Investigating the Role of Optimism and Resilience on the Effect of Work Engagement on Emotional Exhaustion and Workplace Deviant Behaviors

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Abstract
Under what situations can work engagement predict emotional exhaustion? Working with the idea that work engagement and emotional exhaustion are two endpoints of a continuum, we relied on the conservation of resources (COR) theory – which evaluates them as two different variables – to undertake a multi-context, two-study research among bankers and miners. We asserted that work engagement would increase emotional exhaustion for people who are scaled lower in the optimism individual trait. Additionally, we recognized a three-way interaction, wherein work engagement heightened emotional exhaustion for less-optimistic persons who are also not resilient, while oppositely minimizing emotional exhaustion for high-optimism persons who are resilient. Our findings also lend credence to a moderated-mediation model, suggesting that when both optimism and resilience are high, deviant conduct in the workplace is reduced because workers are less emotionally exhausted from their work. We provide suggestions for future studies on work engagement and workplace deviant behavior.

Keywords: work engagement, optimism, emotional exhaustion, resilience, workplace deviant behavior

1 Introduction
Work engagement has received great attention in both the academic (Ahakwa et al., 2021) and professional worlds (Jabeen, 2020). It has become challenging to brush off issues circling work engagement (Bakker & Schaufeli, 2015). According to Schaufeli et al. (2009), work engagement is described as a physical, psychological, and affective attachment of workers to the performance of their duties. Indeed, rigorous meta-analytic studies show that employee engagement enhances employee commitment, productivity, and satisfaction (Babenko et al., 2019; Jabeen, 2020; Soares & Mosquera, 2019). Per several studies’ outcomes, promoting workplace engagement has been positioned to be beneficial to a business firm (Byrne et al., 2016; Hakanen et al., 2018; Kulikowski, 2017; Schaufeli & Bakker, 2004). In another breath, there is the position that greater levels of work engagement will negatively promote emotional exhaustion (Chen et al., 2020; González-Romá et al., 2006). Conversely, people are asserted to have limited cognitive resources (Byrne et al., 2016). Negative outcomes may occur if they are over-engaged and use too much cognitive resources (Kulikowski, 2017). Our study posits to challenge this assertion and define the situations in which we expect engaged workers to be emotionally exhausted and afterward demonstrate deviant behaviors.

Emotional exhaustion occurs when people determine that they lack the resources to execute the tasks assigned to them and experience the feeling that they are detached, have a decreased ability to do normal tasks, or have extreme emotional fatigue (Alola et al., 2019; Kraemer & Gouthier, 2014). Some studies have indicated a negative, rather than positive, association between engagement and emotional exhaustion (Chen...
et al., 2020; Han et al., 2021; Stewart et al., 2009). These studies, however, overlooked personal traits that could shroud the negative association between work engagement and emotional exhaustion among workers, called optimism. Optimism represents the attitude of hope that an outcome of a particular situation or event will be favorable and desirable (Hojat et al., 2015). Optimists interpret failures and negative events as something that will happen again and can be overcome when they occur (Nes & Segerstrom, 2006). Optimistic people are better established to accommodate stress, anxiety, depression, and emotional exhaustion, even when overly engaged (Alarcon et al., 2013; Charoensukmongkol & Suthatorn, 2018). Likewise, resilient people are better at remaining calm in the wake of complex job demands than non-resilient people (Levens & Gotlib, 2012; Vizoso et al., 2019a). Resilience is coping mentally and emotionally with a crisis to return to pre-crisis status quality (Vizoso et al., 2019b). Hence, people with altering optimism and resilience can present different emotional results even when engaged. Therefore, we asked, “how does a person’s level of engagement interact with their personality attributes to affect their tendency to become emotionally exhausted?” and how do these interactions affect workplace deviant behavior?”

To respond to these questions, the present study conducted study 1 with employees in the banking industry of Zimbabwe. It evaluated how optimism posited as an individual-level resource that moderates the influence of work engagement on emotional exhaustion, assuming that a negative association would come up for high levels of optimism rather than low levels. With study 2, conducted with employees in the mining industry in Zimbabwe, we reproduce the outcome in study 1. The study subsequently predicted that the strength of the interacting effect of engagement and optimism on emotional exhaustion would be minimized when people demonstrate resilience. Study 2 paves the way to evaluate whether these interacting effects could condition deviant behaviors. Workplace deviant behaviors can limit a firm’s progress and enhance poor individual performance, and it has been determined that people display deviant behaviors when emotionally exhausted (Rahman et al., 2013; Uddin et al., 2018; Waheed et al., 2017).

