

The relationship between perceived training and development and employee retention: the mediating role of work attitudes

This paper considers how utilizing a model of job-related affect can be used to explain the processes through which perceived training and development influence employee retention. We applied Russell's model of core affect to categorize four different forms of work attitude, and positioned these as mediators of the relationship between perceived training and development and intention to stay. Using data from 1,191 employees across seven organizations, multilevel analyses found that job satisfaction, employee engagement, and change-related anxiety were significantly associated with intention to stay, and were mediators of the relationship between perceived training and development and intention to stay. Contrary to our hypotheses, emotional exhaustion was not significantly associated with intention to stay nor acted as a mediator when the other attitudes were included. These findings show the usefulness of Russell's model of core affect in explaining the link between training and development and employee retention. Moreover, it suggests that studies examining employee retention should include a wider range of work attitudes that highlight pleasant forms of affect that induce motivational rather than impairment prevention effects.

Keywords: employee retention, perceived training and development, job-related affect, multilevel analysis, work attitudes

Introduction

Training and development (T&D) is a systematic approach to developing and enhancing employee skills, abilities and knowledge for the purpose of increasing organizational effectiveness (Aguinus and Kraiger, 2009). As an overarching HR practice it is often considered, and evidenced, to be a broad collection of activities that refer to continual learning and development of general job- and career-related skills (e.g. Boon, den Hartog, Boselie, and Paauwe, 2011). Previous research demonstrates that perceived T&D is associated with higher levels of retention

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3 (Aguinus and Kraiger, 2009), as T&D strengthens the social exchange relationship
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5 between the employee and their employer (Dysvik and Kuvaas, 2008).
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8 More recently, researchers have become interested in understanding the exact
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10 mechanisms that underlie this relationship (e.g. Koster, de Grip and Fourage, 2011). For
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12 example, Koster et al (2011) demonstrated that job satisfaction partially mediated the
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14 relationship between perceived support in employee development and intention to quit.
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16 In contrast, Dysvik and Kuvaas (2008) showed that intrinsic motivation partially
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18 mediated the relationship between perceived T&D and turnover intention.
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21 While these studies have enhanced our understanding of how T&D is related to
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23 retention, exploring mediators individually is problematic for two reasons. Firstly, it
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25 encourages researchers to add potential mediators into the literature with little
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27 consideration of how they are differentiated from others. Therefore, there may be a
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29 number that overlap conceptually, which makes it difficult to clarify the exact processes
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31 through which perceived T&D influences employee retention. Secondly, examining
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33 mediators in isolation limits the degree to which we can be sure that the mediator is
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35 practically important. Some may overpower others, or have specific effects, and so it is
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37 crucial to include a comprehensive range of potential mediators within analyses in order
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39 to untangle the mechanism through which perceived T&D influences retention. The
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41 present study attempts to address these issues by applying and testing a model of job-
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43 related affect that we propose mediates the relationship between perceived T&D and
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45 intention to stay. We seek to contribute to the literature on T&D in at least two ways.
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50 First, we introduce Russell's (1980) model of core affect as a suitable framework
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52 for identifying a 'full' range of work attitudes that are associated with both T&D and
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54 employee retention. Although a multitude of work attitudes have been identified within
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56 the literature, there is no overarching framework that organizes them according to their
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3 affective properties. We propose that work attitudes can be categorized into four groups
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5 based on the quadrants of Russell's (1980) model. More specifically, we identify that the
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7 work attitudes of job satisfaction, emotional exhaustion, employee engagement and
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9 change-related anxiety each occupy a specific quadrant.
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12 Second, we apply this framework to better understand the cognitive-affective
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14 pathways through which perceived T&D impact on intentions to stay. Researchers have
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16 begun to integrate cognitive and affective theories to better understand the processes
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18 through which perceptions of the work and organizational environment lead to attitudinal
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20 and behavioural outcomes (e.g. Colquitt et al, 2013). This is because individuals appraise
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22 events cognitively as well as emotionally (Weiss and Cropanzano, 1996), hence, an
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24 integrated perspective is needed in order to fully understand the processes that link
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26 perceptions of the organizational environment, such as T&D, with important employee
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28 outcomes, such as retention. The present paper integrates Russell's (1980) affect-based
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30 model with the job demands-resources model (JD-R; Demerouti, Bakker, Nachreiner and
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32 Schaufeli, 2001; Bakker and Demerouti, 2008) to suggest that employees will cognitively
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34 evaluate the degree to which T&D has influenced the job demands and resources present
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36 in the work environment, and will emotionally respond to having received T&D within
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38 their organization. We also contribute to practice because clarifying these pathways will
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40 help practitioners enhance their T&D initiatives to facilitate employee retention, and will
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42 provide insight that will strengthen the business case for investing in training and
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44 development.
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50 In sum, this study builds and tests a mediation model that links perceived T&D to
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52 intention to stay via cognitive-affective processes. We propose that the work attitudes of
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54 job satisfaction, emotional exhaustion, employee engagement, and change-related
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56 anxiety represent different forms of job-related affect, and are mediators of the perceived
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3 T&D-intention to stay relationship (as represented by figure 1). We test our hypotheses
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5 on a multilevel dataset representing 1,191 employees from seven organizations.
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8 INSERT FIGURE 1 HERE
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10 11 *The link between perceived T&D and intention to stay* 12

13 There is a need to differentiate between levels of analysis when examining the impact of
14 HR practices on employee outcomes, such as employee retention (Wright and Boswell,
15 2002; Wright and Nishii, 2007). Intended practices, as developed by the HR department,
16 capture an organization's strategic HRM intentions. They are typically interpreted by
17 various line managers, who implement these HR practices in their day to day work with
18 employees. Employees perceive and react to these HR practices in different ways
19 depending on a range of factors such as past experiences and attributions that they each
20 make about the reasons why management have enacted them (Nishii, Lepak and
21 Schneider, 2008). The present study focuses on perceived T&D as it is these individual-
22 level perceptions of an HR practice that have the most significant and influential effect
23 on employee attitudes and behaviours (Guest, 2002).
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38 In the present study we use social exchange theory (Blau, 1964) to explain the
39 link between perceived T&D and retention. According to social exchange theory the
40 relationship between the employer and the employee is based on implicit obligations,
41 trust and an exchange of resources. If employees perceive that they are receiving
42 valuable resources from the organization they are more likely to repay the organization in
43 kind due to feelings of obligation and social norms to reciprocate. One way to do so is to
44 stay with the employer (Shore, Coyle-Shapiro, Chen and Tetrick, 2009).
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53 T&D can be seen as a mechanism through which the employer and employee can
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55 opportunities to acquire and develop valuable resources in the form of skills, abilities and
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3 knowledge (Koster et al, 2011). Thus, it represents a crucial way to increase employee
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5 retention as it elicits strong obligations, within the employee, to repay the organization
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7 for investing in their personal and career development (Lee and Bruvold, 2003). Indeed,
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9 it has been found that perceived T&D is negatively associated with turnover intentions
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11 (Dysvik and Kuvaas, 2008), and positively associated with intentions to stay (Newton,
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13 Becker and Bell, 2014).

