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The Secure Base Script and the Task of Caring for Elderly Parents: Implications for Attachment Theory and Clinical Practice

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Abstract

This study explores links between adults' attachment representations and the task of caring for elderly parents with dementia. Participants were 87 adults serving as primary caregivers of a parent or parent-in-law with dementia. Waters and Waters' (2006) Attachment Script Assessment was adapted to assess script-like attachment representation in the context of caring for their elderly parent. The quality of adult-elderly parent interactions was assessed using the Level of Expressed Emotions Scale (Cole & Kazarian, 1988) and self-report measures of caregivers' perception of caregiving as difficult. Caregivers' secure base script knowledge predicted lower levels of negative expressed emotion. This effect was moderated by the extent to which participants experienced caring for elderly parents as difficult. Attachment representations played a greater role in caregiving when caregiving tasks were perceived as more difficult. These results support the hypothesis that attachment representations influence the quality of care that adults provide their elderly parents. Clinical implications are discussed.

Keywords

attachment; secure base; scripts; aging; dementia; caregiving; expressed emotion

One of John Bowlby's primary goals in developing modern attachment theory was to preserve useful psychoanalytic insights about early development and close relationships. First among these was the notion that early relationship experience establishes a *prototype* upon which later relationships are modeled. To preserve such insights, Bowlby (1958, 1969) replaced the psychoanalytic image of a needy, dependent infant motivated by drive

reduction with one of a sophisticated, competence-motivated infant using its primary caregiver as a secure base from which to explore and, when necessary, as a haven of safety and a source of comfort. In doing so, he suggested that attachment behavior is organized by an underlying control system that maintains a balance between exploratory excursions away from the caregiver and approaches toward the caregiver when seeking help, information, or comfort (Waters & Cummings, 2000).

Bowlby introduced the term *attachment* to refer specifically to this secure base formulation of infant-adult and adult-adult ties and to distinguish it from drive theory and learning theory perspectives. Attachment is not a generic term intended to cover all aspects of all social relationships. Instead, its focus is on the secure base component that is particularly salient in primary relationships, those characterized by (a) preference, (b) familiarity, (c) relative uniqueness, (d) identity, (e) secure base use over time and contexts, and (f) grief and mourning in response to loss (Petters, Waters, & Schönbrodt, 2010). Thus, the prototype hypothesis can be formulated as the prediction that early attachment patterns will be reflected in child-parent relationships, parental behavior, secure base use and support in marriage, and in the manner in which adults care for their elderly parents.

A substantial body of research supports these predictions. This includes long-term longitudinal studies linking infant attachment to attachment patterns in adolescence (Hamilton, 2000) and early adulthood (Waters et al., 2000), and studies linking adult attachment representations to maternal sensitivity (van IJzendoorn, 1995), secure base support of infants (Posada et al., 1995), and provision and use of secure base support in marriage (Crowell et al., 2002). The present study examines the remaining component of the prototype hypothesis - the prediction that attachment, specifically an individual's knowledge of and access to a secure base script, are related to the care adults provide when they are called upon to care for their elderly parents.

The study is also of significant practical importance. In 2000, individuals over the age of 65 made up approximately 12.4 % of the population of the United States, but by 2030 that proportion is expected to increase to nearly 20% (US Census Bureau, 2004). This trend is even more pronounced globally where the number of individuals over 65 is expected to more than double between 2000 and 2030, from 420 million to 973 million individuals (Kinsella & Velkoff, 2001). Among individuals 65 years and older, 52% experience some form of disability often resulting in the need for care from either a spouse or adult children (Steinmetz, 2006).

Dementia is one of the most common and challenging disabilities faced by older adults and their families. It affects as many as a quarter of individuals age 80–89 and nearly 40% of individuals over 90-years-old (Plassman et al., 2007). Additionally, the incidence of dementia is expected to more than double by 2050 (Hebert, Beckett, Scherr, & Evans, 2001). It is estimated that currently 10.2 million individuals are involved in caring for an individual with Alzheimer's disease, the most common form of dementia. Approximately 62% of these are adult children caring for a parent or parent-in-law (Alzheimer's Association, 2010).

Along with the declines in memory and other cognitive functions associated with dementia come a loss of independence and the need for significant care and supervision. Families provide much of this care, with varying degrees of success. Providing care for an individual with dementia is often stressful and places caregivers and care-recipients alike at significant risk for negative outcomes (Brodarty & Hadzi-Pavlovic, 1990; Draper, Poulos, Cole, Poulos, & Ehrlich, 1992; Mace & Rabins, 2006; Pinguart & Sorenson, 2003).

