

Integrating attachment style, vigor at work, and extra-role performance

LAURA M. LITTLE^{1*}, DEBRA L. NELSON², J. CRAIG WALLACE²
AND PAUL D. JOHNSON²

¹*Department of Management, Terry College of Business, University of Georgia, Athens, Georgia*

²*Department of Management, Spears School of Business, Oklahoma State University, Oklahoma, U.S.A.*

Summary

This paper presents and tests a model of the impact of secure and insecure attachment styles (secure, counterdependent, and overdependent) on citizenship behavior and workplace deviance behavior through vigor at work. Employees who exhibit secure attachment styles are proposed to exhibit more vigor at work because of more effective use of physical, emotional, and cognitive resources which translates into increased organizational citizenship behaviors (OCBs) and decreased deviance. Insecurely attached employees are hypothesized to exhibit the opposite pattern. In a sample of 331 repair generalists in a large building facilities and maintenance organization, results indicate that attachment styles indirectly predicted OCBs and deviance through vigor. Implications of these results for attachment style, vigor at work, OCBs, and deviance are discussed. Copyright © 2010 John Wiley & Sons, Ltd.

Keywords: attachment styles; vigor; extra-role behavior

Introduction

The vast majority of jobs require direct interaction with employees, customers, or clients rendering interpersonal aspects of work extremely important to being successful on the job (Bowen, Siehl, & Schneider, 1989). As organizations focus more on people-oriented work, the ways in which employees view, manage, and use physical, emotional, and cognitive resources in their relationships may affect workplace behaviors. Management of physical, emotional, and cognitive resources, termed self-regulation, is a critical component in successfully managing interpersonal demands (Mikulincer, 1995; Mikulincer, Orbach, & Iavnieli, 1998). Although individuals continuously attempt to control or manage these resources, organizational researchers only recently began to investigate and understand the links between interpersonal processes and the regulation of resources within organizational contexts, including how such processes relate to important workplace outcomes (Lord, Klimoski, & Kanfer, 2002).

Attachment theory is regarded as a key framework in understanding interpersonal processes in adulthood; namely, the way in which attachment style affects one's relationships (e.g., Hazan & Shaver,

* Correspondence to: Laura M. Little, Department of Management, Terry College of Business, University of Georgia, Athens, Georgia. E-mail: lmlittle@terry.uga.edu

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1987; Mikulincer, Florian, Cowan, & Cowan, 2002). Attachment styles have been used to explain individual differences in the self-regulation process because stylistic ways of regulating oneself and one's affect are particular to each attachment style (Fuendeling, 1998). Because of these findings, research has begun to investigate the explanatory mechanisms that link attachment style to psychological states (Hazan and Shaver, 1987; Mikulincer et al., 1998; Simmons, Gooty, Nelson, & Little, 2009) which in turn may relate to workplace behavior. These findings are quite important because of the far-reaching impact that attachment styles have both in regard to relationships and to intrapersonal processes.

Despite an expanded understanding of attachment, many questions remain regarding how attachment styles (secure and insecure) impact important outcomes at work. A recent study indicated that the secure attachment style relates to hope and burnout as well as trust in one's supervisor (Simmons et al., 2009). However, of these three constructs, only trust in one's supervisor subsequently related to job performance (Simmons et al., 2009). These authors did not examine insecure attachment styles citing the relative infrequency of insecure styles in the workplace (Simmons et al., 2009). Yet research indicates that employees do self-report insecure attachment (Popper, Mayseless, & Castelnuovo, 2000). Furthermore, researchers have not examined how attachment styles relate to a host of important organizational outcomes beyond task performance. Although the literature has expanded our knowledge base concerning attachment styles in the workplace (e.g., Simmons et al., 2009), research is still needed to better understand attachment styles at work. The main thrust of the current research is that secure and insecure attachment styles uniquely affect resources at an individual's disposal, which in turn affect important work outcomes.

In the framework that follows, we position vigor at work as a positive affective state representing physical, emotional, and cognitive resources. We propose that vigor results from internal regulatory processes related to attachment style. In addition, we propose that vigor represents a unique, exceptional positive resource that differentially drives positive (organizational citizenship behaviors (OCBs)) and negative (deviance) behaviors. Investigating both outcomes provides a balanced approach toward discerning organizational benefits from studying processes that encourage OCBs and discourage deviance behaviors.

Theoretical Background

Attachment theory

Grounded in developmental psychology, attachment theory suggests that infants formulate internal working models of support and protection in times of threat and distress based on the quality of interaction with a primary caregiver (Bowlby, 1982). These internal working models, characterized as secure or insecure, organize cognitions, affect, and behavior in close relationships and shape an individual's self-image. Secure infants differ from insecure infants in that they experience felt security; they trust that the attachment figure can be relied upon in times of stress and hardship. This "secure base" allows the secure infant to leave the caregiver and comfortably explore the environment, building a sense of confidence that he or she possesses sufficient resources to deal with whatever is encountered. On the other hand, an insecure infant does not feel comfortable exploring the environment because of the belief that the caregiver will not be there in times of stress and hardship. This belief is associated with feelings of insecurity, along with the development of negative representations of the self and others.

Building on early research, Hazan and Shaver (1987) examined attachment styles in adulthood and found that attachment styles extended well into the adult years. As children grow up, their attachment figures shift from their parents to their peers. As with infants, anxiety and distress also drive adults to seek support from others, and thus attachment styles were initially proposed to remain fairly consistent. However, subsequent research demonstrated within-person variance in attachment style as the context and the specific relationship changes (La Guardia, Ryan, Couchman, & Deci, 2000). Current theory suggests that within a given context, attachment styles should remain stable (Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Lopez & Brennan, 2000).

Secure attachment is an attachment style characterized by the inclination to form flexible, reciprocal relationships (Ainsworth & Bowlby, 1991). Bowlby (1988) described secure attachment as the capacity to connect well and securely in relationships with others while also having the capacity for autonomous action as situationally appropriate. Because of this secure internal working model, a person with a secure attachment style typically exhibits a healthy pattern of behavior, manifested in the ability to work well alone or with others by forming supportive, reciprocal relationships with a variety of different people. Individuals with high levels of secure attachment have been found to more often seek and use social support at work (Joplin, Quick, Nelson, & Turner, 1995; Quick, Joplin, Nelson, Mangelsdorff, & Fiedler, 1996). The link between the secure attachment style and health and well-being has received substantial empirical support (Priel & Shamai, 1995; Simmons, Nelson, & Quick, 2003). Specifically, the secure style has been associated with less distress and fewer adverse psychological and physical symptoms (Hazan & Shaver, 1990; Quick et al., 1996).

