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The Effects of Optimism, Transformational Leadership, and Work Engagement on Work Outcomes: A Moderated Mediation Model

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THE EFFECTS OF OPTIMISM, TRANSFORMATIONAL LEADERSHIP, AND WORK ENGAGEMENT ON WORK OUTCOMES: A MODERATED MEDIATION MODEL

by

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B.S. May 2015, Virginia Polytechnic Institute and State University

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ABSTRACT

THE EFFECTS OF OPTIMISM, TRANSFORMATIONAL LEADERSHIP, AND WORK ENGAGEMENT ON WORK OUTCOMES: A MODERATED MEDIATION MODEL

Chad Kenneally
Old Dominion University, 2020
Director: Dr. Xiaoxiao Hu

Optimism serves as a powerful resource that can help employees accomplish tasks at work and overcome challenges. However, there are still psychological connections that need to be drawn to explain why optimism has these effects. The Job Demands-Resources Model and the general resource perspective have previously investigated resources in the workplace and the relationships they hold with different work outcomes. In this study, work engagement was investigated as a mediator between optimism and task performance, work withdrawal, and turnover intention. Transformational leadership was investigated as a moderator for the relationship between optimism and work engagement. Optimism was expected to have a positive relationship with all three work outcomes through work engagement. Furthermore, transformational leadership was expected to influence the relationship between optimism and outcomes. These hypotheses were tested using data from Chinese business organizations.

Results showed that optimism was significantly correlated with all three work outcomes. However, work engagement was not found to be a significant mediator, and transformational leadership did not significantly moderate the relationship between optimism and work engagement. Although most hypotheses were not supported, these results still represent important findings for optimism. Theoretical and practical implications, as well as suggestions for future research, are discussed.
ACKNOWLEDGEMENTS

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THE EFFECTS OF OPTIMISM, TRANSFORMATIONAL LEADERSHIP, AND WORK ENGAGEMENT ON WORK OUTCOMES: A MODERATED MEDIATION MODEL

Optimism is a helpful, internal, personal resource characterized by a positive outlook for the future (Scheier & Carver, 1992) that can benefit people in many different settings including the military, occupations, and academics (Peterson, 2000). A review of optimism research cited its beneficial relationships to improved physical health, social interactions, and coping behaviors (Carver, Scheier, & Segerstrom, 2010). Although optimism has been explored in other realms of psychology, such as positive psychology and clinical psychology, there are still applications of optimism to be explored in the Industrial/Organizational (I/O) psychology literature. The workplace can be an exceptionally challenging place for many employees. The source of these challenges can come from interpersonal conflicts, difficult tasks, and other job demands (Davis & Cable, 2014). These tense situations can be discouraging for many employees (Davis & Cable, 2014); however, certain factors may be able to help workers adjust to work life better and cope with their daily work struggles. Optimism is one internal characteristic that can affect employees positively by providing important psychological resources (Greenberg & Arakawa, 2006).

As positive psychology became more popular (Seligman, 2002), researchers continued exploring specific personality traits, such as optimism, that could positively impact employees. Although previous research has linked optimism to some employee outcomes such as coping strategies at work (Carver et al., 2010), exhaustion, and engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), more research is needed to understand the associations between optimism and employee performance and turnover. The current research attempted to address these issues. Optimism has previously been found to be negatively related to turnover intention
(Siu, Cheng, & Liu, 2015). However, when investigating dispositional optimism’s association with task performance, Kluemper, Little, and Degroot (2009) found inconclusive results as dispositional optimism was not associated with task performance, but state optimism was. Finally, optimism’s relationship with work withdrawal has not been examined at all in previous research, although it is likely that optimism can have an important role in work withdrawal.

The effects of optimism on these outcomes may be explained by mediating constructs. Work engagement is a motivational job attitude that is represented by employees investing energy into their jobs (Khan, 1990), which may help explain the effects of optimism. Conceptualizing optimism as a personal resource and work engagement as a motivational mediator is consistent with the most recent version of the Job Demands-Resources (JD-R) model (Schaufeli & Taris, 2014).

Additionally, although optimism’s characterization as an internal personal resource can benefit employees, not all people naturally possess a high level of optimism. Alternative resources, such as various leadership strategies, have been identified as effective approaches for improving employees’ positive work outcomes (Chan & Chan, 2005; Kahai, Sosik, & Avolio, 1997; Limsila & Ogunlana, 2008). More specifically, transformational leadership has been identified as a strong positive influence for employee outcomes (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; Avolio, Sosik, & Berson, 2013; Kelloway & Barling, 2010). Transformational leadership was selected over other leadership styles in the current research for two reasons. First, transformational leadership can be conceptualized as a job resource for employees, as defined in the JD-R model (Schaufeli & Taris, 2014). Second, transformational leadership was also selected due to its strong associations with positive follower outcomes such as job performance and satisfaction (Bono & Judge, 2004), as it is one of the most widely studied
leadership styles. The strength of the relationship between optimism and engagement may be different at different levels of transformational leadership. This moderation effect may exist because transformational leadership and optimism might provide similar types of psychological resources (e.g., positive emotions) for employees. This investigation will help to extend the research on transformational leadership and its relationship to optimism and work engagement.

Work engagement is examined as the mediator in the current model based on the Job Demands-Resources (JD-R) Model (Schaufeli & Taris, 2014). The JD-R model is rooted in the general resource perspective (Hobfoll, 2002), which is the main theoretical framework of this study. The JD-R model provides a more detailed framework of how resources are specialized to the workplace compared to the general resource perspective, which will be explained later in this manuscript. In the JD-R model (Figure 2), demands are facets of the job which require employees to use their abilities as well as their resources to overcome challenges (Bakker & Demerouti, 2007). Demands, similar to resources, can come in many forms: social, organizational, physical, and psychological. Job resources, on the other hand, are the characteristics of the job that come from external sources which can help to accomplish tasks created by demands (Tremblay & Messervey, 2011). These resources can include support from others, job autonomy, feedback, and so on. The JD-R model relies on the notion that resources will act as buffers and coping mechanisms to help reach success in demanding events (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The original JD-R framework was refined by Schaufeli and Taris in 2014 to reflect a model that included personal resources in addition to job resources. This integration was added for the purposes of including not only the work environmental factors (e.g., job autonomy), but personal factors as well (Schaufeli & Taris,
In the current research, optimism was examined as a personal resource, whereas transformational leadership was examined as a job resource.