Discord and abuse in elder-care relationships is of particular concern. As many as 5.4%–11.9% of adults with dementia experience physical or emotional abuse, much higher than

the rates of abuse (1–4%) typically cited for all older adults (Coyne et al., 1993; Lachs et al., 1997; Paveza et al., 1992). The special needs of this population call for a more sophisticated understanding of the caregiving process. One construct that has been extremely useful in understanding caregiving processes is expressed emotion. Expressed emotion, defined as the extent to which a caregiver's attitude is characterized by criticism, hostility or over-involvement, is among the most robust predictors of negative outcomes for caregivers and care-recipients across a wide variety of conditions. High negative EE has been found to predict relapse or escalating symptomatology in a range of patient conditions including affective disorders, physical conditions, substance abuse disorders, anxiety disorders, and personality disorders (Chambless & Steketee, 1999; Hooley & Hoffman, 1999; Miklowitz et al., 1988; O'Farrell, Hooley, Fals-Stewart, & Cutter, 1998; Wearden et al., 2000). Among caregivers for individuals with dementia, high EE predicts caregiver distress and strain as well as a number of distressing behaviors in care recipients including physical aggression, anger, threatening, uncooperative, or paranoid behavior, and the tendency to wander (TARRIER et al., 2002; Vitaliano et al., 1993). These behaviors are particularly relevant as they are often associated with the caregiver's level of stress, their capacity to remain involved in care and institutionalization of the parent with dementia (Steele, Rovner, Chase, Folstein, 1990).

This study explores the relevance of attachment representations to caregiver behavior in adults whose elderly parents are in the early stages of dementia. We test the relevance of the secure base concept, and attachment theory in general, to understanding how adults provide care for those who once cared for them. More specifically, we first validate a new measure for understanding attachment related phenomena for adults caring for elderly parents. Second, we explore the relationship between script knowledge and expressed emotion and the role of caregiver stress as a moderator of that relationship. We predict that caregivers with greater access to and knowledge of a secure base script will report better quality interactions with their elderly parent as evidenced by less criticism or hostility. We also predict that the strength of that link between secure base script knowledge and interaction quality varies as a function of caregiver stress such that as the stress/strain of caregiving increases, secure base script knowledge has a greater effect on interaction quality.

Method

Participants

Participants were 87 self-identified primary caregivers of parents or in-laws with dementia. The majority of participants (71%) were staff, students, or faculty of the University of North Carolina who were recruited via e-mail. The remainder were participants in the Alzheimer's Association's Dementia Care Study (20%; Zimmerman et al., 2005); referrals from previous participants (7%); and individuals who responded to flyers placed in nursing facilities, senior centers, and memory disorders clinics (2%).

The caregivers in our sample were daughters (77%), sons (14%), and other in-laws (9%). Overall, 85% were female. The majority of participants were Caucasian (91%) and highly educated (72% with a college degree or graduate degree), with a household income greater than \$50,000 (74%).

The care recipients were the mothers (78%), fathers (13%), and mother or father-in-laws (9%) of the caregivers. The majority (63%) lived in an institutional setting (i.e., assisted living, nursing facility or special care unit); 26% were living on their own in the community; 11% were living with the caregiver.

Procedure

Caregivers were mailed a self-administered questionnaire that included measures of distress, strain, and caregivers' expressed emotion in their interactions with their parents. A trained research assistant then contacted each caregiver for a one-hour telephone interview about caregiving experiences and attitudes. The Attachment Script Assessment (Waters & Waters, 2006) and the Adult Child/Aging Parent Script Assessment were also administered during the telephone interview to assess caregiver knowledge of and access to a secure base script.

Attachment Script Assessment—The Attachment Script Assessment (ASA) is a narrative measure designed to evaluate a person's knowledge of and access to a generalized secure base script. Individuals are provided with a set of 12–14 prompt words and asked to construct a generic story about attachment topics (interactions between a mother and her baby or child; an adult and their adult partner). Each prompt word outline is comprised of a set of words grouped into three columns that guide story production. These suggest a beginning, middle, and end for the story and yet leave the participant free to formulate their own distinctive story. Instructions are to use each prompt-word outline as a guide moving from one column of words to the next, but that elaboration of the material is welcomed, and that they do not have to use every word in producing their story. Two mother-child prompt word outlines (“Baby’s Morning”, “The Doctor’s Office”) from the Attachment Script Assessment were used for this assessment. The script knowledge scores (7 point scale) from the two prompt sets were averaged to yield a single composite score.

