Applications of Attachment Theory and Research:

The Blossoming of Relationship Science

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Running Head: Applications of Attachment Theory

Attachment theory is one of the most influential contemporary conceptual frameworks for understanding mental health, psychological functioning, and social behavior. In his seminal exposition of the theory, Bowlby (1982) explained why the availability of caring, loving relationship partners, beginning in infancy, is so important to developing a sense of safety and security. This sense facilitates emotion regulation, promotes harmonious and satisfying interpersonal interactions, and sustains psychological well-being and mental health. In this chapter, we briefly review basic concepts of attachment theory, focusing on the "broaden and build" cycle of attachment security (Mikulincer & Shaver, 2003) and the growth-enhancing consequences of secure attachments. We then review and assess empirical findings concerning the ways in which attachment theory is being applied in the fields of counseling and psychotherapy, education, health and medicine, and leadership and management.

Attachment Theory: Basic Concepts

The core tenant of attachment theory (Bowlby, 1982) is that human beings are born with an innate psychobiological system (the *attachment behavioral system*) that motivates them to seek proximity to protective others (*attachment figures*) in times of need. According to Bowlby (1988), attachment figures function as a "safe haven" in times of need – i.e., they provide protection, comfort, and relief – and a "secure base, encouraging autonomous pursuit of non-attachment goals while remaining available if needed. In this way, attachment figures provide a sense of attachment security (confidence that one is worthy and lovable and that others will be supportive when needed). Provision of this sense of security normally terminates proximity-seeking bids and allows a person to function better in a wide array of non-attachment activities, such as exploration, learning, interpersonal exchanges, and sexual mating.

Bowlby (1973) also described important individual differences in the extent to which a person holds a solid sense of security. In his view, these individual differences are rooted in reactions of one's attachment figures to bids for proximity and support in times of need, and the incorporation of these reactions into mental representations of self and others (*internal working models*). Interactions with attachment figures who are sensitive and responsive to one's proximity bids facilitate the smooth, normal functioning of the attachment system, promote a sense of connectedness and security, and contribute to positive working models of self and others. When a person's attachment figures are not reliably available and supportive, however, worries about one's social value and others' harmful intentions are strengthened, and the person becomes less secure in interpersonal relationships and less confident in dealing with threats and challenges (Bowlby, 1973).

Pursuing these theoretical ideas in adulthood, researchers have focused on a person's *attachment orientation*, a systematic pattern of relational expectations, emotions, and behaviors that results from a particular history of interactions with attachment figures (Fraley & Shaver, 2000). These orientations can be conceptualized as regions in a continuous two-dimensional space (e.g., Brennan, Clark, & Shaver, 1998). One dimension, attachment-related *avoidance*, reflects the extent to which a person distrusts others' intentions and defensively strives to maintain excessive behavioral and emotional independence. The other dimension, attachment-related anxiety, reflects the extent to which a person worries that others will not be available in times of need and anxiously seeks love and care. A person's general attachment orientation can be viewed as the top node in a complex network of attachment representations, some of which apply only to specific people and relationships and others of which apply only in certain relational contexts (Collins & Read, 1994). These more specific mental representations can be

activated by actual or imagined encounters with supportive or unsupportive others even if they are incongruent with the dominant attachment orientation (Mikulincer & Shaver, 2007).

We (Mikulincer & Shaver, 2003) have proposed that individuals' location in the two-dimensional anxiety-by-avoidance space reflects both their sense of attachment security and the ways in which they deal with threats and challenges. People who score low on both insecurity dimensions are generally secure, hold positive working models of self and others, and tend to employ constructive and effective affect-regulation strategies. Those who score high on either attachment anxiety or avoidance, or both, suffer from attachment insecurities and worries and tend to use secondary attachment strategies that we, following Cassidy and Kobak (1988), characterize as attachment-system "hyperactivation" or "deactivation" when coping with threats, frustrations, rejections, and losses. People who score high on attachment anxiety rely on hyperactivating strategies – energetic attempts to achieve support and love combined with lack of confidence that these desired resources will be provided and with feelings of anger and despair when they are not provided (Cassidy & Kobak, 1988). In contrast, people who score high on attachment-related avoidance tend to use deactivating strategies, attempting not to seek proximity to others when threatened, denying vulnerability and needs for other people, and avoiding closeness and interdependence in relationships. People who score high on both dimensions (labelled "fearfully avoidant" by Bartholomew [1990]) exhibit inconsistent, conflicted relational strategies based on desiring comfort and closeness while simultaneously fearing it.