Taken together, the purpose of this research was to examine the associations of employee optimism with task performance, work withdrawal, and turnover intention through work engagement. Also, transformational leadership was investigated as a key moderator for the relationship between optimism and work engagement. Previous research on optimism has not examined these relationships in a moderated mediation model. Furthermore, much of the research on optimism examines it as a facet of PsyCap or as a part of many personal resources being studied together. Instead, this research will investigate optimism as a sole personal resource. The study’s model is presented in Figure 1.

**Optimism in the Workplace**

Optimism as a construct has sparked interest in researchers for decades. One of the first definitions comes from Helen Keller in 1903 who stated optimism “is faith that leads to achievement.” However, it has also been defined as an expectation of positive events in the future (Carver & Connor-Smith, 2009). More recently, Tenney, Log, and Moore (2015) stated optimism is “the inclination to expect the best possible outcome (p. 77).” Although optimism has been viewed as a belief, an expectation, and an inclination, it is often viewed as a personality construct in psychology literature. The current research follows that optimism is a personality trait that focuses on having a future-oriented and confident outlook on life (Scheier & Carver, 1992). Although optimism can be measured as a psychological state (temporary), the current study will focus on dispositional optimism (i.e., trait).

Optimism is also a facet of a higher order construct called psychological capital (PsyCap). PsyCap is a construct built from four constructs including hope, self-efficacy,
resilience, and optimism (Luthans, Avolio, Avey, & Norman, 2007). Luthans et al. (2007) found that PsyCap is significantly positively related to performance and job satisfaction, although not all facets were significantly related to performance and job satisfaction when measured alone. Specifically, optimism was related to job satisfaction, but not performance. More recently, Kim (2017) found that personal resources (optimism, self-efficacy, and organizational-based self-esteem) were negatively related to turnover intention and positively related to job performance when measured separately. Additionally, these relationships were partially mediated by engagement when measured together as the construct of personal resources (Kim, 2017). Another study (Madrid, Diaz, Leka, Lieva, & Barros, 2017) showed that facets of PsyCap (including optimism) had significant positive effects on proficiency, adaptivity, proactivity, and overall performance when measured both independently as individual resources and collectively as PsyCap. Taken together, there have been some inconsistent findings regarding the relationships between the individual facets of PsyCap (e.g., optimism) and performance outcomes. These inconsistent results demonstrate that further research on these relationships is necessary.

As workplace wellness efforts globally are made in the form of over $43 billion worth of programs each year (McGroarty, 2017), it may be helpful to take advantage of personality characteristics which employees already have, as this approach may decrease the need for wellness programs. Optimism has been correlated with problem-focused coping instead of avoidant strategies (Smith, Pope, Rhodewalt, & Poulton, 1989). Furthermore, people with higher dispositional optimism report higher levels of work engagement when dealing with high priority tasks (Geers, Wellman, & Lassiter, 2009).
Additionally, optimism has been investigated for its links to improving work life for employees. More specifically, previous research by Marshall, Wortman, Kusulas, Herving, and Vickers (1992) found that optimism had consistent relationships with traits relating to positive moods. Optimism can aid workers by acting as a potential buffer to resist negativity from challenges faced at work (Carver et al., 2010). This result demonstrates how optimism in employees can relate to positive outlooks at work through associations with positive emotions. Optimism is also found to be positively correlated with work happiness, job satisfaction, and performance (Youssef & Luthans, 2007), showing that optimism is not only good for improving general emotions at work, but also enhancing work attitudes. Hence, employees high in optimism are more equipped to handle stressors brought on in the workplace that may deter other employees who do not have high levels of optimism.

The general resource perspective. In the realm of resource theory research, Scheier and Carver (1985) were the first to examine optimism as a psychological/emotional resource. The General Resource Perspective states resources are entities that an individual possesses either internally or externally that act as an aid to achieve a goal (Hobfoll, 2002). Many resource perspectives have been developed over the years. The general resource perspective is a theory that functions on the commonalities between all previous resource perspectives. Some of these commonalities include that those with more resources can solve problems better in stressful environments, resources are linked to other resources and can create resource reservoirs, and that people attempt to have more resources in order to handle stressful situations both psychologically and physically (Hobfoll, 2002). The current research used the general resource perspective as the major theoretical foundation to investigate how optimism can be a powerful resource for workers in terms of work engagement and performance (Hobfoll, 1998).
Optimism and Task Performance, Work Withdrawal, and Turnover Intention

The three organizational outcomes that optimism was expected to have a positive impact on were task performance, work withdrawal, and turnover intention. First, task performance, or the effort that job incumbents accomplish in order to work towards an organization’s goal (Borman & Motowidlo, 1993), is one of the most widely examined performance constructs. When completing a task requested by an organization, difficulties may be prominent without the use of resources, because resources can help employees handle and reduce these difficulties (Sarason, 1974). Optimism as a personal resource may strengthen a person’s ability to face job tasks and accomplish a goal with ease, rather than hardship. Moreover, key resources, such as optimism, tend to be highly related to other positive psychological resources. These resources can include higher self-esteem, self-efficacy, and mastery of tasks, which result in higher performance (Rini, Dunkel-Schetter, Wadhwa, & Sandman, 1999). Therefore, if an employee is low in optimism, they are likely to share low levels of other positive internal resources.

Kluemper et al. (2009) found differing results about optimism’s relationships with task performance. The researchers found that state optimism was a positive indicator of task performance, whereas trait optimism held very weak or nonexistent relationships with task performance (Kluemper et al., 2009). This research was conducted with university students and final grade was a measure of task performance. The researchers attributed this lack of a relationship to the short length of their survey study. PsyCap has also been found to hold positive relationships with task performance (Probst, Gailey, Jiang, & Bohle, 2017). Probst and colleagues (2017) studied workers via Amazon Mechanical Turk and found that PsyCap (all four facets measured as a whole) was consistently and significantly positively related to task performance. However, optimism by itself was not studied, therefore a conclusion based on
optimism’s relationship with task performance cannot yet be drawn. In the current study, it was expected that trait optimism would positively relate to task performance based on the theoretical rationales provided above.