The study’s conceptual model is shown in figure 1. We situate optimism as an important moderating element of the association between work engagement and emotional exhaustion while simultaneously postulating emotional exhaustion as a mediator between work engagement and deviant behaviors. Secondly, a personality trait, namely resilience, posits joining forces to enhance the moderating role of optimism on the engagement to emotional exhaustion association, amplifying the influence on deviant behaviors. This study adds to empirical evidence on work engagement and emotional exhaustion by indicating the patterns that could help explain workplace deviant behaviors, especially from people you least expect. The study unravels the black box of the association between engagement and deviant behaviors (Chen et al., 2020; Ferris et al., 2009; Stewart et al., 2009). More so, the study shows how emotional exhaustion may explain the situation by which overly engaged workers involve in deviant behaviors, which results in troubling organizational effectiveness. The two-study design enhances our framework by indicating consistency across different sample populations.

2 Work engagement and emotional exhaustion (study 1)

2.1 Literature review (study 1)

A great deal of research characterizes work engagement as energetic resilience and a commitment to put forth effort in work assignments (Jackson, 2014; Soares et al., 2017). Literature highlights that work engagement enhances important organizational outcomes such as job commitment, satisfaction, and well-being while minimizing labor turnover and absenteeism (Albrecht et al., 2015; Saks, 2006; Wood et al., 2020). Additionally, the efficiency of a firm is affected by engaged workers because they demonstrate fulfilment, affection, and positive energy (Schaufeli et al., 2009). In contrast to the findings demonstrating these positive outcomes of work engagement, we present a counterintuitive assertion that identifies potential circumstances in which such beneficial effects may not occur.

Beyond examining the favorable returns of engagement at work, earlier researchers have interpreted engagement as the contradicting or positive antithesis of burnout (González-Romá et al., 2006; Heavens et al., 2018). Burnout has been explored to have exhaustion, inefficacy, and cynicism as its components (Schaufeli et al., 2009). Energy, efficacy, and involvement that characterize engagement have been determined to be the direct opposite of burnout components (Heavens et al., 2018). Even though González-
Romá et al. (2006) study raise the notion that exhaustion and cynicism dimensions of burnout are opposed constructs to engagement, recent research questions the position of that assertion (Moeller et al., 2018).

Schaufeli & Bakker (2004) initiated the first counterargument, indicating that while engagement may be a theoretical antipode to burnout, it is a distinct principle that cannot be evaluated on a burnout scale. Additionally, Byrne et al. (2016) posited that the concept of engagement is not synonymous with the concept of burnout. Their research validates our proposition that workers could experience burnout (i.e., emotional exhaustion) due to the physical and psychological drive espoused via work engagement. This notable literature has provided a space for rethinking, modeling, and investigating engagement from a new perspective. Our investigation focused on the role engagement plays in originating negative outcomes.

Optimism was explored as an important individual trait because it is a significant predictor of problem-focused coping (Charoensukmongkol & Suthatorn, 2018; Levens & Gotlib, 2012) rather than disengagement-based coping (Chang & Chan, 2015) and problem-focused coping is a significant asset for

Figure 1 Conceptual framework

2.2 The role of optimism (study 1)
Riding on the theoretical position that work engagement predicts emotional exhaustion, we provide an individual-distinction construct, optimism as a personal characteristic, as a moderator to investigate when such negative associations between work engagement and emotional exhaustion occur and do not suffice. The conservation of resource (COR) theory postulates that people are inspired to safeguard and preserve their prevailing resource pool or valuables (e.g., objects, energy, individual traits, or situations) and to acquire new resources to make up for resources losses (Hobfoll, 1989; Hobfoll et al., 2018). Personal resources prevent people from being stressed out even when facing tough situations or having trouble satisfying job requirements (Nemțeanu et al., 2022; Srivastava & Bajpai, 2020). Optimism is an important personal resource that positively affects workers' behaviors, such as positioning a person to cope and combat dire situations that could end in burnout (Chang & Chan, 2015; Hojat et al., 2015; Nes & Segerstrom, 2006). Even so, researchers have remarked that an individual has limited resources and that persistent engagement will presumably be challenging to sustain (Malagón-Aguilera et al., 2020; Taylor et al., 2019).

Optimism is an important personal characteristic related to countless organizational and individual outcomes (Odedokun, 2017; Özdemir & Kerse, 2020). Optimistic people are said to be hopeful, persistent, positive, contend, and view challenging situations as a learning curve compared to low-optimistic individuals (Vizoso et al., 2019). We postulate that this individual trait may aid individuals in avoiding a situation of being emotionally exhausted. It is among low-optimistic (pessimistic) individuals that we posit that the kind of relationship between engagement and exhaustion is significantly altered. We expect them to lack the personal resources that will aid them to be simultaneously engaged in work and remain emotionally exhausted.