Participants whose attachment representations include an understanding of the secure base concept reflect this in the content and structure of their stories. Participants whose attachment representations are not organized around the secure base script construct well-formed stories but they lack secure base content and structure. This method of assessing attachment representations has been well validated in studies linking this measure to one's own child's Strange Situation in infancy, to coherence in the Adult Attachment Interview, and to secure base use and support in marriage (Waters & Waters, 2006). The primary advantages of the ASA for the present study are (a) it is much easier to administer and score than the AAI and (b) the prompt-word sets are easily adapted to refer to adult child - elderly parent interactions.

An Adaptation of the ASA: Adult Caring for Elderly Parent—Knowledge of a generalized secure base script does not guarantee that the script will be accessed in the context of caring for an elderly parent. Some adults may find it difficult to negotiate the role reversal entailed in becoming the caregiver for their own parent. Moreover, the involvement of others who provide medical, residential, and other types of support could, for some adults, work against their seeing themselves in the role of primary caregiver. Accordingly, we adapted the standard prompt word materials and instructions to more specifically assess whether the adult caregivers are accessing secure base script knowledge in the context of caregiving interactions with their elderly parents.

To assess whether adults were accessing a secure base script in the context of caring for their elderly parent, we developed three prompt-word outlines that focused on adults' interactions with their elderly parents. The secure base story lines for the three prompt word outlines were (a) Parent having an accident, (b) Parent becomes lost during a visit, and (b) Parent becomes upset that their lunch is late. The materials were developed on the basis of clinical experience with this population and were extensively pilot tested for clarity and to minimize the extent to which they elicited idiosyncratic interpretations (e.g., avoiding the use of words that might suggest themes that would compete with the implied secure base

story line and create scoring difficulties). The adapted prompt word outlines are presented in Appendix A.

Participants were instructed to familiarize themselves with the prompt words and to formulate a first person narrative (me and my parent) describing an interaction with their parent. The stories were to be imaginary, not based on actual experiences. They were orally produced, tape recorded and later transcribed. The transcripts ranged from one-half to one full page in length. Each story was scored by two independent coders using a seven point scale reflecting the extent to which the story reflected a secure base narrative (Waters & Rodrigues-Doolabh, 2004). Scale points range from stories with rich secure base content (6–7) to moderate secure base content (4–5) to event-focused stories (3) to a range of stories with unusual, atypical (non-secure base) content (1–2). Secure base script scores for the three passages were averaged to yield a single composite score. Appendix B contains both high and low scoring sample narratives.

Level of Expressed Emotion Scale (LEE) - Caregiver Version—The LEE is a self-report questionnaire consisting of 60 true/false items that assesses the degree to which caregivers: (a) are intrusive (e.g. “I am always interfering”) (b) respond to care recipients in ways that exacerbate care recipient distress (e.g. “I make matters worse when things aren’t going well”) (c) have a negative attitude towards the illness (e.g. “I often accuse him/her of making things up when he/she isn’t feeling well); and (d) have a low tolerance for disturbed behaviors or high expectations of the patient (e.g. “I am realistic about what he/she can or cannot do”). Higher scores on the LEE indicate higher levels of EE (greater intrusiveness, overly emotional responses, negative attitudes, and intolerance). The LEE has been shown to be reliable and internally consistent (Cole & Kazarian, 1988) and has tended to correlate with ratings on the Camberwell Family Interview (the gold standard for assessing EE which requires 5 hours per interview for administration and scoring; Kazarian, Malla, Cole et al., 1990). Cronbach’s alpha for our sample was .70.

Gilleard Strain Scale (GSS)—The Gilleard Strain Scale (Gilleard, 1984) is a 13-item self-report questionnaire widely used to assess the degree to which caregivers of older adults experience negative emotions associated with common caregiving activities. The items cover the degree to which caregivers experience feelings such as embarrassment, frustration, danger, concern about finances, and anxiety, in the context of caregiving. Sample items include, “Do you ever feel embarrassed by the elderly person in any way?” and “How much do you worry about the elderly person?” Each item is rated on a 3-point Likert scale and summed to yield a total score. Gilleard (1987) and Machin (1980) have reported high internal consistency and external validity for the GSS in several large and diverse samples. Cronbach’s alpha for our sample was .83.