In addition to optimism’s positive associations with task performance, optimism may have negative associations with work withdrawal and turnover intention. Work withdrawal is a facet of counterproductive work behaviors (CWBs) that is characterized by a lack of emotional attachment in work and behaviors that temporarily distract or remove oneself from their work tasks (Hanisch & Hulin, 1990). Turnover intention is a premediated motivation to leave an organization (Tett & Meyer, 1993). Optimism has been positively associated with work happiness and job satisfaction (Youssef & Luthans, 2007), which could contribute to low levels of work withdrawal and low turnover intention. In addition, instead of merely ignoring the problems at work and staggering progress, the general resource perspective suggests that optimism will help workers tackle problems directly and suffer less work withdrawal and turnover intention. It is likely that a resource such as optimism will reduce negative employee outcomes such as work withdrawal and turnover intention by offering support during some of the challenging aspects associated with work responsibilities.

**H1:** Optimism will correlate positively with task performance.

**H2:** Optimism will correlate negatively with work withdrawal.

**H3:** Optimism will correlate negatively with turnover intention.

**Mediating Role of Work Engagement**

The positive associations between optimism and the above outcomes may be partially explained by work engagement. Work engagement is a job attitude that is embodied when a person invests a significant amount of their energy into a certain task (Kahn, 1990), and is
identified by vigor, dedication, and absorption in their job (Schaufeli, Salanova, Gonzalez-Romá, & Bakker, 2002). Schaufeli et al. (2002) stated that vigor is represented by individuals with high energy and resiliency in the workplace while dedication represents one’s strong identification to their work role. Lastly, absorption is found when individuals are heavily captivated in their work, sometimes referred to as a state of “flow.”

Research has shown that job and personal resources contribute to the motivational processes in the JD-R Model (Bakker & Demerouti, 2007). Resources in the JD-R model provide a positive effect on the motivating mechanisms which lead to better outcomes in the workplace. Consistent with this model, work engagement, the motivating mechanism in the current study, is expected to increase when optimism is high. Employees high in optimism are likely to have increased levels of work engagement due to their positive interest towards work related activities. A positive relationship between optimism and employees’ work engagement has been found in previous research (Geers, & Wellman, 2009; Medlin & Green, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Engaged employees have the benefit of a positive attitude that is expressed in their workplace activities (Bakker, 2009). High levels of work engagement were expected to associate with not only high task performance, but also low turnover intention and low work withdrawal. These relationships were expected in the current research due to engagement’s three facets which include vigor, dedication, and absorption. These three factors will contribute to more attention on a task, and less disengagement from work, both psychologically and physically.

Consistent with this expectation, work engagement has been found to be negatively related with turnover intention (Halbeslenben & Wheeler, 2008; Hallberg & Schaufeli, 2006; Schaufeli & Bakker, 2004; Shuck, Reio, & Rocco, 2011; Siu, Cheung, & Lui, 2015), positively
related to task performance (Rich, Lepine, & Crawford, 2010), and negatively related to work withdrawal (Lelchook, 2012) in previous studies. Given these ideas and findings, it was hypothesized that work engagement would mediate the relationships between optimism and the three employee outcomes examined in the current study.

**H4a:** *Work engagement will mediate the association between optimism and task performance.*

**H4b:** *Work engagement will mediate the association between optimism and work withdrawal.*

**H4c:** *Work engagement will mediate the association between optimism and turnover intention.*

**Moderating Role of Transformational Leadership**

The next major goal of the current research was the examination of transformational leadership. Transformational leadership is defined as leadership that motivates the employees and inspires them to lead on their own (Burns, 1978; Bass, 1985). Transformational leaders help employees perform above their expected levels. Transformational leadership has four key facets: inspirational motivation, idealized influence, individual consideration, and intellectual stimulation (Bass, Avolio, & Jung, 1999). Inspirational motivation is how leaders help their followers to stay motivated and optimistic throughout their work. This facet helps to keep workers enthusiastic and keep their goals focused. Idealized influence is demonstrated by leaders who establish good relationships with their followers and are seen as role models by them. This construct gives the followers a leader they can shape their behavior after and look up to. Individual consideration is associated with the leaders’ focus on the followers’ needs. This focus helps followers’ needs feel attended to and important. Lastly, intellectual stimulation from
leaders helps followers’ feel their opinions are valued. This facet helps followers stay creative while solving problems and stems from the leader’s interest in their followers’ opinions. With these four facets, transformational leadership forms an influential leadership style to build a successful work force (Bass, Avolio, Jung, & Berson, 2003).

Transformational leadership may influence the relationship between optimism and work engagement by functioning as a job resource. Specifically, when there are high levels of transformational leadership, the association between optimism and work engagement may be relatively weak. Regardless of whether employees have optimism as a personal resource, they can obtain support from their transformational leaders. As referenced earlier, transformational leadership and optimism have similar positive effects on employees’ work outcomes. Both can provide employees with positive outlooks, inspiration, and positive emotions. Zhu, Avolio, and Walumbwa (2009) and Yasin Ghadi, Fernando, and Caputi (2013) all stated that transformational leadership is significantly positively related to engagement, likely through inspirational motivation and intellectual stimulation, which helps followers feel as though they are contributing to the organization (Sosik, 2006). These positive effects can be provided not only externally by transformational leadership, but also internally by optimism. Therefore, transformational leadership’s support is likely to compensate for low levels of optimism and keep employees engaged at work. On the other hand, when there are low levels of transformational leadership, employees’ own personal resources, such as optimism, may have a very strong influence on work engagement. The relationship between optimism and work engagement would be stronger because employees are less likely to be able to rely on external resources. These expected relationships lead to the next hypothesis.
**H5:** Transformational leadership will moderate the effect of optimism on work engagement such that the positive association between optimism and work engagement is reduced when there are high levels of transformational leadership.

**Moderated Mediation**

Overall, optimism serves as an invaluable resource that can lead employees to react positively when work tasks become challenging. High levels of optimism in individuals were expected to show support for enhanced organizational outcomes and higher levels of work engagement, as stated in hypotheses one, two, three, and four. Transformational leadership would likely moderate the relationship between optimism and work engagement, as stated in hypothesis five. Taken together, these proposed relationships suggest moderated mediation relationships among the variables. The moderated mediation model in Figure 1 proposed that work engagement mediates the relationships between optimism and work outcomes, but the strength of these indirect relationship depends on the levels of transformational leadership.

**H6a:** Transformational leadership will moderate the indirect effect of optimism on task performance via work engagement such that the indirect effect will be stronger when transformational leadership is low rather than high.