Studies on attachment styles in adults have also shown that attachment-related self-regulation affects the ways in which information is processed (Green-Hennessy & Reis, 1998; Mikulincer et al., 1998). Securely attached individuals rely on basic guidelines of the attachment system: acknowledging emotional arousal, engaging in instrumental action, asking for others' support, and hoping for successful management of the situation (Mikulincer & Sheffi, 2000). Securely attached individuals are, thus, more flexible and constructive in their cognitive exploration (Green-Hennessy & Reis, 1998). Secure individuals reported less preference for cognitive closure and were more likely to use new information in making social judgments than insecure persons (Mikulincer, 1997). Additionally, secure individuals react to negative affect with less physiological arousal than do insecure individuals and manage negative affect in more functional ways by directing more attention to the positive aspects of the situation (Dozier & Kobak, 1992; Feeney & Kirkpatrick, 1996; Mikulincer et al., 1998). Secure individuals hold more positive expectations about stress manageability (Mikulincer & Florian, 1995) and have confidence in others' good intentions (Bartholomew & Horowitz, 1991; Collins & Read, 1994) than insecure individuals. Secure attachment styles have been related to the psychological states, hope and burnout, and the interpersonal variable, trust in one's supervisor (Simmons et al., 2009).

In contrast to securely attached individuals, insecurely attached individuals, including both counterdependent and overdependent attachment styles, view relationships differently and engage in different self-regulation strategies. *Counterdependence* is an insecure approach to relationships characterized by deactivating attachment needs and distress cues. Based on the belief that others will not be there in times of need, counterdependent individuals will likely avoid dependence on others in the workplace. Counterdependent individuals have been found to avoid close relationships while instead pursuing autonomy and control (Shaver, Collins, & Clark, 1996). As an insecure style, counterdependence is associated with distress symptoms and physical and psychological ill-health (Hazan & Shaver, 1990; Quick et al., 1996).

Furthermore, similar to a secure attachment style, counterdependence affects self-regulation. Individuals using a counterdependent style are less likely to acknowledge emotional arousal than those

not using counterdependence (Mikulincer & Sheffi, 2000). This is accomplished through the suppression of negative or unpleasant thoughts and a reliance on repressive mechanisms, resulting in a negative approach toward exploration and cognitive openness (Mikulincer & Sheffi, 2000). Counterdependent individuals distance themselves from distress-related cues, and they tend to reject new stimuli because the new data may cause a temporary state of ambiguity or distress. Counterdependent individuals have been found to minimize emotional involvement, and use their resources to repress and suppress negative thoughts, emotions, and displays of distress (Collins & Read, 1994; Shaver et al., 1996).

Overdependent individuals try to achieve security by minimizing their distance from others. At work, overdependent individuals may appear clingy because of their desire to seek out and use more support than necessary. Acting on this desire may drive others away. They may drain their support systems by failing to reciprocate and provide support to others. In studies of military personnel in officer training and basic training groups, candidates with overdependent attachment styles were less likely to successfully graduate from training (Joplin et al., 1995; Quick et al., 1996). Those high in overdependence have been shown to have higher levels of distress, negative affect, and physical and psychological symptoms (Hazan and Shaver, 1990; Quick et al., 1996) than those low in overdependence.

Individuals who are overdependent tend to overemphasize distress cues, hyperactivate negative feelings, thoughts and memories, and do not detach from inner pain (Mikulincer & Florian, 1998; Mikulincer & Sheffi, 2000; Shaver et al., 1996). This hyperactivation of the attachment system creates a preoccupation with attachment-related concerns and inhibits physical, emotional, and cognitive resources that might otherwise be used to engage in cognitive exploration. In summary, evidence links attachment styles with interpersonal processes and with important work-related outcomes. One internal state that may be affected by attachment style is vigor.

Vigor at work

Vigor is a positive affective state in a work context that combines elements of an emotion and a mood state (Shirom, 2007; Shirom, Toker, Berliner, Shapira, & Melamed, 2008) resulting in experience of physical strength, emotional energy, and cognitive liveliness (Shirom, 2004). Physical strength represents high levels of energy in carrying out daily tasks. Emotional energy is the capacity to emotionally invest in relationships with clients and customers. Cognitive liveliness refers to feeling mentally agile (Shraga & Shirom, 2009). Vigor at work is an internal, affective representation of the individual's energy reservoirs related to the job. Thus, an individual experiencing vigor at work perceives him or herself to be peppy, physically enlivened, cognitively quick and creative, and able to have meaningful interactions with others. Vigor has been proposed to stem directly from the individual's cognitive appraisal of demands and available physical, emotional, and cognitive resources (Lazarus, 1999; Shirom, 2004). Individuals who perceive themselves to possess the physical, emotional, and cognitive resources to handle job demands will experience energy and liveliness in relation to their jobs. As such, vigor at work is a malleable state because it is affected by dispositional and contextual variables and is linked to motivational processes that initiate and sustain behavior at work. Although malleable, given the stable influence of dispositional variables and absent changes in important contextual stimuli, vigor, like other constructs (goal orientation, regulatory focus), is often relatively stable within the same work context (Shirom et al., 2008; Vandewalle, 1997; Wallace & Chen, 2006).

Encompassing arousal as well as positive feelings, vigor resides in its own conceptual space separate from constructs such as self-efficacy, which represents a *belief* in one's ability rather than a positive, experienced, energetic affective state (Stajkovic & Luthans, 1998). Vigor also differs from positive and negative affectivity, which represent general tendencies to be positive or negative rather than energy

reservoirs directed at one's job (Watson & Clark, 1992b). Reizenzein (1994) found that arousal is not a necessary condition for affect. Vigor has been found to be a distinct construct from other positive emotional states that loaded on either arousal or pleasure (Russell & Steiger, 1982) and is distinguished from lower activation positive affect components such as pleasantness and contentment. Vigor represents the experience of positive physical and emotional energy and cognitive quickness. Thus, an individual can believe that he or she has the *ability* to do their job and can be generally positive, but still not display positive energy and liveliness in relation to doing the job. This reflects the uniqueness of vigor.

Hypotheses and Integrated Model

We propose that attachment styles relate to vigor at work and subsequently to important workplace behaviors, organizational citizenship behaviors, and deviance for the present study. Attachment styles influence internal regulatory mechanisms and shape the way an individual views the environment and how their abilities function within the environment. Secure individuals have positive self-views and perceive that they have adequate resources to reach their goals (Mikulincer, 1997; Mikulincer et al., 1998). Secure individuals' constructive and flexible regulatory strategies are related to a positive attitude toward cognitive exploration and openness (Mikulincer, 1997; Mikulincer & Sheffi, 2000). In addition, their secure internal working models are associated with beliefs that other people will be there for them when needed, comprising an external resource on which they can call. They manage negative affect effectively by looking at the positive aspects of the situation and not being overwhelmed (Dozier & Kobak, 1992; Feeney & Kirkpatrick, 1996; Mikulincer et al., 1998). The secure base and positive views of self result in greater cognitive flexibility, and in turn, to greater perceptions of physical strength, emotional energy, and cognitive liveliness (i.e., vigor).