Caregiving Distress Scale (CDS)—To provide a broader perspective on caregiving difficulties encountered with elderly parents, caregivers also completed the CDS, a 17-item self-report questionnaire of caregiving distress. The CDS not only measures the degree to which caregivers experience negative emotions such as frustration, depression, and helplessness (e.g. “I feel frustrated caring for my parent”), but also assesses the degree to which the caregivers’ own relationships have suffered as a result of providing care to their parent (e.g. “I take part in social activities less”). Higher scores on the scale indicate higher levels of caregiver distress. Cousins, Davies, Turnbull, and Playfer (2002) have reported alpha reliability for the CDS total score as .88 and Cronbach’s alpha for our sample was .90.

Results

Analyses designed to explore the relationship between adult children/aging parent secure base script knowledge and expressed emotion are presented in two sections. The first looks at whether the adaptation of the ASA prompt sets for use with adults and their elderly parents was reliable and appropriately correlated with generalized script knowledge. Furthermore, it examines the relations between the attachment script assessments and the caregiver measures. The second section reports a least squares linear multiple regression analysis exploring the role of caregiver stress as a moderator of the relationship between script knowledge and expressed emotion. Table 1 presents descriptive statistics of all of our study variables.

Preliminary Analyses of the Adult-Child/Aging Parent Script Assessment

Narratives from the standard and the Adult Child/Aging Parent Script Assessments were scored by two independent raters on the same seven-point secure base scriptedness scale. Rater agreement on script scores was consistently high (within 2 points on 90 – 100% of the passages from each prompt word set). Disagreements greater than two points were discussed, one scorer being more familiar with adult-elderly parent interactions and the other more experienced with prompt word assessment, and independently rescored. Scores from the independent raters were then averaged to provide a more reliable composite score for each passage (ICCs ranged from .73 to .79).

Table 2 presents Pearson correlations among all the study measures. Correlations among the script scores from the three narratives from the Adult Child/Aging Parent Script Assessment ranged from .41 to .47, producing a Cronbach's alpha reliability of .70 for the composite script score (average of all 3 adult child/aging parent scores). In addition, the composite Adult Child/Aging Parent script scores correlated significantly with the composite scores on generalized secure base script knowledge ($r = .44; p < .01$)¹ supporting the view that generalized script knowledge guide relationship specific representations.

The Adult Child/Aging Parent script scores also showed good discriminant validity in relation to the two measures of general caregiver distress. That is, the script assessment was not simply reflecting non-specific relationship satisfaction.

Script Knowledge, Expressed Emotion and the Moderating Role of Caregiver Stress

Consistent with the hypothesis that attachment related representations bear on secure base behavior in adult child-elderly parent caregiving contexts, scores on the adapted ASA prompt word sets were significantly correlated with the level of negative Expressed Emotion such that greater script knowledge was associated with less criticism and hostility ($r = -.24; p < .05$). Further analysis determined that the magnitude of that relationship varied as a function of caregiver stress.

Clinical experience suggests that secure base script knowledge would play a more important role when caregiving is more challenging. For instance, when a parent with dementia becomes agitated or aggressive, the caregiver's ability to access a secure base script impacts their capacity to reflect on their parent's frame of mind and remain emotionally responsive. Caregivers with greater script knowledge have a stronger chance of correctly interpreting the needs of their parents and addressing the anxieties that often underlie disruptive behavior.

¹The correlation between script knowledge scores from the standard prompt word sets (Baby's Morning and Doctor's Office) was .44; thus, the alpha reliability of the average of these two scores was .61.

To test for such moderation effects, we created a least squares linear multiple regression model predicting expressed negative emotion from (a) Adult Child/Aging Parent Script Scores, (b) a composite caregiver stress variable, and (c) the interaction term between script knowledge and caregiver stress. Because of the high degree of correlation between the Gilleard Strain Scale (GSS) and the Caregiver Distress Scale (CDS), a composite caregiver stress score was created by standardizing and then summing scores on the GSS and the CDS. The results of this regression model indicated that the model predicted a significant degree of variability in expressed emotion, $F(3, 82) = 14.76, p < .0001$ and that both script knowledge ($b = -1.42, p < .01$) and the interaction term ($b = -0.76, p < .002$) were significant predictors of expressed emotion.

To better understand the moderating effect of caregiver stress, we examined the simple slopes relating secure base script knowledge to expressed emotion at low, medium, and high levels of caregiver stress (Bauer & Curran, 2005; Preacher, Curran, & Bauer, 2006). Low levels of stress were defined as one standard deviation below the mean combined stress level, medium levels were defined as the mean level of stress and high levels of stress were defined as one standard deviation above the mean. Using a web based utility developed by Preacher, Curran, and Bauer (2006), regression coefficients and asymptotic variance and covariance data from the results of the multiple regression model described above were used to obtain unstandardized regression coefficients (simple slopes) and regions of significance that provided a clearer understanding of the role of caregiver stress as a moderator (see Figure 1).