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17 *Hypothesis 1: Perceived T&D will be positively associated with intention to stay.*

18 19 20 ***Russell's model of core affect and its application to work attitudes***

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22 The differentiation between work attitudes has been debated for many years, with
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24 evidence, on one hand, indicating that some attitudes may be better conceptualised as a
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26 unified general factor (e.g. Harrison, Newman and Roth, 2006) and evidence, on the
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28 other, suggesting that although many work attitudes are related to one another, they are
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30 separate and distinct constructs with different foci and effects (e.g. Tett and Meyer,
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32 1993). Although this debate is still ongoing, the majority of research on work attitudes
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34 treats them as independent and distinct constructs. Therefore, being able to organize
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36 work attitudes in a systematic way is important because it not only ensures differentiation
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38 and distinction between them, but also integrates them into a unified framework. In other
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40 words, it enables greater precision of prediction and enhances our understanding of the
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42 different properties and mechanisms of a range of attitudes.
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47 Inherent in definitions of many work attitudes, such as job satisfaction, is the
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49 positioning of affect as a fundamental property (Warr, Bindl, Parker and Inceoglu, 2014).
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51 Affects are "primitive, universal, and simple, irreducible on the mental plane" (Russell,
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53 2003, p.148) and refer to a wide range of emotions, moods and feelings that can be
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55 organized along two dimensions: pleasure - signifying pleasant affect at one end and
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57 unpleasant affect at the other (i.e. affective valence); and arousal – representing activated
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3 affect at one end and deactivated affect at the other (i.e. readiness for action/expending
4 energy). Russell (1980) combined these two dimensions to form a model of 'core affect' -
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6 neurophysiological states that are conscious and non-reflective. The model identifies four
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8 main forms of core affect, specified by the quadrants made by the intersecting pleasure
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10 (horizontal plane) and arousal (vertical plane) dimensions. The pleasant, activated
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12 quadrant refers to feelings such as enthusiasm and excitement; the pleasant, deactivated
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14 quadrant signifies feelings of contentment and calmness; the unpleasant, deactivated
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16 denotes feelings of dejection and boredom; and the unpleasant, activated indicates
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18 feelings of tension and anxiety.
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23 Researchers have increasingly used this model to categorize affect based
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25 responses (Bakker, Albrecht and Leiter, 2011; Schaufeli, 2013; Warr et al, 2014), and
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27 argue that although work attitudes are related to one another, they are distinct enough to
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29 represent specific forms of attitude that can be differentiated by their affective properties.
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31 In the present paper we follow this argumentation and take Russell's (1980) model as a
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33 starting point to understand the attitudinal outcomes of T&D. In line with Bakker et al
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35 (2011) and Schaufeli (2013) we position emotional exhaustion within the unpleasant,
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37 deactivated quadrant; job satisfaction within the pleasant, deactivated quadrant; and
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39 employee engagement within the pleasant, activated quadrant. Furthermore, we argue
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41 that the affective underpinnings of change-related anxiety align with those of the
42
43 unpleasant, activated quadrant. Emotional exhaustion is a core facet of burnout and
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45 reflects a passive withdrawal from the job role that reduces the employee's capabilities of
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47 maintaining a sense of emotional involvement in their work (Maslach, Schaufeli and
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49 Leiter, 2001). Job satisfaction is a positive state that elicits moderate-to-low arousal
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51 because it relates to the individual feeling that their job provides an acceptable level of
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53 what is desired (Locke, 1976). Employee engagement is a positive and activated attitude
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3 because it reflects a sense of high arousal, energy and involvement with one's work
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5 (Parker and Griffin, 2011). Change-related anxiety can be seen as a specific form of job
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7 anxiety because the individual feels uncertainty about the nature and impact of impending
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9 changes, as well as a constant drive to work hard in order to adapt to such changes. These
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11 experiences cause anxiety and worry and so such feelings reflect "an emotional state of
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13 perceived apprehension and increased arousal" (Jensen, Patel and Messersmith, 2013,
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15 p.1703).
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19 In sum, we propose that the work attitudes of job satisfaction, emotional
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21 exhaustion, employee engagement and change-related anxiety reflect different forms of
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23 job-related affect. Thus, they represent distinct, yet related conceptual spaces (see figure
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25 2), that help to categorize and explain the mediation pathways of the relationship
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27 between T&D and intent to stay. In the following sections we derive our hypotheses.
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INSERT FIGURE 2 HERE

Job satisfaction

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36 Job satisfaction is defined as a positive evaluation of one's job that results from
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38 perceiving that one's actual job outcomes are commensurate with the outcomes one
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40 desires (Schleicher, Hansen and Fox, 2010). Job satisfaction has long been viewed as a
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42 causal factor that promotes intentions to stay with the organization because it is a
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44 pleasant psychological state; the individual feels content with the work that they do and
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46 the job role they perform (Locke, 1976). Therefore, satisfied employees are motivated to
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48 sustain these positive experiences by continuing to participate in social exchanges
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50 between themselves and the organization, which further reinforces their intentions to stay
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52 with the organization (Koster et al, 2011). Indeed, meta-analytic evidence has
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54 demonstrated that those who are satisfied at work are more likely to want to stay rather
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56 than leave (Griffeth, Hom and Gaertner, 2000).
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Hypothesis 2: Job satisfaction will be positively associated with intention to stay.

Emotional exhaustion

Emotional exhaustion is a core dimension of job burnout - "a (negative) psychological syndrome in response to chronic interpersonal stressors on the job" (Maslach et al, 2001, p.399). It refers to being drained and depleted of emotional energy, and is associated with feeling flat and empty; where work is no longer a source of energy or inspiration (Maslach and Jackson, 1981). Therefore, individuals who experience high levels of emotional exhaustion find it difficult to psychologically connect with their environment (Demerouti et al, 2001). As a result, these individuals will lack the motivation and desire to maintain their involvement in their work activities, which results in lower intentions to stay with the current organization (Maslach et al, 2001). A meta-analysis by Alarcon (2011) demonstrates that individuals who experience high levels of emotional exhaustion are less inclined to stay than those who experience low levels of emotional exhaustion.