The relationship between attachment styles and vigor is also supported by the theory of regulated behavior (Carver & Scheier, 1990) which posits that human behavior can be cast in goal terms. When an individual becomes aware of a discrepancy between a goal and his/her present situation, an assessment process is initiated. If the individual perceives that s/he has the resources to reduce this discrepancy and produce desirable outcomes, s/he will continue to exert efforts to attain those desirable outcomes. In the current model, secure individuals feel vigorous (energetic, focused) if they perceive they possess adequate resources to fulfill their goals and perceive progress toward those goals (Carver & Scheier, 1990; Shirom, 2004).

Counterdependent individuals, on the other hand, rely heavily on repressing information because additional information may cause them distress that they cannot handle (Mikulincer & Sheffi, 2000). Counterdependent individuals have been found to suppress negative thoughts and emotions to inhibit any display of distress and to rely on repressive–dissociative processes (Collins & Read, 1994; Shaver et al., 1996). Repression and suppression consume and deplete physical, emotional, and cognitive resources (Beal, Weiss, Barros, & MacDermid, 2005; Grandey, 2003; Muraven, Tice, & Baumeister, 1998) and, thus, should lead to reduced feelings of physical strength, emotional energy, and cognitive liveliness. Given such resource depletion, counterdependence should be negatively related to vigor.

Individuals who are overdependent should experience less vigor as well. These individuals perceive a lack of physical, emotional, and cognitive resources which results in the hyperactivation of negative emotions and a significant focus on the attachment system (Mikulincer & Sheffi, 2000). Overdependent individuals, thus, exacerbate distress and overly rely on rumination (Mikulincer & Florian, 1998; Mikulincer & Orbach, 1995). We posit that this will leave few physical, emotional, and cognitive resources available to produce feelings of physical strength, emotional energy, and cognitive liveliness.

In terms of energy/resource management, both counterdependent and overdependent individuals spend considerable energy managing feelings of insecurity. These types of insecurity differ in that counterdependent individuals have negative views of others and positive views of self, whereas overdependent individuals possess negative views of self, but positive views of others (Mikulincer et al., 1998). The two styles are similar in that both repression and hyperactivation of negative emotions divert physical, emotional, and cognitive resources away from other uses important to the individual and thus, individuals with either of the insecure styles should experience less vigor. Thus, we hypothesize:

Hypothesis 1: Secure attachment positively relates to vigor.

Hypothesis 2: Counterdependence negatively relates to vigor.

Hypothesis 3: Overdependence negatively relates to vigor.

Vigor relates to various behaviors through the cognitive, physical, and emotional resources associated with specific approach action tendencies (Fredrickson, 2000; Frijda, Kuipers, & Schure, 1989). In addition to the role of vigor as a positive affective state, which prompts individuals to engage with their environment and partake in activities that bring about pleasurable outcomes, individuals who feel vigorous at work have the physical strength, emotional energy, and cognitive liveliness to enthusiastically engage in activities such as helping others, taking a personal interest in others, giving advanced notice when not able to come to work, and not taking undeserved breaks. Vigor allows individuals to build social connectivity in various work situations, thus facilitating prosocial behavior in the workplace.

OCBs are intentional employee discretionary behaviors directed at helping others in the organization (OCB-Is) or aimed at improving the functioning of the organization (OCB-Os) (Organ, 1988). As a positive affective state incorporating physical strength, emotional energy, and cognitive liveliness, vigor represents an individual's amount of perceived physical, emotional, and cognitive resources to engage in discretionary behaviors that help individuals in the organization (OCB-Is). Individuals experiencing positive mood states, such as vigor, are more likely to help others (Isen & Baron, 1991), strive to reduce the distance between themselves and others (Bateman & Organ, 1983), see situations more positively (Isen, Shalcker, Clark, & Karp, 1978), are more attracted to others (Gouaux, 1971), and do their utmost to maintain their positive feelings (Clark & Isen, 1982). Positive mood states have also been related to behaviors such as protecting the organization, making constructive suggestions, and spreading goodwill (George & Brief, 1992). Again, this is theorized to occur because people in a positive state of mind strive to perpetuate positive feelings (George & Brief, 1992). Thus, individuals in a positive mood state are more likely to help others and the organization. The lack of the physical, emotional, and cognitive resources (vigor), on the other hand, negatively impacts OCBs (Chiu & Tsai, 2006). We propose that individuals experiencing vigor with its inherent positivity and cognitive, emotional, and physical resources will be inclined to behave positively toward others in their organization (OCB-Is) and their organization in general (OCB-Os) in order to maintain their positive physical, emotional, and cognitive resources.

Hypothesis 4: Vigor positively relates to OCBs

Workplace deviance behavior has been defined as unauthorized acts by employees intended to be detrimental to the formal organization (Hollinger & Clark, 1982). Hollinger and Clark (1982) differentiate between two types of deviance: property deviance and production deviance. Property

deviance incorporates instances where employees acquire or damage the tangible property or assets of the work organization. Production deviance concerns behaviors that violate norms delineating the quality and quantity of work. We propose that vigor relates negatively to production deviance (i.e., coming to work late or doing slow or sloppy work) because individuals with vigor-related resources available to them will be motivated to reach their goals and maintain those physical, emotional, and cognitive resources whereas individuals who lack those resources will be more likely to engage in production related deviance behavior. Lack of energy or zest has been related to low productivity, while energy and enthusiasm has been linked to productivity in a within subjects design (Hersey, 1955). Additionally, depleted emotional resources have been found to result in delinquency in youths as well as deviance behavior in the workplace (Liang & Hsieh, 2007; Mulki, Jaramillo, & Locander, 2006). We do not anticipate that vigor will relate negatively to property-related deviance because diminished energy and physical, emotional, and cognitive resources will not likely lead to more active behavior.

Hypothesis 5: Vigor negatively relates to production deviance.

Attachment styles, vigor and discretionary behavior

Vigor is an explanatory mechanism linking individuals' characteristics to their behavioral tendencies (Ellsworth & Scherer, 2003). The internal working model established by each attachment style results in a pattern of resource management that may or may not lead to vigor. We propose significant indirect relationships between attachment styles and OCB-I, OCB-O, and deviance.

