernatural power (e.g., God). Reciprocation of kind acts may foster the relationship harmony between the grateful beneficiary and the benefactor (Algoe & Stanton, 2012). The prosocial nature of gratitude may, therefore, strengthen the perception of social support (Wood, Maltby, Gillett, Linley, & Joseph, 2008), in addition to reminding the beneficiary of their existing assets as well as their importance in the eyes of those have offered help (Algoe, 2012; Lambert et al., 2009; Wood et al., 2009).

This study extended the caregiving literature by investigating the salutary role of gratitude in the coping process among familial caregivers of PWDs. Specifically, we hypothesized that gratitude was inversely associated with psychological distress of caregiving, indicated by caregiving burden and depressive symptoms. In addition, we posited that the beneficial role of gratitude on distress was mediated by coping strategies as well as psychological resources. The present findings, which reveal multivariate associations among gratitude, coping, and psychological distress of caregivers, may offer empirical support for the future adoption of gratitude interventions to caregivers of PWDs.

Method

Participant

Participants were recruited from nine local non-governmental organizations (NGOs; see the Acknowledgement section for the name). These NGOs were chosen based on their extensive experience in dementia-related services and capacity to commit to the case load of the current study within the designated time frame of data collection. Chinese caregivers were recruited if they were 40−80 years old, provided care to a family member with dementia for no less than two hours per day, and were able to understand and speak Cantonese. Caregivers who were undergoing cancer treatment or participating in any structured counselling programmes were excluded. Except the age restriction, these inclusion and exclusion criteria were identical to those of a recent, territory-wide, multidimensional caregiver program (REACH-HK; Cheung et al., 2015). The age restriction was in place considering that local old-old caregivers tend to have low literacy level and may find some survey questions (e.g., coping strategies) too abstract to answer. All participants were remunerated 30 Hong Kong dollars for their participation.

One hundred and nine eligible caregivers provided consent to participate in the study. Eight caregivers did not complete the face-to-face interview, and hence the questionnaire. They were either too distressed to answer the questions or had substantial difficulty understanding the survey questions. Their data were removed from the analysis. The final sample thus comprised 101 caregivers. Table 1 presents the demographic characteristics of the caregivers and PWDs.

Table 1. Sample characteristics ($N = 101$).

Variables CG characteristics	*n*/Mean	%/SD
CG proportion of female	83	82.2
CG age	57.6	7.95 (range = 40−76)
CG relationship with PWD		
Spouse	29	28.7
Children/children-in-law	71	70.3
Others (i.e., sister-in-law)	1	1.0
CG cohabiting with PWD	60	59.4
CG working (full time/part time)[a]	25	24.7
CG monthly household income (in HK dollar)[b]		
5000 or below	26	25.7
5001−10,000	20	19.8
10,001−20,000	18	17.8
20,001−40,000	20	19.8
40,001 or more	10	10.0
CG education level[c]		
Primary or less	32	31.7
Junior secondary	16	15.8
Senior secondary	30	29.7
Degree or more	18	17.8
CG with religious affiliation[d]	51	50.5
CG married	70	69.3
PWD characteristics		
PWD proportion of female	68	67.3
PWD age	81.7	9.36 (range = 59−100)
No. of years since the diagnosis	4.42	3.23

Notes: CG = caregiver; PWD = person with dementia.
[a]One participant did not provide his/her work status.
[b]Seven participants did not provide their income level.
[c]Five participants did not provide their education level.
[d]One participant did not provide his/her religious affiliation.