Optimism was explored as an important individual trait because it is a significant predictor of problem-focused coping (Charoensukmongkol & Suthatorn, 2018; Levens & Gotlib, 2012) rather than disengagement-based coping (Chang & Chan, 2015) and problem-focused coping is a significant asset for
avoiding emotional exhaustion. Generally, optimism is modeled as a tool that preserves and provides a protective shield to deal with stress, anxiety, depression, and burnout (Chang & Chan, 2015; Hojat et al., 2015; Nes & Segerstrom, 2006). Optimistic people are more likely to have a fair and objective evaluation of their job responsibilities because of their hopeful attitude, positives, and their resolve to conduct their work to turn negatives into opportunities (Malagón-Aguilera et al., 2020; Özdemir & Kerse, 2020). Therefore, optimistic individuals can persevere when challenged and need to cope with multiple job demands (Levens & Gotlib, 2012; Odedokun, 2017; Özdemir & Kerse, 2020).

Therefore, based on the COR model, we assume that people with adequate individual resources (i.e., who are high in optimism) and demonstrate high levels of work engagement are less likely to be emotionally exhausted than those who are low in optimism. Given this, we assume that,

**H1 (study 1).** Optimism moderates the association between work engagement and emotional exhaustion. Less optimistic workers will experience emotional exhaustion, whereas more optimistic workers will experience less emotional exhaustion.

The main hypothesis was evaluated in study 1 with a sample of workers in the banking sector. In study 2, which used a sample of mining workers, we replicated the outcome of study 1 related to H1. We also predict that the strength of this engagement and optimism interaction effect on emotional exhaustion would be highlighted when considering individual resilience. We proceeded to explore the rationales in study 2.

3 **Research method for banking employees’ sample (study 1)**

3.1 **Data collection and sample**

Data was gathered from a sample of employees of prominent banks in the capital of Zimbabwe, Harare. The respondents were exposed to the survey processes, making them know their participation was voluntary. The respondents were assured confidentiality and that their research team would use their responses solely for academic purposes. The questionnaire indicated the study’s purpose, instructions, construct items, and scales. The questionnaire was administered online (via WhatsApp & Telegram) through a random sampling approach. Aligning with the current study objective, the study relied on measures that relate to the current theory and hypothesis: work engagement, optimism as a trait, and emotional exhaustion.

The majority of participants were within the age bracket 18-25 years (46.7%), followed by 26-35 years (44.0%). In terms of gender, 164 (72.9%) were males and 61 (27.1%) were females. 144 (64%), 39 (17.3%), and 20 (8.9%) have bachelor, master, and HND. The majority had been with their firms for 6-10 years (46.2%), and 72 (32%) for 1-5 years. 206 (91.6%) and 19 (8.4%) are full and part-time workers respectively.

3.2 **Constructs measurement**

All the variable elements used a 5-point Likert response scale, from 1 (strongly disagree) to 5 (strongly agree). Examples of the scale elements are indicated in the descriptions of each construct.

3.2.1 **Predictor (work engagement)**

The work engagement measurement consisted of 14 items (α=0.917, CR=0.929, AVE=0.579). The items were taken from (Salanova et al., 2003). A sample item was “I am carried away by my task”.

3.2.2 **Dependent construct (emotional exhaustion)**

The scale was an eight-item measure (α=0.872, CR=0.899, AVE=0.528) employed from Alola et al. (2021). Samples item was “I feel used up at the end of my work.”

3.2.3 **Moderator (optimism)**

Optimism was evaluated with the revised Life Orientation Test (LOT), using eight items (α=0.892, CR=0.914, AVE=0.571) taken from Carver et al. (2010). Samples items were “In uncertain times, I usually expect the best.”

4 **Results and discussions (study 1)**

The study tested the assumptions by evaluating the distinctiveness of the relevant constructs. This was made possible after evaluating the measurement model reliability and validity (EFA) with SmartPLS 4.0 by running the algorithms. The variables included work engagement (14 items), emotional exhaustion (8 items),
and optimism (8 items). The outcome revealed that the measurement model is adequately fit (NFI=0.776, SRMR=0.070, Chi-square=954.528, d_G=0.769, d_ULS=2.265, R-square=0.800). The values satisfy the thresholds (thumb rules), thereby establishing the model's reliability. The composite reliability (CR), Cronbach alpha (α), and the Average Variance Extracted (AVE) are indicated under constructs measurement.

The discriminant validity was determined using the Fornell-Larcker approach with a threshold of <0.85. The potential variable’s square root of AVE values was more significant than the correlation coefficients between potential variables relying on the Fornell-Larcker approach, as shown in Table 1.

Table 1 Discriminant validity (study 1)

<table>
<thead>
<tr>
<th>Fornell-Larker criterion</th>
<th>Mean</th>
<th>STDEV</th>
<th>Emotional exhaustion</th>
<th>Optimism</th>
<th>Work engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion</td>
<td>0.314</td>
<td>0.068</td>
<td></td>
<td>0.727</td>
<td></td>
</tr>
<tr>
<td>Optimism</td>
<td>0.560</td>
<td>0.070</td>
<td>0.255</td>
<td>0.835</td>
<td></td>
</tr>
<tr>
<td>Work engagement</td>
<td>0.038</td>
<td>0.026</td>
<td>0.396</td>
<td>0.421</td>
<td>0.844</td>
</tr>
</tbody>
</table>

N=225, diagonals connote the square root of the average variance extracted, and the remaining entries represent the correlations.