The Broaden-and-Build Cycle of Attachment Security

According to our model of adult attachment-system functioning (Mikulincer & Shaver, 2003, 2016), appraisal of the availability and supportiveness of an attachment figure in times of

need automatically activates mental representations of attachment security. These representations include both declarative and procedural knowledge organized around a relational prototype or "secure-base script" (Waters & Waters, 2006), which contains something like the following if-then propositions: "If I encounter an obstacle and/or become distressed, I can approach a significant other for help; he or she is likely to be available and supportive; I will experience relief and comfort as a result of proximity to this person; I can then return to other activities." Having many experiences that contribute to the construction of this script makes it easier for a person to confront stressful situations with optimistic expectations and to feel relative calm while coping with problems. Indeed, adolescents and adults who score lower on attachment anxiety or avoidance scales (more secure) are more likely to hold rich and fully developed secure-base scripts in mind when narrating threat-related stories or dreams (e.g., Mikulincer, Shaver, Sapir-Lavid, & Avihou-Kanza, 2009).

Attachment-figure availability also fosters what we, following Fredrickson (2001), call a broaden-and-build cycle of attachment security, which increases a person's resilience and expands his or her perspectives, coping flexibility, and skills and capabilities. By imparting a pervasive sense of safety, assuaging distress, and evoking positive emotions, interactions with responsive attachment figures allow secure people to remain relatively unperturbed in times of stress and to experience longer periods of positive affect, which in turn contributes to their sustained emotional well-being and mental health. This heightened resilience is further sustained by a reservoir of core positive mental representations and memories derived from interactions with responsive attachment figures. During these interactions, people learn that distress is manageable and that others are benevolent, trustworthy, and kind. They also learn to view themselves as strong and competent, because they can effectively mobilize a partner's support

when needed and can function autonomously when conditions warrant. Moreover, they perceive themselves as valuable, lovable, and special, thanks to being valued, loved, and regarded as special by caring attachment figures. Research has consistently shown that hope, optimism, and positive views of self and others are characteristic of secure persons (e.g., Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Collins & Read, 1990; Mikulincer & Florian, 1998).

Besides building one's strength and resilience, experiences of attachment-figure availability have beneficial effects on pro-relational cognitions (beliefs that closeness is rewarding and that one can trust partners), thereby heightening secure people's chances of establishing and maintaining intimate and harmonious relationships. In addition, this heightened resilience allows secure people to feel safe and protected without having to deploy defensive strategies that can distort perception and generate tension and conflict. Rather, they can devote mental resources that otherwise would be employed in preventive, defensive maneuvers to the pursuit of other non-attachment goals (e.g., exploration, affiliation). Moreover, being confident that support is available when needed, secure people can take calculated risks and accept important challenges that contribute to the broadening of their perspectives and facilitate the pursuit of self-actualization. Indeed, research has shown that adults scoring lower on attachment anxiety and/or avoidance scales form more stable and mutually satisfactory close relationships and tend to fully engage, enjoy, and thrive in non-attachment activities, such as learning, caregiving, and sex (see Feeney, 2016; Mikulincer & Shaver, 2016, for reviews).

Theoretically, the broaden-and-build cycle of security is renewed every time a person notices that an actual or imaginary caring attachment figure is available in times of stress. In examining this hypothesis, researchers have experimentally primed representations of a responsive attachment figure by exposing participants to the name or picture of this figure or

asking them to visualize this person's face or to imagine a security-enhancing interaction with him or her (see Mikulincer & Shaver, 2016, for a review of priming techniques). Findings have consistently shown that this contextual infusion of security (*security priming*) has positive effects on social cognitions, mood, and psychological functioning (e.g., Luke, Sedikides, & Carnelley, 2012; Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Otway, Carnelley, & Rowe, 2014).