At low levels of stress there was no significant relationship between secure base script knowledge and expressed emotion ($b = .025, ns$). However, at moderate and high levels of stress, there was a significant negative relationship between secure base script knowledge and expressed emotion such that greater script knowledge was associated with less criticism and hostility, and the magnitude of this relationship increased as levels of caregiver stress increase ($b = -1.42, p < .01$ and $b = -2.87, p < .001$ for moderate and high levels of stress, respectively). A region of significance analysis indicated that the relationship between secure base script knowledge and expressed emotion becomes significant at a z-score of $-0.71 (p < 0.05)$ on the combined caregiver stress measure.²

Discussion

Studies from a variety of perspectives have examined adults' affect, behavior, and cognitions in relation to their elderly parents' well-being, psychiatric symptomatology and rates of institutionalization of the elderly parent (Carpenter, 2001; Cicirelli, 1993; Crispi, Schiaffino, & Berman, 1997; Markiewicz, Reis, & Gold, 1997). The relevance of attachment theory, in particular, to the later years of life was highlighted in a special issue of *Attachment and Human Development*. Contributors examined older adults' relationship networks over time, relationships between attachment and religion, and attachment's function in emotional experience among older adults (Antonucci, Akiyama, & Takahashi, 2004; Cicirelli, 2004; Magai, Consedine, Gillespie, O'Neal, & Vikler, 2004; Steele, Phibbs, & Woods, 2004).

²Without being adapted to refer specifically to adult child-elderly parent caregiving interactions, the standard ASA also predicted a significant degree of variability in negative expressed emotion, $F(3, 81) = 9.68, p < .0001$ and the interaction term was significant ($p < .05$). At low and moderate levels of stress there was no significant relationship between generalized secure base script knowledge and expressed emotion ($b = .59$ and $b = -.66$ respectively, ns). At high levels of stress, there was a significant relationship between generalized secure base script knowledge and expressed emotion ($b = -1.90, p < .05$). The region of significance analysis indicated that the relationship between secure base script knowledge and expressed emotion becomes significant at a z-score of 1.02 ($p < 0.05$) on the combined caregiver stress measure.

Contributors to the present special issue focus specifically on caregiving interactions. Our contribution has been to adapt the Attachment Script Assessment for research on adults caring for their elderly parents and to demonstrate that secure base script knowledge plays a significant role in the caregiver report of the quality of such interactions. This work is important for attachment theory and to clinical practice.

The prototype hypothesis, the notion that early attachment experience influences later attachment behavior, is one of the cornerstones of Bowlby-Ainsworth attachment theory. An extensive body of research on secure base behavior in infancy, parenting, and marriage supports this hypothesis. This study extends support for the prototype hypothesis to include the task of caring for elderly parents. The study demonstrates that: (a) script-like representations of secure base experience can be accessed in support of care for elderly parents, (b) accessing such representations predicts lower levels of criticism, hostility and emotional over-involvement towards elderly parents, and (c) script knowledge has a stronger effect on such interactions when the caregiving task is perceived as more difficult.

The significant relationship found between the generalized secure base script scores and our relationship specific script scores suggest that caregivers do access a script like representation for how to provide care to their elderly parents that draws on knowledge of a more general secure base narrative. This is the first study to make that claim and provides evidence for the relevance of attachment representations across the lifespan. Additionally, beyond expanding support for the relevance of the secure base script to a new population, the pattern of correlations found in our study also point to the unique importance of the relationship specific script. Although the generalized script and the relationship specific scripts were correlated, only the relationship specific script was significantly associated with the caregiver's report of criticism and hostility towards their parent. It appears that although knowledge about how a secure base functions serves as the foundation for caregiving across a variety of relationships, knowledge of how to function as a secure base for that specific kind of relationship is the better predictor of the nature of the interactions reported by caregivers.

