

Making the body relevant:

Using attachment theory to conceptualize effective treatment
for midlife women coping with dissolution of an intimate relationship

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Abstract

Dissolution of an intimate relationship, whether it was a legally sanctioned union or not, represents a tremendous stressor for those who must cope with this transition (Holmes & Rahe, 1967). Loss and grief reactions, upheaval, and financial repercussions are part of the disruption taxing the resources of those who must deal with this common, but difficult, event. Declines in holistic well-being – physical health, emotional satisfaction, felt security, financial security, self-esteem, and self-efficacy – are likely for women negotiating this stressful transition (Amato, 2000; Holden & Smock, 1991; Lorenz, et al, 2006). For women at mid-life, there are unique challenges to rebuilding their lives after the end of an intimate attachment relationship (Bogolub, 1991). These challenges are intensified if the woman also bears responsibility for the care of children or aging relatives; she may suffer from the knowledge that she is unable to provide adequate care, given the burden of her grief and stress (Mikulincer & Shaver, 2009). Mental health practitioners could use more research on how to support women after losing a partner in mid-life, especially those women most vulnerable to decreased self-worth, depression, anxiety, a reduced sense of self-efficacy, and economic declines, which all intertwine as consequences of divorce or relationship dissolution (Bogolub, 1991). During and after a relationship dissolution, women with insecure attachment status will be less resilient, as they work to cope and recover (Mikulincer & Shaver, 2009).

The reasons for the magnitude of stress engendered by the dissolution of an intimate relationship can be conceptualized through the lens of attachment theory. In adulthood, intimate partnerships function as attachment relationships, providing a sense of felt security, through the proximity and accessibility of the partners. A sense of self in relation to others, and expectations about what to expect from the world, arise from the internal working models that attachment relationships help to shape. Partner loss can shake an individual's internal working models of self and others, and destabilizes the ability to regulate affect.

The regulation of affect through the medium of attachment relationships begins in infancy and continues into adulthood. Thus attachment theory provides us with some rationale for targeted interventions using touch to help mid-life women who seek support as they try to rebuild their lives (Takeuchi, et al., 2010). The well-documented importance of touch to well-being (Spitz, 1945; Harlow, 1958) relates to attachment theory in that "touch is the language of attachment" (Fisher, 2011), and that touch is a non-verbal form of communication that informs us on a deep level that we are safe and worthy of care and affection (Bowlby; Takeuchi, et al., 2010). Research shows massage to be useful in reducing stress and other distressing symptoms. However, there appears to be a dearth of research exploring the use of massage as an adjunct to psychotherapy for suffering related to attachment-related ruptures.

Therefore, the researcher proposes the use of massage therapy as an adjunct to attachment-oriented psychotherapy, and posits that using massage therapy may effectively reduce the distress of women in midlife who are suffering the end of an intimate relationship. Informed by attachment theory and related studies, the researcher hypothesizes that the implicit (and largely unconscious) attachment experiences of these women, as held in the body, will become more accessible through the bodily experience of nurturing touch. Their internal working models of self and other, as encoded in their implicit bodily knowledge, may become more available to modification, as the women gain more consciousness of their attachment experiences in the therapy relationship. Bringing into consciousness their experiences related to losing their significant attachment relationships, within a matrix of whole-body care and support, may act to stimulate the development of stronger felt security, which in turn will help to support coping more effectively with the transition, as their symptoms of distress are reduced. This will benefit not only the women, but all who rely upon them for care and productivity.

Introduction

After nearly fourteen years, the news that my partner wanted to break up was a shock. We had been in couples counseling for about nine months, and I was still hopeful that we could learn to open up our communication and work things out. My partner thought otherwise. As we worked out the details about the house we owned together, and as I faced moving out and looking for work, I was overwhelmed with the details that needed attention, the practical problems I needed to solve, and the emotional turmoil and grief that I was facing. It had been so long since I lived alone. I worked for my partner's business, but did not have savings, so my financial situation looked bleak. What about the cats!? I had the first panic attack of my life after a mediation meeting.

We were not legally married. Some friends and family did not acknowledge my grief as readily as if it had been a divorce from a marriage. Some friends seemed to feel they had to choose sides, resulting in more losses for me. My newly single state brought a great deal of uncertainty and survival fears.

I wondered: Will anyone ever love me again, touch me again? I'm not as young as I was the last time I was single – will anyone ever find me attractive again? Can I handle dating? Will I be able to make it financially? With whom will I share meals? Who will I tell about my day? On some days I wondered, will I die of loneliness?

Fortunately, I had been building a network of supportive friends and colleagues in the art community. Through connections in one of the artist groups I belonged to, I found a good therapist. I also started making regular appointments with my massage therapist. When I was on the massage table, I would experience insights about my situation that I would then bring to my psychotherapist for discussion. Sometimes during a massage I would cry, and feel a release from tension that I had been unable to find in the previous week or two, and this would encourage me to face the next week of problem-solving. My massage therapist's

kindness, sensitivity, and attunement helped me to believe that I was worthy of care and attention – and touch – a belief that the dissolution of my relationship had made difficult to sustain. My psychotherapist also demonstrated these qualities, also treating me with warmth and unconditional positive regard, and she showed confidence in my ability to succeed, as I prepared to rebuild my life and apply to graduate school. I felt cared for, listened to, and supported as I sorted out the many threads of my life that needed a new organization.

The transition was stressful – at times I did not know how I would make it. As it turns out, the three and a half years since that break-up have been full of growth and very meaningful. I moved to a new city, entered graduate school, and discovered that my cats and I were more resilient than I had anticipated. I made new friends and began a new career. Very soon, I will have a Master's Degree in Counseling.

I was fortunate enough to have access to both psychotherapy and massage therapy at a very stressful time, when I questioned my worth and my ability to cope. Not only did I talk about my situation and receive verbal and emotional support, but I also received care as a whole being, through the physical and emotional support I received in massage sessions. Being able to look forward to a pleasurable reduction in stress made a very difficult time much more manageable. The end of that relationship, which I had thought to be lifelong, felt traumatic to me. Yet I received the right kind of support – and I believe that this helped me to weather the crisis, and to repair my internal models of self in relation to others; instead of staying overwhelmed, anxious, and depressed, and continuing to feel myself to be unworthy of love and affection, I believe that I have experienced what is known as post-traumatic growth.

Although this is only my story, a single-subject study, I believe that my experience might be useful for other women at midlife who find themselves coping with the dissolution of a meaningful relationship.

Problem Statement

Whether one conceptualizes loss of an intimate partner as traumatic or not, losing one's partner constitutes a major source of stress, with concomitant possibilities for deterioration of functional and emotional well-being. A woman grappling with this kind of loss may be faced with depression, anxiety, disorientation, somatic distress, loss of meaning, and the need to reorganize her identity in a world without the partner. Possible long-term effects may include negative impacts on the woman's physical health from the physiological stress, unless she has adequate inner resources for distress and affect regulation; during this crisis of loss, she will likely need external support. This study proposes an intervention based on attachment theory, which helps to conceptualize why the loss of an intimate relationship is so stressful.

Divorce, or relationship dissolution, is a common event in the United States. The latest records for California show a rate of 4.3 per 1,000 population in 1990. For 2007, the national rate was 3.6 per 1,000 (U.S. Census Bureau, 2010, p. 94). The rate is lowest for first marriages, and increases for dissolution of second and third marriages. In recent years, about 20% of divorces involved women between aged 40-60 (Sakraida, 2005). When we consider *all* partnership dissolutions, we have no statistics, but we do know that the number of people affected by such an event will be even larger than those who are divorcing from legally defined unions. (Given the discriminatory barriers to same-sex couples, and because the importance of a relationship cannot be determined by its legal status, I will use the term relationship dissolution for this proposal.)