Parallel to these laboratory findings, attachment researchers have examined the renewal of the broad-and-build cycle of attachment security within real-life relational contexts in which an actual relationship partner's supportive behaviors are evident, personally significant, and repeated over time and situations (see Mikulincer & Shaver, 2016, for a review). Such behavior on the part of a relationship partner has been found to help an insecure person deal more effectively with life problems and adversities, allowing him or her to deploy mental resources in other non-attachment activities. These theoretical ideas and research findings provide a foundation for applying attachment theory to a wide variety of life domains, such as marital relationships and educational and healthcare settings, with the goal of improving psychological functioning and quality of life in each such domain. In the next section, we briefly review some of these applications of attachment theory.

Applications of Attachment Theory

Originally, attachment theory (Bowlby, 1982) was formulated to explain infant-parent emotional bonding and its anxiety-buffering and growth-promoting functions in early childhood. However, based on Bowlby's (1979, p. 129) claim that attachment needs are active "from the cradle to the grave," attachment researchers have expanded the theory to examine the broaden-and-build cycle of attachment security and the psychological problems generated from attachment insecurities to other relational contexts and at other ages and developmental stages

(see Mikulincer & Shaver, 2016, for a review). The expanded theory is being used to explain psychological functioning and thriving in a wide variety of life domains as well as to construct intervention programs that foster the broaden-and-build cycle of attachment security in those domains. Such applications are based on three principles:

(a) Threats and distress-eliciting events in a given life domain activate the attachment system and a person's dominant working models of self and others, which in turn shapes his or her motives, cognitions, and behaviors in that domain.

(b) A person's responses to stress and distress in a given life domain are also affected by the quality of interactions he or she has with others who fulfill the role of attachment figure in that context. That is, interactions with figures who are a target for proximity seeking in times of need and potential context-specific providers of a safe haven and/or a secure base.

(c) Interactions with a sensitive and responsive attachment figure in a given life domain set in motion a context-specific broaden-and-build cycle of security and the resulting cascade of positive outcomes derived from this cycle.

With those principles in mind, attachment theory can be applied to any life domain in which people feel threatened or distressed, and in which there is an actual person or symbolic figure who can provide a safe haven and secure base. This figure can have a close emotional relationship with the threatened person (e.g., parent, friend, spouse) or can occupy the formal role of a "stronger and wiser" caregiver in a specific context (e.g., teacher, therapist, manager, priest). In such cases, a person's dominant attachment orientation can be projected onto the potential security provider, thereby biasing the person's pattern of relating and responses to this figure. However, this figure's responsiveness to bids for proximity and support can counteract this projection and cause meaningful changes in a care recipient's psychological functioning.

Hence, attachment-based interventions aimed at bringing positive psychological change to a given life domain (a) target the security provider as the agent of change and (b) attempt to heighten his or her responsiveness and capacity to provide empathic and effective care and support the distressed person's autonomous growth and thriving.

The original application of attachment theory occurred in the domain of parent-child relations. Numerous cross-sectional and prospective longitudinal studies consistently found that parents' responsiveness to their infants' signals and needs contributed to children's security in relation to parent (in Ainsworth's Strange Situation; Ainsworth, Blehar, Waters, & Wall, 1978) and more favorable developmental outcomes (see Thompson, 2015, for a review). There is also extensive evidence that parents' attachment orientations contribute to their child's attachment security and favorable psychological development (see Verhage et al., 2016, for a review and meta-analysis). Longitudinal studies have revealed that these effects tend to persist over time and contribute to adolescent and adult well-being and functioning (e.g., Haydon, Collins, Salvatore, Simpson, & Roisman, 2012).

