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Caregiving Spouses' Attachment Orientations and the Physical and Psychological Health of Individuals with Alzheimer's Disease

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Abstract

Objective—Attachment theory is a useful framework for understanding how caregiving dyads regulate emotions and maintain feelings of security in reaction to a loved one's chronic illness. In this study we examined the extent to which the attachment orientations (anxiety and avoidance) of persons with Alzheimer's disease (AD) and their spousal caregivers were associated with each partner's report of the physical and psychological health symptoms of the person with AD.

Method—Fifty-eight individuals with AD and their spousal caregivers each completed a 12-item self-report measure of trait attachment orientation and rated the physical and psychological health symptoms of the person with AD over the past two weeks. Data from the persons with AD were used after determining that they were able to provide reliable responses.

Results—As predicted, individuals with AD who were high in anxious attachment self-reported more physical and psychological symptoms, particularly when their caregivers were high in anxious attachment. Also, caregivers perceived more physical symptoms in individuals with AD who were high in avoidant attachment.

Conclusion—This study highlights the importance of considering the attachment security of both caregivers and persons with AD when considering how each partner views the psychological and physical health symptoms of the person with AD. Our results have implications for providing care-recipients and caregivers with improved, tailored care.

Keywords

attachment; Alzheimer's disease; caregiving

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Alzheimer's disease (AD) is the most common cause of dementia among older adults. It is estimated that 2.4 to 5.1 million Americans have AD, and these numbers are expected to grow given that the U. S. population is aging and there is no effective treatment or prevention for this disease (Alzheimer's Disease Education & Referral Center, National Institute on Aging). For many people the process of dementia is characterized by experiences of loss, separation from attachment figures and feelings of insecurity, each of which are central to attachment theory (Browne & Shlosberg, 2005). Interestingly, the majority of research using attachment theory in the context of dementia has focused on caregivers' well-being or feelings of burden. Little attention has been paid to the well-being of the individuals with dementia. To our knowledge, no study has examined how the attachment orientation of caregivers and persons with dementia simultaneously relate to self-reports and perceptions of the psychological and physical health symptoms of the persons with dementia.

Attachment theory

According to attachment theory (Bowlby, 1969), humans have an evolutionary-based system designed to ensure proximity to caregivers during times of threat throughout the lifespan. On the basis of interactions with primary caregivers in early life, people develop enduring cognitive schemas (*attachment orientations*) that continue into adulthood and guide behavior and expectations in other relationships. Responsiveness from primary caregivers results in the development of comfort with interpersonal closeness and willingness to depend on others. This is referred to as *secure attachment*. In contrast, *insecure attachment* develops in response to inconsistent or unresponsive caregiving and can involve a tendency to be anxious regarding possible rejection, discomfort with close relationships, or both.

There are two fundamental dimensions with regard to attachment orientation (Brennan, Clark, & Shaver, 1998). The anxiety dimension assesses the degree to which the self is perceived to be unworthy of love and the degree to which the individual is worried about being rejected by others. The avoidance dimension assesses the degree to which individuals are uncomfortable with intimacy and dependence on others (Brennan, et al., 1998). People are considered to be securely attached when they score low on both the anxiety and avoidance dimensions. There are other conceptualizations of attachment orientation; however, this perspective has been used most frequently in the adult attachment literature.

Attachment theory and dementia

Although attachment theory has stimulated an enormous body of empirical research focused on infancy, childhood, and early adulthood, research on late-life relationships using this perspective has been relatively limited. Furthermore, research taking an attachment theoretical perspective to understand the multiple processes of informal caregiving is still quite rare. Attachment theory is a useful framework for understanding the experiences of both individuals with dementia and their caregivers because attachment theory provides a basis for understanding the interplay between the propensity to seek support from others in times of threat, such as when a person experiences dementia (Browne & Shlosberg, 2005), and to care for others who are suffering (Mikulincer, et al., 2001). In the present study, we propose that the attachment orientation of both individuals with dementia and their caregivers are associated with reports of the physical and psychological well-being of persons with dementia.