Although common, the dissolution of a romantic relationship remains an uncommonly stressful event in an individual's life, second only to the death of an intimate family member (Holmes & Rahe, 1967). Research in the field of adult attachment and physiological regulation shows that when romantic partners travel apart from each other, they experience stress; this stress can be measured in terms of behavior, affect, and physiological effects (Diamond,

Hicks, & Otter-Henderson, 2008). The stress intensifies and is of greater duration when the partner has gone away for good.

Although stressful, relationship dissolution ultimately affects individuals in different ways (Sakraida, 2005), depending on various factors, including overall resilience, state of mind with respect to attachment, and the quality of the relationship prior to dissolution (Amato, 2000). For some, the end of the partnership may eventually lead to increases in well-being; others find it stressful, but in time recover; still others begin a long-term decline in well-being. There is support for conceptualizing the stress of divorce both as a relatively short-term crisis, with acute psychological distress, and as a long-term strain, with cumulative effects that result in worsening health and economic well-being (Amato, 2000; Lorenz, et al, 2006). Turner & Lloyd (1995) write about the cumulative nature of traumas experienced over the life-span, and how these have significant effects on mental health, even years and decades after the specific trauma(s) have ended.

Individual variations notwithstanding, we can safely say that divorce (including dissolution of non-married couple relationships) is a stressful life event. Research, including a major review of the literature on divorce (Amato, p. 1274), supports this notion, and points to the possibility of many negative outcomes including increased physical risks like alcoholism, motor vehicle accidents, suicide, and homicide (Sakraida, 2005). Divorce sequelae also include greater psychological distress and unhappiness, poorer self-image, health problems, higher risks for death and depression, social isolation, less satisfying sex lives, decreased wealth, lower standards of living, and more economic hardship – these last three especially so for women (Lorenz, et al, 2006).

After divorce, women face disproportionately more negative consequences: they often face greater stressors in terms of child rearing responsibilities; in terms of economic security, their earning power, standard of living, and net worth decline, with cumulative effects that

increase the stress of being divorced (Lorenz, et al, 2006; Holden & Smock, 1991, p. 53). There are also long-term negative consequences for physical health (Lorenz, et al, 2006; Sakranda, 2005), and for some, who may have been more vulnerable to begin with, the stress of losing this significant relationship may well precipitate major difficulties with psychological and emotional well-being.

These more vulnerable women may be the ones whose divorce precipitates a decline into worsening mental, physical, and economic well-being, without the opportunity for recovery – unless we intervene successfully by providing the kind of support necessary to reverse these devastating outcomes. Given the stressful nature of dissolving intimate partner relationships, treatment interventions that alleviate stress are especially worth noting. Asking why this event is so stressful will help to bring empirically supported theory to bear in finding appropriate interventions. The relationship between stress and relationship dissolution, as they pertain to my proposed intervention, will be elaborated below.

For women at mid-life, in particular, there are unique challenges to rebuilding their lives after the end of an intimate attachment relationship. As we know, this transition stresses all domains of a woman's life, including the emotional and financial realms. Women in mid-life have a higher rate of depression, which may be related to the number of transitions they experience during this stage of life. In fact, according to some researchers, the majority of clients present for counseling during life transitions. There is evidence that the accumulating stress of these transitions may precipitate declines in overall life satisfaction and in holistic well-being (Degges-White & Myers, 2006).

Another factor making post-dissolution adjustment difficult is that women at mid-life have a harder time entering new long-term relationships, for several reasons. These include men's earlier rates of mortality, women's mid-life body changes – which are not valued in the context of our society's emphasis on youth and beauty – and the tendency of men to marry

younger women. Furthermore, in mid-life, there is less time to build a new life with someone than earlier in life when many partnerships are formed. These factors may depress a divorced woman's self-esteem and confidence as she re-enters the dating world, especially if she was left by her ex-partner for a younger woman (Bogolub, p. 429).

The grief of losing an important relationship can be compared to the loss experienced when a spouse dies – the most stressful life experience (Holmes & Rahe, 1967) – and the anxiety, depression, and loneliness experienced by women who grieve the end of a relationship may be more intense, and of greater duration and frequency, for women at mid-life than for younger women (Sakraida, 2005).

In addition to the personal and financial costs of relationship dissolution for women at mid-life, there are likely to be other people who will suffer adverse effects of the woman's loss. If she is caring for children, for aging parents, or both, these dependents will suffer from the woman's decreased ability to provide care when her own resources are being stressed. If she has children, not only will they feel the loss on their own account, but they will also lose some of their mother's support and attention at this very critical time (Mikulincer & Shaver, in Brown, Brown & Penner, Eds., 2009; Bowlby, 1982). Some of these adverse affects may even carry into the next generation, in the form of impacts on the attachment security of children who are not receiving adequate care from grieving and stressed mothers. Vulnerability felt in relation to the attachment system can threaten the caregiving system (Mikulincer & Shaver, 2009). The shock waves of relationship dissolution ripple out, affecting not only the separating individuals, but their families as well. Helping women to navigate this transition will help them and their loved ones to avoid potentially devastating consequences on many levels.

Mental health practitioners could use more research on how to support women after losing a partner in mid-life, especially those women most vulnerable to decreased self-worth,

depression, and economic declines, which all seem to intertwine as consequences of divorce or relationship dissolution. In 1991, when Ellen Bogolub wrote her article on practice issues for working with divorced women, she found scant research on how to help them (p. 430). The researcher here proposes to use a theoretical basis to formulate research into effective interventions.

In a study using conceptualizations influenced by feminist theory, Sakranda (2005) suggests that the time of transition after relationship dissolution may be an opportunity for women to use interventions that support "personal growth, healing, and the development of a healthier lifestyle and thus, a healthy divorce transition." This echoes the idea of Post-Traumatic Growth (Gerrish, et al, 2009), which for reasons of space, will not be elaborated upon here. I believe that transitional crises are periods of greater than usual holistic/systems plasticity, and that we can help promote more constructive and flexible organizations of internal working models of self and other, if we target our interventions to make use of this crisis. In the following section, the concept of internal working models will be elaborated upon, along with other ideas from attachment theory that will help us answer the following questions: Why is divorce so stressful, leading so often to negative outcomes, who is most vulnerable, and what can we do to help?

Using attachment theory to locate effective interventions for optimal recovery from relationship dissolution

One way to conceptualize the significance of relationship dissolution, which entails the loss of an intimate partner, lies in the domain of attachment theory. When we are babies and children, we need attachment figures, and in particular, one special attachment figure who usually functions as the main caregiver (Cassidy & Shaver, 2008). These attachment figures provide us with somewhere to turn when we are in pain or afraid, under stress and in distress. This is known in attachment literature as providing a safe haven. Another main

function of the attachment behavioral system is to provide a secure base, in which the child feels support for her need to explore the world, and to which she can return when she needs to "recharge" her sense of security (Mikulincer & Shaver, 2009).

In adult life, an intimate partner usually functions as a primary attachment figure within a network of attachment relationships (Doherty, N., & Feeney, J., 2004). The four hallmarks of attachment relationships are: proximity-seeking, or wanting to be with the partner; provision of a safe haven, where comfort can be found in times of distress; provision of a secure base, a sense of confidence and security, which allows us to explore the world; and separation protest when the partner is unavailable (Doherty and Feeney, 2004).

Losing a primary attachment relationship means losing both safe haven and secure base, and creates distress because the former attachment figure is no longer available. Thus, the loss of this relationship will represent a crisis affecting an individual's sense of self, her sense of safety (felt security) and her ability to explore and navigate her environment effectively. Her expectations about herself and others will be shaken. She may wonder: Am I still worthy of care and attention? Will a caring and responsive person be available when I need help and comfort? Am I going to be able to handle this? This conceptual framework helps to answer the question about why divorce, or relationship dissolution, is so stressful.