Measures

Gratitude

Gratitude was measured by both the Gratitude Adjective Scale (GAS; McCullough et al., 2002) and the Gratitude Questionnaire (GQ; McCullough et al., 2002). For the GAS, participants evaluated the extent to which the terms *grateful*, *thankful*, and *appreciative* described their everyday feelings in general. The GQ differs from the GAS in that the former does not only measure the frequency of gratitude felt in everyday life but also its span (the variety of gratitude-worthy events) and density (the number of objects one is grateful for in each specific event). In other words, the GQ complemented the GAS by considering more dimensions of the affective disposition (McCullough et al., 2002). Sample items of the GQ include 'I have so much in life to be thankful for' and 'I am grateful to a wide variety of people.' In this study, participants evaluated the extent to which the three GAS items described their everyday feelings, as well as their agreement with the six GQ items on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

A study on Taiwan college students, however, indicated that Item 6 of the GQ ('Long amounts of time can go by before I feel grateful to something or someone') loaded poorly with other five items on a single gratitude dimension on a confirmatory factor analysis (Chen, Chen, Kee, & Tsai, 2009). Hence, we also tested the factor loadings of the six items on a single gratitude factor using confirmatory factor analysis with our sample. Although the overall model-data fit was good ($\chi^2(9) = 8.67$, $p = .468$, CFI = 1.00, TLI = 1.00, RMSEA = .000, SRMR = .034), Item 6 loaded poorly on the gratitude factor (factor loading = .13, $p = .220$), unlike the rest of the five items (factor loadings = .54−.90, $p < .000$).

Thus, following the practice of Chen et al. (2009), we removed Item 6 from the GQ in the subsequent analysis. Responses on the items were averaged to form the scale scores for each measure.

Psychological resources

Participants' recent caregiving competence was operationalized as personal resources, whereas the receipt and satisfaction with social support were operationalized as social resources (Hobfoll, 2002). Caregiving competence was assessed by a four-item scale (Pearlin et al., 1990). Participants were asked to judge the accuracy of those items (e.g., 'competent', 'self-confident') as descriptions of themselves as caregivers and to answer on a scale ranging from 0 (*totally inaccurate*) to 3 (*totally accurate*). The average of the responses on these items formed the scale score of caregiving competence.

Social support was measured by three types of received support (i.e., tangible, emotional, and informational) as well as the satisfaction with each type of support (Krause, 1995; Krause & Borawski-Clark, 1995). The receipt of social support does not always confer satisfaction and a beneficial effect to the well-being of the recipient. Support that compromises the autonomy and preferences of the caregivers may be less welcomed compared to the kind of assistance that is appropriate and respects the dignity of the beneficiary (Smith & Goodnow, 1999). Thus, we constructed an overall social support score by aggregating received social support and satisfaction of caregivers to it in this study. Many participants remarked that the first item of the received tangible support scale ('provide transportation') was largely irrelevant to their caregiving task because extremely few people in their social network had the capacity to offer such support (e.g., without a car), and they had restricted their daily activities (e.g., grocery shopping, going to the elderly centre and doctors) to their immediate vicinity. Thus, the item was removed, leaving the received tangible support with two items ('help with household chores' and 'help with grocery shopping'). Both the received emotional (e.g., 'comfort you when you are stressful') and the received informational (e.g., 'offer you information') support were evaluated by four items. Participants assessed how often they received each type of support, and answered on a scale ranging from 0 (*never*) to 3 (*always*). Participants were also asked whether they were satisfied with the three types of social support (tangible, emotional, informational) they have received, and to respond on a scale ranging from 0 (*totally dissatisfied*) to 3 (*very satisfied*). The scores of the 13 items (2 on received tangible support, 4 on received emotional support, 4 on received informational support, and 3 on support satisfaction) were averaged to form the overall social support score.