Attachment orientations and self-reported symptoms of persons with dementia

A small body of research shows that the attachment orientation (measured as pre-morbid attachment orientation) of persons with dementia impacts their own illness experience, specifically how they express emotions, react to family visits, and behave. For instance, Magai and colleagues (1997) found secure pre-morbid attachment in persons with mid- to late-stage dementia to be positively related to current expressions of joy; whereas, avoidantly attached individuals with dementia displayed less joy and were less interested in family visits. Magai and Cohen (1998) also found that individuals with dementia with an anxious attachment style were more depressed and experienced more anxiety than secure and avoidantly attached individuals with dementia. Avoidant individuals with dementia showed more symptoms of paranoia than secure individuals with dementia and more activity disturbance than anxiously attached individuals with dementia. Taken together, past findings suggest that insecure attachment orientation (anxiety or avoidance) of individuals with dementia has negative consequences for their own well-being.

It is theorized that the attachment orientations of individual with AD have important consequences for their physical and psychological well-being because attachment orientations are associated with differences in the ability to regulate distress (e.g., Wei, Vogel, Ku, & Zakalik, 2005) and utilize social support (e.g., Karantzas & Cole, 2011). Research shows that people high in anxious attachment tend to overreact to their negative feelings in order to elicit support from others and to ensure others' availability, an emotion regulation strategy called hyper-activation (e.g., Cassidy & Kobak, 1988). In contrast, people high in avoidant attachment tend to suppress their negative feelings and maximize their distance from others in order to avoid frustration caused by others unavailability. This strategy is referred to as deactivation (e.g., Cassidy, 2000; Cassidy & Kobak, 1988). These affect regulation strategies are thought to have short-term adaptive value by reducing uncomfortable feelings toward others who have been insensitive or rejecting (Cassidy, 2000). However, the rigid use of these affect strategies have been shown to contribute to negative mood such as increased depressive symptoms and anxiety (Lopez, Mauricio, Gormley, Simko, & Berger, 2001) and physical symptoms (Sadava, Busseri, Molnar, Perrier, & DeCourville, 2009).

It is important to note that whereas past research consistently shows that anxiously attached individuals report more psychological and physical symptoms, evidence is mixed for how avoidant attachment relates to symptom reporting (e.g., Feeney & Ryan, 1994; McWilliams & Bailey, 2010; Porter, et al., 2011). Some studies show that attachment avoidance, like attachment anxiety, can be associated with pessimistic, distress-intensifying patterns of appraisal, especially when avoidant individuals are under large amounts of stress (e.g., Berant et al., 2001; Mikulincer & Florian, 1998). Dementia may be one such stressor.

Caregivers' attachment orientations and their perceptions of the symptoms of the individual with dementia

Caregivers' attachment orientation is also presumably associated with perceptions of the psychological and physical well-being of individuals with dementia. Although attachment theory mainly deals with others' responses to one's needs, Bowlby (1969) argued that the theory is also relevant for explaining one's reactions to others' needs. Drawing from this idea, Mikulincer and colleagues (2001) have shown that attachment security in young adults is associated with more empathic reactions to others' distress, and anxious attachment is associated with more personal distress reactions to others' distress (see also Monin, Feeney, & Schulz, 2012). This has also been shown with older spouses of persons with osteoarthritis (OA; Monin, Schulz, Feeney, & Cook, 2010). Monin and colleagues asked spouses to watch their partners with OA (and also an opposite sex stranger) perform a pain-eliciting

household task, and results showed that anxiously attached spouses perceived greater pain in their partners (but not the stranger) than less anxiously attached spouses. However, spouses' attachment avoidance was not significantly associated with higher or lower perceptions of OA partner pain.

In the child development literature it has been theorized that individuals who are high in anxious attachment are more likely to perceive others' distress because they are more sensitive to signs of threat in the environment than individuals low in anxious attachment are (Bowlby, 1973). In the adult attachment literature, researchers suggest that a partner's distress may be a threat because anxious individuals are not confident they can cope with negative emotions (Pietromonaco, Feldman Barrett, & Powers, 2006) or because vulnerability indicates that the partner is unavailable to provide care to the anxiously attached individual. Another potential motivation for anxiously attached individuals' heightened perceptions to a partner's vulnerability is the opportunity to gain closeness (Shaver & Mikulincer, 2002).