Based on these findings, child psychologists have created attachment-based intervention programs aimed at heightening parents' responsiveness as a means of fostering children's positive development. Some of these programs include short-term interventions (5-16 weeks), mostly relying on parents' psycho-education and video feedback of their behavior during interactions with their infants. Research findings clearly indicate that infants' attachment security is enhanced when parents participate in these short-term programs, especially when parents themselves show improved post-intervention responsiveness (see Mountain, Cahill, & Thorpe, 2017, for review and meta-analysis). Similar positive effects have been obtained in studies of more intensive and longer (20 weeks to 1 year) intervention programs (e.g., Hoffman, Marvin,

Cooper, & Powell, 2006; Lieberman, Ippen, & Van Horn, 2006; Slade, Sadler, & Mayes, 2005).

Most of these interventions include not only psycho-education and video feedback but also

psychotherapeutic techniques aimed at correcting parents' attachment-related fears and defenses

that interfere with the provision of empathic care.

In adulthood, a romantic or marital partner is often a person's primary attachment figure

(e.g., Zeifman & Hazan, 2016). Therefore, attachment theory is being applied to the field of

couple and marital counseling. During the past 40 years, hundreds of studies have documented

the crucial contribution of a person's dominant attachment orientation to motives, cognitions,

feelings, and behavior in the context of couple and marital relationships (see Feeney, 2016, and

Mikulincer & Shaver, 2016, for reviews). At the same time, there is growing evidence that a

sensitive and responsive romantic partner can counteract the destructive intrusion of the other

partner's attachment insecurities into a couple relationship, buffering the detrimental effects of

attachment anxiety and avoidance (see Arriaga, Kumashiro, Simpson, & Overall, 2018, for a

review). Moreover, supportive and loving couple interactions have been found to attenuate

partners' distress and contribute to psychological well-being, physical health, and longevity (see

Holt-Lunstad & Smith, 2011, and Taylor & Broffman, 2011, for reviews). Correlational and

experimental studies have also indicated that actual or imagined interactions with a responsive

dating partner or spouse promote a wide variety of pro-relational cognitions and behaviors that

heighten relationship stability and satisfaction (see Reis, 2014, for a review).

The increasing body of evidence highlighting the growth-promoting role of a partner's

responsiveness within couple relationships led Sue Johnson (2003) to apply attachment theory to

the field of couple therapy and to develop an attachment-based intervention – Emotion-Focused

Therapy (EFT). Johnson (2003) conceptualizes relationship distress as resulting from one

partner's lack of responsiveness to the other partner's support-seeking bids and from their own unacknowledged and unmet attachment needs (*attachment injuries*). EFT helps partners acknowledge basic attachment needs, insecurities, and injuries and improve their ability to respond to each other with sensitive and responsive care, resulting in more positive and pro-relational interactions. There is growing evidence that heightening partners' functioning as a secure base to one another within the context of EFT dramatically reduces relationship distress and improves the quality of the relationship (see Greenman, Johnson, & Wiebe, 2019, for a review).

Besides these two relational contexts – parent-child and couple relationships, attachment theory has been applied to other life domains in which a person formally occupies or is expected to occupy the role of security provider (e.g., teacher, therapist, supervisor). In the following sections, we review some of these applications to counseling and psychotherapy, education, health and medicine, and leadership and management.

Counseling and Psychotherapy

In applying attachment theory to counseling and psychotherapy, Bowlby (1988) emphasized that clients typically enter therapy in a state of frustration, distress, and psychological pain, which automatically activates their attachment system and causes them to yearn for support and relief. Attachment needs are easy to direct toward therapists, because therapists, at least when a client believes in their healing powers, are perceived as "stronger and wiser" caregivers. Therapists are expected to know better than their clients how to deal with the clients' problems, and they occupy the dominant and caregiving role in the relationship. As a result, the therapist can easily become a potential provider of security and a target of the client's projection of attachment-related worries and defenses. Moreover, the therapist's responsiveness

to clients' support-seeking bids becomes crucial in facilitating clients' broaden-and-build cycle of attachment security and fostering positive therapy outcomes. With this in mind, Bowlby (1988) developed a model of therapeutic change focused on the ability of a responsive therapist to provide a secure base from which clients can explore and understand their painful attachment experiences, identify and revise insecure working models of self and others, and acquire more adaptive patterns of relating.