**H6b:** Transformational leadership will moderate the indirect effect of optimism work withdrawal via work engagement such that the indirect effect will be stronger when transformational leadership is low rather than high.

**H6c:** Transformational leadership will moderate the indirect effect of optimism on turnover intention via work engagement such that the indirect effect will be stronger when transformational leadership is low rather than high.
METHOD

Participants

The data used in this study were collected from 230 (101 female, 129 male) job incumbents and their supervisors in 25 Chinese technology-focused organizations in Shanghai, China. The average age of the participants was 33 years ($SD = 7.61$). The sample consisted of 70 teams with an average of 3.29 workers in each group. The distribution of education level for employees included 0.4% ($n = 1$) high school, 4.8% ($n = 11$) technical school, 62.6% ($n = 144$) bachelor’s degree, 30.4% ($n = 70$) master’s degree, and 1.7% ($n = 4$) doctorate. No incentive was offered for participation. Although there can be cross-cultural concerns with a sample collected in China and its similarity to a sample in the United States, these concerns are lessened with a sample from Shanghai. Shanghai is a financial center of China, and one of the most cosmopolitan and westernized cities in the mainland of China (Ji, 2015; Kim et al., 2000; Masdeu Torruella & Sáiz López, 2019). The employees and their supervisors in this sample interacted daily and were very familiar with each other.

According to a simulation study that was performed in order to investigate the power for testing moderated mediation hypotheses (Chu & Chen, 2012), the minimum sample size for testing the proposed moderated mediation is 110 participants. This number is generated for a power level of 0.8. The simulation study took five different simulation methods including bootstrapping, bias-corrected bootstrapping, and coefficient multiplication. Sample sizes with a power level of 0.8 were calculated for small, medium, and large effect sizes for moderated mediation. The current sample size easily exceeds this minimum of 110 participants. The minimum sample size is based on the expectation of a moderate effect of the antecedent on the mediator, a moderate effect of the mediator on the outcomes, and a small moderation effect.
Moderate effects were expected due to personal resources’ existing relationships with work engagement that has been documented in previous research ($\rho = .42$, Kim, 2017). Furthermore, work engagement’s existing relationships ($M_\rho = .45$ with task performance; Christian, Garza, & Slaughter, 2011) with the outcomes being investigated in this study (Bakker & Bal, 2010; Halbeslenben & Wheeler, 2008; Hallberg & Schaufeli, 2006; Salanova, Agut, & Peiro, 2005; Salanova, & Schaufeli, 2010; Schaufeli & Bakker, 2004; Shuck, Reio, & Rocco, 2011; Siu, Cheung, & Lui, 2015) were expected to contribute to a moderate effect size as well.

**Materials**

All survey measures were translated into Chinese and then back-translated (Brislin, 1981). Furthermore, many of the surveys used in this study have been used widely in the Chinese work research context. The task performance (Ang et al., 2007; Hu, Kaplan, Wei, & Vega, 2014), transformational leadership (Bass, 1997; Shao & Webber, 2006), optimism (Schwarzer, Bäßler, Kwiatek, Schröder, & Zhang, 1997), and work withdrawal (Peng, 2012) measures have been supported in the Chinese context.

**Optimism.** The Revised Life Orientation Test (Appendix A) assessed optimism (Scheier, Carver, & Bridges, 1994). Respondents used this 6-item test (with 4 filler items) on dispositional optimism to rate items such as “I’m always optimistic about my future,” on a scale of 0 (Strongly Disagree) to 4 (Strongly Agree). This variable was self-reported by the employees. Hirsch, Britton, and Bridges (1994) established criterion-related validity of this scale with correlations of $r = -.65$ with hopelessness and $r = -.60$ with depression. Test-retest reliability correlations were .68, .60, .56, and .79 for four months, 12 months, 24 months, and 28 months, respectively (Hirsch et al., 1994). Alpha for this scale was .74 in the current study.
**Transformational leadership.** Transformational leadership of the managers was assessed by the Multifactor Leadership Questionnaire (MLQ-Form 5X; Appendix B; Bass & Avolio, 1997). This inventory has 20 items that assess transformational leadership and includes sample items such as “I help others develop themselves.” Respondents use a 5-point Likert scale from 0 (not at all) to 4 (frequently, if not always). For coding purposes, these data were input on a scale from 1 to 5. This survey was completed by the managers, and previous research has found that social desirability does not have an impact on the result of this scale in various samples including food service, a bank, and a local government organization (Lievens, Van Geit, Coetsier, 1997). Furthermore, Lievens et al. found that transformational leadership is better assessed by the leaders due to followers having trouble differentiating between the facets of transformation leadership. Lastly, Antonakis (2001) found that overall, the MLQ-5X scale had good construct and criterion validity and was recommended to use in the future for research. Alpha for this scale was .96 in the current study.

**Work Engagement.** The scale for work engagement (Appendix C) was adapted from Rogelberg, O’Connor, and Sederburg (2002). Rogelberg et al. (2002) used a nine-item scale previously developed by Wicker, Kirmeyer, Hanson, and Alexander (1976). Wicker et al. (1976) developed their scale to assess “manning.” Manning theory describes whether a task is undermanned (i.e., not enough people to complete the task), adequately manned (i.e., just enough people or a surplus of people to complete a task), or overmanned (i.e., too many people for the task to accommodate all persons). Manning theory shares some similarities with engagement to a task, hence why Rogelberg et al. used this scale to measure member engagement. Three items were selected from this scale to limit the overall length of the survey. Respondents rated items such as “Indicate the extent to which you feel that you work hard,” on a 5-point scale from 1 (not
at all) to 5 (a great extent). This variable was completed by the employees. Alpha for this scale was found to be .81 in the current study.

**Task Performance.** The first 4 items from the 7-item scale from Williams and Anderson (1991) were used to measure task performance (Appendix D). These four items have the highest factor loadings among the 7 items. They were chosen due to concerns about survey length and interference with work. This scale is rated from 1 (strongly disagree) to 7 (strongly agree) and includes items such as “performs tasks that are expected of him/her.” This variable was rated by the leaders about their subordinates. These four items were found to have an alpha of .97 in the current study. The 7-item scale is widely used due to its consistently good validity in various samples and has been used in numerous research articles over the years (e.g., Poursafar, Rajaeepour, Seyadat, & Oreizi, 2014; Van Scotter & Motowidlo, 2000; Yun, Takeuchi, & Liu, 2007). When the scale was developed, Williams and Anderson (1991) found satisfactory convergent validity with organizational citizenship behaviors for individuals ($r = .52$) and with organizational citizenship behaviors for the organization ($r = .55$). Discriminant validity was also established by having no significant correlations with any attitudinal predictors (e.g., positive arousal, negative activation, extrinsic job cognitions, and intrinsic job cognitions).