While not the primary thrust of the current research, we also anticipate a direct relationship between attachment styles and OCBs and deviance because the cognitive and regulatory processes used in secure and insecure attachment impact the recall of information and views of others. Positive views (inherent in secure attachment) and negative views of others (inherent in counterdependence and overdependence) will likely affect an individual's perception of the social exchange relationship with the organization and those in it (Bateman & Organ, 1983; Cropanzano & Mitchell, 2005). Secure individuals easily recall positive interactions from the past, which shapes a positive view of the organization and of others (Mikulincer et al., 2002). Individuals with a counterdependent style are more suspicious of others' intentions and are more likely to project negative self-traits onto others, resulting in negative views of others and the organization. Overdependence is characterized by an anxiety motivation that exaggerates threat-appraisals; despite the overdependent individual's positive view of others and negative view of self, their exaggerated anxiety that others are not available in times of need drives overdependent people to have a negative view of the exchange relationship (Mikulincer et al., 2002; Pereg, 2001). However, as theorized above, we believe that vigor mediates the proposed direct relationships between attachment styles and OCBs and deviance. Thus, overdependence and counterdependence lead individuals to reciprocate negatively, increasing deviance and decreasing OCBs, whereas secure attachment increases OCBs and decreases deviance directly. We propose

Hypothesis 6: Secure attachment style positively relates to OCBs (H6a) and negatively relates to deviance (H6b). These direct relationships are mediated by vigor, respectively (H6c & H6d)

Hypothesis 7: Insecure attachment styles negatively relate to OCBs (H7a) and positively relate to deviance (H7b). These direct relationships are mediated by vigor, respectively (H7c & H7d)

Methods

Participants and procedure

As part of a broader research effort, a large building facilities and maintenance organization located in the Midwestern United States agreed to participate in the current study in exchange for summary information. Employees were repair generalists whose tasks were solving a variety of building problems, including electrical problems, plumbing issues, general maintenance, and painting.

The recruited sample consisted of 495 full time employees of which 406 completed the self-report survey. Immediate supervisors provided organizational citizenship behavior and deviance ratings for 331 employees resulting in a response rate of 67 per cent (331/495). Sixty-three per cent of the participants were male, the average age was 36.28 ($SD = 11.32$), 80 per cent were Caucasian, 10 per cent African-American, 5 per cent Hispanic, 3 per cent Asian, and the remaining 2 per cent were either 'other' or not reported. The average tenure in the current job was 10.1 years ($SD = 7.31$). Measures were administered over a four-month period with employees initially completing the attachment style survey, approximately 4–6 weeks later, the vigor scale and approximately 4–7 weeks later, employees' immediate supervisors were asked to complete OCB and deviance evaluations for all their employees.

Measures

Attachment style

Employees completed a modified version of the Self Reliance Inventory (SRI; Joplin, Nelson, & Quick, 1999). The scale was modified to represent an individual's attachment style in the workplace (Frazier, Johnson, & Bolton, 2007). There is mounting evidence that although attachment styles are relatively stable, they may vary based on context (Baldwin et al., 1996; Lopez & Brennan, 2000). The SRI was previously refined so that it was more specific to the workplace (Frazier et al., 2007). Attachment style was measured in terms of attachment dimensions as recommended based on evidence suggesting no discrete taxa in regard to attachment style (Fraley & Waller, 1998). Participants were asked to indicate their level of agreement with several statements about them *at work*. The modified SRI includes a seven-item subscale for secure attachment ($\alpha = 0.82$), e.g., "I can usually take care of my own work but I don't mind getting help if I need it"; a seven-item subscale for counterdependence ($\alpha = 0.79$), e.g., "Needing someone is a sign of weakness;" and a five-item subscale for overdependence ($\alpha = 0.81$), e.g., "My desire to be close to my coworkers sometimes scares them away." This modified SRI has also been validated across multiple samples, as recommended by Hinkin (1995). The scale has demonstrated three factors (secure, counterdependent, and overdependent) as well acceptable reliability and validity (Frazier et al., 2007). Respondents were asked the degree to which they agreed with the various items ranging from "definitely disagree" (1) to "definitely agree" (7).

Vigor

Employees completed the 12-item Shirom-Melamed Vigor Measure (SMVM; Shirom, 2004) which asks respondents to indicate how often they have felt a particular way at work in the last 30 days ($\alpha = 0.90$). This scale assesses vigor's three components: (1) physical strength (e.g., "I feel full of pep"), (2) emotional energy (e.g., "I feel able to show warmth to others"), and (3) cognitive liveliness (e.g., "I feel able to be creative"). Responses ranged from "never or almost never" (1) to "always or almost always" (7). Theoretically and empirically, vigor has been supported as a second-order factor

comprised of the three facets, emotional energy, cognitive liveliness, and physical strength (Shirom, 2004). Vigor was calculated by aggregating each of the three dimensions and then averaging those three dimensions into a single scale score.

Because this measure is relatively new and little empirical data were available to support the construct validity and predictive utility of the measure, we elected to assess the relationship between vigor and two commonly used and well-known constructs that vigor should share significant relationships with: positive affect and general self-efficacy. Although we expected that all measures would generally be highly and positively related, we felt that because vigor incorporates both arousal *and* positive affect that vigor would more strongly capture aspects of workplace behavior (i.e., production deviance and citizenship). We collected pilot data from a working student sample at a Midwestern university. All participants worked more than 20 hours per week. We were able to collect vigor, positive affect (Watson & Clark, 1992a), general self-efficacy (Chen, Gully, & Eden, 2001), self-report production deviance, and OCBs. Vigor, deviance, and OCBs were measured using the same scales used in the main study. After removing incomplete surveys, the final pilot sample was 168 employed students of which 52 per cent were male, the average age was 29.2 (S.D. = 10.34), 79 per cent were Caucasian, 8 per cent African American, 4 per cent Hispanic, 8 per cent Native American, and 1 per cent Asian. Descriptive statistics and bivariate correlations can be found in Table 1. We first examined the construct validity of the vigor measure and its uniqueness as compared to similar yet more well-known measures (i.e., positive affect, general self-efficacy). We did so by conducting a confirmatory factor analysis using LISREL 8.7 (Jöreskog & Sörbom, 1993) in which we found support for a model of vigor as a second-order factor comprised of its first-order factors: physical strength, emotional energy, and cognitive liveliness. Vigor was also found to be distinct from both positive affect and general self-efficacy. We tested this “distinct constructs model” against several competing models in which the relationships between vigor and other constructs were held to one (i.e., tested the distinct constructs model versus a single factor model, a two-factor model, and several 3-factor models). Results can be found in Table 2 and support our distinct constructs model and the construct validity of vigor.

To examine the utility of vigor in regard to positive affect and general self-efficacy, we both ran a hierarchical regression model in which we investigated the impact of vigor on each of our outcomes over and above positive affect and general self-efficacy (see Table 3) as well as conducted dominance analysis using vigor, positive affect, and general self-efficacy in predicting (1) production deviance and (2) citizenship behaviors. Dominance analysis evaluates unique contributions for a given variable or a set of variables and is typically a better assessment of the uniqueness for a given variable or set of predictors (Budescu, 1993; Eby, Butts, & Lockwood, 2003). Furthermore, it has been found to be one of the “most successful measures of relative importance currently available” (Johnson & LeBreton, 2004, p. 238). Dominance analysis directly compares the predictive power of all possible permutations for

Table 1. Descriptive statistics and bivariate correlations from pilot

Variable	M	SD	1	2	3	4	5	6
1 Vigor	4.90	0.97	(0.93)					
2 General self-efficacy	3.98	0.71	0.59**	(0.94)				
3 Positive affect	3.29	0.86	0.60**	0.70**	(0.78)			
4 Deviance	1.64	0.79	-0.27**	-0.12	-0.02	(0.83)		
5 OCBI	3.94	0.66	0.51**	0.30**	0.18**	0.49**	(0.90)	
6 OCBO	3.32	0.59	0.31**	0.19*	0.21**	0.02	0.49**	(0.71)

Note. $N = 168$; Coefficient α s are in parentheses.