Caring for elderly parents can be a pleasure and add new dimensions to a long-standing relationship. It can also be difficult. Problems like dementia can present challenges that range from mild disorientation and confusion to aggressive or paranoid behavior. As in parenting, trial and error plays an important role in acquiring the requisite caregiving skills. Our findings suggest that access to secure base script representations is associated with caregiver reports of less distressing interactions. We suspect that the value of secure base script knowledge lies more in providing a motivational framework and a goal structure (to be a good secure base) than in specific skills. At the same time, script knowledge may well be associated with a greater sense for sensitive and cooperative interaction, more benign attributions for distressing interactions and a more mindful orientation (Meins, Fernyhough, Fradley, & Tuckey, 2001; Slade & Cohen, 1996). For example, one of the greatest and most painful tragedies of dementia is the recognition of the diminishing capacities of the sufferer by both the caregiver and the individual with dementia. As the disease progresses, caregivers must respond to the sufferer's associated confusion, anxiety, and agitation. Our findings suggest that access to secure base script knowledge may have a significant effect on how a caregiver understands and then responds to these difficult interactions. In a moment when an individual with dementia is confused and frustrated, a caregiver who has greater access to secure base script representations has the motivational framework that guides their behaviors towards sensitively responding with comfort, support and then encouragement for the individual with dementia to function at their capacity. Such an approach may prevent escalations in agitation. In contrast, a caregiver who lacks secure base script knowledge may themselves become panicked or angry, hold unrealistic expectations for what the individual

is capable of or alternatively become overly controlling and subsequently limit the individual from functioning in ways that they may be capable.

Our finding that caregiver stress moderates the relationship between secure base script knowledge and expressed emotion has implications for understanding the nature of how and when attachment representations influence caregiving. Specifically, our results suggest that a certain amount of stress is required for script knowledge to begin impacting caregiver behavior. It may be that in the context of caring for a parent with dementia, stress represents a signal that allows caregivers to recognize and then shift into their role as a caregiver. This may be particularly true for the majority of participants in this study, who were previously cared for by the same individual for whom they are now providing care. For these individuals, a shift must occur in how they view their relationship and their role in their relationship with their parent. Recognition that a parent not only lacks the capacity to provide care but also now requires care can be extremely stressful. The stress evoked by such experiences may serve to activate the attachment representations that influence caregiver interactions.

Some of the limitations of the current study point towards future research questions that could provide greater clarity into the specific ways that attachment script knowledge impacts caregiving. Exploring these questions would expand our understanding of how mental representations are translated into specific caregiver behavior. For example, we did not directly observe caregiving behaviors in the present study but rather assessed caregiver report of their behavior. Although measures of expressed emotion have been found in other populations to be associated with specific caregiver behaviors, additional research directly establishing this relationship is necessary (Hooley & Campbell, 2002; Miklowitz et al., 1989). Additionally, the dynamics of caregiving are impacted by a range of variables including stage of dementia, the nature of problematic behaviors expressed, living situation, and type of caregiving relationship (Pearlin, Mullan, Semple & Skaff, 1990). Better understanding of how a caregiver's attachment script knowledge and mental representations manifest in different or similar behaviors across these various contexts would provide significant insight into when these representations become activated (e.g. is there a difference when an individual is relatively intact versus severely demented or does it vary depending on whether the individual is caring for a spouse, parent, or in-law). Questions may also be asked as to how attachment representations influence caregiving behaviors when different types of caregiving skills are demanded across differing caregiving settings (i.e. when the individual with dementia lives with the caregiver versus when the caregiver is managing the care provided in a nursing home). These questions are outside the scope of the current paper and limitations in sample size and composition make many of these questions impossible to answer with the available data, but these questions represent new and exciting directions for understanding the importance of attachment across the life span.

In addition to providing a theoretical framework within which to conceptualize care for elderly parents, attachment theory has much to offer in the area of program development and intervention. Our findings suggest that attachment representations impact how caregivers interact with their parents with dementia and more specifically that greater knowledge of a secure base script is associated with less expression of criticism and hostility. Interventions that specifically attempt to address a caregiver's lack of secure base script knowledge may be helpful in increasing a caregiver's sensitivity, understanding and attitude of cooperation. A number of clinical interventions have been developed that utilize attachment theory as a theoretical foundation to attempt to shift patterns of attachment-caregiving interactions (Davila & Levy, 2006; Fosha, 2000; Johnson & Greenberg, 1985; Slade, 1999; Marvin, Cooper, Hoffman, & Powell, 2002). Such programs seem adaptable to the task of helping

adults cope with the task of caring for elderly parents and the challenges that arise when the task become difficult due to conditions such as dementia.