**Work withdrawal.** Work withdrawal of the employees was assessed through a scale (Appendix E) from Spector et al. (2006). This 4-item scale includes statements such as “came to work late without permission,” that are rated from 1 (never) to 5 (every day). This variable was self-reported by the employees. Alpha was .64 for this scale in the current study. A potential cause of this low alpha level might be the homogeneity of the group’s responses. Spector et al. (2006) assessed the validity of their scale in five samples including the employees of two universities, a financial consulting firm, a behavioral health services company, and an accounting
firm. According to Spector et al., the work withdrawal scale score was significantly positively related to other aspects of counterproductive work behaviors (CWB) including production deviance ($r = .37$), sabotage ($r = .29$), and theft ($r = .40$), which exhibits convergent validity. Additionally, it was significantly negatively related to distributive justice, procedural justice, and job satisfaction, exhibiting discriminant validity (Spector et al., 2006)

**Turnover intention.** Turnover intention was assessed by a 3-item scale (Appendix F). Tekleab, Takeuchi, and Taylor (2005) developed a two-item scale that was used to assess turnover intention. This scale includes items such as “It is likely that I will leave my employment with the company within a year,” and “I intend to keep working at the company for at least the next three years (reverse coded),” rated from 1 (*totally disagree*) to 5 (*totally agree*). Tekleab, Takeuchi, and Taylor found discriminant validity evidence of this scale as demonstrated by a significant negative correlation with job satisfaction ($r = -.31$). Furthermore, convergent validity was demonstrated by a strong positive correlation with actual turnover ($r = .85$) (Tekleab et al., 2005). A third item, “I don’t plan to quit my job in the next few years,” was added in this study for the purposes of reliability assessment. This scale had alpha of .69 in the current study. This measure was completed by the employees.

**Control variables.** Age, sex, and tenure were included as control variables. Recent meta analyses (Ng & Feldman, 2008; Sturman, 2003) found that age holds an inverted-U shape with performance ratings. Sturman also found that tenure has a non-linear, but not inverted-U shape, relationship with performance ratings. Additionally, another meta-analysis (Bernerth & Aguinis, 2016) found that common control variables, including all three of the ones examined in this study, were among the most frequent control variables related to turnover. Given the evidence for these relationships, these variables were included as control variables in this study.
Procedure

During the recruiting process, 78 supervisors in the company were first contacted by a researcher and asked whether they would like to participate in the study. After supervisors agreed to participate, their subordinates (316) were then contacted and asked about their willingness to participate. During normal working hours, 230 employees (72.78% response rate) and 70 (89.74% response rate) supervisors responded to questionnaires developed for the current research. These multisource data were collected at the same time. Supervisors were asked to rate subordinates’ task performance and their own transformational leadership, whereas subordinates were asked to provide self-ratings on optimism, work engagement, work withdrawal, and turnover intention. Subordinates also provided demographic information. Surveys were completed during participants’ normal work hours. All questionnaires were directly distributed by a researcher. Both supervisors and subordinates were ensured that ratings would be kept confidential (i.e., not shared with other people in the organization), used only for research purposes, and reported only in aggregate. Employees and supervisors finished their surveys in their own offices/cubicles without other people being present. After questionnaires were completed, they were placed in an envelope and returned to a researcher, who was waiting in a separate room.
RESULTS

Data Cleaning, Discriminant Validity, and Regression Assumptions

Missing data were found in responses from less than 5% of the participants. Mean substitution was used to replace missing data because it has been found to provide very good representations of the original data when the number of respondents with missing data and the number of items missing were 20% or less (Downey & King, 1998). Discriminant validity of the variables was examined using confirmatory factor analysis (CFA) in Mplus Version 8 (Muthén & Muthén, 2012). Results showed that no intercorrelations between the variables were above .5, indicating more than sufficient discriminant validity among the latent variables assessed by each questionnaire. While this test for discriminant validity is not as stringent as the multi-trait multi-method approach developed by Campbell and Fiske (1959), it is still a classic and valid test for discriminant validity (Segars & Grover, 1993). Additionally, a six-factor model with all variables was tested against a two-factor model with one factor representing variables assessed by leaders and one variable representing variables assessed by followers. The two-factor model fit the data significantly worse than the six-factor model ($\Delta \chi^2(4) = 1814.30, p < .001$). Furthermore, a model tested with variables reported by followers with four factors fit the data significantly better than a model with one factor ($\Delta \chi^2(6) = 456.37, p < .001$). Given the conceptual overlap between optimism and engagement, a three-factor model was also tested with variables from these scales loading onto one factor. This three-factor model also fit the data significantly worse than the four-factor model ($\Delta \chi^2(3) = 176.15, p < .001$). Lastly, results also showed that a model with two factors for the variables reported by supervisors fit the model significantly better than a model with one factor ($\Delta \chi^2(1) = 1325.77, p < .001$). Overall, these results support the discriminant validity among the constructs.
Next, regression assumptions of the data were checked. The assumptions assessed included homoscedasticity of the residuals, independence of residuals, and normality of the residuals (Cohen, Cohen, West, & Aiken, 2003). In order to assess these assumptions, plots of the residuals with lowess lines and Q-Q plots were analyzed, as well as scatterplots of the residuals. These plots indicated the normality, homoscedasticity, and independence assumptions were met. The only variable which exhibited non-normal residuals was work withdrawal. The Q-Q plot of this variable had some diversion at the tails of the plot, which indicated the distribution was not normal. When analyzed further, this variable had a skewness of 2.63 and a kurtosis of 5.94. This indicated that workers generally had a very low level of withdrawal. However, these data were not transformed because it reflected workers’ true withdrawal levels, and it would not affect regression estimates, only standard errors (Cohen et al., 2003). The skewness and kurtosis of optimism (skewness = 0.01, kurtosis = 0.06), work engagement (skewness = -0.24, kurtosis = 0.24), transformational leadership (skewness = -0.27, kurtosis = 0.54), task performance (skewness = -0.67, kurtosis = 1.27), and turnover intention (skewness = 0.39, kurtosis = 1.31) were all acceptable. All variables were seen to be linear within the regression equations. After assumptions were assessed, descriptive statistics and correlations were analyzed. Then, path analysis was conducted with all variables in the model simultaneously. This analysis yielded the results discussed below.