The study evaluated the model using the OLS regression and PROCESS macro in SPSS 26 (model 1) introduced by Hayes (2012) to test the first moderation hypothesis. The outcome is stipulated in Table 2. In Model 1 of Table 2, the study observed a negative relationship between work engagement and emotional exhaustion (β=−0.183, p=.006). The study suggests in hypothesis 1 that the association between engagement and exhaustion is moderated by optimism. Table 2 Model 3 shows a non-significant interaction effect (R² = 6.1%) for emotional exhaustion (β=−0.46, p=.000), supporting H1. The study asserted that engagement would be associated with emotional exhaustion for people with low optimism but not for people with high optimism. Figure 2 provides a visual representation that partly seconds our position as indicated by the significant slope differences (p<.0001), with a negative slope at high optimism (t=3.18, p<.01) and a non-significant simple slope (negative) at low optimism (t=0.21, p>.01).

Table 2 outcome of moderation effect on emotional exhaustion (study 1)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Tested</th>
<th>Emotional exhaustion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>3.482 (.258)***</td>
</tr>
<tr>
<td>Work engagement</td>
<td></td>
<td>-.183 (.067)*</td>
</tr>
<tr>
<td>Optimism</td>
<td></td>
<td>.086 (.093)</td>
</tr>
<tr>
<td>Engagement x optimism</td>
<td>H1</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>R-square</td>
<td></td>
<td>.034</td>
</tr>
</tbody>
</table>

The coefficients and standard errors (in parenthesis) are reported; *** p < .001, ** p < .01, * p < .05
Figure 2 two-way interaction of work engagement and optimism on emotional exhaustion (study 1)

Summarily, study 1 gives evidence for the assuaging role of optimism in warding off highly engaged workers from becoming emotionally exhausted. People who are optimistic and are highly engaged at work may experience less emotional exhaustion but the same cannot be said for individuals who have low optimism, as they are likely to be emotionally exhausted. The outcome, however, remains inadequate to depict how personal elements or traits may prevent employee behaviors that emanate from loss of resources among engaged workers. Determining this association would call for further studies that could establish the proposed central role of emotional exhaustion in predicting workplace deviant behavior. To enhance the generalization of these assumptions, the study relied on analysis from a different industry setting to test the model captured in figure 1. Furthermore, the study represented workplace deviant behavior outcomes to further evaluate the effects of the interplay between work engagement, optimism, resilience, and emotional exhaustion.

5 Work engagement to workplace deviant behavior relationship (study 2)

5.1 Literature review (study 2)

We have indicated that highly optimistic people who engage heavily in their work will go through less emotional exhaustion as compared to low optimistic people. We subsequently asserted that people with high engagement but low optimism would discover that their disorganization and absence of endurance maximize the possibility of undergoing an increased level of emotional exhaustion likened to people with high engagement and high optimism. However, when does work engagement demonstrate a significant positive association with emotional exhaustion?

We argue not only that low optimism is important, as previously postulated, but that resilience is as well, and that the two elements work in synergy with one another to maximize the tendency that a person engaged in their work will be emotionally exhausted. Of course, people who are not resilient – explained as the place where an individual cannot cope mentally and emotionally under stressful situations (Anasori et al., 2020; Flynn et al., 2021) – are positioned to be emotionally exhausted, because of their conveyed negative feelings such as hopelessness, worry, and indignation (Jiang et al., 2020; Lee et al., 2021). Additionally, people who are less resilient and less optimistic position to employ the prevention coping mechanisms when confronted with challenges, which is generally viewed by their compatriots as being ineffective (Aguiar-Quintana et al., 2021; Al-Hawari et al., 2020; Lyu et al., 2021). Given this, we assert that:

H2 (study 2). A 3-way interaction exists between work engagement, optimism, and resilience such that engaged workers who are less optimistic and less resilient will experience high levels of emotional exhaustion, whiles engaged workers who are more optimistic and resilient would experience low levels of emotional exhaustion.
Workplace deviant behaviors are detrimental to the overall productivity of a company and threaten the well-being of a firm (Rahman et al., 2013; Uddin et al., 2018). According to Jiang et al., (2020), workplace deviance is regarded as voluntary behavior workers demonstrate that violates essential organizational norms. Cognizance of that, our study considers “production deviance” which is associated with performance and represents actions that go against the documented requirements of a firm (Ferris et al., 2009; Stewart et al., 2009). For instance, leaving early from work, absenteeism, lateness to work, wasting resources, and intentionally working low are considered production/performance-associated deviant behaviors. We position that performance-related deviance is more significant to our context than the other forms of deviant behaviors since the aforementioned is more associated with emotional exhaustion. We regarded emotional exhaustion as a potential precursor of workplace deviant behavior.