Coping strategies

The Brief COPE (Carver, 1997) was used to measure participants' deployment of coping strategies in the recent two weeks in response to the challenges encountered in caregiving. Prior to the administration of the questionnaire, the centre managers of two participating NGOs expressed concerns regarding the substance abuse items ('using alcohol and other drugs to make myself feel better' and 'using alcohol and other drugs to help me get through it'), and requested removing them from the questionnaire in order to protect privacy and reduce unnecessary stigmatization to their clients. They remarked that the substance use items were too sensitive considering the negative connotation of using these substances to cope with caregiver stress, and the potential elderly abuse cases that often occurred along with substance abuse (Lachs & Pillemer, 2004). Thus, substance use was not measured in the current study. The remaining 13 coping strategies (active coping, planning, positive reframing, acceptance, humour, religious coping, emotional social support seeking, instrumental social support seeking, distraction, denial, venting, behavioural disengagement, and self-blame) with a total of 26 items were adopted. Each coping strategy was assessed by two items. The framework of Cooper et al. (2008) included three coping subscales. First, the problem-focused coping subscale comprised active coping, planning, and instrumental social support seeking. Second, the emotion-focused coping subscale consisted of acceptance, emotional social support seeking, humour, positive reframing, and religious coping. Third, the dysfunctional coping subscale comprised behavioural disengagement, self-blame, venting, denial, and distraction. Participants answered on a scale from 1 (*never*) to 4 (*always*) regarding their use of each coping strategy. Strategy scores and subscale scores were constructed by taking the average of the responses on the items.

Psychological distress

Psychological distress was measured by both caregiving burden and depressive symptoms. Caregiving burden, which described the levels of strains in different domains of life as a result of the caregiving role, was evaluated by a 12-item version of the Zarit Burden Interview (Tang et al., 2015). Participants evaluated the extent to which they had experienced the symptoms described by the items (e.g., 'feel angry when you are around with CR', 'feel that your social life has suffered because you are caring for CR') in the recent two weeks, and responded on a scale from 1 (*never*) to 5 (*very often*). Responses on the 12 items were averaged to form the caregiving burden score. Depressive symptoms were evaluated by the seven-item Center for Epidemiologic Studies – Depression Scale (CESD; Herrero & Meneses, 2006; Santor & Coyne, 1997). Sample items included 'feel depressed' and 'have difficulty sleeping'. Participants evaluated the frequency of which they experienced each symptom in the previous two weeks and answered on a scale from 1 (*never*) to 4 (*always*). Responses on the seven items were averaged to form the depressive symptoms score.

Procedures

This study employed a cross-sectional design. Each session lasted for approximately one hour, and took place either in a private counselling room of the participating elderly centre or at the participant's home. The items were shown on response cards to facilitate participants' responses. Written informed consent was obtained before any questionnaire items were asked. All the sessions were conducted in Cantonese. The study materials were presented in traditional Chinese characters. Back-translation by independent bilingual research assistants was adopted to translate the English scale items into Chinese (Brislin & Freimanis, 2001). This study has received prior approval from the Human Research Ethics Committee for Non-clinical Faculties of the University of Hong Kong.

Analytic strategy

The associations among gratitude, psychological resources, coping strategies, and psychological distress were first examined using bivariate correlations. Structural equation modelling (SEM) was then used to explore the interrelationships among gratitude, psychological resources, coping strategies, and psychological distress. The model-data fit was assessed by multiple indices (Hu & Bentler, 1999). Specifically, in the light of the small sample size, an acceptable model-data fit is indicated by failing to reject the null hypothesis of the χ^2 test of exact fit, attaining a standardized root-mean-square residual (SRMR) of less than 0.09, as well as a comparative fit index (CFI) of over .95. Other relevant indicators including TLI and RMSEA with cut-offs at $\geq$.95 and $\leq$.060 were also used. The SEM was performed using MPlus Version 6 (Muthén & Muthén, 1998−2011), whereas all other analyses were conducted with SPSS Version 19.0.0.

Results

Table 2 provides the descriptive statistics and reliabilities of gratitude, psychological resources, coping strategies, and psychological distress.

Table 3 presents the intercorrelations among gratitude, psychological resources, coping strategies, and psychological distress. As expected, GQ and GAC were strongly associated with each other. GAC was positively related to social support and emotion-focused coping. GQ was associated with problem-focused coping as well as emotion-focused coping. Both types of psychological resources (social support and caregiving competence) were related to emotion-focused coping, caregiving burden, and depressive symptoms. Burden and depressive symptoms were related to dysfunctional coping, but neither emotion-focused nor problem-focused coping.