Correlations

Descriptive statistics, including the means, standard deviations, and correlations among all the variables can be seen in Table 1. The first hypothesis was supported as the data showed that optimism was significantly positively correlated with task performance, \( r(226) = .18, p = .007 \). Hypothesis 2 was supported as optimism significantly negatively related to work
withdrawal, $r(226) = -0.22, p = .002$. Support was also found for hypothesis 3 as optimism was significantly negatively related to turnover intention, $r(226) = -0.33, p < .001$.

**Path Analysis**

Gender, organizational tenure, and age were used as control variables in the path analysis. Work engagement was assessed as a mediator in the analysis. The path analysis was run in Mplus Version 8 statistics software (Muthén & Muthén, 2012). The model had an acceptable fit for the data: $\chi^2 (5, N = 230) = 9.73, p = 0.08; \text{CFI} = 0.88, \text{RMSEA} = 0.09, \text{SRMR} = 0.02$. An RMSEA in the range of .05 to .10 represents fair fit of the model (MacCallum, Browne, & Sugawara, 1996). Additionally, the SRMR value less than .06 indicates a good fit (Hu & Bentler, 1999). Coefficients from the model can be seen in Figure 3. Results from this analysis are presented in Table 2. As can be seen in this table, optimism was not a significant predictor of work engagement, $b = 0.49, SE = 1.06, p = .641$, and work engagement was a significant predictor of task performance, $b = 0.31, SE = 0.12, p = .007$. To test the mediation effects, Monte Carlo confidence intervals were generated and assessed. The Monte Carlo Method for Assessing Mediation (MCMAM) uses the path coefficients, variances, and covariance from the independent variable and mediator to estimate a confidence interval for the product of these two values (Selig & Preacher, 2008). This statistical analysis was completed for each outcome variable through Mplus software (Muthén & Muthén, 2012). The results indicated work engagement did not mediate the relationship between optimism and task performance, 95% CI = [-0.29, 0.50], failing to support hypothesis 4a.

Work engagement was a significant predictor of work withdrawal, $b = -0.14, SE = 0.06, p = .028$. However, work engagement did not mediate the relationship between optimism and work withdrawal, 95% CI = [-0.08, 0.09], failing to support hypothesis 4b.
Lastly, work engagement was not a significant predictor of turnover intention, \( b = 0.00, SE = 0.12, p = .987 \). Work engagement did not mediate the relationship between optimism and turnover intention, 95% CI = [-0.12, 0.13], failing to support hypothesis 4c.

**Moderation and Moderated Mediation**

To examine hypothesis 5, transformational leadership was tested as a moderator for the association between optimism and work engagement in the path analysis. Transformational leadership did not significantly moderate the relationship, \( b = 0.21, p = .225 \). Therefore, the hypothesis was not supported.

Hypotheses 6a, 6b, and 6c predicted that the indirect effect of optimism on the three outcomes via work engagement would be weakened with higher levels of transformational leadership. Given that the moderation effect of transformational leadership on the optimism–work engagement relationship was not significant, the proposed moderated mediation effects would not be significant. Thus, hypotheses 6a, 6b, and 6c were not supported.

**Supplementary Analysis**

To further explore the potential moderation effects of transformational leadership, additional analyses of moderated regression were conducted to examine whether transformational leadership influences the direct relationships between optimism and the outcome variables. Moderated regression (when all variables are entered simultaneously) in MPlus showed that transformational leadership did not moderate the relationship between optimism and task performance (\( b = -0.14, p = .457 \)) or work withdrawal (\( b = 0.10, p = .252 \)). However, it did significantly moderate the relationship between optimism and turnover intention, \( b = 0.35, p = .005 \). The pattern of the interaction is presented in Figure 4. This figure
demonstrates that optimism was related to employees’ turnover intention when transformational leadership was low, but not when transformational leadership was high.
DISCUSSION

This study investigated the relationships between optimism and task performance, work withdrawal, and turnover intention. In addition, work engagement was examined as a mediator between optimism and the different work outcomes. Last, transformational leadership was explored for its moderating role between optimism and work engagement.

Optimism was significantly correlated with all three work outcomes, supporting hypotheses 1, 2, and 3. Optimism was negatively correlated with turnover intention and work withdrawal, and positively correlated with task performance. No significant indirect effects were found for engagement as a mediator, failing to support hypotheses 4a, 4b, and 4c. Transformational leadership was not identified as a moderator in the proposed model as the effect was not found to be significant, failing to support hypothesis 5. Lastly, no moderated mediation was found, failing to support hypotheses 6a, 6b, and 6c. Although these results were not expected based on previous research findings and the theoretical framework upon which this research was conducted, they do offer insights for research in this field and directions for future research.

The positive correlations of optimism with task performance mirror some of the results found by Kluemper et al. (2009). Furthermore, the negative associations of optimism with turnover intention and work withdrawal were in line with expectations given optimism’s previous positive relationships with job satisfaction and work happiness found by Youssef and Luthans (2007). Additionally, current results found significant correlations between optimism and engagement, which is consistent with previous findings (Geers, & Wellman, 2009; Medlin & Green, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). However, engagement did not mediate any relationships in the proposed model with optimism and other performance
outcomes. Engagement also had a positive correlation with task performance and negative correlations with turnover intention and work withdrawal, similar to previous research (Bakker, 2008).

**Theoretical Implications**

The general resource perspective (Hobfoll, 2002), as well as the Job Demands-Resources Model (Schaufeli & Taris, 2014) provided the main theoretical frameworks for this research on optimism. The results are consistent with the notion that optimism is a resource associated with turnover intention, task performance, and work withdrawal. This may suggest that optimistic employees are predisposed to a better outlook towards life, which promotes better performance and stability in their job. Overall, the general resource perspective was supported for the outcomes studied and shows promise for future research on optimism’s effect on other work outcomes. It is worth noting that since the results were correlational in nature, it is possible that employees with positive work outcomes are more likely to rate themselves as optimistic. As Hobfoll (2002) stated, resources are a valuable tool that can help individuals in stressful work environments. The negative correlations between optimism with turnover intention and work withdrawal support this claim and show that optimism’s role as a personal resource is one that should be taken into consideration when studying work demands. Other personal resources may also work in conjunction with optimism.