Bowlby (1988) discussed five therapeutic tasks that contribute to the revision of insecure mental representations and to the achievement of positive therapeutic outcomes. The first is to provide clients with a safe haven and secure base from which they can begin to explore painful memories and emotions and maladaptive beliefs and behaviors. This is a precondition for all of the other aspects of the therapeutic process. The second and third tasks are to encourage clients to consider how beliefs and expectations about themselves and others influence how they think, feel, and act in relationships, including in the therapeutic relationship itself. The fourth task is to help clients assess how current thoughts, feelings, and behaviors may have originated in childhood relationships with parents or other caregivers. The fifth task is to help clients understand that previous ways of thinking and behaving may not be well adapted to their current lives and to imagine and practice alternative, healthier ways of coping and relating. In this way, therapists' encouragement of inner exploration in a secure environment can promote clients' broaden-and-build cycle of security and facilitate therapeutic change and personal growth.

Research has provided support for this attachment-focused conceptualization of psychotherapy. Numerous studies have shown that clients' pre-therapy attachment orientations bias their attitudes toward therapists and therapy, shape the establishment of a good working alliance, and affect therapeutic outcomes (see Bernecker, Levy, & Ellison, 2014; Levy, Kivity,

Johnson, & Gooch, 2018; and Mikulincer & Shaver, 2016, for reviews and meta-analyses). In addition, there is evidence that clients tend to perceive therapists as security providers (Parish & Eagle, 2003) and that therapists' responsiveness has beneficial effects on therapy outcomes (e.g., Håvås, Svartberg, & Ulvenes, 2015). Studies have also found that the formation of clients' secure attachment to a therapist has beneficial effects on therapeutic change (see Mallinckrodt & Jeong, 2015, for a meta-analysis). There is also growing evidence that therapy can move clients away from insecure and toward secure attachment orientations, and that this movement is a good indication of effective treatment. For example, Travis, Bliwise, Binder, and Horne-Moyer (2001) found an increase in clients' reports of secure attachment across the course of time-limited dynamic psychotherapy, and this increase was associated with decreases in the severity of psychiatric symptoms. Similarly, Maxwell, Tasca, Ritchie, Balfour, and Bissada (2014) found that attachment insecurities decreased during group psychotherapy, and that this decrease predicted improvement in clients' well-being and functioning up to 12 months after therapy.

Several evidence-based therapies have incorporated Bowlby's (1988) principles of therapeutic change in both individual and group psychotherapy. Among these therapies are the following: *Mentalization-Based Therapy* (MBT, Bateman & Fonagy, 2004), *Accelerated Experiential-Dynamic Psychotherapy* (AEDP, Fosha, 2000), *Attachment-Based Group Psychotherapy* (ABGP, Marmarosh, Markin, & Spiegel, 2013) and *Group Psychodynamic Interpersonal Psychotherapy* (GPIP, Tasca, Mikail, & Hewitt, 2005). These attachment-based interventions explicitly recognize the trauma induced by rejection, separation, and loss and the impact of these experiences on mental health; the self-fulfilling nature of attachment working models; and the positive therapeutic effects of interventions that focus on developing secure emotional connections with a therapist and other relationship partners. Moreover, they

underscore the importance of the therapist providing a safe haven and secure base for the exploration and revision of maladaptive working models. There is growing evidence that these attachment-based approaches are more effective than other cognitive-behavioral or psychodynamic approaches in improving mental health and psychosocial functioning (e.g., Bateman & Fonagy, 2008; Marmarosh et al., 2013; Maxwell et al., 2014).

Education

Attachment theory has been applied to the field of education, where it provides a conceptual framework for understanding the relational basis of academic performance and socio-emotional adjustment to school (e.g., Ladd et al., 2014; Pianta, 2016). Several studies have shown that a child who is greater securely attached to parents tends to appraise teachers as more responsive and to elicit more caregiving behavior from them (see Ahnert, Pinquart, & Lamb, 2006, and Williford, Carter, & Pianta, 2016, for reviews and meta-analyses). Moreover, children's attachment security to parents has been reliably associated with more school readiness and better socio-emotional adjustment to school during the early school years (see Williford et al., 2016, for a review).