OCB-I = organizational citizenship behavior directed toward the individual;

OCB-O = organizational citizenship behavior directed toward the organization

* $p < 0.05$; ** $p < 0.01$

Table 2. CFA model fit indices for vigor, positive affect, and general-self-efficacy

Model	χ^2	df	$\Delta\chi^2$	RMSEA	SRMR	CFI
A. Expected Distinct Constructs Model	818.39	400	—	0.07	0.08	0.94
B. Vigor and GSE forced to load on a single factor	873.93	401	55.54*	0.09	0.32	0.92
C. Vigor and positive affect forced to load on a single factor	840.11	401	21.72*	0.09	0.25	0.92
D. Vigor and positive affect fixed to 1.0 and vigor and GSE forced to load on a single factor	872.37	402	53.98*	0.09	0.41	0.92
E. Vigor, positive affect, and GSE forced to load on a single factor	896.02	403	77.63*	0.10	0.39	0.92

Note. Vigor is a second-order construct indicated by first-order factors of physical strength, emotional energy, and cognitive liveliness. The expected distinct constructs model consists of vigor, general self-efficacy (GSE), and positive affect as distinct latent constructs. $N = 168$.

Table 3. Hierarchical regression from pilot

Variable	Deviance		OCB-I		OCB-O	
	Step 1	Step 2	Step 1	Step 2	Step1	Step 2
Step 1						
PA	0.10 (0.96)	0.24* (2.17)	0.15 (1.37)	0.04 (0.36)	-0.04 (-0.42)	-0.26** (-2.66)
GSE	-0.19 (-1.76)	-0.07 (-0.63)	0.10 (0.91)	0.01 (0.02)	0.33** (3.21)	0.14 (1.47)
Step 2						
Vigor		-0.37** (-3.76)		0.29** (2.94)		0.58** (6.72)
R^2	0.02	0.08	0.05	0.05	0.09	0.29

Note: $N = 168$. PA = positive affect; GSE=general self-efficacy; OCB-I = organizational citizenship behavior directed toward the individual; OCB-O = organizational citizenship behavior directed toward the organization. Standardized beta coefficients with t -value in parentheses.

* $p < 0.05$; ** $p < 0.01$

variables of interest in order to determine the relative importance of each variable. The results take the form of relative percentage of the total variance accounted for by a given variable. For production deviance, we found that vigor, positive affect, and general self-efficacy accounted for 6 per cent of the variance in production deviance and vigor captured 72.2 per cent of the relative percentage of production deviance while general self-efficacy captured 5.6 per cent of the relative percentage and positive affect captured 22.2 per cent of the relative percentage of production deviance. For OCB-Os, we found that vigor, positive affect, and general self-efficacy accounted for 33 per cent of the variance in citizenship behavior and vigor captured 76.8 per cent of the relative percentage of OCB-Os while general self-efficacy captured 10.1 per cent of the relative percentage and positive affect captured 13.1 per cent. Additionally, vigor captured 77.8 per cent of the relative percentage of OCB-Is while general self-efficacy captured 14.9 per cent of the relative percentage and positive affect captured 7.3 per cent. Thus, these preliminary analyses serve to highlight the construct validity and predictive utility for vigor and, therefore, we proceeded to test the full model using Shirom’s measure as reported in the literature.

OCBs

Supervisors completed Williams and Anderson’s (1991) OCB-I and OCB-O measure. The OCB-I measure consisted of seven items ($\alpha = 0.82$; e.g., “Assists supervisor with his/her work when not

asked”). The OCB-O measure consisted of seven items ($\alpha=0.80$; e.g., “Conserve and protects organizational property”). All items used response categories ranging from “never” (1) to “very often” (5). Due to utilizing several supervisors for employee reports of OCBs, there is a chance of non-independence in the OCB data. To assess non-independence of supervisor ratings we used intraclass correlation coefficient (ICC) (1) and found a non-significant ICC (1) values for OCB-I (ICC (1) = 0.05, $p > 0.05$) and OCB-O (ICC (1) = 0.09, $p > 0.05$)

Deviance

Supervisors also completed Hollinger and Clark’s (1982) production deviance measure ($\alpha=0.79$, i.e., “Comes to work late or leave early”). Response categories for this scale ranged from “never” (1) to “very often” (5). As with OCBs, we assessed the non-independence of deviance and again found non-significant ICC (1)s: ICC (1) = 0.04, $p > 0.05$).

Controls

We included conscientiousness, assessed using Goldberg et al.’s measure (2006; Goldberg, 1999), and age as control variables. Meta-analytical evidence suggests conscientiousness to be the best individual difference predictor of OCBs and deviance (Berry, Ones, & Sackett, 2007; Organ & Ryan, 1995; Sackett & DeVore, 2001; Dalal, 2005; Salgado, 2002). We controlled for this variable to better ensure attachment styles and vigor predicted additional variance in OCBs and deviance beyond conscientiousness. Conscientiousness was assessed with a 20-item measure available to the public on the International Personality Inventory Pool (Goldberg, 1999). Age was included as a control because we found that it was significantly correlated with production deviance.

Results

Bivariate and descriptive statistics, provided in Table 4, suggest support for the majority of our relationships. Secure attachment style positively correlated with vigor (hypothesis 1; $r=0.27$, $p < 0.05$) and counterdependent attachment style (hypothesis 2; $r=-0.23$, $p < 0.05$) and over-dependent attachment style (hypothesis 3; $r=-0.27$, $p < 0.05$) negatively correlated with vigor. Hypotheses 4 and 5 also garnered support with a positive correlation between vigor and OCB-Os

Table 4. Descriptive statistics and bivariate correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Secure	5.42	1.03	(0.82)								
2. Insecure-counterdependent	2.74	1.10	-0.13*	(0.79)							
3. Insecure-overdependent	2.46	1.28	-0.29**	0.40**	(0.81)						
4. Vigor	5.10	1.02	0.27**	-0.23**	-0.27**	(0.90)					
5. OCB-I	3.61	0.62	0.12*	-0.10	-0.19**	0.28**	(0.82)				
6. OCB-O	3.59	0.67	0.10	-0.09	-0.23**	0.19**	0.79**	(0.80)			
7. Deviance (production)	1.22	0.40	-0.11*	0.12*	0.09	-0.21**	-0.07	-0.09	(0.79)		
8. Conscientiousness	4.08	0.79	0.09	-0.21**	-0.49**	0.02	0.11*	0.13*	-0.01	(0.72)	
9. Age	44.75	12.91	0.01	0.09	0.07	0.01	-0.02	0.01	-0.19**	-0.05	—