Emotionally fatigued workers have negative perceptions of their work situations and may respond by disregarding organizational rules and suppressing commitment at work, resulting in company inefficiencies (Chen et al., 2020a; Jiang et al., 2020; Shantz et al., 2013; Srivastava, 2016). Considering the negative impact that emotional exhaustion can have on people and their actions, we consider it worthwhile to investigate how emotional exhaustion can contribute to workplace deviant conduct (González-Romá et al., 2006; Schaufeli et al., 2009). Postulating that work engagement affects emotional exhaustion based on different levels of optimism, both independently (H1) and in conjunction with resilience (H2), and emotional exhaustion increases workplace deviant behavior as aforementioned, we provide the following two extra extensive moderated-mediation assumptions.

H3 (study 2). When optimism is high, the effect of work engagement on deviant behaviors will be minimized via less emotional exhaustion.

H4 (study 2). Work engagement will maximize workplace deviant behavior through emotional exhaustion when there is low optimism and resilience. Nevertheless, when there is high optimism and resilience, workers' engagement will minimize deviant behaviors through less emotional exhaustion.

6  Research methods for miners’ sample (study 2)
6.1 Data collection and sample
To determine the reliability and validity of our moderated-mediation model and to provide implications for subsequent studies and practice, we evaluated the conceptual model using a larger sample of workers in the mining industry in Zimbabwe. To maximize study 2’s robustness, we increased the chance of obtaining significant outcomes with a larger sample size. To enhance the generalizability for H1, we included some control variables we believe would best define our model.

We gathered responses from workers and their supervisors from Zimbabwe mining companies. The research team visited the companies especially those in close proximity to obtain permission from their Personnel Managers. Relying on a random sample approach, we undertook an online survey (via WhatsApp and emails) as efforts to do an interview with the CEOs proved abortive. To aid clarity and understanding, the questionnaire was written in simple words. The research supervisor and other Ph.D. students audited the questions; to ensure there is consistency, unbiasedness, validity, and a high degree of accuracy. A few changes and spelling mistakes were corrected after the review.

A total of 301 completed questionnaires were deduced after scrutiny and used for the current research, indicating a 78.2% response rate from a possible 385. The majority of participants were within the age bracket 26-35 years (159, 52.8%), followed by 18-25 years (94, 31.2%). In terms of gender, 219 (72.8%) were males and 82 (27.2%) were females. 126 (41.9%), 98 (32.6%), and 62 (20.6%) have bachelor, HND, and master, respectively. The majority had been with their firms for 6-10 years (151, 50.2%), and 97 (32.2%) for 1-5 years. 287 (95.3%) and 14 (4.7%) are full and part-time workers respectively

6.2 Construct measurement (study 2)
The study’s constructs were evaluated with a 5-point Likert response scale, from 1 (strongly disagree to 5 (strongly agree), except otherwise stated. The study provides examples of scale elements in the descriptions of each construct.
6.2.1 Predictor (work engagement)
The work engagement measurement consisted of 14 items (α=0.930, CR=0.941, AVE=0.560). The items were taken from (Salanova et al., 2003), the same as in study 1.

6.2.2 Mediator (emotional exhaustion)
The scale was an eight-item measure (α=0.933, CR=0.945, AVE=0.681) employed from Alola et al. (2021), similar to study 1.

6.2.3 Dependent construct (performance deviance)
The 7-item measure (α=0.848, CR=0.869, AVE=0.590) was expunged from (Agwa, 2018) for the survey. It evaluated the workplace deviance of workers in executing their formal tasks. The elements were evaluated using a 5-point Likert scale from 1 (never) to 5 (always). Participants scored themselves regarding performance-deviant actions. For instance, “I often come to work late without permission”, “I often engage in personal matters instead of working for my company”, and “I often put little effort towards my job”.

6.2.4 Moderators (optimism & resilience)
Optimism was evaluated with the revised Life Orientation Test (LOT), using eight items (α=0.929, CR=0.942, AVE=0.669) taken from Carver et al. (2010), in line with study 1. Resilience was measured with an eight-item scale (α=0.865, CR=0.906, AVE=0.588) employed from (Pilafas et al., 2020). Sample item was “I am calm in a crisis”.

6.2.5 Control variables.
Relevant controls were deployed in the current research. We controlled for other personal traits that could influence both emotional exhaustion and/or performance deviance, precisely, conscientiousness, (α=0.758, CR0.776=, AVE=0.555), extraversion (α=0.712, CR=0.813, AVE=0.600), and emotional stability (α=0.728, CR=0.819, AVE=0.606) (Bowling & Eschleman, 2010; John et al., 1991). The number of years worked with a company was used in evaluating work experience because when individuals work in the same field for a considerable number of years, they are less likely to go through emotional exhaustion (Chen et al., 2020).