In contrast, more avoidant individuals tend to direct their attention away from cues in the environment that make attachment needs salient (Mikulincer & Shaver, 2003). Although there is more empirical evidence suggesting that avoidant individuals tend to downplay threats in the environment, again it is important to acknowledge that some studies show that when stressors are particularly impactful and less controllable, avoidant individuals' emotion regulation strategies can break down, leading to distress-intensifying reactions similar to anxious individuals (Berant et al., 2001; Mikulincer & Florian, 1998). Very little is known about whether being faced with a loved one's dementia can cause such a breakdown in emotion regulation processes.

How both partner's attachment orientations relate to self-reported or perceived symptoms of the individual with dementia

It is often taken for granted that a partner's attachment orientation can affect the other partner's experiences and perceptions, especially within the context of dementia (Braun, et al., 2009). A number of central theories in the close relationships literature, including attachment theory, emphasize the importance of dyadic processes in which one partner's outcomes are linked to the other partner's needs, goals, and behavioral tendencies (Kane, et al., 2007). Despite this theoretical emphasis on interpersonal processes, most empirical studies on attachment and relationships have taken an intrapersonal perspective in which one partner's attachment orientation is linked to his or her own outcomes. There are no studies, to our knowledge, that have examined the interactive effects of both partners' attachment orientations on both partners' reports of the symptoms of individuals with dementia.

There are, however, a few studies showing partner effects, or effects of one partner's attachment orientation on the other partner's well-being. These studies show that caregivers' attachment orientations are linked with behaviors of care-recipients with dementia. For example, Perren and colleagues (2007) found that caregivers' avoidant attachment was associated with more agitation/aggression in their partners with dementia. Interestingly, the attachment orientation of the partner with dementia was not associated with problem behaviors. Steele, Phibbs, and Woods (2004) also found that joyful and secure behaviors, including proximity seeking and responsiveness, exhibited by older mothers with dementia were positively associated with their daughters' secure attachment orientation.

While no research has examined whether caregivers' attachment orientations relate to self-reported physical and psychological symptoms of partners with dementia, there have been some relevant studies in the context of cancer caregiving. For example, a study of persons with lung cancer and their caregiving spouses showed that the spouses' avoidant attachment

was associated with reports of increased pain and poorer functional well-being by the partners with lung cancer (Porter, et al., 2011). A potential pathway through which a caregiver's attachment orientation affects a care-recipient's well-being is the quality of the support provided to the care-recipient (Kunce & Shaver, 1994; Solomon & George, 1999). Specifically, secure caregivers are likely to foster security in their care-recipients.

In addition, no research has examined whether care-recipients' attachment orientations are linked with caregivers' perceptions of care-recipients' symptoms. However, past studies suggest that caregivers may be more likely to perceive symptoms in anxiously attached care-recipients because individuals high in anxious attachment are more likely to express pain (McWilliams & Holmberg, 2010) and vulnerability (Simpson, Rholes, & Nelligan, 1992) than individuals low in anxious attachment. In contrast, avoidant individuals are less likely to express negative emotions or vulnerability, making it less likely for caregivers to notice their symptoms (Wei, et al., 2005). Also, attachment orientation is associated with differences in the tendency to seek support, with anxious individuals seeking more and avoidant individuals seeking less support from their partners (e.g., Karantzas & Cole, 2011).

Our review of existing literature suggests that we still know very little about associations between one partner's attachment orientation and the other partner's report of symptoms. Although we examine these associations, or partner effects, in the present study we are most interested in examining the interactive, and potentially multiplicative, effects of both partners' attachment styles on both partner's reports of symptoms in the person with AD. This is the first study of caregivers and individuals with AD to take this approach.

Summary of Hypotheses

Past research provides preliminary evidence that (a) the attachment orientation of a person with dementia is linked to self-reported physical and psychological health symptoms, (b) a caregiver's attachment orientation is associated with perceptions of the health symptoms of the person with dementia, and (c) the caregiver's attachment orientation is associated with the self-reported health symptoms of the person with dementia. In the present study, we suggest that the attachment orientation of both partners will have a multiplicative effect on both partners' reports of the health symptoms of the individual with AD. We hypothesize that when both partners are high in attachment insecurity (either anxious or avoidant attachment) the care-recipient will be more likely to self-report and the caregiver will be more likely to perceive symptoms in the person with AD than when one or both partners are low in attachment insecurity. This is because when both partners are insecurely attached there is limited opportunity for one partner to provide support to the other partner, who may be particularly distressed or angry (Solomon & George, 1999). There may also be a higher risk for negative emotional contagion between dyad members because both partners may experience more distress due to less effective emotion regulation strategies (Monin & Schulz, 2009; Wei, et al., 2005).