Hypothesis 3: Emotional exhaustion will be negatively associated with intention to stay.

Employee engagement

Employee engagement can be defined as "a positive attitude held by the employee toward the organization and its values. An engaged employee is aware of business context, and works with employees to improve performance" (Robinson, Perryman and Hayday, 2004, p.4). This definition has been used in additional qualitative research by Jenkins and Delbridge (2013). Engaged employees will feel strongly affiliated to the organization because they perceive their work to be meaningful and fulfilling (Saks, 2006). Therefore, employees who are highly engaged will be more likely to stay with the organization than those who exhibit low levels of engagement because they have a strong personal connection with the organization via their work role. This connection is a

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3 powerful signal to the employee that there is a mutually beneficial relationship between
4 themselves and their employer, which should be maintained by staying with the
5 organization (Saks, 2006). Empirical studies show support for this proposition (e.g.
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10 Juhdi, Pa'wan and Hansaram, 2013).

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13 *Hypothesis 4:* Employee engagement will be positively associated with intention to stay.

14 15 ***Change-related anxiety***

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18 Change-related anxiety is an emotional state that refers to feeling overwhelmed by
19 changes occurring within the work environment, and may reflect similar psychological
20 responses as work intensity (cf Berneth, Walker and Harris, 2011; Burke, Singh and
21 Fiksenbaum, 2010). Drawing on the related and broader construct of job anxiety, we
22 propose that change-related anxiety will be negatively associated with intention to stay.
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29 When employees experience such a negative, yet arousing emotional state, they are
30 unable to replenish the energies needed to sustain healthy functioning and so they must
31 withdraw themselves in order to conserve their resources (Hobfoll, 1989). An initial
32 action that an employee can take to conserve resources is to cognitively withdraw from
33 their organization, i.e. reduced intention to stay. Indeed, studies have found that job
34 anxiety is positively related to turnover intentions (e.g. Jensen et al, 2013).
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44 *Hypothesis 5:* Change-related anxiety will be negatively associated with intention to
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46 stay.
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49 50 ***The mediating role of work attitudes in the relationship between perceived 51 training and turnover intentions***

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53 The relationship between T&D and turnover intentions is not direct, but rather it is
54 mediated by the attitudes that employees hold of work and the working environment
55 (Guest, 2002). In this paper, we have applied Russell's (1980) model of core affect to
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3 organize potential mediating attitudes according to their affective properties. The
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5 theoretical propositions of the JD-R model (Demerouti et al, 2001; Bakker and
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7 Demerouti, 2008) may help us to understand how these different attitudes mediate the
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9 relationship between perceived T&D and intention to stay. The JD-R proposes that the
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11 work context can influence attitudes and behaviours through two processes: the first is an
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13 impairment pathway where job-related demands impair the employee's ability to
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15 maintain high levels of performance and wellbeing; whereas the second is a motivational
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17 pathway where job-related resources promote the employee's ability to sustain high(er)
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19 levels of performance and wellbeing (Demerouti et al, 2001; Bakker and Demerouti,
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21 2008). We apply this dual pathway alongside Russell's (1980) model of core affect to
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23 explain how perceived T&D is associated with different forms of job-related affect, thus
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25 identifying the intermediary processes that link perceived T&D with intention to stay.
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30 Firstly, perceived T&D acts to prevent the impairment pathway because T&D
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32 opportunities provide the individual with the technical skills and abilities as well as the
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34 psychological resources needed to deal with various demands of the job (Aguinis and
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36 Kraiger, 2009). Evidence has shown that, as a result, the employee will feel reduced
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38 levels of emotional exhaustion because they are better able to cope with the demands of
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40 their job role (Xanthopoulou et al, 2007), and will feel lower levels of change-related
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42 anxiety because building psychological resources helps employees to be better able to
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44 adapt to changes in the work environment and maintain positive morale and performance
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46 in the face of uncertainty, which further increases retention (Avey, Reichard, Luthans
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48 and Mhatre, 2011).
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53 *Hypothesis 6a:* Emotional exhaustion will mediate the relationship between perceived
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55 T&D and intention to stay.
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3 *Hypothesis 6b:* Change-related anxiety will mediate the relationship between perceived
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5 T&D and intention to stay.
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9 Secondly, perceived T&D, as a form of job resource, enables the individual to
10 meet both their extrinsic (e.g. performance goals) and intrinsic (e.g. personal growth)
11 motivational needs (Bakker and Demerouti, 2008). As a result they are more satisfied
12 with their job, and in turn are happy to stay with the organization, as the organization has
13 fulfilled their obligation to provide adequate resources and skills needed to perform
14 activities that can lead to the fulfilment of extrinsic needs (Lee and Bruvold, 2003).
15 Moreover, the employee will feel more engaged because facilitating the fulfilment of
16 intrinsic motivational needs elicits pleasant, activated feelings, such as enthusiasm, that
17 energise the employee to become more involved in their work, and as such will
18 strengthen their intention to stay with the organization (Parker and Griffin, 2011).
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31 *Hypothesis 6c:* Job satisfaction will mediate the relationship between perceived T&D and
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33 intention to stay.
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37 *Hypothesis 6d:* Employee engagement will mediate the relationship between perceived
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39 T&D and intention to stay.
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42 In summary, we propose that perceived T&D will be positively associated with
43 intention to stay, and that this relationship will be mediated by four different forms of
44 work attitude based on Russell's (1980) model of affect; namely job satisfaction,
45 emotional exhaustion, employee engagement and change-related anxiety (see figure 2).
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51 **Method**

52 ***Sample Characteristics***

53 A total of 1,809 employees from seven organizations based in the UK received the IES
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55 employee engagement survey between 2008 and 2012. The data was collected via a
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number of commissioned research projects on the employment relationship that IES undertook within this timeframe. Each organizational sample had data collected at one point in time within the five year timeframe, and approximately one to two samples were collected per year. This research design is in line with other research studies that have focused on gaining a large dataset from multiple organizations (Harter, Schmidt and Hayes, 2002; Langford, 2009; MacCormick and Parker, 2010). We decided to use the full sample rather than focus on the most recent sub-sample in order to gain a large sample size and to achieve maximum power. Responses were received from 1,191 employees, constituting a 65.8% response rate. 52% of respondents were female; the median age category was 30-39 years. Responses ranged from 26 to 399 employees for each organization (median = 88 employees). A summary of the organizations is given in table 1, where it shows that there was substantial variation between the organizations with regard to workforce composition and the diversity of sectors being represented.