Note: $N=331$. Coefficient α s are in parentheses. OCB-I=organizational citizenship behavior directed toward the individual; OCB-O=organizational citizenship behavior directed toward the organization; * $p < 0.05$; ** $p < 0.01$

($r = 0.19, p < 0.05$) and OCB-Is ($r = 0.28, p < 0.05$) and a negative correlation with deviance ($r = -0.21, p < 0.05$). Finally, the predicted direct relationships between attachment style and our outcomes found mixed support, with significant positive correlations between secure attachment style and OCB-I (H6a: $r = 0.12, p < 0.05$) and between counterdependence and deviance (H7b: $r = 0.12, p < 0.05$), as well as significant negative correlations between secure style and deviance (H6b: $r = -0.11, p < 0.05$) and between overdependence and OCB-Is (H7a: $r = -0.19, p < 0.05$) and OCB-Os (H7a: $r = -0.23, p < 0.05$).

While mostly supportive of our expectations, bivariate correlations do not provide a complete account of unique relationships and, therefore, we proceeded to test mediation and indirect effects. We also needed to account for our control variables. To more fully assess our hypotheses we used Shrout and Bolger's (2002) approach based largely on Baron and Kenny (1986). In this approach, the first step in testing mediation is to determine the relationship between the distal predictor (X) and the criterion (Y). While we will test the X→Y relationships, if a direct relationship is not found, Shrout and Bolger, as well as Kenny, Kashy, and Bolger (1998), strongly suggest proceeding with mediation steps as indirect effects are likely to be significant. The second step in Shrout and Bolger's (2002) method is to test the relationship between distal predictors and the mediator. Third, the mediator must relate to the outcome after controlling for the distal predictor. Fourth, if there was a significant relationship in step 1, researchers are encouraged to examine the decrease in magnitude of this estimate such that if the previous estimate was significant, but no longer is, then mediation of this relationship can be claimed. If the estimate is reduced in magnitude yet is still significant, then only partial mediation can be claimed. Lastly, they suggest testing the magnitude and significance of indirect effects, particularly if the X→Y relationship is precluded by theory or if these relationships are non-significant.

All steps for the Shout and Bolger mediation analyses can be found in Table 5. After controlling for conscientiousness and age, we found that overdependent attachment style negatively predicted OCB-O ($\beta = -0.22, p < 0.05$) and OCB-I ($\beta = -0.14, p < 0.05$) while counterdependent attachment style positively predicted deviance ($\beta = 0.13, p < 0.05$). No other attachment styles significantly predicted any of our performance outcomes. We continued with the mediation steps outlined above to better gauge whether indirect effects were present and significant. Step two was fully supported with each attachment style significantly predicting vigor: secure attachment ($\beta = 0.19, p < 0.05$), counterdependent ($\beta = -0.15, p < 0.05$), and overdependent ($\beta = -0.23, p < 0.05$). In the third regression, we found that vigor positively and significantly predicted OCB-O ($\beta = 0.15, p < 0.05$), OCB-I ($\beta = 0.25, p < 0.05$), and deviance ($\beta = -0.17, p < 0.05$) above and beyond attachment styles and control variables. This supports the third step in mediation. In the fourth step, we found that only overdependence remained a significant predictor of OCB-O ($\beta = -0.19, p < 0.05$), indicative of partial mediation. These results suggest that overdependent's direct relationship with OCB-I and counterdependent's relationship with deviance were both mediated by vigor, while overdependent's relationship with OCB-O was only partially mediated.

Although it is the most common method for testing mediation, researchers have pointed out shortcomings of the Baron and Kenny (1986) approach and recommend reporting estimates of the size of the indirect effect and statistical significance tests (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008; Shrout & Bolger, 2002). An assumption of statistical significance tests is that the data are normally distributed. However, indirect effects are likely skewed so the assumption of normality is often untenable (Preacher & Hayes, 2008). Thus, to provide more confidence in our mediation tests presented above, we derived estimates of the indirect effects, their standard errors, and the bias corrected and accelerated 95 per cent confidence intervals around the effects using a bootstrapping method (see Preacher and Hayes (2008) and Shrout and Bolger (2002) for this method of testing mediation). Previous work has used this approach (e.g., Edwards & Arthur, 2007; Schmeichel & Vohs, 2009; Wallace, Edwards, Shull, & Finch, 2009) and research demonstrates that

Table 5. Tests of vigor as a mediator of attachment styles and performance

Analysis/variable	β	<i>t</i> -test	R^2	β	<i>t</i> -test	R^2	β	<i>t</i> -test	R^2
Step 1: Attachment styles (distal predictors) to performance facets (outcomes)									
	OCB-I			OCB-O			Deviance		
Age	0.03	-0.01		0.01	-0.16		-0.19	-3.49**	
Conscientiousness	0.04	0.02		0.02	0.11		0.05	0.78	
Secure attachment	0.05	0.03		0.03	0.55		-0.08	-1.41	
Insecure-counterdependent attachment	-0.03	-0.01		-0.01	0.02		0.13	1.97*	
Insecure-overdependent attachment	-0.14	-0.22	.05	-0.22	-3.17*	0.05	0.05	0.72	0.07
Step 2: Attachment styles (distal predictors) to vigor (mediator)									
	Vigor								
Age	.03	0.52							
Conscientiousness	.14	2.41*							
Secure attachment	.19	3.65*							
Insecure-counterdependent attachment	-.15	-2.56*							
Insecure-overdependent attachment	-.23	-3.46*	.15						
Step 3 and 4: Vigor (mediator) to performance facets (outcomes) with attachments styles (distal predictors)									
	OCB-I			OCB-O			Deviance		
Age	0.02	0.40		-0.01	-0.23		-0.19	-3.49**	
Conscientiousness	0.08	1.26		0.02	0.22		0.03	0.44	
Secure attachment	0.01	0.02		0.01	0.05		-0.05	-0.85	
Insecure-counterdependent attachment	0.01	0.06		0.02	0.34		0.09	1.39	
Insecure-overdependent attachment	-0.09	-1.24		-0.19	-2.67*		0.02	0.31	
Vigor	0.25	4.38*	0.10	0.15	2.50*	0.07	-0.17	-2.77**	0.09

Note: $N = 331$; OCB-I = organizational citizenship behavior directed toward the individual;

OCB-O = organizational citizenship behavior directed toward the organization.