7 Results (Study 2)
Table 4 stipulates the descriptive information covering the mean, standard deviations, and correlations for all constructs. The study estimated the models employing OLS regression and PROCESS macro (Model 1, 3, and 11) in SPSS 26 by Hayes, (2012) to determine the moderation and moderated-mediation assumptions. The outcome in Table 5 shows the study’s stepwise approach. The study began with the control variables (Model 1), proceeded to the main effect (Model 2), and finally added the moderators in model 3. Model 4 determined H1 and Model 5 tested H2.

The study evaluated the assertions by ascertaining the distinctiveness of the relevant variables. This was made possible after assessing the measurement model reliability and validity (EFA) with SmartPLS 4.0 by running the algorithms. The constructs included work engagement (14 items), emotional exhaustion (8 items), optimism (8 items), resilience (8 items), organizational deviance (7 items), agreeableness (3 items), conscientiousness (3 items), extraversion (3 items), and emotional stability (3 items). The outcome revealed that the measurement model is adequately fit (NFI=0.765, SRMR=0.122, Chi-square=4374.227, d_G=2.250, d_ULS=23.864, R-square=0.902). The values satisfy the thresholds (thumb rules), thereby establishing the model's reliability. The composite reliability (CR), Cronbach alpha (α), and the Average Variance Extracted (AVE) are indicated under constructs measurement.

The discriminant validity was determined using the Fornell-Larcker approach with a threshold of <0.85. The potential variable’s square root of AVE values was more significant than the correlation coefficients between potential variables relying on the Fornell-Larcker approach, as shown in Table 3.

<table>
<thead>
<tr>
<th></th>
<th>Fornell-Larcker criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
</tr>
<tr>
<td>STVED</td>
<td>EE</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.003</td>
</tr>
</tbody>
</table>

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As shown and aligned with study 1, we saw a negative association between work engagement and emotional exhaustion (β=−.26, p=.000). Hypothesis 1 indicated that the negative relationship between work engagement and emotional exhaustion would be stronger at high than low optimist individuals. Table 4 (Model 5), we had a significant interaction effect surfaced (ΔR² = 2.9%) for emotional exhaustion (β=−.36, p=.0013), seconding hypothesis 1. We indicated that work engagement would positively associate with exhaustion for low-optimism persons and negatively associate with exhaustion for high-optimism persons. Figure 3 dispenses a visual presentation that buttresses our assumed position. It reveals a significant slope variance (p<.0001) with a negative slope for high optimism individuals (t = −2.70, p<.01) and almost a mean slope for low optimists (t = 0.78, p>.01). Summarily, in line with study 1, a strong negative association between work engagement and emotional exhaustion was only ascertained for high optimist persons.

Table 4 Regression outcomes for the effects on emotional exhaustion for study 2.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Tested</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td></td>
<td>4.079*** (.324)</td>
<td>-0.097 (.167)</td>
<td>-0.066 (.141)</td>
<td>-0.080 (.137)</td>
<td>1.550 (.818)</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td></td>
<td>0.086 (.121)</td>
<td>0.023 (.048)</td>
<td>0.029 (.041)</td>
<td>0.002 (.040)</td>
<td>-0.004 (.039)</td>
</tr>
<tr>
<td>E. stability</td>
<td></td>
<td>-1.122 (.126)</td>
<td>-0.086 (.050)</td>
<td>-0.085* (.042)</td>
<td>-0.073 (.041)</td>
<td>-0.063 (.040)</td>
</tr>
<tr>
<td>Extraversion</td>
<td></td>
<td>-1.100 (.129)</td>
<td>0.060 (.052)</td>
<td>0.074 (.043)</td>
<td>0.010 (.042)</td>
<td>0.042 (.041)</td>
</tr>
<tr>
<td>Work engagement</td>
<td></td>
<td>-0.256*** (.027)</td>
<td>-0.422*** (.061)</td>
<td>-0.056 (.071)</td>
<td>0.142 (.075)</td>
<td></td>
</tr>
<tr>
<td>Optimism</td>
<td></td>
<td>-0.583*** (.053)</td>
<td>-0.638*** (.116)</td>
<td>-0.132 (.131)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resilience</td>
<td></td>
<td>-0.259*** (.064)</td>
<td>-0.630*** (.144)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement x optimism</td>
<td>H1</td>
<td>-0.361*** (.110)</td>
<td>-0.334*** (.119)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement x resilience</td>
<td></td>
<td></td>
<td>-0.244* (.150)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimism x resilience</td>
<td></td>
<td></td>
<td></td>
<td>0.716** (.248)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement x optimism x resilience</td>
<td>H2</td>
<td>0.456* (.212)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-square</td>
<td></td>
<td>0.010</td>
<td>0.142</td>
<td>0.289</td>
<td>0.294</td>
<td>0.304</td>
</tr>
</tbody>
</table>