Method

Participants

Data from 58 individuals with AD and their spousal caregivers were examined in the present study (Schulz, et al., 2010). Participants were recruited from the Alzheimer's Disease Research Center at the University of Pittsburgh and the local chapter of the Alzheimer's Disease Association. In the larger study, individuals with AD had to: (a) be 50 years old or older; (b) have consensus-based diagnosis of probably or possible AD or related dementia; and (c) reside in the community with the primary caregiver. Caregivers had to: (a) be a family member/partner (e.g., spouse, child, or fictive kin); (b) be 21 years of age or older;

(c) provide a minimum of three months of in-home care prior to recruitment; (d) speak English; and (e) self-define as primary caregiver of the partner with AD. We limited the present study sample to spouses because attachment processes are likely to differ between various types of family caregiving dyads (Cassidy, 2000).

The average age of individuals with AD was 73.95 ($SD=8.10$) and 71.10 ($SD=7.8$) for caregivers. Eleven (19%) of the AD individuals were women, and 47 (81%) were men. Fifty-five (94.8%) AD individuals were White; 2 were Black (3.4%); and 1 (1.7%) was Asian. This was the same for caregivers. Thirty-eight AD individuals (66%) and 41 caregivers (71%) completed at least some college education.

Procedure

Persons with AD and caregivers participated in face-to-face interviews administered by a trained interviewer in the participant's home or location of their choice. Participants were interviewed separately without the presence of other individuals. Visual cues were used to remind participants of response options, and interviewers were asked to assess the participant's comprehension by rating the ability of the participants to reliably answer questions and to ask follow-up questions when responses were unclear or inconsistent. If the participant was judged to be incapable of completing the interview, the interviewer engaged the participant in an informal conversation before terminating the interview. Based on interviewer ratings, Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) scores, and analysis of responses to structured questions, it was determined that persons with dementia scoring less than 16 on the MMSE ($N=26$ from the 105 AD individual-caregiver dyads originally recruited for the larger study) could not provide reliable responses. Their data were not used in the present analyses.

Measures

Attachment orientation—A 12-item version of the Experiences in Close Relationships Scale (ECR; Brennan, et al., 1998; Feeney, 2004) was used to assess two dimensions of adult attachment in each partner: anxious attachment (e.g., “I worry about being alone”) and avoidant attachment (e.g., “I don't feel comfortable opening up to others.”) Participants responded to each item using a scale from 1 (disagree strongly) to 7 (agree strongly). The alphas were .89 for AD individual's anxious attachment ($M=2.85$, $SD=1.00$, $range=1-5.5$) and .95 for avoidant attachment ($M=2.24$, $SD=.90$, $range=1-4.5$). The alphas were .85 for caregiving spouse's anxious attachment ($M=2.56$, $SD=1.29$, $range=1-5.67$) and .91 for avoidant attachment ($M=2.16$, $SD=1.25$, $range=1-5.83$).

Self-reports and caregivers' perceptions of the physical and psychological symptoms of individuals with AD—Two instruments were used to assess physical and psychological symptoms of the individual with AD from both partners' perspectives (Schulz, et al., 2010). These measures were designed to capture physical and psychological symptoms of suffering, and they have been validated and found to be reliable with diverse samples (e.g., individuals with AD, individuals with OA, and African American and Hispanic caregivers of older adults; Schulz, et al., 2010). The physical symptoms scale consisted of nine items (e.g., confusion, pain, nausea, shortness of breath, dry mouth, lack of appetite, etc.). For each item, the respondent (both the individual with AD and caregiver) was asked to indicate how often the individual with AD experienced the symptom during the last 7 days (*not at all* = 0; *a little* [a few days, 1–3] = 1; *quite a bit* [most days, 4–6] = 2; *very often* [every day] = 3). Sum scores were used. The mean of self-reported physical symptoms was 4.50 ($SD=3.72$, $range=0-16$), and the mean of caregivers' reports of the physical symptoms of the individuals with AD was 7.13 ($SD=4.17$, $range=1-21$). The alpha for caregivers' reports of AD individuals' physical symptoms was .62; for AD individuals' self