The lack of findings for work engagement as a mediator suggest that other constructs may explain the relationships between optimism and the work outcomes studied. One possible mediator may be empowerment, as previous research supported empowerment as a mediator between optimism and intention to quit (Avey, Hughes, Norman, & Luthans, 2008). Furthermore, other constructs such as meaningfulness or job satisfaction could play a role in this
relationship. Optimism may influence employees’ meaningfulness in a job and their job satisfaction, which may in turn impact their performance and turnover. These constructs should be investigated in future research.

In addition, transformational leadership was not a significant moderator in the relationship between optimism and work engagement. It was expected that transformational leadership would compensate for low levels of optimism due to the similar positive effects these two variables have on employees. The supplementary analysis conducted in this study indicated that transformational leadership moderated the relationship between optimism and turnover intention. As shown in Figure 4, optimism related to employees’ turnover intention when transformational leadership was low, but not when transformational leadership was high. This indicated that transformational leadership did interact with optimism to affect turnover intention. This finding mirrors previous research where transformational leadership moderated the relationship between emotional exhaustion and turnover intention (Green, Miller, & Aarons, 2013). Taken together, an interaction effect was found for turnover intention, but not for work engagement. It is possible that transformational leadership can provide useful resources and compensate for low levels of optimism when influencing employees’ behavior, but cannot substitute for optimism when shaping employees’ job attitudes. Future research examining other performance and job attitude outcomes would be helpful and informative.

**Practical Implications**

The hypotheses that were supported show some promising results for practitioners. For supervisors who wish to hire employees who will be engaged at work, not turnover quickly, and perform well, it would be advantageous to seek out employees with high levels of optimism. From the current research, optimistic employees seem to be better than the average employee in
terms of performance and intent to remain on the job. As previous research shows, optimism may influence more than just job attitudes (e.g., engagement; Carver et al., 2010), but can also develop into behaviors (e.g., work withdrawal). Furthermore, optimistic employees may be associated with higher task performance and lower work withdrawal due to their ability to use their resources as a resiliency tool (Scheier & Carver, 1985). Based on this, managers may attempt to hire employees who exhibit higher dispositional optimism. Employees high in optimism may be better equipped to handle difficult tasks and challenges at work compared to those with low ratings in optimism.

Nevertheless, the lack of support for some hypotheses shows the importance of using a comprehensive approach when seeking out high quality employees. Besides identifying what personality characteristics may assist employees at work, employers should also screen for other predictors in their personnel selection processes. Other predictors used during screening can range from traditional resumes (Zikmund, Hitt, & Pickets, 1978), job knowledge (Palumbo, Miller, Shalin, & Steele-Johnson, 2005), and even drug testing (Konovsky & Cropanzano, 1991). Although one predictor alone cannot offer a full picture of an individual’s fit for a position, more predictors would offer a more detailed profile of an applicant.

Limitations and Future Research

The current study has several limitations. First, the range of the variable ratings for employees was relatively small. Although scales averaged a range from one to five, many ratings appeared on the higher end of the spectrum with relatively low standard deviations. While normality was maintained according to skewness and kurtosis values (apart from work withdrawal), ratings that consistently hover towards either the maximum or minimum value sacrifice variability in the results. For example, when the “low” rated individuals in optimism
are still above the midpoint of the scale, it may be difficult to conclude with confidence that those with “lower” ratings are actually rated low in optimism. This was also true for the work outcomes, as both task performance and work withdrawal had very high and low means, respectively. Limited variability may have made it more difficult to find significant results in the current study.

Another limitation of the current study was that it was cross-sectional in nature. The constructs studied were all collected at only one time-point which prevents determination of causation and prediction. Although these constructs can be viewed in terms of their correlations and relationships, one cannot conclude that one construct precedes another, or causes it. Moreover, the relationships investigated in this study could also be investigated for their reciprocal nature. Schaufeli and Taris (2014) state that the JD-R model may come with the existence of gain cycles. Gain cycles develop when the resources and motivational variables influence each other mutually. However, it is difficult to tell which variable is a stronger antecedent than the other with data that is collected at one time point. A research design that is not cross-sectional would be able to better distinguish which variables are true antecedents and outcomes in the future. Therefore, future research should focus on longitudinal designs that collect data from multiple time points. This may allow for better interpretability in the results and stronger causal conclusions to be made about the constructs.

Another limitation may stem from the surveys used to measure the constructs. While the measures were mostly sufficient in terms of reliability and validity, there will always be room for improvement in terms of measurement of the constructs. Specifically, the validity evidence for the work engagement scale was limited. Although this scale has been used previously and was developed under a closely related construct, a more detailed validity study would be beneficial.
Finally, although back translations were performed, and the measures have previously been used in a Chinese context, it is still possible that a different country and society could result in different findings. Chinese research has investigated personal resources such as PsyCap and found similar results to the current study including a significant negative relationship to job burnout, and significant positive relationship to organizational commitment (Peng et al., 2013). However, China’s government and cultural norms are quite different from those in the United States of America and could influence the results. For example, although transformational leadership exists in Chinese culture as well, it can be broken down further into Confucian and Taoist work values which are not common in a Western Context (Lin, Ho, & Lin, 2012). These differences, small or large, may have shaped the results differently than if they were investigated in the United States of America. Future research should examine this issue in a western context to see if similar results are found.