N=301, the coefficients and standard error (in parenthesis) are reported; ***p<.001, **p<.01, *p<.05
Additionally, our H2 assumed that the interaction influence between engagement and optimism would be further moderated by resilience as highlighted in a significant 3-way interaction. Table 5 under model 5 covers the 3-way significant interaction with ($\Delta R^2 = .30$) for emotional exhaustion ($\beta=0.46, p=.032$), aiding the determination of H2. We deemed work engagement to be more positively associated with emotional exhaustion for low-optimism people than persons with high optimism, particularly for less resilient individuals. From figure 4, we deduce the slope pattern. For low optimism & low resilience (blue line 1) ($t=3.02, p>.001$), as well as high optimism & high resilience position (blue line 1) ($t=-2.35, p=.010$), which affirms the hypothesis. More so, figure 4 shows the slope of high optimism & low resilience (gray line 2) ($t=-2.33, p=.013$), implying resilience, or the lack thereof, had much less effect on high optimism persons than low optimism persons.

Relying on Process Macro proposed by Hayes (2012) in SPSS and applying the 10000 bootstrapping methods to provide the basis for H3 and 4, producing the outcome for the moderation-mediation. This aided the study to evaluate the conditional indirect influence of the two & three-way interaction terms on performance deviance through emotional exhaustion. Mediation could be deduced if the confidence interval of the indirect effect does not include zero. Table 6 stipulates the mediation outcome.
With H3, we indicated that when optimism is high, the engagement effect on performance deviance through emotional exhaustion would decrease for high-optimism individuals than for low-optimism individuals. We realized that emotional exhaustion mediated the association between work engagement and performance deviance when optimism was high (95%, CI [-0.20, -0.03]) but not when it was low (95%, CI [-0.04, -0.18]) as table 5 displays. We deduced that people who were optimistic and resilient demonstrate less performance deviance, due to a decline in their emotional exhaustion (95%, CI [-0.22, -0.04]). Therefore, we recognized some backing for H4. Moreover, because we discovered a negative slope for high-optimism individuals who go through emotional exhaustion at both levels of resilience in figure 4, we posit that optimistic individuals may have also demonstrated less deviant behaviors due to less emotional exhaustion when they are not resilient (95%, CI [-0.28, 0.01]), however, it was not the case. The influence did not proceed to affect performance deviance.

Table 5 Moderated-mediation results. Bootstrapped conditional effects of indirect effects of emotional exhaustion on performance deviance

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Optimism</th>
<th>Resilience</th>
<th>Effect</th>
<th>Boot SE</th>
<th>Boot LLCI</th>
<th>Boot ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td>-</td>
<td>0.0627</td>
<td>0.0572</td>
<td>-0.0401</td>
<td>0.1844</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>-</td>
<td>-0.1011</td>
<td>0.0441</td>
<td>-0.1976</td>
<td>-0.0293</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>0.1421</td>
<td>0.0825</td>
<td>0.0161</td>
<td>0.3310</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>-0.0902</td>
<td>0.0831</td>
<td>-0.2746</td>
<td>0.0763</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Low</td>
<td>-0.1337</td>
<td>0.0742</td>
<td>-0.2837</td>
<td>0.0123</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>-0.1177</td>
<td>0.0522</td>
<td>-0.2226</td>
<td>-0.0346</td>
<td></td>
</tr>
</tbody>
</table>

N = 301 workers; bootstrapping sample size = 10,000

8 Discussion (Study 2)
Traditionally, work engagement has been unraveled as a positive tool to promote several gainful behaviors to organizations and people who are fully engaged. In both the banking and mining setting, we discovered that people with a high level of optimism who were engaged at work did not go through emotional exhaustion; however, this cannot be said for low-optimism individuals. Furthermore, these associations were stronger when looking at the influence of resilience. It is through their capacity to endure and manage challenging situations that optimistic, engaged workers go through less emotional exhaustion and are less performance-deviant. People low in optimism posit to go through emotional exhaustion when they are highly engaged with their work. The room to be less resilient increases emotional exhaustion, manifesting in adverse effects for performance deviance (i.e., higher workplace deviant behaviors). Cognizance to the two industry setting for the study, we offer empirical proof that these consequences are not isolated or unitary phenomena, and that the literature might profit from looking at engagement as a precursor to adverse outcomes.

By unearthing the association between individual-level work engagement and workplace deviant behavior, we offer a distinct position on the effects of work engagement by highlighting the possible disadvantages for organizations and individuals, and this position has implications for work engagement interventions. Compared to the conventional pattern which emphasizes the beneficial effects of engagement on behavior at work and performance (Shantz et al., 2013; Uddin et al., 2018), We think it’s important to take into account how some people might find it challenging to maintain high levels of healthy work engagement that don’t result in exhaustion or deviance. We specifically show that engagement can result in a wider range of outcomes, such as exhaustion and deviance. Therefore, we urge researchers to conceptualize work engagement and its effects more broadly in their future studies.