We also examined the more nuanced relationships between gratitude and individual coping strategies. Both GQ and GAC were related to the enhanced use of positive reframing (GQ: $r = .29$, $p = .004$; GAC: $r = .25$, $p = 012$), acceptance (GQ: $r = .30$, $p = .002$; GAC: $r = .26$, $p = 010$), humour (GQ: $r = .32$, $p = .001$; GAC: $r = .30$, $p = 003$), religious coping (GQ: $r = .24$, $p = .014$; GAC: $r = .24$, $p = 017$), and emotional social support seeking (GQ: $r = .28$, $p = .005$; GAC: r = .29, $p = 004$), which all belong to the emotion-focused coping subscale. GQ was also associated with greater use of planning ($r = .23$, $p = .024$).

In the light of the small sample size relative to the broad repertoire of coping strategies examined in this study, we included only the constituent items of emotion-focused coping into the tested model, as emotion-focused coping was the only subscale that had significant correlations with both GQ and GAC. Figure 1 displays the SEM results. The model-data fit was sufficient (χ^2 (98) = 119.35, $p = .0703$, χ^2/df = 1.19, CFI = .945, TLI = .933, RMSEA = .047, SRMR = .085).[1] The χ^2 test result indicated a sufficient model fit. The model also fulfilled the criteria of good fit as required by SRMR. However, marginal model fit was indicated by the CFI. The direct effects from gratitude to both coping resources and emotion-focused coping, and that from psychological resources to psychological distress, were significant.[2] Although the indirect effect via emotion-focused coping ($\beta = -0.05$, $p = .491$) and psychological resources ($\beta = -0.17$, $p = .070$) were non-significant, the combined indirect effects via both mediators were significant ($\beta = -0.22$, $p = .016$).

Table 2. Descriptive statistics and reliabilities of gratitude, psychological resources, coping strategies, and psychological distress ($N = 101$).

Variables	*M*	SD	α
Gratitude			
Grateful Adjective Scale	5.40	1.10	.79
Gratitude Questionnaire	5.60	1.03	.86
Psychological resources			
Caregiving competence	1.78	0.73	.88
Social support	1.52	0.56	.85
Coping strategies			
Active coping	2.95	0.79	.73
Planning	2.57	0.95	.78
Positive reframing	2.72	0.92	.64
Acceptance	3.10	0.72	.50
Humour	2.40	0.84	.43
Religious coping	1.93	1.05	.88
Emotional social support seeking	2.29	0.83	.80
Instrumental social support seeking	2.38	0.80	.81
Distraction	2.43	0.92	.72
Denial	1.10	0.28	.21
Venting	2.19	0.70	.71
Behavioural disengagement	1.35	0.59	.72
Self-blame	1.72	0.65	.73
Coping strategies subscales			
Problem-focused coping	2.63	0.65	.78
Emotion-focused coping	2.46	0.53	.71
Dysfunctional coping	1.76	0.35	.60
Psychological distress			
Caregiving burden	3.24	0.69	.82
Depressive symptoms	2.07	0.85	.90

Table 3. Correlations among gratitude, psychological resources, coping strategies subscales and psychological distress ($N = 101$).

	1. GQ	2. GAS	3. CC	4. SS	5. PFC	6. EFC	7. DC	8. ZB	9. DS
2.	.70**								
3.	.11	.17							
4.	.05	.21*	.31**						
5.	.23*	.17	.18	.08					
6.	.47**	.43**	.24*	.25*	.42**				
7.	.06	−.11	−.14	−.18	.01	.05			
8.	−.03	−.10	−.25*	−.22*	.19	−.13	.37**		
9.	−.12	−.17	−.29**	−.34**	.15	−.16	.42**	.67**	

Notes: GQ = Gratitude Questionnaire; GAS = Grateful Adjective Scale; CC = caregiving competence; SS = social support; PFC = problem-focused coping; EFC = emotion-focused coping; DC = dysfunctional coping; ZB = caregiving burden; DS = depressive symptoms.
*$p < .05$; **$p < .01$.