These kinds of questions, which may arise when a woman loses a partner, and relate to her internal working models, affect her ability to self-regulate (Mikulincer & Florian, 1998). These ways of organizing experience have also been described as "relatively enduring expectations or 'schemas' about themselves and the world" (Parkes) or "assumptive worlds," the term used by Janoff-Bulman (Gerrish, et al., 2009). Our internal working models of self and others arise through the millions of interactions with significant others, starting with our caretakers in infancy, who lay the foundation for our expectations about ourselves and about others.

Secure internal models of attachment come from consistent interactions with caretakers who are available, sensitive, and responsive to the infant's signals of distress, and her bids for proximity and support (Shaver & Mikulincer, 2007; Mikulincer & Florian, 1998). Because the secure individual has had these repeated experiences, she learns that she can handle distress, and can manage stress and solve problems, even though this may be painful and hard (Mikulincer & Florian, 1998; Shaver & Mikulincer, 2007). In the attachment literature, the phrase "a secure state of mind with respect to attachment" is often used to indicate the internal working models that function as such a resource for secure individuals. In a secure attachment relationship, the infant learns coping strategies that provide resilience in times of stress; these secure strategies of the attachment behavioral system are collaborative, constructive, flexible, and responsive to reality, including emotional experience (Bowlby; Ainsworth; Shaver & Mikulincer, 2007).

Infant observation demonstrates how the caregiver creates experiences of security in the infant, through bodily experiences of touch, as well as other sensory dimensions including sound (rhythm, pitch, volume), motion, smell, temperature, and dryness (Feldman, 2007). Internal working models of self and others develop from these millions of intersubjective experiences – in large part, through the language of touch. The secure infant learns that she can expect effective responses to her signals of distress most of the time, and that she can expect significant others to be available when needed. She learns that she can handle pain and discomfort and that when her own resources are overwhelmed, she can ask for and receive support.

Individual differences

Unfortunately, not everyone develops within (a) secure relationship(s). Although 60-65% of the general population have secure states of mind with respect to attachment (Sonkin, 2010), this leaves a significant proportion of the population who have developed in a situation

of insecure attachment. These people must develop "secondary strategies" for maintaining their attachment relationships, which function within the specific difficulties of their developmental environments; in adulthood, however, these strategies, reflecting these individuals' internal working models, or ways of organizing experience, often create problems in relationships.

Differences in resilience amongst women whose relationships have ended may relate to their differing states of mind with respect to attachment. For those women who start out with less secure states of mind with respect to attachment, the stress of a divorce/ dissolution may lead to prolonged grief and suffering (Mikulincer & Florian, 1998).

On the following page is a model of attachment security, showing some basic concepts concerning attachment styles, and the strategies employed by those with different styles.

Continuum of attachment, Mary Ainsworth's model describing her observations and research:

A	B	C
Avoidant..... Dismissing (25%) (10%) <i>down-regulates</i> caregivers consistently not available	Secure..... (60-65%) <i>flexible</i> caregivers consistently available	Resistant/ Ambivalent Preoccupied <i>up-regulates</i> caregivers inconsistently available

A fourth category was added, which at first was called "cannot classify," and later was termed Disorganized, which correlated with infants being abused by caregivers; their safe haven is also the source of their fear, so they experience fear without a solution, and their attachment strategy collapses. Later researchers discovered another type of disorganized attachment, in which the mothers did not abuse their children, but had been abused and were without resolution of those experiences. They tended to frighten, or show that they were frightened of, their children.

[Source: Creating a Secure Base: Psychotherapy from an Attachment Theory Perspective, a 14-hour workshop taught by Daniel Sonkin, Ph.D., June 2010.]

Experiential inspiration and theoretical basis for the proposed intervention

My proposal has its roots both in theory and in personal experience. I felt the therapeutic and growth-enhancing effects of oscillating between psychotherapy and bodywork. My body helped to inform my mind, so that I explored insights and felt experiences in therapy; my cognitive and emotional experiences in therapy were further integrated during bodywork. Similar integrative work has been used in research combining verbal processing with movement and other body-oriented interventions (Payne, 2009).

For the proposed study, this researcher draws from infant observation studies, neurological research, and attachment studies, from which it has become apparent that internal security relates to both mind and body. Mind and body are interconnected systems within the indivisible system of a human being.

This position, which contradicts the Cartesian body-mind split, finds support in many healing communities, and is explicitly affirmed by research in the field of dance movement therapy (DMT), also recently recognized in the UK as a state-regulated profession as dance movement psychotherapy (DMP). It has been shown to help people with psychosomatic disorders, and – using the BodyMind Approach (BMA), a synthesis of Authentic Movement and other modalities, including massage – to help alleviate depression, anxiety, and medically unexplained symptoms (Payne, 2009).

Payne describes how she conceptualizes her intervention working to assist unification and integration of the mind-body system. Using movement and other non-verbal, body-oriented experiences gives primacy to right hemisphere processing, and then including witnessing (verbal processing) to the experience, brings the left hemisphere's orientation to language into play. Barriers to experience and insight that might normally be enacted through the dominance of the language-oriented left hemisphere may be sidestepped in movement and other bodily experiences (Payne, 2009; see also Betty Edwards, *Drawing on the Right Side*

of the Brain, 1999). Subsequently involving the left hemisphere integrates the felt experiences, and helps bring unconscious material into greater awareness.

The opportunity to receive nurturing touch – in this proposed study, from massage – along with the opportunity to talk about what is experienced on the bodily level, may help to bring internal working models into consciousness. According to attachment expert and psychotherapist, Daniel Sonkin (2010), therapy makes implicit models explicit, and along with greater consciousness, this leads to greater choice and flexibility. In this way, therapeutic work that includes the body may help a woman to recover from the attachment injury of losing an intimate partner. During the most acute phase of distress, providing temporary safe haven and secure base experiences to her whole system, through the use of therapy that addresses both psyche and soma (body), provides scaffolding for her affect regulation. It is heartening to note that change is possible, even at the level of implicit models.

Internal working models, plasticity, and the possibility of change

One of the attractive things about the ever-expanding research into attachment theory is that it confirms our capacity for change at a deep, implicit level of knowledge; we can "earn" secure attachment status through experiences that help our internal working models to change. These automatic, unconscious models incorporate mostly implicit memory, which is procedural knowledge, "implicit cognitive belief systems, encoding beliefs, attitudes, expectations, and strategies" (Sonkin, 2010). We are open to influence from new experience, and the stable patterns of internal working models are not unalterable structures (Wallin, 2007). Further research will help expand our understanding of the change processes involved in moving toward more secure states of mind with respect to attachment; at this point, however, it will be a good start if we can show that the addition of a somatic intervention helps to reduce levels of stress and distress, and hastens recovery from the loss of an important relationship.

Stress, attachment relationships, and well-being

As we know, divorce (or relationship dissolution) is a major stressor, and bears similarity to the most stressful life experience, which is losing a partner to death (Holmes & Rahe, 1967). The universal human experiences of grief and loss, topics that John Bowlby elucidated in his work on attachment, occur when an individual loses access to an attachment figure, whether in childhood or adulthood (Bowlby; Diamond, et al., 2008). When we ask ourselves how to help alleviate the stress, distress, and resulting negative impacts that flow from such a relationship loss, it makes sense to look at attachment theory and research for ideas about why this loss creates so much stress, and how we can use this knowledge to help.