INSERT TABLE 1 HERE

Measures

All measures that follow, unless otherwise stated, use a 5-point Likert scale (strongly agree, agree, neither agree/disagree, disagree, strongly disagree) and were taken from the IES employee engagement survey (Robinson, Hooker and Hayday, 2007).

The IES employee engagement survey was initially designed in 2004 (Robinson et al, 2004) and was consolidated in 2007 (Robinson et al, 2007). It is an evidence-based employee attitudes questionnaire that is grounded from the literature on the employment relationship. It is used primarily by organizations who want to understand the perceptions and attitudes of their employees so that they can better design their internal HRM strategies and initiatives. Therefore, it provides an opportunity to gain data from a wide range of organizations. The questionnaire is usually administered as a one-off or annually, and has been used by over 20 organizations since 2004 (although only 7 have

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3 agreed for their data to be used for research purposes). To assess the validity of the IES
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5 questionnaire, we collected additional data to compare the psychometric properties of the
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7 IES scales to alternative published scales¹. All items for the measures in the present study
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9 are included in Appendix 1.
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11 *Perceived T&D*

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13 A 3-item perceived T&D scale was taken from the IES employee engagement survey
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15 (Robinson et al, 2007). An example item is 'I am encouraged to develop new skills'.
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17 Inter-item reliability was $\alpha = .82$.
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20 *Job Satisfaction:*

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22 A 3-item job satisfaction scale was taken from the IES employee engagement survey
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24 (Robinson et al, 2007). An example item is 'Overall, I am satisfied with my job'. Inter-
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26 item reliability was $\alpha = .91$.
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30 *Emotional Exhaustion:*

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32 A 3-item emotional exhaustion scale was taken from the IES employee engagement
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34 survey (Robinson et al, 2007). An example item is 'I have felt emotionally drained by my
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36 work'. Inter-item reliability was $\alpha = .91$.
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40 *Employee Engagement:*

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42 The IES 12-item measure of employee engagement (Robinson et al, 2007) was used. The
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44 measure covers the following content: a) pride in the organization (e.g. 'I speak highly of
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46 this organization to my friends'); b) belief that the organization provides good
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48 products/services and enables the employee to perform well (e.g. 'I would be happy to
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50 recommend this organization's products/services to my friends and family'); c) a
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55 ¹ This results from these additional analyses are available from the first author upon request.
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3 willingness to behave altruistically and go beyond what is required (e.g. 'I try to help
4 others in this organization whenever I can'); and d) an understanding of the 'bigger
5 picture' (e.g. 'I find that my values and the organization's are very similar'). Inter-item
6 reliability was $\alpha = .85$.

11 *Change-related Anxiety*

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13 A 3-item change-related anxiety scale was taken from the IES employee engagement
14 survey (Robinson et al, 2007). An example item is 'I sometimes feel overwhelmed by the
15 pace of change here'. Inter-item reliability was $\alpha = .80$.

20 *Intention to stay:*

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22 A single item measured the employee's intentions to stay at their current organization:
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24 'Which of the following statements most reflect your current intentions? 1- Plan to leave
25 as soon as possible, 2- Likely to leave within the next year, 3- Likely to stay for at least
26 another year, 4- Plan to stay for the foreseeable future'. Single item scales measuring
27 turnover intentions (positive or negative valence) have been used in a number of
28 academic studies (e.g. Ng and Butts, 2009), and, in general, single item scales have been
29 found to have good reliability and face validity (Bergkvist and Rossiter, 2007).

36 *Control variables:*

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38 Gender (0=male, 1= female), age (1= <30 years, 2= 30-39 years, 3= 40-49 years, 4= 50+
39 years), tenure (1= < 1 year, 2 = 1- 3years, 3 = 4- 7 years, 4= 7+ years) and management
40 responsibility (0 = no, 1= yes) were included as control variables. These variables are
41 controlled for because studies that examine employee retention or perceived HR
42 practices have demonstrated that they are associated with such intentions and perceptions
43 (e.g. Dysvik and Kuvaas, 2008; Koster et al, 2011).

50 *Data Analysis*

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52 Due to the data being collected from a single source only, there is a need to consider
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3 common method bias and discriminant validity (Podsakoff, MacKenzie, Lee and
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5 Podsakoff, 2003). To control for the influence of common method bias and to determine
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7 how the model fitted the data, a confirmatory factor analysis (CFA) was conducted. Four
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9 fit indices were calculated: Chi-square goodness of fit (χ^2), comparative fit index (CFI),
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11 root mean square error of approximation (RMSEA) and standardised root mean square
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13 residual (SRMR). CFI should be equal or greater than 0.90; RMSEA and SRMR should
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15 be 0.08 or less (Hu and Bentler 1998; Podsakoff et al, 2003). The CFA found that the six
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17 latent constructs (i.e. T&D, job satisfaction, emotional exhaustion, change-related
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19 anxiety, employee engagement, intention to stay) were distinct factors as the model had a
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21 reasonable fit: $\chi^2(261) = 2179.20, p < 0.001$; RMSEA = 0.08, CFI = 0.85, SRMR = 0.08.
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25 To further test for common method variance, we conducted Harman's single
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27 factor test, which involves a CFA where all variables are allowed to load onto one
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29 general factor. The one-factor model was a poorer fit than the six-factor model ($\Delta\chi^2(14)$
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31 = 5405.80, $p < 0.001$) and did not fit the data well: $\chi^2(275) = 7585.00, p < 0.001$;
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33 RMSEA= 0.16, CFI = 0.43, SRMR = 0.14. In addition, alternative nested models were
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35 tested to ensure that no other (more parsimonious) alternatives were suitable. Table 2
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37 shows that these models did not fit the data better than the hypothesised six-factor model.
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39 Hence, we can conclude that common method bias does not cause major concerns in the
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41 present study.
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49 As the survey was conducted across seven organizations, the data can be considered as
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51 being hierarchically structured around two levels: the individual employee ($N = 1,191$)
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53 and the organization ($k = 7$). Multilevel modelling (MLM) enables regression analyses to
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55 be conducted whilst taking into account these hierarchical structures (Snijders and
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57 Bosker, 2012).
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To determine the amount of variance that was attributed to the different levels of analysis, the intraclass correlation for each of the first-level variables was calculated (Snijders and Bosker, 2012). For the dependent variable (DV) 18% of variance was attributed to the between-organizations level; with the predictor variables ranging from 2% to 17%. Overall these suggest that MLM is warranted as 10% or more variance of the DV was attributed to the between-groups level (Snijders and Bosker, 2012).