Current clinical interventions for helping adults care for elderly parents focus on caregiving strategies around problem behaviors, stress management skills and accessing adequate social support (Belle et al., 2006; Nichols et al., 2008; Mittelman, Roth, Haley, & Zarit, 2004). Attachment research has the potential to broaden the avenues for intervention. For example, the Circle of Security intervention uses short-term therapy, self-observation of videotaped interactions, and small group interactions to enhance mothers' role playing skills, sensitive responsiveness, and sense of what it means to serve as a secure base (Marvin, Cooper, Hoffman, & Powell, 2002). In light of the present results, which support the relevance of attachment representations in caregiver interactions, it seems likely that this well studied attachment based intervention could usefully be adapted for work with adults and their elderly parents and help caregivers to understand their new role and respond in ways that do not escalate conflict. This would require collaboration between attachment theorists and clinicians experienced with elderly populations. Although John Bowlby's work focused on maternal care and children's mental health, his primary goal was that attachment theory should prove widely useful. He would be gratified to know that significant benefits for adults caring for their elderly parents are on the near horizon.

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Appendix A. Prompt word outlines (Adult Child – Aging Parent Script Assessment)

A. Accident During a Visit From Your Parent

your parent	check on	broken leg
shower	hurt	cast
fall	crying	home
cry out	hospital	rest

B. Your Parent Gets Lost

your parent	worried	tears
driving	telephone	dinner
lost	calls your home	talk
getting late	directions	smile

C. Lunch is Late for Your Parent

lunchtime	ask	impatient
hungry	server	food arrives
late	coming soon	eat
upset	wait	happy

Appendix B Sample Adult Child – Aging Parent Narratives

1. Accident During Visit From Your Parent (High Scoring - Secure Base Script)

My mother thinks she can do everything by herself. So she came to my house and she spent the night with me and the next morning it was time for her to take her shower and I offered to help her but she said, "I can do it myself". But I still stood outside the door because she's

not as good at things as she thinks. She's been known to sometimes direct the water outside the shower and get the bathroom wet and she could slip because she's a little unsteady on her feet. Suddenly I heard her cry out very loudly and she had fallen in the shower. So I went in and she was upset and she was hurt. But she trusts me to do the right thing in a situation like that. So I did the best I could to get her sitting on the bed and getting her dressed. And she was in a lot of pain so I knew I had to get her to the Emergency Room. When we got there we waited a very long time which was hard on her because she asks a lot of questions when she's waiting for a doctor anyway. The doctor finally came and said her leg was broken and she accepted that pretty well and they put her in a cast and she went along with all that very well. And then it was time for me to take her back home. She insisted on going to her house, not mine. But she let me stay a while. And we talked and then she felt ok and settled down for a nap.

2. Accident During Visit From Your Parent (Middle Score - No Secure Base Script, Matter of Fact Presentation of Events)

There was a time when my mother came to our house and she'd been having a hard time getting around because she'd had a broken leg. And when she had the cast on she wasn't able to get around hardly at all. Finally, the cast was off and so she started feeling more confident and she stayed with us for a weekend. And while she was staying with us she wanted to take a shower. And we asked her if we could help her in the shower but she was reluctant to let anyone help her, she thought she could do this all herself. And we heard a big thump and we thought maybe she had fallen in the shower. And we heard her cry out, cry for help and so we ran upstairs to check on her. And we found out that she was indeed hurt. She was laying on the floor of the shower and she couldn't get up. And she was crying and she was upset and she was also in some pain. So we wound up calling those EMS guys and they put her in the ambulance and took her to the hospital. It turned out that she had not broken her leg again and they just sent her home and told her to just get some rest and to be more careful.

3. Accident During Visit From Your Parent (Low Scoring - No Secure Base Script, Atypical Content, Story Focused on the Distress of the Adult Child)

Mama one evening went back to wash up for supper. She always wanted to look real nice for when my dad got home. And all of the sudden, I heard this, "ba-boom" and I ran back there and daddy ran back there and she had fainted in the bathroom. She had passed out in the bathroom and we didn't really know what had happened and so dad called the doctor and that was back when they did house calls or this doctor did anyways. He came over and examined her and decided that she was just exhausted. She does a lot of volunteer work and I guess it was too much for her. And the doctor said all she needed was some rest. But I was beside myself because my mama was not well and I didn't know why. So I go running into the bedroom every time I heard a sound. And sometimes I'd shake her and wake her up to make sure she was still alive. And she'd look at me and smile and say, "Honey, I'm okay, Honey, I'm okay." After about the tenth time I did that she said, "Honey, Please let me sleep," but all I could do was cry because my mama was hurt. But she got some rest and got better and that's when we got some help for her cleaning the house. So she was just doing way too much and she was happy then, she never had another problem.