Discussion

This study examined the role of gratitude on the coping process among a group of Hong Kong familial caregivers of PWDs. The results suggest that gratitude is positively associated with a higher level of psychological resources, as well as emotion-focused coping. In turn, psychological resources and emotion-focused coping together mediated the relationship of gratitude with psychological distress.

The levels of gratitude among our participants are comparable to those of other samples. Taking GQ as an example, McCullough et al. (2002) recorded a mean score of 5.92 and standard deviation (SD) of 0.88 among an American college student sample. In a Taiwanese study applying the Chinese version of GQ to the study of married couples, the mean score was 6.01 (SD = 0.85) for wives (mean age = 37.5) and 5.64 (SD = 0.93) for husbands (mean age = 40.1). With the current mean score of 5.60 and SD of 1.03, we contend that the levels of gratitude for caregivers in the current study were

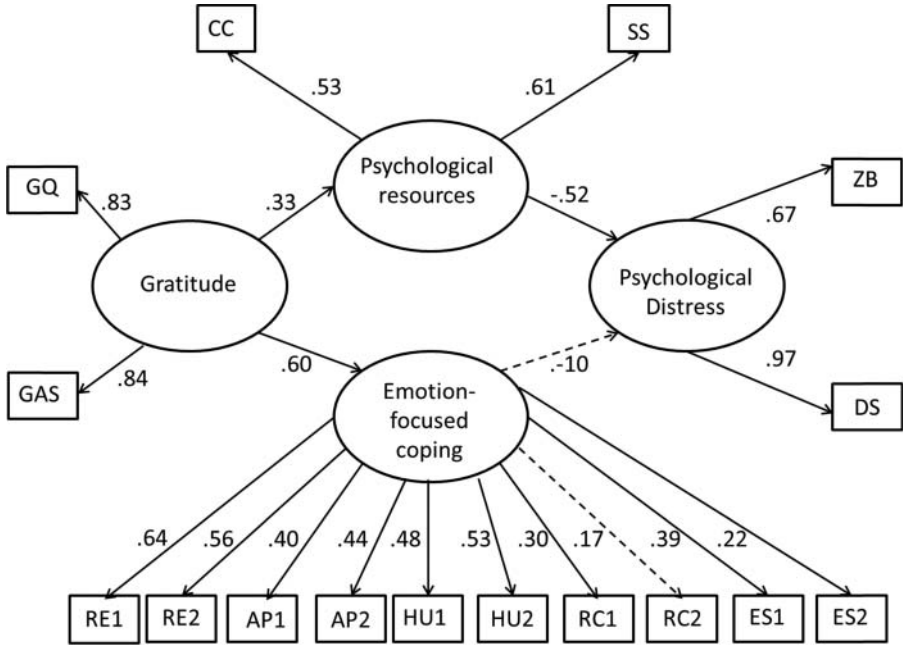

Figure 1. SEM model ($N = 98$).
Notes: Standardized coefficients were shown. Residuals of indicators were not shown on the diagram. The loadings from residuals to indicators were set at 1. Significant direct effects were denoted by bold arrows ($p < .05$). Non-significant direct effects were indicated by dotted arrows. GQ = Gratitude Questionnaire; GAS = Grateful Adjectives Scale; CC = caregiving competence; SS = social support; RE1 = item 1 on positive reframing; RE2 = item 2 on positive reframing; AP 1 = item 1 on acceptance; AP2 = item 2 on acceptance; HU1 = item 1 on humour; HU2 = item 2 on humour; RC1 = item 1 on religious coping; RC2 = item 2 on religious coping; ES1 = item 1 on emotional social support seeking; ES2 = item 2 on emotional social support seeking; ZB = caregiving burden; DS = depressive symptoms.