MLM was conducted using the mixed linear model function in SPSS version 18 (SPSS, 2009). Random intercept models were tested, IGLS estimation was used, and predictor variables were centred on the grand mean; based on the recommendations by Snijders and Bosker (2012). Tests for mediation effects adopted the Monte Carlo Method for Assessing Mediation (MCMAM; Selig and Preacher, 2008).

Findings

Table 3 presents the Cronbach's Alpha, the mean and standard deviation for each scale, and inter-scale correlations for all latent variables in the study. The inter-scale correlations show the expected direction of association and are all significant at the $p < 0.001$ level, except one which is at the $p < 0.01$ level.

INSERT TABLE 3 HERE

The results of the MLM analyses are presented in table 4. The null model, without any predictor variables, was first conducted to ascertain the baseline $-2 \cdot \log$ likelihood ($-2 \cdot \log$) and variance figures.

The second model tested the effects of the control variables on intention to stay. This model was a better fit than the null model $\Delta -2 \cdot \log = 55.27, p < 0.001$. Women ($\gamma = 0.15, p < 0.05$) and older workers ($\gamma = 0.17, p < 0.001$) were, on average, more likely to stay with the organization than males and younger employees. Tenure ($\gamma = 0.06, p >$

0.05) and management responsibility ($\gamma = 0.06, p > 0.05$) were not significantly associated with intention to stay. However, tenure became a significant predictor in the subsequent models; those with long lengths of service were, on average, more likely to stay with the organization than those with short lengths of service.

The third model tested the effects of perceived T&D on intention to stay. This model was a better fit than the control model: $\Delta-2*\log = 68.72, p < 0.001$. Perceived T&D ($\gamma = 0.29, p < 0.001$) was positively associated with intention to stay. Therefore, hypothesis 1 was supported and the first condition (of four) needed for mediation was met, i.e. the predictor should be significantly associated with the dependent variable (Baron and Kenny, 1986). Table 5 shows that perceived T&D was significantly associated with each of the work attitudes, thus meeting the second condition of mediation, i.e. the predictors are correlated with the mediator (Baron and Kenny, 1986).

The fourth model in Table 4 tested the effects of the four work attitudes on intention to stay. This model was a better fit than the control model $\Delta-2*\log = 216.56, p < 0.001$. Job satisfaction ($\gamma = 0.30, p < 0.001$), and employee engagement ($\gamma = 0.29, p < 0.001$) were significantly and positively associated with intention to stay. Change-related anxiety was significantly and negatively associated with intention to stay ($\gamma = -0.11, p < 0.001$). Therefore, hypotheses 2, 4 and 5 were fully supported, meeting the third condition needed for mediation, i.e. the mediators should be significantly associated with the dependent variable (Baron and Kenny, 1986). However, emotional exhaustion was not significantly related with intention to stay ($\gamma = 0.01, p > 0.05$), thus hypothesis 3 was not supported, and as a result hypothesis 6a (mediation) was also not supported.

The fifth model tested the effects of the work attitudes on intention to stay, whilst taking into account the effects of perceived T&D. This model was a better fit than the control model $\Delta-2*\log = 166.18, p < 0.001$. The association between perceived T&D and

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3 intention to stay became non-significant ($\gamma = 0.07, p > 0.05$), whereas the associations
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5 between the work attitudes and intention to stay remained at similarly significant levels
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7 to model 4, i.e. fulfilling the fourth condition of mediation (Baron and Kenny, 1986).
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10 To ascertain whether these indirect effects were significant, MCMAM tests were
11 performed (Selig and Preacher, 2008). MCMAM is a repeated simulation (20,000
12 repetitions) of $a*b$ and the assumption is that in the case of no mediation effect, $a*b$
13 would be zero, i.e. mediation should be accepted if the 95% confidence interval of the
14 indirect effect does not contain zero. The a and SE of a were taken from table 5; and the
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To ascertain whether these indirect effects were significant, MCMAM tests were performed (Selig and Preacher, 2008). MCMAM is a repeated simulation (20,000 repetitions) of $a*b$ and the assumption is that in the case of no mediation effect, $a*b$ would be zero, i.e. mediation should be accepted if the 95% confidence interval of the indirect effect does not contain zero. The a and SE of a were taken from table 5; and the b and SE of b were taken from model five in table 4 for each mediation test. As table 6 shows, three work attitudes were found to mediate the relationship between perceived T&D and intention to leave: job satisfaction - $ab = 0.11$; employee engagement - $ab = 0.07$; and change-related anxiety- $ab = 0.01$. The effect sizes (calculated as the 'completely standardized indirect effect' described by Preacher and Kelley, 2011) indicated that the indirect effects were small (Cohen, 1988). The strongest mediator was job satisfaction (effect size = 0.08), followed by employee engagement (effect size = 0.05), with change-related anxiety as the weakest (effect size = 0.01). Overall, these results confirm Hypotheses 6b, 6c and 6d.

To ascertain whether any of the significant mediators were just as powerful when considered singularly, the multilevel analysis was re-run for the fifth model. The relationship between perceived T&D and intention to stay remained significant, although reduced, for all of the mediators when each was considered alone. All other independent variable - dependent variable relationships in the model remained the same. This indicates that the full mediation found in the initial fifth model were due to including a range of attitudes based on Russell's (1980; 2003) model of core affect.

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INSERT TABLE 5 HERE

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Discussion

Our study demonstrates that Russell's (1980) model is a useful way of differentiating various work attitudes, and their potential strength of influence on outcomes, and complements other studies that have utilized an affect-based perspective to understand attitudes (e.g. Colquitt et al, 2013). Based on Russell's model, we proposed that work attitudes can be categorized into four main groups: those that are unpleasant and low in activation, those that are unpleasant and high in activation, those that are pleasant and low in activation, and those that are pleasant and high in activation. Additionally, we found that these categories of work attitudes each exerted a different strength of mediation on the relationship between perceived T&D and intent to stay. Our findings contribute to HRM research and theory in different ways.

First, our study demonstrates that the relationship between perceived T&D and intention to stay is mediated by different forms of work attitude. We found that job satisfaction and employee engagement, and to some degree (and negatively) change-related anxiety mediated the relationship between perceived T&D and intention to stay. Contrary to our predictions, emotional exhaustion was not a mediator. This is one of the first studies to examine a range of mediators in one model of employee retention using an integrated framework of job affect. The results show that different work attitudes exert different effects on employee retention. Hence, future research exploring the mediated link between HR practices and employee-level outcomes, should consider attitudes under a holistic framework, rather than just singling out individual attitudes.