During the last few decades, adult attachment research has produced an enormous body of literature to elaborate the concept of adult attachment, the connections between well-being and states of mind with respect to attachment, and the way that attachment strategies affect our ability to cope with stress and regulate our physiological responses (Cassidy & Shaver, 2008; Simpson & Rholes, 1998). The goal of the attachment system, for both children and adults, is felt security, and a desire for close contact is part of the attachment behavioral system (Collins & Read, 1990).

Attachment relationships and the importance of touch

"Touch is the language of attachment" (Fisher, 2011). For the regulation of arousal within the infant-caregiver dyad, and in the formation of attachment in infancy, the importance of touch has been documented. Infants learn how to regulate difficult emotions – felt in the body as sensations of pain or discomfort – through mind-body interactions with the caregiver. In 1945, Spitz observed that the babies in institutions who were deprived of touch – although they receive other basic necessities – had a much higher mortality rate than the babies who received nurturing touch. He concluded that touch is a basic need as important as food and sanitation.

In 1958, Harlow's famously heartbreaking research with rhesus monkeys and wire "mothers" scientifically demonstrated the necessity of touch for well-being, and the terrible consequences that follow touch deprivation. Following and elaborating on this line of research, Bowlby also observed that touch is a basic form of nonverbal communication, intrinsic to forming bonds of intimacy, affection, and attachment, and the primary way that caregivers communicate to their infants that they are loved and safe. As expressed so pithily by attachment expert and psychotherapist David Wallin, "Preverbal experience, identified by attachment research as so influential, is largely, of course, bodily experience" (2007).

In infancy and childhood, touch is the most fundamental way that caregivers demonstrate their proximity and attunement to a child, and the most tangible evidence a child has that he or she is safe. The quality and availability of touch to a child influences the internal working models of the adult, and affects the adult's susceptibility to depression (Takeuchi, et al., 2010). However, our need for touch and its importance for the maintenance of well-being does not end with childhood, but continues throughout the lifespan (Takeuchi, et al., 2010).

Touch has also been shown to be fundamental to the interrelated behavioral systems of adult love: attachment, caregiving, and sexuality. However, the connection between touch and attachment in adult romantic relationships has not been as well-described. There does seem to be a relationship between the use of touch (and not just with sexual behavior) and the maintenance of attachment bonds, with touch signaling proximity and availability, and the seeking of support during stressful events (Brennan, Wu, & Loev, 1998).

The researcher's proposed intervention study is one attempt to investigate the clinical application of the relationship between touch and the enhancement of attachment security, and thus, the reduction of stress. As mentioned above, this provides a theoretical link between the highly stressful nature of a divorce/relationship dissolution and a theoretically-

supported line of research into targeted interventions to support individuals through this difficult transition.

Such research will help shed light on the connections between intimate relationships, health, and the psychobiological processes inherent in the attachment system (Diamond, et al, 2008). As Diamond, et al, observe, Hypothalamic-Pituitary-Adrenocortical (HPA) activity, as measured by samples of salivary cortisol, is a physiological indicator of stress associated with activation of the attachment system, which will occur with the loss of reliable access to one's attachment figure. One of the hypothesized outcomes from the proposed intervention is a reduction in levels of HPA activity (stress) while participants think and talk about their relationship dissolution, compared with the levels measured before the intervention. In psychotherapy, we can provide responsive, sensitive attunement, but if the body is left out of the conversation, the clients' internal working models may take a while to catch up. The researcher hypothesizes that regular massage therapy, coupled with attachment-oriented psychotherapy, will assist women with affect regulation through the mechanism of enhanced attachment security, possibly conceptualized as secure-base priming.

Secure base priming

Some attachment research appears to support the use of interventions that enhance access to the internal processes enjoyed by people with secure attachment. Secure base priming, wherein subjects are shown, or asked to imagine, secure-base experiences, increases felt security and promotes pro-social behaviors; experimental induction of increased access to the secure-base script helps individuals soothe their emotions and maintain a positive mood, even in the face of stressful experiences. Secure people, with their ready access to the secure-base script, have more resilience, and are better at maintaining their equilibrium during stressful times (Mikulincer & Shaver, 2009). Boosting attachment security, resilience, and affect regulation are good outcomes to aim for when trying to help mid-life women suffering

the loss of an intimate relationship. Other worthy outcomes that may be furthered by the use of massage include stress-reduction, greater self-efficacy, and lower levels of other life-constricting states, like anxiety, depression, and somatic complaints.

Research on the use of massage to support well-being

A major review of the literature (Field, 1998) concludes that massage leads to decreases in pain, depression, and anxiety, and also to lower levels of stress hormones, which improves autoimmune functioning. In the literature, many studies have methodological flaws, or have not been replicated, but Field's review focused on research that met criteria including adequate statistical power and the use of random assignment to control groups. Much of the research reviewed was conducted by Field and colleagues.

Other research has demonstrated the use of massage to improve mood and behavior in children and adolescents diagnosed with attention-deficit/hyperactivity disorder (Khilnani, Field, Hernandez-Reif, & Schanberg, 2003). Adolescents receiving massage therapy assessed themselves to be happier, compared with the students receiving relaxation therapy; the massage group was also observed to be less fidgety, less hyperactive, and more on-task than the comparison group (Khilnani, et al, 2003).

Massage has also been useful for children with autism, and their parents; an exploratory study found that massage given by the parents to their autistic children helped them to feel closer to their children, both emotionally and physically, and seemed well-received by the children (Cullen-Powell, Barlow, & Cushway, 2005).

Other research on the use of massage has been conducted with adolescent psychiatric inpatients, with an array of disorders. Despite the acknowledged limitations of one pilot study, its results do suggest positive outcomes from the use of massage, such as reductions in anxiety and stress-related measures (Garner, Phillips, Schmidt, Markulev, O'Connor, Wood, Berger, Burnett, & McGorry, 2008). Another study using massage with a similar population

demonstrated reductions in depression and anxiety, decreased measures of cortisol, and sleep improvements (Khilnani, et al, 2003).

For individuals with anxiously insecure attachment, the strategy for maintaining attachment ties involves hyperactivation of arousal and a heightening of communication of distress. Given that children tend to communicate their distress with their bodies much more than in words, it is possible that some of the ADHD diagnoses relate to issues of anxious attachment. Cullen-Powell, et al, who investigated the use of parental massage of children with autism, also explored the link between attachment and their results: the parents' sense of greater closeness and bonding with their children through the medium of touch (2005). This line of reasoning is speculative, but theoretically plausible, and worthy of further investigation.

Synthesizing theory towards research into effective interventions for clinical practice

At mid-life, there are many stressors facing a woman whose primary attachment relationship has dissolved. Emotionally, psychologically, practically, materially, financially, and socially, she must confront changes that affect her both internally and externally. Attachment theory, and research into the uses of touch and massage to relief stress and distress, provide a rationale for research into the effectiveness of massage as an adjunct to psychotherapy for helping women – especially those who are most vulnerable – during this difficult mid-life transition. To support coping and recovery, and to prevent these women's losses and suffering from becoming permanent (and/or multiplied) represent worthy goals that will benefit not only the holistic well-being of the women, but also those whose lives intertwine with hers.

Goals and objectives

The proposed intervention, using a combination of massage and attachment-oriented psychotherapy, is expected to act as a stream of secure base priming experiences, with the potential to act upon subjects' internal working models in such a way that they will recover from the distress of their relationship dissolution more rapidly and with better outcomes than otherwise. Alternating between massage and discussion (within the therapy relationship), of the woman's emotional, cognitive, and behavioral experiences, is expected to provide a mind-body integrative function, enhancing the process of coming to terms with the dissolution, making meaning of the experience, and recovering – possibly with a greater sense of internal security than before.