There is also a large theoretical and empirical literature concerning the effects of teachers' responsiveness on children's adjustment to school (see Ladd et al., 2014; Pianta, 2016, for reviews). Theoretically, teachers, mainly at the kindergarten and elementary school levels, function as context-specific attachment figures who can provide comfort and support within the school setting. Moreover, they can function as a secure base from which children can explore and learn, take risks, and even make mistakes, with the confidence that their teacher's support will be available when needed (Wentzel, 2016). As a result, children whose teacher functions as a security provider can maintain an open and confident attitude toward learning and remain calm

while coping with school-related threats and challenges. In support of this view, many studies have shown that children whose teacher is warmer and more emotionally responsive tend to exhibit better socio-emotional and academic adjustment to school (see Roorda et al., 2017, for review and meta-analysis). Moreover, field experiments have found that improving teachers' responsiveness to students' needs improves the children's academic functioning and adjustment to school (e.g., Murray & Malmgren, 2005; Webster-Stratton, Reid, & Hammond, 2004).

Based on such research findings, Pianta, La Paro, and Hamre (2008) developed a systematic classroom observation system that captures the extent to which a teacher is responsive to children's support-seeking bids and provides a secure climate to explore and learn: the Classroom Assessment Scoring System (CLASS). The primary domains assessed in the CLASS are emotional support (teacher's ability to manage students' emotional needs), classroom organization (teacher's ability to manage students' behaviors), and instructional support (teacher's ability to provide constructive and supportive feedback to students' academic efforts and performance). The CLASS has been found to have good psychometric qualities and to predict students' academic functioning and adjustment to school (e.g., Hamre, Hatfield, Pianta, & Jamil, 2014; Mashburn et al., 2008).

The CLASS has also been used to evaluate a teacher's functioning as a secure base and improve student-teacher interactions. For example, Head Start uses CLASS scores to help determine the accreditation of new prekindergarten teachers (Hamre et al., 2014). In addition, evidence-based professional development programs, such as My Teaching Partner (MTP, Pianta, Mashburn, Downer, Hamre, & Justice, 2008), use the CLASS framework to analyze videotaped teacher-student interactions and provide feedback to teachers on their functioning as a secure base. In the MTP program, for example, teachers work with a personal coach throughout the

program and are given the opportunity to watch videotaped teacher-student interactions of highly responsive teachers, identify security-enhancing responses to students' needs, and receive ongoing constructive feedback from the coach on their own interactions with students. The coach, working with the teacher, then create an action plan for the teacher to change his or her interactions with students and improve his or her functioning as a secure base. Studies have found the MTP effective in improving teachers' responsiveness and heightening children's academic functioning and adjustment to school (see Williford et al., 2016, for a review).

Health and Medicine

From an attachment perspective, physical pain, injuries, and illnesses can provoke fear and distress, which automatically activates the attachment system. As a result, needs for protection and support and characteristic attachment orientations, including working models of self and others, are activated and directed toward people who can reduce ill-related worries and distress. According to Maunder and Hunter (2015), this kind of attachment-system activation is likely to be directed toward physicians and other healthcare providers in medical settings, because they are perceived as a source of knowledge, healing, and physical safety. That is, they generally occupy the role of "stronger and wiser" caregivers in the physician-client relationship. Thus, we can expect clients to appraise physicians as fulfilling, or not fulfilling, the attachment functions of a safe haven and secure base. Moreover, we can hypothesize that clients will project their attachment concerns and orientations onto their relationships with physicians, which may be relevant to explaining individual differences in the healing process. In addition, physicians' responsiveness to clients' support-seeking bids can be expected to contribute to patients' distress management, compliance with treatment, and the entire healing process.

Based on this reasoning, Maunder and Hunter (2016) constructed a self-report scale tapping whether a healthcare provider functions as a safe haven (e.g., "In some circumstances, I might count on this person to help me feel better") and a secure base (e.g., "This person makes me feel more confident about my health"). Patients were asked to nominate healthcare providers "who matter to you more than others" and to complete the scale for each of the identified providers. Ninety-one percent of the participants were able to identify at least one healthcare provider who mattered most and the majority of them appraised these healthcare providers as fulfilling safe haven and secure base functions.