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Second, the results show that job satisfaction and employee engagement may have stronger direct and mediational relationships with intent to stay than emotional exhaustion and change-related anxiety. This indicates that Russell's (1980) distinction between pleasant and unpleasant affect is particularly relevant to understanding the attitudinal processes that link perceived T&D with employee retention. Perceived T&D facilitates employee retention by increasing positive feelings that act to motivate and energise, rather than reducing negative feelings that act to impair wellbeing. Hence, the motivational pathway is stronger than the impairment prevention pathway underlying the relationship between perceived T&D and employee retention. This suggests that combining the theoretical propositions of the JD-R model (Bakker and Demerouti, 2008) with Russell's (1980) model of core affect may be particularly useful when examining employee retention; the motivational processes triggered by job resources help to explain the mechanisms that connect T&D and employee retention. This suggests that perceptions of HR practices can be considered as job resources. Although the JD-R model has considered certain HR practices as resources (such as feedback and training), there is scope for future studies to integrate the literature on High Performance Work Systems (e.g. Jensen et al, 2013) with the JD-R to illustrate the motivational pathways that are triggered when employee feel that they have access to effective HR practices. However, as Shaw, Delery, Jenkins and Gupta (1998) point out, clustering and bundling various HR practices together may reduce the ability to uncover complex interactions that may exist between HR practices. Therefore, we would recommend future researchers to consider the effects of HR practices individually as well as in clusters/bundles to better understand how strategic HRM can influence employee attitudes and behaviors.

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Third, with regards to the second dimension of the Russell model our findings suggest that perceived T&D influences both deactivated and activated forms of pleasant

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3 job-related affect, and that those forms of job-related affect effect employee retention in
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5 similar ways. Specifically, our finding revealed that the mediated effects of job
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7 satisfaction and employee engagement were of similar magnitude. This indicates that the
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9 pleasant/unpleasant dimension differentiates between the effects of work attitudes on
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11 intent to stay more strongly than the activated/deactivated dimension. Future researchers
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13 within the HRM field should place more emphasis on the role of positive affect and
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15 emotions when attempting to explain how perceptions of HRM can positively impact
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17 employee outcomes. Relying on purely cognitive theories, such as social exchange
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19 theory, may not give the fullest or most accurate explanations of these mechanisms.
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23 Overall, this study has shown that Russell's (1980; 2003) model is a useful way
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25 of organizing work attitudes into an affect-based framework that can help explain the
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27 link between perceived HRM and employee attitudes/ behaviors. In doing so we have
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29 advanced research as scholars can categorize work attitudes into a holistic and integrated
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31 model that enables comparison and evaluation of individual-level processes and
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33 relationships. For example, it can be applied to examine and compare the mechanisms of
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35 various individual HR practice-outcome relationships in a meaningful way that clarifies
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37 the psychological processes that underpin HRM at the micro-level.
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40 ***Limitations and areas for future research***

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42 The results should be assessed in light of the study's limitations. First, all
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44 variables were measured at the same time-point using self-report data and so causality
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46 cannot be established (Maxwell and Cole, 2007). Although additional tests suggest that
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48 common method bias did not cause a major concern, longitudinal and experimental
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50 research is needed to confirm the causal order of the relationships. A further
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52 complication is that the data was collected across a five year period, thus confounding
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54 potential differences between organizations and reducing our ability to fully explore
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3 organizational-level variance. This temporal issue is particularly salient in light of the
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5 fluctuating economic situation as a result of the 2007 global recession (Zagelmeyer and
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7 Gollan, 2012). This may have impacted on the relationships in different ways depending
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9 on the timing of each survey. We have accepted this limitation as it was difficult,
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11 practically, to collect many complex datasets over a limited time period, but we
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13 encourage scholars to collate data from multiple organizations across a shorter time span.
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16 Second, we conceptualised and measured perceived T&D as one overall factor.
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18 Although this is in line with other research (e.g. Boon et al, 2011), there may be an
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20 important distinction between training *and* development. Training refers to the
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22 acquisition of technical job-specific skills aimed at increasing personal effectiveness
23
24 whereas development signifies the expansion of generalized skills and career
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26 development opportunities aimed at enhancing personal growth (Aguinus and Kraiger,
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28 2009). This has implications for theory and practice, as technical job-specific skills
29
30 training may have differential effects than generalised skills and career development. For
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32 example, Paul and Anantharaman (2003) found that training was most related to higher
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34 levels of employee productivity whereas career development was associated most
35
36 strongly with employee retention. Therefore, treating them as a one overall HR practice
37
38 may be misleading in terms of management implications. We would welcome future
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40 research that separates out the effects and mediation pathways of perceived training *and*
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42 perceived development. We would expect that perceived training triggers deactivated
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44 attitudes as the individual expects to receive a certain amount of technical skills training
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46 to be able to perform the job effectively; whereas perceived development is likely to
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48 elicit activated attitudes as these activities encourage personal growth and mastery.
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54 While we used an existing questionnaire that had been applied across a range of
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56 organizations, the instruments were designed for a specific practical purpose, with many
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3 consisting of a small number of items. Moreover, the dependent variable was captured by
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5 one item. Although we replicated the study with an additional dataset, which
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7 demonstrated that all measures showed high levels of reliability and correspondence with
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9 other published scales, researchers may want to replicate the study with other alternative
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11 measures that include a wider range of items.
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14 Finally, our study focused on retention rather than turnover. The antecedents of
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16 retention may be different to those of turnover and so future research could compare the
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18 attitudinal mechanisms of retention and turnover. We would expect that the antecedents
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20 of retention are likely to be 'pull' factors, such as positive experiences and job resources,
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22 whereas the antecedents of turnover are likely to be 'push' factors, such as negative
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24 experiences and excessive job demands (Scanlan, Still, Stewart and Croaker, 2010).
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27 ***Implications for practice and conclusion***

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29 This study indicates that HR practitioners should focus on developing T&D practices that
30
31 foster pleasant forms of job-related affect. This can be achieved by designing T&D
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33 initiatives in ways that motivate and energise employees. In particular, HR practitioners
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35 should consider the psychological needs of the individual employee (Bakker and
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37 Demerouti, 2008; Parker and Griffin, 2011), and should focus on enriching the
38
39 experience and quality of training (Lee and Bruvold, 2003). For example, organizations
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41 could better reap the benefits of training by incorporating mindfulness and coaching
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43 activities that aim to increase meaningfulness and work role fit (Leroy, Anseel,
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45 Dimitrova and Sels, 2013) and developing capabilities, such as psychological capital, that
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47 enhance positive psychological states and attitudes (Avey et al, 2011). Moreover, line
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49 managers should seek to understand the career goals and motives of their direct reports;
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51 and should actively encourage their personal development through regular discussions
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53 and annual appraisals (Aguinis and Kraiger, 2009). For example, line managers could
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3 include an 'Employee Development Agreement' within the appraisal process that focuses
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5 on how the employee can develop their career aspirations (Gruman and Saks, 2011).
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8 To conclude, this paper has demonstrated that perceived T&D is positively
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10 associated with intention to stay, and that this relationship is mediated by three different
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12 forms of work attitude: job satisfaction, employee engagement, and change-related
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14 anxiety. Building on Russell's model of core affect, the study indicates that perceived
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16 T&D exerts its influence on intention to stay mainly through increasing pleasant job-
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18 related affect that trigger motivational processes rather through reducing unpleasant job-
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20 related affect that trigger impairment prevention processes. Overall, our study suggests
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22 that future research linking perceived HRM practices to employee-level outcomes should
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24 incorporate a broader range of attitudes to understand in more detail the mechanisms
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26 through which these perceptions are related to employee attitudes and behaviours.
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Appendix 1: Scales and items used in the study