Outcome objectives

1. To reduce stress, and enhance affect regulation, as indicated by HPA activity, and measured by cortisol samples analyzed by a laboratory. (Diamond, et al, 2008).
2. To reduce feelings of depression, as measured by the depression sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
3. To reduce feelings of anxiety, as measured by the anxiety sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
4. To decrease somatic symptoms, as measured by the somatic sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
5. To decrease anger-hostility, as measured by the anger-hostility sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
6. To reduce symptoms of post traumatic stress, as measured by the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979; see Appendix B).
7. To increase feelings of self-efficacy and competence, as measured by the Self-Efficacy Scale (Sherer, et al, 1982; see Appendix C).

8. To compare differences in outcomes between the groups with different levels of attachment-related avoidance and anxiety, through analyzing the relationships between attachment security data (Fraley, 2010; see Appendix E) and all outcome measurements.
9. To measure the quality of the experience of participating in either the control or experimental condition, as measured by the Experience and Satisfaction Questionnaire (Caudillo, 2011; see Appendices D.1 & D.2).

Method

Design

For the proposed study, the population of interest is women at mid-life (ages 35-65) who are navigating the dissolution of an intimate relationship of at least two years. The experimental group will receive massage as an adjunctive therapy in addition to attachment-oriented psychotherapy.

Participants in both the experimental and control groups will receive the control condition, which means attending weekly individual sessions of attachment-oriented psychotherapy. This can be considered "treatment as usual" with an attachment theory twist. Each session will last the standard 50 minutes. There will be six therapists, each of whom will work with an expected 10 participants each. Each of the therapists will be knowledgeable about attachment theory concepts, and experienced with attachment-oriented psychotherapy, in which the relationship is seen as important to the therapeutic process; in this kind of therapy, attention is paid to both attachment-related experiences in the client's life, and to the present moment interactions between therapist and client.

The control group, all of whom will experience this psychotherapy as their treatment condition, will be compared to the experimental group, who will receive one-hour sessions of massage therapy each week, in addition to individual psychotherapy. The therapists will have a mix of clients in the control and experimental groups, in order to spread the individual therapists' effects between the groups. Thus, this study will use a quasi-experimental, mixed (between-group and within- subjects) design, comparing the control and experimental groups, in order to measure the efficacy of adding massage therapy to the psychotherapy intervention.

Psychotherapist training

All therapists will be highly experienced in the clinical application of attachment theory,

and will be trained in the use of the same adult attachment interview protocol (Sonkin, 2010). Although undoubtedly familiar with similar attachment interview questions, the therapists in this study will receive the same training in the application of a particular interview format (see Appendix F), which provides a framework for eliciting attachment-related experiences in sessions. To ensure that all the therapists have a shared core knowledge base, their training will also include a four-day seminar given by Daniel Sonkin and David Wallin, experts in the clinical application of attachment theory. You will find in Appendix G an example from a workshop powerpoint presentation illustrating the concepts of Wordless Language and the "Unthought Known" (Wallin, 2009).

Each therapist will also receive the same introductory training in Hakomi, a somatically-oriented psychotherapy, with emphasis on the use of mindfulness (Kurtz, 1990; Fisher, 2011). Mindfulness is used both by Hakomi practitioners and attachment-oriented clinicians (Wallin, 2008). The requirement that the therapists in this study have some training in somatic work and mindfulness aims to bridge the dominant mind-body separation in the therapeutic profession, as appropriate to this study's goals. The therapists will meet together, along with the researcher once monthly during the study period, in order to evaluate the progress and comparability of the psychotherapy control condition.

Of necessity, each therapy relationship will follow its unique trajectory, based on the specific needs of each client/ participant, but the skill and experience level of the therapists, as well as their specialized training for this study, will serve to equalize the control condition as far as possible – each participant will receive personal attachment-oriented psychotherapy from a well-trained and experienced therapist.

Massage therapist training

The massage therapists, who will also have training as psychotherapists, will receive the same training in attachment theory as the therapists. However, for this study, the massage

therapists will not be practicing as counselors, but as massage therapists. The requirement that massage therapists are also psychotherapists is for safety in the event of trauma reactions evoked by the massage; the training in attachment theory is to make sure each body worker has an equal understanding of the theoretical foundation of the study. The massage therapists may be currently practicing psychotherapists, or may no longer be in practice, but will have previous practice experience and the training (as Marriage and Family Therapists, Clinical Psychologists, or Licensed Clinical Social Workers).

Any bid for extended discussion within bodywork sessions will be handled with compassion, but ultimately referred to the participant's psychotherapist for further exploration. The massage therapist may ask the client if she would like to have a note made for her future reference. In the process notes also, the massage therapists will record these instances. Meanwhile, expressions of affect, or requests for verbal processing, will be gently contained, and the client will be guided into a state of mindfulness and self-observation, thus saving extensive verbal processing for psychotherapy sessions.* (see below)

As for a specific massage protocol, the massage will consist of whole-body relaxation massage. The massage therapists will meet for four days prior to the study to workshop together and devise a shared protocol for the basic massage condition. With this protocol as a base, the massage therapists will have the freedom to respond to specific requests by the client/participant. In the conceptual framework of attachment theory, this attention to specific requests for care is important, as demonstrating responsive care congruent with the bids for support on the part of the client/participant. As each client/participant will have the freedom to ask for such care, the treatment will be considered equal in that dimension, varying according to the individual's own proclivities to ask for support, as mediated by their own internal working models.

Each massage therapist will be paired with a psychotherapist, and weekly meetings of

psychotherapists with massage therapists will allow for a transfer of information and consultation, as necessary. During the informed consent process, participants will give permission for this communication (or not, if they choose to opt out).

Timeline

The process of grieving a relationship loss, and the nature of attachment, warrant longer-term relational interventions, and preclude the use of short-term therapy. Thus, both the experimental and control conditions will last four months (18 weeks). Participants will be rotated into the study, as they become available, during the study period of two years.

For the experimental group, in addition to weekly psychotherapy for 18 weeks, the intervention will last for the same length of time, and will consist of weekly massage therapy sessions with a trained and certified massage therapist.

Experimental	Pre-test	M + P	Post-test	Follow-up
	<i>week 1</i>	<i>weeks 2-19</i>	<i>week 18</i>	<i>3 months later</i>
Control	Pre-test	P	Post-test	Follow-up

M: Massage intervention

P: Psychotherapy

After names have been collected, an informed consent package will be sent to each potential participant, who will also be informed about the screening interview, and the requirements for completing the assessment instruments, and contributing cortisol samples on three separate occasions. Although the participants will agree to complete all the study's measures, an incentive of \$25 will be offered in order to help raise the rate of participation in post-test and follow-up assessments.

Two weeks prior to the beginning of the experimental and control conditions, the Experiences in Close Relationships - Revised (ECR-R) Questionnaire will be given to all

confirmed research participants, to assess their attachment status relative to two dimensions, anxiety and avoidance. To control for threats to internal validity, we will randomly assign participants to control or experimental groups using the results of the ECR-R questionnaire. Four different strata of this independent variable will result: secure, anxious, avoidant, and fearful. However, avoidant and anxious are the two *dimensions* used for analyzing the data. Secure individuals score at the low end of both scales, and those who score at the high end of both scales are considered fearful, in terms of attachment. Fraley strongly recommends that the data analysis honors the conceptualization of the constructs as points in dimensional space rather than categorical results (2010). In order to achieve a greater balance of strata into groups, we will use minimization, a stratified random assignment method that has shown to be effective to this end (Conlon & Anderson, 1990).

One week before the intervention sessions begin, the pre-tests will be given to participants, and the first samples of salivary cortisol will be collected, to provide a baseline of symptom levels for comparison with the post-test and follow-up results.