comparable with those for samples from other studies. There was a reasonable spread in responses in the present sample. The robust association between gratitude and emotion-focused coping aligned with previous findings from studies of other populations (e.g., Lambert et al., 2009; Wood et al., 2007). In contrary to the results of Wood et al., dysfunctional coping was not related to gratitude in the present sample. A point to note is that the samples in Wood et al. (2007) have very different characteristics from the present sample (e.g., age). Also, the former evaluated coping strategies in the context of everyday lives, whereas the present study focused on coping for dementia caregiving. There is so far little research on the relationships between gratitude and coping strategies other than emotion-focused coping and social support seeking. Therefore, we call for future studies to further explore the associations of dysfunctional coping and grateful personality.

The present findings highlight the benefits of gratitude in coping with dementia caregiving, and suggest that gratitude may facilitate the experience of positive aspects of caregiving (Peacock et al., 2010; Tarlow et al., 2004). A recent qualitative study found that Hong Kong familial caregivers of PWDs spontaneously experienced several positive aspects of caregiving in their daily lives (Cheng et al., 2015). These positive aspects are highly relevant to the adaptive coping strategies and psychological resources that were found to be associated with gratitude in the current study. First, this study revealed that caregivers experience relief by reinterpreting the behavioural symptoms of PWDs as a consequence of disease progression. Caregivers also tended to use humour to reframe their experienced hassles. The habit of emotion-focused coping among grateful caregivers may help them adroitly adopt these adaptive reinterpretations. Second, a sense of purpose and commitment, as well as a sense of mastery and emotional calmness prevailed among the spontaneous reports of positive aspects of caregiving in Cheng et al.'s study. Frequent experiences of gratitude may support the accumulation of psychological resources such as caregiving competence, sense of meaning, and positive affect (Fredrickson, 2004). Thus, grateful caregivers may demonstrate greater emotional adjustment to their role. Moreover, grateful caregivers may establish caring and loving relationships with family members, friends, and practitioners through appreciating their kind help and professional assistance. Through reciprocating the kindness of the benefactors, grateful caregivers may, in turn, experience a greater sense of mastery from their caregiving role too. As reported by Cheng and colleagues, caregivers were exhilarated by knowing that their works were appreciated by their relatives and friends, as well as that their shared experience has been beneficial to other caregivers. The ability to respond with gratitude to the gratitude of others (friends, relatives, other caregivers) is imperative to experiencing these elating moments.

In the light of these findings, we propose that gratitude may be a personality antecedent for experiencing higher levels of positive aspects of caregiving. Specifically, gratitude may facilitate the accrual of psychological resources eliciting caregiving gains, such as caregiving competence and social support. Gratitude may also foster emotion-focused coping needed for experiencing caregiving gains, including positive reframing, emotional social support seeking, and religious coping. Frequent experiences of positive aspects of caregiving may enhance role adjustment demonstrated by experiencing less caregiving burden and depressive symptoms. Although the findings of the current study have supported the hypothesized positive link of gratitude with emotion-focused coping, psychological resources, and psychological distress, future studies are encouraged to investigate the role of positive aspects of caregiving in the association of gratitude with mental health.