Training and Development

- 21 I am encouraged to develop new skills
22
23 My line manager takes employee development seriously
24
25 I have many opportunities for training and development
26

Job satisfaction

- 27
28 I find real enjoyment in my job
29
30 I am seldom bored with my job
31
32 Overall, I am satisfied with my job
33

Emotional exhaustion

- 34
35
36 I have felt emotionally drained by my work
37
38 I feel burned out by my work
39
40 I have felt under constant strain recently
41

Change-related anxiety

- 42
43 I sometimes feel overwhelmed by the pace of change here
44
45 The pace of change is too fast here
46
47 The demands of the job seriously interfere with my private life
48

Employee engagement

- 49
50 I speak highly of this organization to my friends
51
52
53 I would be happy for my friends and family to use this organization's products/services
54
55 This organization is known as a good employer
56
57 This organization has a good reputation generally
58
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3 I proud to tell others that I am a part of this organization

4
5 This organization really inspires the very best in me in the way of performance

6
7 I find that my values and the organization's are very similar

8
9 I always do more than is actually required

10
11 I try to help others in this organization whenever I can

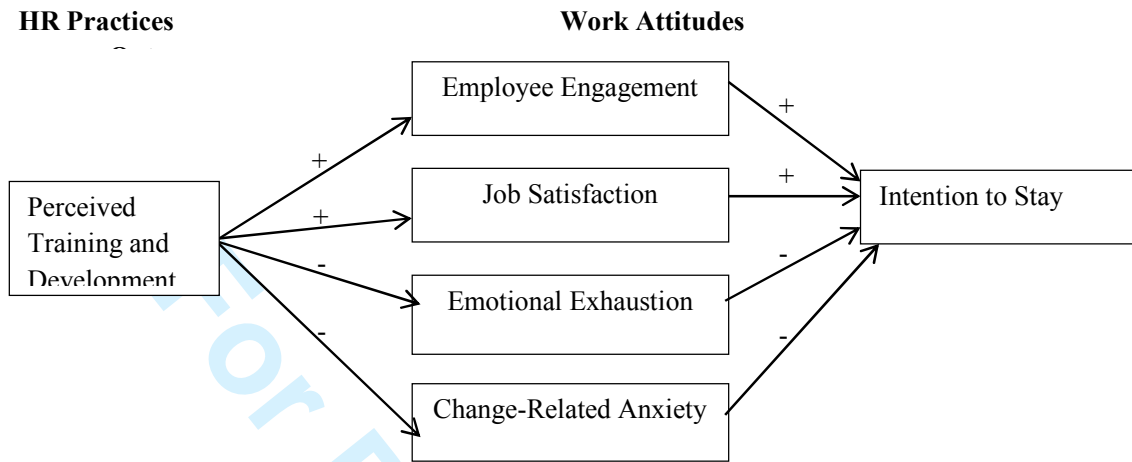
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13 I try to keep abreast of current developments in my area

14
15 I volunteer for things that contribute to the organization's objectives

16
17 I frequently make suggestions to improve the work of my team/department

18
19
20 **Intention to stay** 'Which of the following statements most reflect your current
21 intentions? 1- Plan to leave as soon as possible, 2- Likely to leave within the next year, 3-
22 Likely to stay for at least another year, 4- Plan to stay for the foreseeable future'.
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Figure 1. Illustration of the hypothesised model being tested



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Figure 2. Theoretical model of work attitudes adapted from Russell's (1980) model of core affect

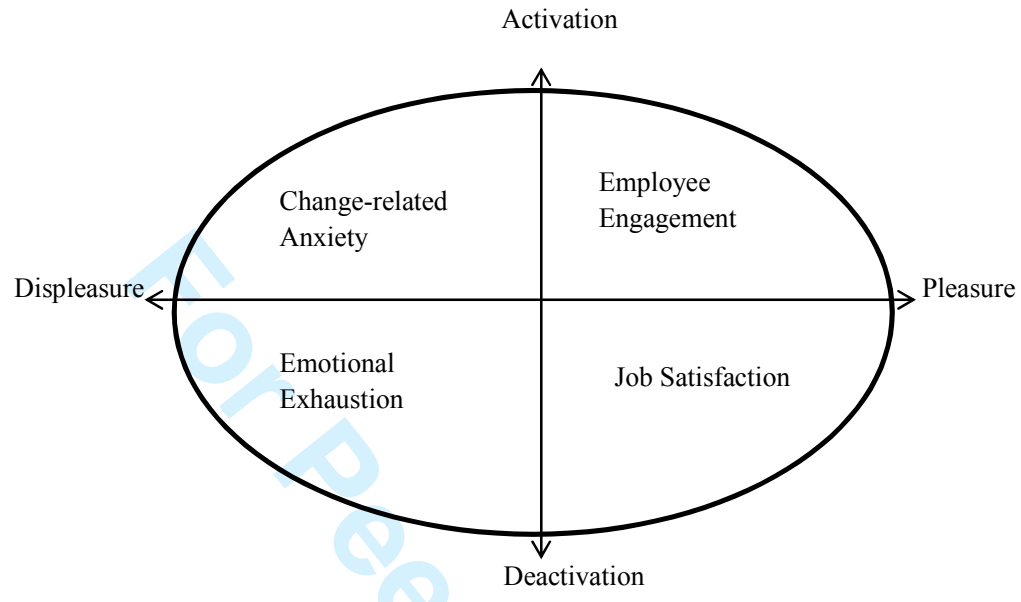


Table 1. Distribution of sectors, organisational sizes, gender, age, tenure and managerial responsibility