At the end of the 18-week intervention period, and one week before the end of the study conditions, (on the day of the penultimate psychotherapy session), participants will take the post-test assessments and will give their final samples for measuring cortisol. Three months later, in order to ascertain whether the effects of the intervention were durable, these same assessments will be administered one last time, and participants will also be asked to complete a short process evaluation about their experience in the study.

At the end of the study, all participants will be invited to join an ongoing, low-fee support group for women at midlife who have been navigating a relationship dissolution.

***A theoretical discursion to acknowledge the unfortunate dualism in this design, and other cultural considerations**

Because of the need to distinguish causative factors in the outcomes of the study, efforts

to separate massage from psychotherapy will be made, as referenced above. From this, client-participants may get the idea that verbal processing is unwelcome while having a somatic experience. Ideally this would not be the case, yet the design for this preliminary research necessitates this separation.

However necessary, this requirement serves to underline the dualistic split between body and mind in traditional psychotherapies where touch is taboo, forbidden, or at least strongly discouraged. This dualism is addressed by Damasio (*Descartes's Error*, 1994); Rothschild, in *The Body Remembers* (2000); and Payne (2009). Body-mind dualism, as well as the history of our profession's attitudes toward touch in therapy, and current differences amongst professionals regarding the use of touch, receive attention by the various authors in *Touch in Psychotherapy* (Smith, Clance, & Imes, 1998). Smith (in Smith, Clance, & Imes, 1998) suggests that a holistic and organismic paradigm frees us to judge interventions according to their merits, instead of evaluating the use of touch with the unexamined bias of mind-body dualism that is entrenched within Western society.

For the purposes of this research, however, dividing the two modalities in time and between two separate therapists, but joining them in the overall treatment plan, is a starting point for beginning to understand the uses of touch. There are many kinds of therapy in which touch is integral or expected, and some which allow for touch, even though it may not always be used. I do not have intimate knowledge of each of the following, but it seems that Rosen work, craniosacral therapy, Rolfing, Reichian work, Body Mind Centering, Somatic Experiencing, and Hakomi are some therapeutic modalities which span a continuum from mostly body and touch oriented, to mostly emotional, cognitive, verbal, insight, and relationship oriented. Hakomi uses mindfulness to track the intersubjective processes between client and therapist, and present-time somatic experiences, to effect change (Fisher, 2011; Kurtz, 1990). Hearing attachment-oriented therapists describe their work leads me to

understand that they also work in a similar way, with mindfulness and attunement, and attention to bodily experiences in both client and therapist (Sonkin, 2010; Wallin, 2009).

Another issue relevant to cultural diversity that needs acknowledgement here has to do with socioeconomic assumptions about the availability of both massage and psychotherapy. For those from a culture of poverty, or who simply do not have the financial resources, this study may seem to be based in elitist notions of possible interventions that could be relevant to the general population. The researcher acknowledges the sometimes prohibitive cost of both psychotherapy and massage therapy. At the same time, I believe that a more just society should provide equal access to efficacious, holistic healthcare to every citizen. Toward that end, one hoped-for outcome of this research will be to shift the bias toward the use of touch, if it should prove useful. Currently many insurance policies do not pay for mental health treatments that include touch, in our highly litigious society's atmosphere of risk management. However, the risks of suffering to individuals may outweigh the risks of lawsuits to insurance companies, if a possibly efficacious treatment is being denied simply because it violates a largely unexamined bias toward mind-body splitting. If research can show that massage complements psychotherapy in terms of better outcomes for clients, then it may be worthwhile to the general population in the long run. Meanwhile, we can still advocate for equal access to quality healthcare that addresses the needs of whole people.

There may also be individuals who come from a culture that finds interpersonal touch taboo or uncomfortable between anyone but family members or lovers. The research being proposed will most likely fail to affect the people who do not want massage to be part of their mental or physical care.

Sample and population

The population of interest is women in mid-life, here operationalized as ages 35-65, who have suffered the end of an intimate relationship that lasted at least two years. The sample will be

recruited from women in the greater San Francisco Bay Area, living in the counties of Alameda, Contra Costa, San Francisco, Marin, and Sonoma. In an effort to arrive at a diverse pool of participants, recruitment will be accomplished using a variety of means and venues, including electronic listservs addressing predominantly female members; flyers will be placed in diverse locations, such as cafés, laundromats, universities and colleges, health centers, dance and yoga studios, and churches; face to face recruitment will occur via presentations to women's groups and college classes.

Inclusion criteria:

1. Participants' intimate partner relationships have ended, within the last six months, such that participants no longer have ready access, or regular proximity to their former partners; there may be contact for purposes of shared child-rearing, mediation, or divorce proceedings, or for similar reasons, but participants no longer rely on ex-partner for secure base or safe haven functions.
2. Participants will self-identify as women.
3. They will be between the ages of 35 and 65.
4. They will decide to proceed after reading the informed consent forms describing the study, with the inclusion of a warning, should the participant be assigned to the experimental condition: "For many people, massage can be a relaxing and pleasant experience that may help to reduce stress. For some however, especially those with unresolved trauma and abuse histories, massage may trigger unforeseen trauma reactions. If you suspect that you may be uncomfortable with massage, or at risk for post-traumatic complications, you may want to opt out of this study and seek support in another setting. We will be happy to suggest resources and referrals, and to discuss your concerns with you, as you decide whether you will give your consent to be in this study."

Exclusion criteria

The researcher and one other therapist will meet with each potential study participant, and will make subjective assessments of fitness, based on an initial screening interview. Possible participants suffering from florid psychoses, severe personality disorders, or other extreme states, such as overt hostility or paranoia (Keratin & Revere, 1998), which place them at risk for harm through the intervention, will be excluded at the discretion of the screening team.

Outcome Evaluation

Design

In this study, we will investigate the interaction of three independent variables. The first independent variable is treatment intervention, with the two levels of experimental condition and control condition. The second independent variable, time, has three levels as measured by pre-tests, post-tests, and follow-up assessments, using both self-report measurements and cortisol sampling. The third independent variable is attachment status, measured by the Experiences in Close Relationships - Revised (ECR-R) Questionnaire (Fraley, R. C., Waller, N. G., & Brennan, K. A., 2000). The four levels of this variable are derived from two dimensions: attachment-related avoidance, and attachment-related anxiety. High levels of both avoidance and anxiety relate to a fearful orientation toward attachment, while low levels of the two dimensions indicate a secure attachment classification. Thus, the two attachment dimensions will yield four strata for purposes of random assignment and later analysis; however, the four attachment strata will not be treated as categorical data, but as dimensional data, for the purposes of statistical analysis.

It is expected that at post-test, both experimental and control groups will improve in measures of well-being and self-efficacy over the pre-test levels; at follow-up, we predict that participants will maintain or continue to improve these lower scores in measures of stress, anxiety, depression, somatic symptoms, and anger-hostility. However, the researcher hypothesizes that the experimental group will show greater improvements in scores, when compared with the control group.

Using the total score for Kellner's Symptom Questionnaire (SQ), we expect an increase in the mean scores for the dependent variable holistic well-being. We also predict an increase in mean scores for the dependent variable self-efficacy (Self-Efficacy Scale). The researcher hypothesizes that the mean scores for the following dependent variables will be reduced by

the experimental intervention: depression (SQ sub-scale), anxiety (SQ sub-scale), somatic symptoms (SQ sub-scale), anger-hostility (SQ sub-scale), symptoms of post-traumatic stress (Impact of Events Scale), and measures of physiological stress. Relationships between the attachment variables and intervention effectiveness will be explored.