Research also provides evidence that attachment orientations are relevant for explaining individual variations in health-related behaviors. For example, attachment anxiety and avoidance have been associated with less engagement in health-promoting behaviors, such as maintaining a healthy diet or engaging in physical activity, and more engagement in health-related risks, such as smoking, drinking, and drug abuse (e.g., Ahrens, Ciechanowski, & Katon, 2012; Davis et al., 2014). For example, Ciechanowski, Walker, Katon, and Russo (2002) assessed attachment orientations in a large sample of primary care patients and found that women scoring higher on attachment insecurities were less likely to make health care visits over a 6-month period despite reporting higher symptom levels.

There is also consistent evidence that attachment insecurities can intrude and interfere with medical treatment, the physician-client relationship, and the healing process. First, attachment insecurities have been found to interfere with adherence to medical regimens among people diagnosed with a wide variety of physical problems (e.g., Tuck & Consedine, 2015). Second, attachment insecurities have been found to foster catastrophic perceptions of physical illness, which in turn interfere with the healing process (e.g., Vilchinsky, Dekel, Asher,

Leibowitz, & Mosseri, 2013). Third, attachment insecurities have been found to interfere with restorative biological processes (e.g., Robles, Brooks, Kane, & Schetter, 2013) and to heighten inflammatory stress-related responses that counteract the healing process (e.g., Kidd, Hamer, & Steptoe, 2013).

Research also indicates that patients' attachment insecurities are associated with more negative attitudes toward physicians and poorer trust in them (e.g., Calvo, Palmieri, Marinelli, Bianco, & Kleinbub, 2014). Maunder et al. (2006) asked physicians (who were blind to clients' attachment scores) to rate the difficulty of their relationships with particular patients. Physicians reported having more troubled relationships with insecure than secure patients. That is, insecure patients' relational problems were evident in physician-patient relationships.

Despite the cumulative evidence highlighting the relevance of attachment theory for health and medicine, there is no systematic research program on the contribution of physicians' responsiveness and ability to effectively manage client's emotional needs to the client's health and physical recovery. In our review of the literature, we found only one study reporting that physicians' attachment insecurities, which probably make them less responsive to clients, were associated with clients' lower satisfaction with treatment (Kafetsios, Hantzara, Anagnostopoulos, & Niakas, 2016). Moreover, there is no evidence-based medical training program aimed at cultivating physicians' responsiveness and functioning as a secure base. However, in their pioneering book, *Love, Fear, and Health*, Maunder and Hunter (2015) provided practical recommendations to healthcare providers about how to manage clients' attachment-related worries and defenses and how to make clients feel more secure. We hope that these efforts will ultimately result in important changes in medical education and in the development of

attachment-based training programs, which would aid healing and reduce expenses for both clients and the medical system.

Leadership and Management

From an attachment perspective, there is a close correspondence between leaders (e.g., managers, political and religious authorities, supervisors, and military officers) and attachment figures. "Leaders, like parents, are figures whose role includes guiding, directing, taking charge, and taking care of others less powerful than they and whose fate is highly dependent on them" (Popper & Mayseless, 2003, p. 42). That is, leaders often occupy the role of "stronger and wiser" caregivers and can provide a secure base for their subordinates (Mayseless & Popper, 2007). Like other security-enhancing attachment figures, effective leaders are likely to be responsive to their subordinates' needs; provide advice, guidance, and emotional and instrumental resources to group members; affirm subordinates' ability to deal with challenges; and encourage learning and personal growth (Haslam, Reicher, & Platow, 2015).

Following this attachment-based conceptualization of leadership, a responsive leader can support the broaden-and-build cycle of attachment security in subordinates, increasing their self-esteem, competence, autonomy, and well-being. By the same token, as in other cases of unresponsive attachment figures, a leader's inability or unwillingness to respond sensitively and supportively to subordinates' needs can magnify their anxieties and lead to feelings of demoralization and an inclination to disengage. In these cases, a non-responsive leader can radically alter the leader-subordinate relationship and transform what began with the promise of a secure base into a destructive, conflicted, hostile relationship that is damaging to the leader, his or her subordinates, and the organization to which they belong.