	Industry	Sector	Size	% Female	Median Age Category	Median Tenure	% Managerial Responsibility
Org 1	Scientific research	Voluntary	Large	64.2	30 – 39 years	4 – 7 years	22.8
Org 2	Education	Voluntary	Small	42.3	40 – 49 years	4 – 7 years	53.5
Org 3	Local government	Public	Medium	45.5	40 – 49 years	7 + years	19.3
Org 4	Healthcare	Public	Large	78.8	40 – 49 years	4 – 7 years	7.6
Org 5	Regulatory body	Public	Small	71.4	40 – 49 years	1 – 3 years	61.2
Org 6	Event management	Voluntary	Small	33.3	< 30 years	1 – 3 years	45.1
Org 7	Technology	Private	Large	16.6	30 – 39 years	7 + years	0.0
χ^2 (df)				274.55*** (6)	165.42*** (18)	272.89*** (18)	218.41*** (6)

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3. Descriptive statistics and correlations between variables at the individual level of analysis

	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
1 Gender	0.52	0.50	(-)									
2 Age	2.52	1.00	-.04	(-)								
3 Tenure	3.05	0.94	-.12**	.39**	(-)							
4 Managerial Responsibility	0.16	0.37	.00	.16**	-.01	(-)						
5 Perceived T&D	3.30	0.79	.01	.00	-.06*	.13**	(.82)					
6 Job Satisfaction	3.69	0.87	-.01	.09**	.02	.08**	.35***	(.91)				
7 Emotional Exhaustion	2.74	0.95	.15***	.01	.12**	-.01	-.16***	-.18***	(.91)			
8 Change-Related Anxiety	3.06	0.98	-.26***	-.01	.13***	-.04	-.13***	-.09**	.60***	(.80)		
9 Employee Engagement	3.57	0.53	-.02	.01	-.14***	.21***	.39***	.44***	-.28***	-.12***	(.84)	
10 Intention to Stay	3.44	1.11	.15***	.16**	.07*	.10**	.21***	.33***	-.29***	-.22***	.31***	(-)

N=1,191. *p < 0.05, **p < 0.01, *** p < 0.001. Cronbach's Alphas for each scale are given in parentheses

Table 4. Multilevel models predicting intention to stay

	<i>Model 1: Null</i>			<i>Model 2: Control Variables</i>			<i>Model 3: Training & Development</i>			<i>Model 4: Work Attitudes</i>			<i>Model 5: Full Hypothesised Model</i>		
	Est.	SE	t	Est.	SE	t	Est.	SE	t	Est.	SE	t	Est.	SE	t
Intercept	3.24	0.18	18.43	2.38	0.22	10.79***	2.35	0.21	11.29***	2.44	0.21	11.62***	2.43	0.21	11.62***
Gender				0.15	0.06	2.47*	0.16	0.06	2.59**	0.12	0.06	2.05*	0.11	0.06	1.98*
Age				0.17	0.03	5.49***	0.17	0.03	5.49***	0.12	0.03	4.29***	0.13	0.03	4.52***
Tenure				0.06	0.03	1.88	0.08	0.03	2.45*	0.10	0.03	3.05**	0.10	0.03	3.07**
Management Responsibility				0.06	0.08	0.69	-0.01	0.08	0.08	-0.01	0.08	0.16	-0.02	0.08	0.21
Perceived T&D							0.29	0.03	8.41***				0.07	0.04	1.94
Job Satisfaction										0.30	0.03	9.27***	0.29	0.03	8.67***
Emotional exhaustion										-0.01	0.04	0.28	-0.01	0.04	0.26
Change-related Anxiety										-0.11	0.04	3.04***	-0.11	0.04	2.97**
Employee Engagement										0.29	0.06	5.02***	0.26	0.06	4.36***
-2*log likelihood	3316.28			3261.01***			3192.29***			3044.45***			3026.11***		
Variance between-orgs	.20			.19			.16			.18			.18		
Variance within-orgs	.93			.89			.84			.75			.74		

Level 1 $N=1,191$, Level 2 $k=7$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5. Multilevel models predicting job satisfaction, job emotional exhaustion, change-related anxiety and employee engagement

	Predicting Job Satisfaction			Predicting Job Emotional exhaustion			Predicting Change-related anxiety			Predicting Employee Engagement		
	Est.	SE	t	Est.	SE	t	Est.	SE	t	Est.	SE	t
Intercept	3.44	0.13	27.26***	2.80	0.19	14.74***	3.15	0.20	15.45***	3.65	0.09	40.97***
Gender	0.02	0.05	0.35	-0.10	0.06	1.74	-0.21	0.06	3.67***	0.00	0.03	0.12
Age	0.08	0.03	3.12**	-0.06	0.03	1.94	-0.06	0.03	2.15*	0.04	0.01	2.55**
Tenure	0.00	0.03	0.14	0.06	0.03	1.86	0.04	0.03	1.28	-0.06	0.02	3.62***
Management Responsibility	0.07	0.07	1.05	0.32	0.08	4.22***	0.32	0.08	4.13***	0.14	0.04	3.59***
Perceived T&D	0.38	0.03	13.08***	-0.18	0.03	5.84***	-0.13	0.03	4.26***	0.28	0.02	16.25***
-2*log likelihood	2858.92			3011.87			3026.61			1481.01		
Variance between-orgs	.01			.13			.17			.02		
Variance within-orgs	.65			.73			.74			.20		

Level 1 $N=1,191$, Level 2 $k=7$; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6. MCMAM analyses examining the mediation effects of work attitudes on the perceived training & development-intention to stay relationship

<i>Mediator</i>	<i>a / SE</i>	<i>b / SE</i>	<i>a*b</i>	<i>Lower Bound</i>	<i>Upper Bound</i>	<i>c'</i>	<i>c</i>	<i>Effect Size</i>
Job Satisfaction	0.38 / 0.03	0.29 / 0.03	0.11	0.0798	0.1353	0.07	0.18	0.08
Emotional exhaustion	-0.18 / 0.03	-0.01 / 0.04	0.00	-0.0127	0.0164	0.07	0.07	n/a
Change-related Anxiety	-0.13 / 0.03	-0.11 / 0.04	0.01	0.0035	0.0280	0.07	0.08	0.01
Employee Engagement	0.28 / 0.02	0.26 / 0.06	0.07	0.0395	0.1090	0.07	0.14	0.05

a= regression coefficient for association between perceived T&D and mediator; b= regression coefficient for association between mediator and intention to stay(DV) when predictors are also included; c' regression coefficient for association between perceived T&D and intention to stay (DV) when predictors and mediators are also included – direct effect; a*b= regression coefficient for indirect association between perceived T&D and intention to stay, via mediator – indirect effect; and c= sum of a*b and c' – total effect.