The literature on attachment leads the researcher to predict that there will be differences in outcome measures for the groups in the four strata of attachment security – secure, anxious, avoidant, and fearful – as measured by the dimensional variables anxiety and avoidance. Avoidant individuals may be less likely to anticipate the massage intervention with optimism, and may be more likely to opt out when informed of this component of the study. There is the possibility that, for avoidant and fearful participants in the experimental group, improvements in measured symptoms will be less marked, or equal to those of the control group. Some improvements in scores are predicted for at least the secure and anxious participants. It is possible that for the fearful and avoidant groups in the control condition, the change from pre- to post- and follow-up scores will record greater increases in well-being than for the same attachment strata in the experimental condition, and will also show larger measures of change than the other attachment style groups in the control condition.

Analysis

The data collected will be analyzed with reference to the objectives outlined on pages 24-25 of this proposal. They are copied below for your convenience. For outcome number 1, the reduction in cortisol levels, the data will be analyzed using a 2 x 3 repeated-measures analysis of variance. For outcomes 2-8, six separate 2 x 3 repeated-measures multivariate analyses of variance will be calculated.

Relative to outcome 9, the four attachment strata (secure, anxious, avoidant, and fearful), will be determined and arrived at through analysis of the data generated by the ECR-R. The location of these classifications will be visualized in two-dimensional space and derived from

the two axes: avoidant and anxious. Statistical analysis of the subject variable effects on response to treatment (analyzing how attachment affects the efficacy of treatment), will use the dimensional nature of the data for multiple regression analysis, as recommended by Fraley (2010; see Appendix E). As per Fraley, using dimensional data for analysis will yield higher statistical power than using categorical data; these categories will be used only to assign participants to a treatment condition using stratified random assignment and minimization to ensure a balanced assignment to groups.

<i>attachment domain</i>	<i>treatment condition</i>	<i>pre-test</i>	<i>post-test</i>	<i>follow-up</i>
low anxious & low avoidant (secure)	control			
	experimental			

<i>attachment domain</i>	<i>treatment condition</i>	<i>pre-test</i>	<i>post-test</i>	<i>follow-up</i>
high anxious & low avoidant (anxious)	control			
	experimental			

<i>attachment domain</i>	<i>treatment condition</i>	<i>pre-test</i>	<i>post-test</i>	<i>follow-up</i>
low anxious & high avoidant (avoidant)	control			
	experimental			

<i>attachment domain</i>	<i>treatment condition</i>	<i>pre-test</i>	<i>post-test</i>	<i>follow-up</i>
high anxious & high avoidant (fearful)	control			
	experimental			

Process Evaluation and analysis

In order to evaluate the research process (outcome 10), from the point of view of the participants, the data generated by the Experience and Satisfaction Questionnaire (ESQ) will be analyzed both qualitatively and quantitatively. Using the questionnaire (devised for this study by the researcher), participants will be asked to rate their experience in this study. They will be given a Likert-style scale as well as an opportunity to elaborate narratively. From this we will arrive at a general measurement of satisfaction, as well as more detailed phenomenological information to use for the design of future research. This assessment will have only one set of scores, so the comparisons will be made between ESQ mean scores for control and experimental groups, and between the different strata of attachment style; additionally, the relationships between attachment style, experimental condition, and satisfaction will be explored. The researcher will compile suggestions for improvement and expressions of satisfaction, and will create a list of constructs to work with when planning the next research project.

Outcome objectives:

1. To reduce stress, and enhance affect regulation, as indicated by HPA activity, and measured by cortisol samples analyzed by a laboratory. (Diamond, et al, 2008).
2. To increase overall feelings of well-being, as measured by the Symptom Questionnaire (Kellner, 1987; see Appendix A).
3. To reduce feelings of depression, as measured by the depression sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
4. To reduce feelings of anxiety, as measured by the anxiety sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
5. To decrease somatic symptoms, as measured by the somatic sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).

6. To decrease anger-hostility, as measured by the anger-hostility sub-scale of the Symptom Questionnaire (Kellner, 1987; see Appendix A).
7. To reduce symptoms of posttraumatic stress, as measured by the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979; see Appendix B).
8. To increase feelings of self-efficacy and competence, as measured by the Self-Efficacy Scale (Sherer, et al, 1982; see Appendix C).
9. To compare differences in outcomes between the groups with different levels of attachment-related avoidance and anxiety, through analyzing the relationships between attachment security data (Fraley, 2010; see Appendix E) and all outcome measurements of intervention effectiveness.
10. To measure the quality of the experience of participating in either the control or experimental condition, as measured by the Experience and Satisfaction Questionnaire (Caudillo, 2011; see Appendices D.1 & D.2).

Instrumentation

Salivary cortisol levels - physiological stress measurement indicating HPA activity

Sampling levels of cortisol provides a way to measure stress which bypasses emotional and cognitive self-assessment, going straight to the body's physiological response to the stressor of relationship dissolution; these responses will be induced by instructing the participant, when providing the samples, to think about her current experience with regard to the relationship dissolution. The sampling will occur three times: during the first week of the intervention, on the day of the penultimate session, and once six weeks later.

To measure the activation of the Hypothalamic-Pituitary-Adrenocortical (HPA) axis we will take samples of cortisol in subjects' saliva. All samples will be taken using Salivettes (Sarstedt, Germany), which consist of a plastic tube with a cotton insert. The participants will be instructed to lightly chew on the insert to thoroughly soak it with his or her saliva. After

providing the first two morning samples (at waking and 30 min after waking), the participant will phone a research assistant to report the time of the first sample. The research assistant will then calculate the correct times for the rest of the day's samples and will text or call the participant throughout the day to provide the rest of the samples. It is recommended that sampling begin with the moment of waking (while respondents remain in bed), then 30 minutes later, followed by 3 hours after waking, 8 hours after waking, 12 hours after waking, and finally at bedtime. Hence, participants will provide six saliva samples per day of measurement. (Protocol borrowed from Diamond, et al, 2008.)

Well-being/distress - SQ total scores and scores for sub-scales (Kellner, 1987; Appendix A)

The Symptom Questionnaire (SQ) has 92 items, with four sub-scales to measure symptoms of distress; the four distress subscales also include items that measure matched constructs of well-being: depression / contented; anxiety / relaxed; somatization / somatic well-being; and anger-hostility / friendly. The subscales were designed to be used separately if desired. Reliability has been estimated using various samples, with test-retest coefficients of stability over four weeks measuring .71, .95, .77, and .82, for anxiety, depression, somatic, and hostility, respectively. Internal consistency had ranges of .75 to .95 for anxiety; .74 to .93 for depression; .57 to .84 for somatic; and .78 to .95 for hostility. Validity has excellent ratings, with good discriminatory capacity. The SQ shows sensitivity to change due to treatment.

Symptoms of post-traumatic stress - Impact of Events Scale (IES), (Horowitz, Wilner, & Alvarez, 1979; see Appendix B).

This instrument has 15 items for assessment of "the experience of posttraumatic stress for any specific life experience and its context, such as the death of a loved one" (Horowitz, et al; Appendix B). The IES uses two subscales to measure intrusive experiences that occur in response to stress from a traumatic event, and avoidance of events that remind the subject of those events. It is considered sensitive and appropriate for measuring clients' progress in

treatment. The subscales of the IES show good internal consistency, averaging .86 for the intrusive subscale, and .90 for the avoidance subscale. Validity has been reported as discriminatory, and the IES responds to change over the course of treatment.

Self-efficacy Scale (SES) - (Sherer, et al, 1982; Appendix C)

This instrument measures levels of belief in one's own competence, and is useful for monitoring change over the course of treatment, as expectations of self-efficacy will likely change with intervention. Self-efficacy possibly relates to the concept of the secure base; the researcher hopes participants' access to a secure base script will increase. It has 30 items for measurement of general expectations not connected to particular behaviors or situations. The two sub-scales measure general self-efficacy and social self-efficacy. Fairly good internal consistency is reported for the SES, with alphas of .86 for the general subscale, and .71 for the social subscale. Good criterion validity and construct validity are reported for the SES.