* $p < 0.05$; ** $p < 0.01$.

bootstrap methods are more powerful than traditional tests of mediation (Shrout & Bolger, 2002). We estimated 1000 bootstrap samples in which the independent variables were attachment styles, the mediator was vigor, and the dependent variables were OCB-Os, OCB-Is, and deviance while still controlling for conscientiousness and age. Consistent with Preacher and Hayes (2008), unstandardized effects are reported.

The direct relationship between secure attachment style and OCB-O was not significant when the mediator was in the model (direct effect = 0.01, $t = 0.05$, *ns*), nor was it with OCB-I (direct effect = 0.01, $t = 0.02$, *ns*) or deviance (direct effect = -0.02, $t = -0.85$, *ns*). The total indirect effect from secure attachment to OCB-O was significantly different from zero (indirect effect = 0.02, 95 per cent CI = 0.01 to 0.05) as it was for OCB-I (indirect effect = 0.03, 95 per cent CI = 0.01 to 0.06) and deviance (indirect effect = -0.03, 95 per cent CI = -0.03 to -0.01).

The direct relationship between overdependent attachment style and OCB-O was significant when the mediator was in the model (direct effect = -0.09, $t = -2.67$, $p < 0.05$). It was not significant with OCB-I (direct effect = -0.04, $t = -1.24$, *ns*) or deviance (direct effect = 0.01, $t = 0.31$, *ns*). The total

indirect effect from overdependent attachment to OCB-O was significantly different from zero (indirect effect = -0.02 , 95 per cent CI = -0.05 to -0.01) as it was for OCB-I (indirect effect = -0.03 , 95 per cent CI = -0.06 to -0.01) and deviance (indirect effect = 0.02 , 95 per cent CI = -0.01 to 0.03).

The direct relationship between counterdependent attachment style and OCB-O was not significant when the mediator was in the model (direct effect = -0.01 , $t = -0.33$, *ns*) nor was it significant with OCB-I (direct effect = -0.01 , $t = -0.06$, *ns*) or deviance (direct effect = 0.03 , $t = 1.39$, *ns*). The total indirect effect from counterdependent attachment to OCB-O was significantly different from zero (indirect effect = -0.02 , 95 per cent CI = -0.04 to -0.01) as it was for OCB-I (indirect effect = -0.02 , 95 per cent CI = -0.05 to -0.01) and deviance (indirect effect = 0.02 , 95 per cent CI = 0.01 to 0.03).

Discussion

An important component of effective discretionary work performance is the regulation of resources. This study has supported a model that demonstrates the influence of intrapersonal and interpersonal aspects of attachment styles with vigor at work. By integrating individual differences related to intrapersonal processes with a more malleable work-specific state, we have further supported not only the importance of attachment style in the workplace, but also the positive psychological state of vigor.

Theoretical and practical implications

Results indicate that the secure attachment relates to feeling vigorous at work and subsequent citizenship and deviance behaviors even when controlling for conscientiousness and age. Individuals with secure attachment styles reported greater vigor in terms of emotional energy, cognitive liveliness, and physical strength. Vigor, a positive state, translates into helping behaviors on the part of secure individuals, including such behaviors as helping others with heavy workloads, assisting the supervisor with his/her work, displaying above average attendance, and refraining from complaining about insignificant things. In addition, secure individuals, through their experience of vigor at work, tend to avoid committing deviant behaviors such as coming to work late or leaving early, or using sick time when they are not really sick. These results indicate that part of the relationship between secure attachment style and outcomes such as OCBs and deviance stems from the secure individual's positive experience of vigor in the workplace. In essence, feeling secure in their relationships frees up physical, emotional, and cognitive resources (energy) that they invest in positive outcomes (OCBs) and allows for the avoidance of counterproductive outcomes (deviance).

Counterdependence related negatively to vigor at work. Counterdependent individuals are more likely to work in isolation and are reluctant to ask for help when they need it. Furthermore, counterdependent individuals have been shown to repress and suppress negative emotions and avoid stimuli that deplete their own energy resources on a consistent basis, and therefore, they are less vigorous. They are less likely to expend the extra effort to engage in OCBs, and less likely to refrain from engaging in deviance.

Overdependence also significantly and negatively related to vigor at work. The hyperactivation of negative emotions, exacerbation of distress, and over-reliance on rumination (Mikulincer & Florian, 1998; Mikulincer & Orbach, 1995; Shaver et al., 1996) characteristics of overdependence leave few resources available to produce feelings of physical strength, emotional energy, and cognitive liveliness. Significant indirect effects but no direct effects were found in the relationship between overdependence

and deviance and OCB-I. Overdependent individuals engage in deviance behavior because they lack vigor. Despite their desire to be close to others, overdependent individuals' lack of vigor reduced the occurrence of helping behavior directed toward others.

Significant direct effects were found between overdependence and OCB-O. We suspect this is because overdependent individuals are overly focused on individual relationship issues and, thus, will be preoccupied with these relationships at the expense of organizational issues. This preoccupation with individual relationship issues, however, does not translate into helping behaviors as can be seen in the lack of a significant direct relationship between overdependence and OCB-Is. Overdependent individuals are inherently needy and are clinging to others. These individuals have a positive view of others and negative view of self and thus, we suspect that this clinginess is aimed at receiving help rather than giving it.

Despite the differences between overdependence and counterdependence, both reduce vigor. In terms of energy/resource management, both suppression and hyperactivation of negative emotions divert physical, emotional, and cognitive resources away from the individual and thus, individuals with either of the insecure styles experience less vigor. These findings highlight the importance of studying attachment style in its relation to self regulatory mechanisms and vigor in the workplace. The manner in which people view interpersonal relationships affects their regulatory processes and the physical, emotional, and cognitive resources they have available (i.e., how much vigor). Individuals who feel secure in their ability to meet goals use this confidence to feel positive and energetic and do not waste their valuable physical, emotional, and cognitive resources on hyperactivating negative emotions (overdependence) or suppressing negative emotions (counterdependence). This study found that attachment styles indirectly affect important behaviors in the workplace, shedding some light into the process (feeling vigorous) through which workplace behaviors are affected. Furthermore, the results indicate that even if securely attached individuals are a majority in work organizations (Simmons, et al, 2009), secure *and* insecure attachment styles are worthy of study because of their impact on workplace behavior.

From a theoretical perspective, these findings add substantially to previous literature in that they highlight the importance of vigor as an active, energized state affected by attachment style and having effects on important behaviors in the workplace. Specifically, this study adds to an understudied aspect of research on vigor by specifying antecedents to vigor in the workplace (attachment styles). Furthermore, this work built on past research which investigated the impact of secure attachment on psychological states (Simmons, et al, 2009) by investigating how insecure attachment styles impact psychological states at work. The study adds previously unstudied outcomes (OCBs and deviance) to the theory of vigor at work and provides support for incremental explanatory power of attachment styles over conscientiousness. The study also highlights the importance of broadening our investigation of attachment styles beyond their interpersonal implications. Attachment styles also influence individuals' intrapersonal processes with important relationships to outcomes at work.