reports it was .67. The low reliability of this measure is expected because it represents an index of physical symptoms not necessarily related to one another (see Schulz, et al., 2010). Psychological symptoms were measured with 15 items (e.g., confident, afraid, irritable, depressed, cheerful, hopeless, abandoned, etc.) using the same response options used with the physical symptoms scale, yielding scores from 0 (no psychological symptoms) to 45 (high psychological symptoms). Positive items were reversed scored. The mean was 7.30 ($SD=6.56$, $range=0-32$) for self-reports and 11.26 ($SD=6.53$, $range=1-33$) for caregiver perceptions. The psychological symptoms scales were found to be reliable for self-reports and caregiver perceptions ($\alpha s > .80$).

Analysis

First, we examined the interrelations among all study variables for each partner (see Table 1). We also tested for potential covariates of attachment available for both partners (age, education, and gender); none of these variables were significantly associated with either partner's attachment dimensions and were not included in subsequent analyses.

For our main analyses, after centering the independent variables, we used multiple regression models, specifying four separate models for the following outcomes: the AD individual's self-reported physical symptoms, the caregiver's perceptions of the AD individual's physical symptoms, the AD individual's self-reported psychological symptoms, and the caregiver's perceptions of the AD individual's psychological symptoms (see Table 2). In all models, we entered both partners' attachment dimensions because anxious and avoidant attachment were positively correlated within individual participants, and partners' avoidant attachment were positively correlated with one another. We also tested for two-way interactions among partners' attachment dimensions. In cases where the two-way interactions were significant, we presented the trimmed models, eliminating non-significant two-way interaction terms. We used separate linear regression models predicting caregiver perceptions and AD individuals' self-reports in our analyses, rather than dyadic analyses (e.g. multilevel modeling, the Actor-Partner Interdependence Model; Kenny, Kashy, & Cook, 2006) because the dependent variables for caregivers and individuals with AD were distinct. Caregivers reported their perceptions of symptoms exhibited by the individuals with AD, and individuals with AD reported their direct experience of symptoms.

Results

Physical symptoms

As predicted, there was a significant interaction between the caregiver's anxious attachment and the AD individual's anxious attachment predicting the AD individual's self-reported physical symptoms. Follow-up analyses revealed that when caregiver attachment anxiety was 1 sd above the mean, the AD individual's attachment anxiety was positively associated with self-reported physical symptoms, $\beta=.41$, $SE=.66$, $t(57)=2.33$, $p<.05$. When caregiver attachment anxiety was 1 sd below the mean, the AD individual's attachment anxiety was not significantly associated with self-reported physical symptoms, $\beta=-.08$, $SE=.69$, $t(57)=-.44$, $p=.66$. As shown in Figure 1, when both caregivers and AD individuals were high in anxious attachment, self-reported physical symptoms in the person with AD were highest.

We also found a significant, positive association between AD individuals' avoidant attachment and caregivers' perceptions of AD individuals' physical symptoms and a marginally significant, positive association between AD individuals' avoidant attachment and self-reported physical symptoms.

Psychological symptoms

As predicted, there was a significant interaction between the caregiver's anxious attachment and the AD individual's anxious attachment predicting the AD individual's self-reported psychological symptoms. Follow-up analyses revealed that when caregiver attachment anxiety was 1 sd above the mean, the AD individual's attachment anxiety was positively associated with self-reported psychological symptoms, $\beta=.65$, $SE=1.30$, $t(57)=3.57$, $p<.01$. When caregiver attachment anxiety was 1 sd below the mean, the AD individual's attachment anxiety was not significantly associated with self-reported psychological symptoms, $\beta=.08$, $SE=.69$, $t(57)=.45$, $p=.66$. As shown in Figure 2, as predicted, when both caregivers and AD individuals were high in anxious attachment, self-reported psychological symptoms in the person with AD were highest.