In two studies conducted with Israeli combat soldiers and their direct officers, Davidovitz, Mikulincer, Shaver, Ijzak, and Popper (2007) provided empirical support for this

attachment-focused conceptualization of leadership. In one study, an officer's ability to provide effective emotional and instrumental support to his soldiers in times of need (as rated by himself and his soldiers) contributed positively to his soldiers' instrumental and socioemotional functioning. In a second study, Davidovitz et al. (2007) found that soldiers' appraisal of their officer as a secure base during combat training (i.e., the officer's ability and willingness to accept and care for his or her soldiers rather than rejecting and criticizing them) produced positive changes in soldiers' mental health two and four months later. These findings highlight the importance of a leader's responsiveness in sustaining subordinates' mental health.

Subsequent studies have built upon and extended Davidovitz et al.'s (2007) findings to business organizations, showing that managers' responsiveness contribute positively to workers' job satisfaction, organizational commitment, and psychological well-being (e.g., Lavy, 2014; Ronen & Mikulincer, 2012; Wu & Parker, 2017). Conceptually similar findings have been reported in studies of relationships between school directors and teachers (e.g., Kafetsios, Athanasiadou, & Dimou, 2015) and between coaches and athletes (e.g., Davis, Jowett, & Lafrenière, 2013). Using an experimental manipulation of supervisor behavior, Game (2008) found that less secure workers reacted to a manager's cold and rejecting behavior with greater distress.

Although these findings support the conceptualization of supervisors and managers as security providers, this role is still undervalued in some contemporary management literature, which advocates the creation of 'cool, and exciting organizational cultures to increase workers' engagement and satisfaction (Rheem, 2017). We know of no evidence-based leadership development program based on attachment-theory principles for enhancing leaders' ability to consider and react effectively to subordinates' emotional needs. However, some of these

principles can be found in positive leadership programs that train leaders to be emotionally available, mentor their subordinates, attend and validate their subordinates' needs, recognize their accomplishments, and encourage their autonomous growth (e.g., Cameron, 2012). In fact, organizational scientists and professionals are becoming more aware of attachment theory and the benefits of cultivating emotionally safe organizations and transforming managers into security-enhancing attachment figures.

Conclusions

In this chapter, we have briefly reviewed theory and research findings concerning the application of attachment theory to the domains of parenting, of counseling and psychotherapy, education, health and medicine, and leadership and management. This is only a partial list of applications of attachment theory and research. Due to space limitations, we have not included findings showing the relevance of attachment theory for understanding individual differences in career development, work engagement, financial decisions, consumer behavior, moral judgments, group-related attitudes and behavior, and religious orientations and spiritual development (Mikulincer & Shaver, 2016). Moreover, we have not addressed how attachment theory and research inform social policy related to domestic violence, divorce, child custody, child maltreatment, foster care, adoption, and incarceration and rehabilitation of delinquent adolescents and adult criminals (Shaver, Mikulincer, & Feeney, 2009). We also did not have space to consider implications of attachment theory and research for political systems (e.g., the welfare state as a security provider; Gruneau Brulin, Hill, Laurin, Mikulincer, & Granqvist, 2018), terrorism, intergroup violence and war, and intergroup reconciliation and peace education (Mikulincer & Shaver, 2016).

Nevertheless, we hope we have demonstrated the broad relevance of attachment theory and research to many domains of life in which temporary or continuing close relationships matter greatly to the well-being of individuals, families, groups, and organizations. Human beings are, first and foremost, social beings; the human mind is a complex, highly evolved device for dealing with social relationships; and the attachment processes evident from birth through the first years of life continue to show themselves, as Bowlby (1979) said, "from the cradle to the grave." Noticing and nurturing the attachment aspects of all relationships could make an enormous contribution to individuals' mental and physical health and the quality and benefits of their diverse relationships. There is now adequate basic and applied research to inspire future applications and interventions.

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