From a practical perspective, this research underscores the importance of attachment style and vigor in the workplace and encourages supervisors, as attachment figures, to increase vigor by playing an active role in trying to revise their employees' internal working models of relationships when they possess insecure styles. Evidence suggests that therapeutic encounters between individuals and counselors can help in this regard (Hardy & Barkham, 1994; Lopez, 2003). Thus, attachment figures can provide protection and emotional security and may bring about variation in attachment orientations (La Guardia et al., 2000). Supervisors may help employees revise their internal models of work relationships by demonstrating secure behavior patterns and by being responsive to employees' needs for security and protection. Recent research has shown that security-enhancing interactions benefit insecure individuals in terms of mental health, prosocial behavior, and intergroup relations (Mikulincer & Shaver, 2007). Training managers to use security priming techniques with insecure followers could be quite effective in terms of increasing vigor at work and organizational citizenship behavior while

decreasing deviance. For secure individuals, supervisors should recognize, encourage, and reward behaviors indicative of this style such as working independently when appropriate and asking for help when needed. For insecure individuals, the supervisor should recognize that an employee lacks secure attachment and, therefore, know that his/her relationship with the employee is of critical importance because the employee may have few other physical, emotional, and cognitive resources to draw upon for remaining productive.

Limitations and future research

This research frames a rich field of study for further examination of both attachment styles and vigor in the workplace; however, it is not without its limitations. First, the data came from a single organization. Future research should investigate these variables in other organizations and industries. Furthermore, attachment styles and vigor came from the same source. We attempted to reduce the problems associated with same source bias by collecting these variables with a month-long time lag (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Our deviance measure was supervisor-reported organizational deviance. Future research should investigate the relationship between these processes and self-report measures of deviance as well as interpersonal deviance.

Additionally, all study variables have positive or negative implications that raise the concern of social desirability. However, we did analyze the larger data set, including constructs not introduced in this study's model, and found that not all positive variables correlated nor did all negative variables correlate. Due to utilizing several supervisors for employee reports of OCBs, there is a chance of non-independence in the OCB and deviance data; the ICCs suggest independence. Additionally, based on the notion that simply because states can change does not mean they do change (Vandewalle, 1997; Wallace & Chen, 2006) and evidence indicates that vigor at work can be fairly stable given stable antecedents (Shirom et al., 2008), we represent vigor as a predictor of workplace behavior. Future research should further investigate the stability of vigor given both stable and changing contextual antecedents. Furthermore, while we controlled for conscientiousness in our primary analyses and general self-efficacy and positive affect in our pilot study, these should be considered a few of several potential constructs that should be examined (e.g., neuroticism, extra-version) to further demonstrate the differential validity of attachment styles and vigor on important organizational outcomes. Practitioners should note the rather small effect sizes found in the indirect relationships and take care not to "over-interpret" the results.

Our paper helps set a course to further understand how employees experience vigor at work, but it does not specify the conditions in which employees experience vigor. Future research should investigate managers' abilities to influence vigor at work (through leadership behaviors, abusive supervision, or a group climate for involvement) as well as the ways in which this influence might affect the relationships between attachment and extra-role behavior. For example, justice may be a factor; secure individuals who feel they have been treated unfairly may feel vigorous, might engage in deviance due to perceived mistreatment. Further investigation of the direct effects of attachment styles on these outcomes may also be needed. Researchers could then turn to specifying the internal processes that allow secure individuals to feel vigorous at work and prevent issues that might reduce the relationship between vigor and OCBs. Additionally, future research should investigate job context as a moderator. The frequency and quality of social interactions experienced on the job may impact these relationships. Insecure individuals, for example, may find quality relationships in the workplace reduce the negative relationship between the insecure styles and vigor.

Motives are also missing from our current model. Vigor might interact with various motives (i.e., social exchange) to impact discretionary behavior. For example, individuals may want to reciprocate favorable treatment (engage in OCBs), but, due a lack of vigor, they may not have enough energy to do

so. Future studies should investigate motives and contextual factors within this context. Along these lines, future research should investigate employees' views of organizational citizenship behavior. In this paper and consistent with previous research (i.e., Bateman & Organ, 1983), we investigated behaviors directed at helping individuals and the organization and proposed that vigor would drive this relationship because individuals were compelled to maintain their positive feelings as well as reduce the social distance between themselves and others. We did not, however, address whether or not the employee viewed these behaviors as explicitly extra-role, or if instead they were viewed as part of the job description. Recent research has indicated that some employees do indeed view these behaviors as in-role behaviors (McAllister, Kamdar, Morrison, & Turban, 2007; Morrison, 1994; Tepper, Lockhart & Hoobler, 2001; Tepper & Taylor, 2003). Investigating whether this belief impacted this relationship may be interesting. Future research should also investigate whether or not these processes relate to in-role performance in a similar manner.

Future efforts could better serve our understanding of vigor at work by examining its relationship with additional psychological states and processes (e.g., emotional labor, task focus, regulatory focus) and behavioral outcomes at work (in-role performance, health, stress) as well as additional antecedents. Furthermore, better understanding the antecedents and consequences of each of the dimensions of vigor may help managers facilitate vigorous environments as well as understand how to reap the most from its positive consequences. Studies that simultaneously investigate the interpersonal and intrapersonal aspects of attachment styles at work are also needed.

Conclusion

This study investigated attachment style from an intrapersonal perspective and demonstrated its impact on vigor and subsequently on positive and negative workplace behaviors. Results indicated that secure individuals feel more vigorous at work whereas counterdependent individuals feel less vigorous. Vigor in turn has a positive impact on OCBs and negative impact on deviance. These results also shed light on how managers can encourage organizational citizenship behavior and discourage deviance in the workplace.

Author biographies

Laura M. Little, Ph.D., is an Assistant Professor of Management in the Terry College of Business at the University of Georgia. Her research interests focus on emotion regulation and identity management in the work place. She received her Ph.D. from Oklahoma State University.

Debra L. Nelson, Ph.D., is the SSB Associates' Distinguished Professor of Management at Oklahoma State University. Her research interests include identity in organizations, positive organizational behavior, and work stress.

J. Craig Wallace Ph.D. is an Associate Professor and Brattain Professor of Management in the Spears School of Business at Oklahoma State University. His research interests revolves around predicting, explaining, and enhancing multiple aspects of effectiveness at the individual and group levels by integrating individual level theories of personality, motivation, and emotion with higher-level organizational constructs (e.g., climate). He received his PhD from Georgia Tech in I/O Psychology.

Paul D. Johnson, Ph.D., will be an Assistant Professor of Management at Western Carolina University in the Department of Global Management & Strategy starting in the Fall of 2010. His research focuses on a multilevel framework integrating motivation processes, innovation, creativity, performance

management, employee empowerment, and entrepreneurial psychology. He received his Ph.D. from Oklahoma State University.

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