4. Your Parent Gets Lost (High Scoring - Secure Base Script)

This is a story about my mother. She called and told me that she was coming to see me and she was driving. After a while I thought she'd be arriving but it was getting later and later

and she was not there. And I was starting to get very concerned about her and finally she called our house. She said that she had stopped and could not find my house and did not remember how to get to our house and for some reason she could not remember and she was lost. So I told her to stay where she was and that I would come to her. I didn't feel confident that I could give my mother directions because she was totally lost and couldn't find my house. So then I called a friend and asked her to drive me. So my friend came to my house and drove me to where my mother was. And my mother cried when she realized that she had a potential memory problem because she had always remembered how to get to my house. So I tried to reassure her that we'd get to my house and we'd sit down and talk about it. And she was ready so I drove her to my house in her car. My friend followed and when we'd had time to allow my mother to lay down and rest and get over being upset then we began to talk about what had happened and why she couldn't find my house and finally my mother smiled.

5. Lunch is Late for Your Parent (High Scoring - Secure Base Script)

Well it's a beautiful fall afternoon, and I've decided to go and see my mother at the nursing home. And it was after lunch time actually and so I thought that she probably would have eaten lunch already. But they were behind schedule and my mother hadn't had any lunch yet. When I arrived she seemed to be upset so I asked her what was bothering her and she said that she was hungry. So I asked the nurse on duty whether or not lunch would be coming soon and she said it wouldn't be more than another fifteen minutes. So I tried to console my mother and tell her that we would only just have to wait a little while but my mother was becoming impatient and starting to complain. So I tried to kind of get her mind off of it and talk about happy times that we had had in the past or, if she didn't remember that, I would tell her a couple of happy things that were happening right now, like it was a nice day and that you know the ... that there was a good show on TV that she might want to watch. Finally the server came in and said that the food was ready. So my mother had a nice lunch. I was happy to see that that she was no longer hungry and not feeling upset about not getting her food and that she was eating happily.

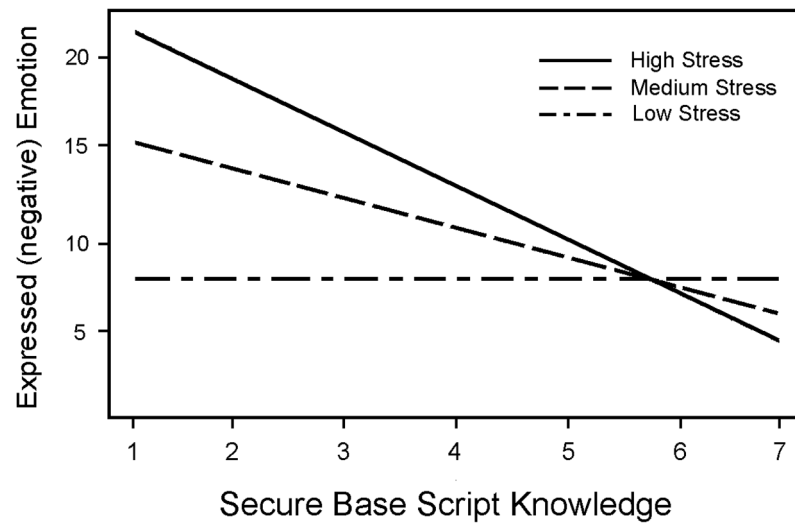


Figure 1. Relationship stress as a moderator of the relation between secure base script knowledge and negative expressed emotion.

Table 1

Descriptive Statistics for the Attachment Script Assessments and Caregiver Stress Measures

	Mean	SD	Range
Secure Base Script Scores			
Attachment Script Assessment	4.1	1.01	1 to 7
Adult Child – Aging Parent Script Assessment	3.9	1.01	1 to 7
Caregiver Measures			
Level of Expressed Emotion Scale	10.9	5.38	3 to 30
Caregiving Distress Scale	24.0	4.81	14 to 34
Gilleard Strain Scale	28.1	12.68	0 to 57
Composite Strain/Distress Scale (z scores)	0.0	1.9	–3.9 to 4.3

Table 2

Correlations Among Attachment Script Measures and Caregiver Measures

	Attachment Scripts	Adult Child/Aging Parent Scripts	Level of Expressed Emotion Scale	Caregiving Distress Scale	Giljeard Strain Scale
Attachment Scripts	1				
Adult Child/Aging Parent Scripts	.44**	1			
Expressed Emotion Scale	-.07	-.24*	1		
Caregiving Distress Scale	.05	-.02	.47**	1	
Giljeard Strain Scale	.17	-.03	.47**	.80**	1
Composite Strain/Distress Scale	.14	-.03	.49**	--	--

* p < .05,

** p < .01