While future research should pay close attention to fixing the aforementioned limitations, there are other avenues that can be explored as well. For example, although these constructs have been investigated in both Chinese and American contexts, they are rarely studied simultaneously in different cultures. Future research should work to measure these variables in similar organizations across different cultures at the same time periods. Additionally, future research could investigate these constructs in other, less traditional work settings. Instead of investigating educated business organizations, future research may include factory settings, fast-food organizations, and even remote work places. Remote work places may offer different conclusions due to the separation of the employee from the supervisor on most occasions. Although remote work places are not the norm currently, they may offer interesting conclusions as technology advances and more organizations are allowed remote work.
CONCLUSION

Overall, the results in this study help researchers understand how optimism can be beneficial to employees. The research on personal resources can still be expanded upon and this study helped to investigate optimism. Although the hypotheses were not all supported, the results found still offer insights for theory and practice. Significant relationships exist between optimism, task performance, work withdrawal, and turnover intention, supporting the notion that optimism can function as an important psychological resource for employees at work. The predicted mediation and moderation relationships were not supported by the data, but offer directions for future research. Other psychological mechanisms should be investigated to explore the underlying mechanisms for the relationships between optimism and outcomes.
REFERENCES


Table 1

Means, Standard Deviations, and Correlations of Variables

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<th>4.</th>
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<th>6.</th>
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*Note.* *p < .05. **p < .01 (two-tailed)
### Table 2

Path Analyses Predicting Work Engagement and Work Outcomes

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<th>Second stage dependent variable = task performance</th>
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Unstandardized coefficients are reported. Interactions are mean-centered. * $p < .05$, ** $p < .01$
Figure 1

The Proposed Model
Figure 2

The Job Demands-Resources Model

- Mental
- Emotional
- Physical
- Etc.
- Support
- Autonomy
- Feedback
- Etc.

Job Demands +

Strain -

Organizational Outcomes +

Job Resources

Motivation +

+ -

- +
Figure 3

The Path Model

Transformational Leadership

Optimism

Engagement

-0.49**

Task Performance

0.41

0.31*

Work Withdrawal

-0.14*

0.00

Turnover Intention

-0.14
Figure 4

Moderated Regression Analysis

Moderated Regression of Turnover Intention

Low Optimism

High Optimism

$, Low TL

--- High TL
Appendix A

OPTIMISM SCALE

Revised Life Orientation Test (LOT)

Of these eight items, four are keyed in a positive direction, and four are keyed in a negative direction. Respondents are asked to indicate the extent to which they agree with each of the items, using the following response format: 4 = strongly agree, 3 = agree, 2 = neutral, 1 = disagree, 0 = strongly disagree. Additional instructions caution respondents to be as accurate and honest as they can throughout, and to try not to let their answers to one question influence their answers to other questions. They are explicitly told that there are no correct or incorrect answers. All negatively worded items are reversed prior to scoring.

1. In uncertain time, I usually expect the best.
2. It is easy for me to relax. (filler item)
3. If something can go wrong for me, it will. (r)
4. I’m always optimistic about my future.
5. I enjoy my friends a lot. (filler item)
6. It’s important for me to keep busy. (filler item)
7. I hardly ever expect things to go my way. (r)
8. I don’t get upset too easily. (filler item)
9. I rarely count on good things happening to me. (r)
10. Overall, I expect more good things to happen to me than bad.

(r) These items are reversed prior to scoring.
Appendix B

TRANSFORMATIONAL LEADERSHIP SCALE

INSTRUCTIONS: This questionnaire provides a description of your leadership style. Twenty descriptive statements are listed below. Judge how frequently each statement fits you. The word others may mean your followers, clients, or group members.

0 - Not at all 1 - Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always

1. I make others feel good to be around me..............................................0 1 2 3 4
2. I express with a few simple words what we could and should do. ..................0 1 2 3 4
3. I enable others to think about old problems in new ways..........................0 1 2 3 4
4. I help others develop themselves............................................................0 1 2 3 4
5. I tell others what to do if they want to be rewarded for their work............0 1 2 3 4
6. I am satisfied when others meet agreed-upon standards............................0 1 2 3 4
7. I am content to let others continue working in the same ways always........0 1 2 3 4
8. Others have complete faith in me..............................................................0 1 2 3 4
9. I provide appealing images about what we can do......................................0 1 2 3 4
10. I provide others with new ways of looking at puzzling things...................0 1 2 3 4
11. I let others know how I think they are doing............................................0 1 2 3 4
12. I provide recognition/rewards when others reach their goals.....................0 1 2 3 4
13. As long as things are working, I do not try to change anything..................0 1 2 3 4
14. Whatever others want to do is OK with me..............................................0 1 2 3 4
15. Others are proud to be associated with me.............................................0 1 2 3 4
16. I help others find meaning in their work................................................0 1 2 3 4
17. I get others to rethink ideas that they had never questioned before...........0 1 2 3 4
18. I give personal attention to others who seem rejected............................0 1 2 3 4
19. I call attention to what others can get for what they accomplish.............0 1 2 3 4
20. I tell others the standards they have to know to carry out their work.........0 1 2 3 4
Appendix C

WORK ENGAGEMENT SCALE

Please determine the extent that these statements describe your work experiences.

Scale: 1 (not at all) to 5 (to a great extent)

1. Indicate the extent to which you feel that you work hard.
2. Indicate the extent to which you are involved with group tasks.
3. Indicate the extent to which you contribute to the group.
Appendix D

TASK PERFORMANCE SCALE

Please rate how true these statements are about your employee from (1) strongly disagree to (7) strongly agree.

1. Adequately Completes assigned duties.
2. Fulfills responsibilities specified in job description.
3. Performs tasks that are expected of him/her.
4. Meets formal performance requirements of the job.
Appendix E

WORK WITHDRAWAL SCALE

Please rate the current items on how often they occur from (1) never to (5) every day.

1. Came to work late without permission
2. Stayed home from work and said you were sick when you were not
3. Taken a longer break than you were allowed to take
4. Left work earlier than you were allowed to
Appendix F

TURNOVER INTENTION SCALE

Please rate how true these statements are about yourself from (1) totally disagree to (5) totally agree.

1. It is likely that I will leave my employment with the company within a year.
2. I intend to keep working at the company for at least the next three years. (r)
3. I don’t plan to quit my job in the next few years.
VITA

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EDUCATION

Bachelor of Science, Psychology; Minor: Statistics, May 2015
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, Old Dominion University, Dr. Xiaoxiao Hu, Norfolk, VA, August 2015 to Present

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Research Assistant, Department of Psychology, Virginia Tech, Dr. E. Scott Geller, Blacksburg, VA, September 2013 to December 2014

Data Reductionist, Virginia Tech Transportation Institute (VTTI), Blacksburg, VA, March 2014 to July 2015

PRACTICAL EXPERIENCE

Overcome Academy, Fall 2017
• Assessed needs for combat wounded warriors for successful transition to civilian life

Children’s Learning and Research Center (CLRC), Fall 2016
• Conducted interviews and online surveys with employees and assessed organizational needs (financial, organizational support, selection, training)

AFFILIATIONS

Industrial – Organizational Psychology Student Association (IOPSA)
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