There was also a marginally significant interaction between the caregiver's anxious attachment and the AD individual's avoidant attachment predicting self-reported psychological symptoms in the individual with AD ($p=.06$). Although neither simple slope was significant, when caregiver anxious attachment was 1 sd above the mean, the AD individual's avoidant attachment was negatively associated with self-reported psychological symptoms, $\beta= -.30$, $SE=1.73$, $t(57)= -1.34$, $p=.19$. When caregiver anxious attachment was 1 sd below the mean, the AD individual's avoidant attachment was positively associated with self-reported psychological symptoms, $\beta=.27$, $SE=1.42$, $t(57)=1.49$, $p=.14$. Thus, there was a tendency for AD individuals who were low in avoidant attachment to report more psychological symptoms when their caregiver was high in attachment anxiety. We reported and included this marginal effect ($p=.06$) in our trimmed regression model because it had a suppression effect on the significant interaction between the caregiver's anxious attachment and the AD individual's anxious attachment. Accounting for its variance in the model strengthened the effect reported above.

Discussion

Our results showed that attachment orientations of caregivers and individuals with AD are associated with the self-reported experience of physical and psychological health symptoms of individuals with AD. Specifically, we found that individuals with AD who were high in anxious attachment were more likely to report physical and psychological symptoms, especially when their caregivers were also high in anxious attachment. These findings support past research showing that anxious individuals, in general, report more physical health problems (Feeney & Ryan, 1994; McWilliams & Bailey, 2010; Porter, et al., 2011) and more negative affect (Feeney & Ryan, 1994; Porter, et al., 2011; Roberts, et al., 1996) than less anxious individuals. We extend past research by showing that the attachment orientation of both partners may have a multiplicative influence on the self-reported physical and psychological symptoms of individuals with AD. Insecure care-recipients may suffer when caregivers are not able to provide a secure caregiving environment (Solomon & George, 1999) and when caregivers are also experiencing increased negative affect (Monin & Schulz, 2009; Wei, et al., 2005).

We found less support for our hypothesis that the attachment orientation of both partners influenced caregivers' perceptions of the symptoms of the person with AD. We did, however, find that caregivers who had partners high in avoidant attachment perceived more physical symptoms in their partners. Although this finding is contrary to traditional theory regarding avoidant attachment, it provides added support for the idea that the deactivating emotion regulation strategy associated with avoidant attachment can break down in the face of very stressful situations (Berant, et al., 2001; Mikulincer & Florian, 1998). Dementia may be one of these stressful situations in which this emotion regulation strategy is less effective and avoidant care-recipients actually express more symptoms. It may also be the case that

for avoidant individuals, distress can be manifested as physical symptoms (McWilliams & Bailey, 2010).

Finally, we found in our correlational analysis that one partners' avoidant attachment was significantly related to avoidant attachment in the other partner, potentially reflecting assortative mating or that one partner's avoidant behaviors promote or reinforce avoidant behavior in the other partner (Fuller & Fincham, 1995). Also, partners' reports of physical and psychological symptoms in the individual with AD were positively related, suggesting that caregivers are responsive to levels of their partners' well-being even if they tend to overestimate partner suffering overall (Schulz, et al., in press; Schulz, et al., 2010).

Future Research and Limitations

This study presents interesting associations between attachment orientations of caregivers and individuals with AD and their reports of AD individuals' health; however, more research is needed to examine the behavioral and cognitive mechanisms that might explain these associations (e.g., emotion regulation, caregiving efficacy, support seeking tendencies). Laboratory and in situ observational studies in which caregiving behaviors and affect are observed will help us better understand how attachment orientation in each partner relates to the well-being of the individual with AD. This is especially important for examining avoidantly attached individuals because they are sometimes motivated to hide their feelings of vulnerability. Also, it will be important to understand how dementia may impact pre-morbid attachment style for both individuals over time. As dementia progresses, attachment security is likely to change. Another future direction is to examine both partners' well-being, instead of both partners' perceptions of the well-being of the person with AD in an actor-partner interdependence model.

Limitations of this study are the small sample size, that most individuals with AD were Caucasian men, and that it was cross-sectional. With these data it is not possible to draw conclusions about the directionality of the effects or to determine if there are confounding variables that were not measured driving the associations. It is possible that people with more psychological and physical symptoms report more attachment insecurity.

Another limitation of this paper and this line of research in general, is that we have no way of objectively assessing psychological and physical symptoms of the person with dementia. Because symptoms are inherently subjective and only the person with dementia has direct access to them, we tend to view self-reports as more veridical than caregiver perceptions. Thus, disparities between caregiver and patient reports of subjective symptoms are typically attributed to caregiver bias (Schulz, et al, in press). The research reported here shows that both caregiver and care-recipient reports are subject to the influence of personality attributes which become manifest in the context of interpersonal relationships.