Attachment-related avoidance and anxiety - Experiences in Close Relationships

Questionnaire - Revised (Fraley, 2010; see Appendix E)

The ECR-R assesses individual differences related to attachment-related anxiety – whether a person feels secure or insecure about a partner's availability and responsiveness – and attachment-related avoidance – the extent to which people feel secure depending on other people or discomfort with being close to others. Internal consistency reliability tends to be around .90 or higher for both subscales, although reliability may be less at the secure end of both dimensions than at the insecure ends. More detailed information may be found in Fraley, Waller, & Brennan (2000). An excerpt from this article, which analyzes various methods used for assessing attachment constructs, provides some interesting details about the concepts contained within the ECR-R's dimensions of anxiety and avoidance:

After examining a wide range of cluster numbers (i.e., 20-32 clusters), we concluded that a 30-cluster solution provided the best partitioning of items for

our purposes. Specifically, each cluster contained a set of conceptually tight items that we judged to be sufficiently different in content from the remaining clusters. The content of the 30 clusters can be succinctly summarized by the following cluster labels: (1) *anxiety about abandonment*, (2) *fear of intimacy*, (3) *no anxiety about abandonment*, (4) *desire to merge*, (5) *I drive others away*, (6) *dependency / preoccupation*, (7) *don't depend on others or express emotions*, (8) *fear of rejection~relationships are risky*, (9) *I prefer distance*, (10) *open communication*, (11) *I'm important*, (12) *I can't trust others*, (13) *dismissing*, (14) *I value independence*, (15) *I fear disapproval*, (16) *anger/frustration*, (17) *partner not sensitive*, (18) *can't depend*, (19) *desire to be closer*, (20) *partner unpredictable*, (21) *values achievement*, (22) *easy to be close*, (23) *partner available*, (24) *ambivalence*, (25) *I want to be nearby my partner*, (26) *I'm not lovable*, (27) *I'm lovable*, (28) *preoccupied*, (29) *people are good*, and (30) *partner is sensitive*. We created cluster scores for each of the 30 clusters by averaging peoples' responses to the items within each cluster (Fraley, Waller, & Brennan, 2000).

Process evaluation - Experience and Satisfaction Questionnaire (Caudillo, 2011; see Appendices D.1 & D.2).

There are no data regarding validity or reliability of this self-report questionnaire, as it was designed for this study and has not been researched. It uses a mixed design, using both open-ended questions to generate narrative/qualitative data, and a Likert-style scale to generate some numerical data. Questions had to do with the participants experience of being in the study and how they felt about both the intervention they received and the way they were treated as study participants.

Delimitations

The design of this study included efforts to control for threats to internal validity, yet in

a quasi-experimental study of this type, there will always remain some threats that cannot be entirely done away with. Some potential threats that may mediate outcomes include individual differences of participants, individual differences of psychotherapists and massage therapists, testing effects, and attrition. Every attempt will be made to retain participants, with the use of a small monetary incentive, and every possible care being made to provide a high-quality intervention for both control and experimental groups. Although there may be some threats to internal validity from testing exposure, the use of pre-, post- and follow-up measures will be useful for assessing whether the interventions produce desired effects. As discussed above, individual differences in the therapists have been tempered by specialized training shared by all the therapists of each type (massage and psychotherapy). Finally, the individual differences brought to the research situation by the participant/clients, while making absolute determinations difficult, also replicates the real-world conditions at play when clinicians attempt to apply theoretically-derived interventions in therapy with unique individuals. The analysis of different interaction effects determined by attachment security will help to isolate at least one important domain of individual differences.

One problem relative to external validity relates to the expense of treatment if it is to include both individual and massage therapy. However, if weighed against the cost of ineffective intervention, with possible results like increased alcohol abuse, missed work, physical illness, and ongoing psychological distress, then the cost may not seem so high. Still, some people may not be able to provide the necessary financial outlay required for conventional delivery of these interventions. It is hoped that if research shows the effectiveness of holistic mind-body interventions, such as the proposed adjunctive use of massage, then these interventions may become more widely available. On the level of cultural change, if the efficacy of massage becomes known and publicized as an alternative to traditional self-medication or suffering, then perhaps it will become a more viable alternative.

In addition, if the intervention gains credibility as evidence-based, then more insurance companies should pay for mental health treatments that include a somatic component.

Other threats to external validity were considered in the section on cultural considerations, and could perhaps be affected by the changes posited (and hoped-for) in the previous paragraph.

Finally, one limitation of this study was also touched on in the section on dualism and other cultural considerations, namely the need to separate body-processing and verbal-processing in order to study their differential effects. When affect, emotion, and memory arise in the middle of a massage session, it would be most therapeutic if the massage therapist was the same person as the psychotherapist, or at least someone who could contain and support whatever process was arising using the most relevant aspects of their expertise as whole-person healers. Likewise, it would be desirable to encourage a higher level of somatic awareness in all psychotherapists, so that body processes arising in therapy can be noticed, acknowledged, and addressed with sensitivity and skill. But these are idealistic concerns pointing toward directions for future research.

Directions for future research

When a woman suffers the loss of a primary attachment figure, such as an intimate partner, this crisis could increase the possibility for change, the plasticity of her internal working models of self and other. The influences of this change could be either negative or positive. It would be worthwhile to investigate whether supportive interventions, strengthened by the inclusion of touch, can help to stabilize internal working models; such intervention may also support post-traumatic growth, with the changes to internal working models increasing felt security with respect to attachment. We hope the current research proposal will prompt further research into these questions.

Future research could also investigate whether an attachment-oriented *group* for mid-life women might provide similar support, when combined with massage, more cost effectively than individual therapy. Participation in such a group would provide mutual support from peers going through the same process, psychotherapeutic containment from a pair of group facilitators, and a strong psychoeducational component, in which the women can explore their experiences of processing the dissolution of their relationships in the context of attachment concepts – and with knowledge of their own particular attachment vulnerabilities. While they process their losses in the group format, they would also be able to explore what thoughts, emotions, memories, and experiences arise, as they receive nurturing touch (massage) each week. Comparisons could be made between such a group and individual therapy; the use of such a group as a control condition could also be compared to the experimental condition of adding massage or another body-based therapy to the group intervention, in a design similar to the study proposed here.

The use of other forms of touch and body-oriented therapies, such as craniosacral work, and Dance Movement Therapy, should also be investigated in order to evaluate their effectiveness in helping women at mid-life to achieve better holistic well-being after the

dissolution of an attachment relationship. Other populations undergoing serious attachment ruptures should also be included in this research program. Adopted and foster children might benefit greatly from the support that holistic interventions could provide; their formative attachment systems have been stressed, and their cognitive and verbal processing abilities are even more limited than those available to adults. Acting at the level of body-mind integration could be highly effective for younger people suffering from relationship ruptures.

Summary

The health and integrity of mind and body can be well-supported in psychotherapy without the use of touch. However, when attempting to help in the healing of an attachment injury, such as the loss of an intimate relationship, the use of touch may provide a greater intensity of intervention, specifically targeted for the area that has been injured. The internal working models which determine our ability to seek and accept support may be most malleable during such a crisis, and most in need of the kind of support that addresses the person in the language of attachment, through unconditional caring conveyed through touch. At the same time, the client's need to process the experience in an oscillating dialogue – between verbal construction of meaning and somatic experience – argues for the availability of both modalities in conversation with each other. The researcher hopes that this proposed inquiry into the use of massage as an adjunct to psychotherapy will prove beneficial to women at midlife who must suffer the dissolution of an intimate partner relationship. Beyond application to this specific and under-considered population, I hope that this research begets further studies to support holistic body-mind interventions for everyone who could benefit.

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