Understanding the role of malleable character strengths, such as gratitude, in dementia, caregiving may also help shift the focus of non-pharmacological caregiver interventions from one that emphasizes risks and losses to one that empowers and capitalizes on caregivers' strengths and gains (Peacock et al., 2010). The current findings suggest that gratitude interventions could be particularly useful for improving participants' perception of psychological resources as well as enabling them to adopt more emotion-focused coping strategies, such as emotional social support seeking and positive reframing. Gratitude interventions that commonly involve regular journaling or reflecting on gratitude-worthy events have been found to result in robust improvement in life satisfaction and emotional well-being (Emmons & McCullough, 2003; Ho, Yeung, & Kwok, 2014; Seligman, Steen, Park, & Peterson, 2005). Cheng, Lau, Mak, Ng, and Lam (2014) have reported preliminary success in a benefit-finding intervention with dementia caregivers. Gratitude intervention, which enables caregiver to appreciate the origin of benefits in addition to acknowledging the presence of benefits, may engender even greater results in terms of social support and relationship satisfaction. Nonetheless, studies on the effect of gratitude intervention for alleviating the physical and psychological strains of dementia caregiving are scant. Gratitude intervention has been found to fit well in multi-component positive psychological interventions for elderly (Killen & Macaskill, 2015; Proyer, Gander, Wellenzohn, & Ruch, 2014). Future studies may explore the benefits of gratitude intervention in non-pharmacological programmes that aims at enhancing subjective well-being for caregivers (Schulz, 2000).

The person-centred approach (Kitwood, 1997) describes dementia caregiving as a meaningful and dignified relationship between the caregiver and the PWD. A common misconception about dementia caregiving is that the relationship is a one-way drive involving the caregivers giving without the care recipients reciprocating. Dementia often involves a long journey of gradual deterioration. Although caregivers in Cheng et al.'s (2015) study reported experiencing the gratitude of their family members with dementia as an elating moment, few studies have investigated how individuals of limited mental capacity express the love and care for their caregivers, and how caregivers perceive this altered form of (but not necessarily diminished) reciprocity. A recent study by Monin, Schulz, and Feeney (2014) showed that compassionate love of the PWDs and caregivers were associated with less caregiving burden and greater positive aspects of caregiving. Although gratitude was not included in the analysis, it is conceivable that the expression and feelings of gratitude of the PWDs and the caregivers may facilitate the experience of compassionate love for each other, which in turn foster caregiving gains and well-being. Understanding the grateful experience of both parties of the dyadic caregiving relationship may help researchers and practitioners appreciate the nature and motivation behind the onerous but meaningful caregiving role.

This study possesses several limitations. First, the cross-sectional nature of the data-set precluded causal inferences on the relationships among gratitude, psychological resources, coping strategies, and psychological distress. Second, the modest sample size may have limited the statistical power of the SEM analysis (Anderson & Gerbing, 1988; MacCallum, Browne, & Sugawara, 1996). Third, because the coping strategies and social support variables were collected through self-report, they may not necessarily indicate actual behavioural options. Future studies are encouraged to adopt longitudinal cross-lagged designs to delineate the directions of causal relationships and employ experience sampling paradigms to capture actual behavioural options of caregivers. Lastly, the current sample was homogeneous in terms of ethnic background and was relatively young. They were also recruited from centres that established track records in dementia-related care. The generalizability of the findings to caregivers who are older, of other demographic characteristics, and not reachable by established dementia-related social services awaits confirmation. Nonetheless, we acknowledge the utility of using qualitative studies to examine how gratitude facilitates adaptation to the caregiving role, especially among older caregivers who may have difficulties articulating their experiences by quantitative measures.

Conclusion

This study examined the role of gratitude on the coping process of caregivers of PWDs. The results demonstrate that gratitude is related to higher levels of psychological resources as well as emotion-focused coping. In turn, psychological resources and emotion-focused coping mediated the relationship of gratitude with lessening psychological distress. These findings may provide empirical foundation for incorporating gratitude into non-pharmacological interventions for caregivers of PWDs. They may also facilitate researchers and practitioners to appreciate the role of character strengths in the caregiving process.

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No potential conflict of interest was reported by the authors.

Notes

1. The SEM model was conducted on 98 participants. Two missing responses were found on a positive reframing item, with another missing response found on an emotional social support seeking item.
2. The pattern of significant effects remained the same after controlling for activities of daily living and problem behaviours of PWDs, caregiver gender, caregiver age, caregiver's religious affiliation, and number of years of dementia diagnosis. Significant effects were found for the association between gratitude and emotion-focused coping, between gratitude and psychological resources, and between psychological resources and psychological distress.

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