Implications

Findings from this study have implications for dementia caregiving interventions. Simultaneously targeting individuals with dementia and their family caregiver may enhance the efficacy of psychosocial and behavioral interventions for dementia (Martire, Schulz, Helgeson, Small, & Saghafi, 2010; Whitlatch, Judge, Zarit, & Femia, 2006). Especially in the early stages of dementia, it is possible for care-recipients to benefit from interventions just as caregivers do, in terms of enhancing their ability to deal with isolation, understanding the meaning of their diagnoses, and communicating choices and preferences (Whitlatch, Feinberg, & Tucke, 2005a, 2005b).

Also, taking an attachment theoretical perspective may help health professionals tailor counseling for specific caregiving dyads (Karantzas, Evans, & Foddy, 2010) because some

couples may not be able to seek or provide support as effectively as more secure dyads (Karantzas, et al., 2010). Adapted versions of Emotionally Focused Couple Therapy (EFT), an empirically based intervention to enhance relationship satisfaction that is rooted in attachment theory, may be helpful for caregiving dyads, especially for spouses coping with dementia (Johnson, 2008).

Finally, although it is not possible to fully understand whether the insecure individuals with dementia in our sample were accurately conveying information about their psychological and physical health, we did find that perceptions of symptoms were higher in insecure individuals, suggesting vulnerability in this group. Perceptions may be more important than objective indicators of health in helping partners cope with dementia.

In summary, this study highlights the importance of taking into account the influence of both partners' attachment orientations on the physical and psychological well-being of individuals with dementia. The ability to rely on others for support and effectively regulate emotions has consequences for the self as well as others, especially in the context of chronic illness. Taking an attachment theoretical perspective to understanding these processes will help health professionals better understand how to provide care-recipients and caregivers with improved, tailored care.

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Figure 1.

Association between AD anxious attachment and self-reports of physical symptoms at 1 SD above and below the mean of CG anxious attachment

Note. CG= Caregiver, AD= Individual with AD

Figure 2.
Association between AD anxious attachment and self-reports of psychological symptoms at 1 SD above and below the mean of CG anxious attachment
Note. CG= Caregiver, AD= Individual with AD

Table 1

Interrelations for all study variables

	1	2	3	4	5	6	7	8
Individual with AD								
1. Anxious attachment	1	.34 [*]	.26 [*]	.33 [*]	-.05	.01	-.09	.06
2. Avoidant attachment	-	1	.37 ^{**}	.23	.14	.31 [*]	.26	.18
3. Physical symptoms	-	-	1	.59 ^{**}	.17	.18	.48 ^{**}	.14
4. Psychological symptoms	-	-	-	1	.32 [*]	.18	.40 ^{**}	.39 ^{**}
Caregiver								
5. Anxious attachment	-	-	-	-	1	.42 ^{**}	-.01	.23
6. Avoidant attachment	-	-	-	-	-	1	.17	.33 [*]
7. Perceived AD individual physical symptoms	-	-	-	-	-	-	1	.43 ^{**}
8. Perceived AD individual psychological symptoms	-	-	-	-	-	-	-	1

Note.

^{**}
p<.01,^{*}
p<.05

Table 2

Multiple regression models: Attachment dimensions of individuals with AD and caregivers predicting self-reports and caregivers' perceptions of the physical and psychological symptoms of the individuals with AD

	Physical symptoms			Psychological symptoms					
	Individual with AD self-report			Caregiver perception			Individual with AD self-report		
	β	SE		β	SE		β	SE	
Intercept	4.52**	.45		6.63**	.51		7.73**	.84	
AD anx	.62	.49		-.80	.55		2.61**	.91	
AD avoid	1.05 [†]	.57		1.33*	.64		-.10	1.06	
CG anx	.40	.39		-.33	.44		1.78*	.70	
CG avoid	.11	.42		.39	.47		.45	.78	
CG anx * AD anx	.71*	.36		-	-		1.57*	.69	
CG anx * AD avoid	-	-		-	-		-1.71 [†]	.91	

Note. All variables were centered on the mean and simultaneously entered into the models. AD= individual with AD, CG= caregiver, anx= anxious attachment, avoid= avoidant attachment.

**
p<.01,

*
p<.05,

[†]
p<.10. β = unstandardized coefficient.