8.1 Theoretical implications (study 1 & study 2)
The study adds to the literature on work engagement, workplace deviant behavior, and emotional exhaustion. For example, we demonstrate how work engagement can bring about deviant behaviors and how such behaviors emanate from workers’ experiences of emotional exhaustion. The study’s outcome is a step
towards examining a new area of work exhaustion. Additionally, we provide confirmation that work engagement can influence workers negatively and subsequently affect an organization adversely. Cognizance of the COR theory and with the introduction of optimism as a personal resource, we demonstrate the situations in which work engagement manifest either positive or negative effects. The study proved that personality traits may be more substantial than researchers had initially considered, which has the probability of enhancing the understanding of which people may be capable of conserving their resources whiles going through engagement (Hobfoll, 1989; Hobfoll et al., 2018).

Additionally, this research seconds Taylor et al., (2019) indicating that the construct of engagement may not be the theoretical antipode of emotional exhaustion. Instead, engagement can result in emotional exhaustion, since people may deplete their psychological and cognitive resources when they are highly engaged. More so, by investigating the interacting effects of individuals’ differences on the work engagement to exhaustion association, we concluded that optimism and resilience are both relevant personal traits to regard as boundary conditions in the theory of work engagement. Since low-optimism people are less like to execute their tasks effectively, they may have a challenging time dealing with depression, anxiety, stress, and other prevailing job demands when they are overly engaged at work (Schaufeli & Bakker, 2004; Vignoli et al., 2016). The consequences of optimism on emotional exhaustion may be heightened when a person is unstable emotionally, showing frustrations and negative emotions.

8.2 Managerial implications (study 1 & study 2)

The study’s findings give some implications for practitioners. Our results are consistent with a study that demonstrate that "too much of a greater good" can have unforeseen repercussions (Chen et al., 2020). As an assertion, however, only some persons experience these negative effects. This implies that some workers – like those who are low in optimism and experiencing high levels of engagement will – will go through emotional exhaustion, whereas others continue to flourish. From the viewpoint of personnel management, providing certain important job resources may aid those who are less optimistic to be engaged, but less exhausted. For instance, offering those who lack optimism within an organization coaching, confidence, and hopefulness may help them become better, know how to handle themselves, and remedy their flaws when engaged highly in their job.

Additionally, strategies that reduce the requirements of the job — such as lowering the degree of task demands, role conflicts, workload, and time pressure (Kunzelmann & Rigotti, 2021; Vignoli et al., 2016) enables less optimistic people to be active without experiencing emotional exhaustion. Companies may take into account initiatives that are unrelated to the workplace, like mindfulness training, to aid an individual to develop their cognitive abilities (Anasori et al., 2020; Jahanzeb et al., 2020). Due to the growing focus on work-life balance, employers can also mandate a more coordinated job design and foster a work-life atmosphere that allows people to feel better mentally and experience less emotional tiredness (Chan et al., 2022; López et al., 2018).

Moreover, when creating work engagement initiatives that are intended to be helpful, management must be aware of some of the adverse impacts that individual disparities can have (Bakker & Albrecht, 2018; Buitendach et al., 2016). Recognizing an individual's cognitive characteristics may enable them to adjust such initiatives as needed, allowing the advantages to be fully realized. To regularly experience resource gains at a greater rate than resource losses, COR philosophers have recommended that businesses establish resource caravans or a worker marketplace where people may share necessary resources and acquire corporate assistance (Hobfoll, 1989; Hobfoll et al., 2018). Such shared resources may be crucial for those who most need them, such as people less optimistic.

Lastly, management may wish to ensure their staff directs their engagement activities to duties that are advantageous to organizational growth. According to a study, an individual’s intrinsic inspiration for a task can lower their commitment to other tasks they deem less intrinsically gratifying (Hobfoll et al., 2018; Sungu et al., 2020). Therefore, employers may have difficulties if a worker is intensely grossed to a task that is intrinsically satisfying to the worker but is somewhat less important than other tasks. Management should watch out for employees, especially less optimistic persons, who spend too much time on less-important jobs to the detriment of more-vital ones.
9 Limitations and suggestions for future research (study 1 & study 2)

The current study has some limitations that may assist future researchers to consider in their line of study. First of all, we centered on personal elements that moderate the association between work engagement and emotional exhaustion. External factors may also affect people who are engaged. Elements such as workloads, emotional labor, time pressure, and other important elements that constitute job demands may initiate quicker resource depletion, which may heighten the work engagement to the deviance process (Kunzelmann & Rigotti, 2021). Emotional exhaustion among workers can be mitigated by certain workplace factors (eg. Strong work relationships, coaching & mentorship, stimulating work design, and mindfulness training) (Buitendach et al., 2016; Heavens et al., 2018; Wood et al., 2020), whereas other organizational elements such as a poor fit with organizational values may trigger emotional exhaustion (Malagón-Aguilera et al., 2020). Additionally, employers can help by providing a positive example for staff members rather than using harsh kinds of discipline that could worsen workers' animosity against the company (Deery et al., 2017). Without support from their superiors or coworkers, employees can easily plunge into a downhill trajectory of emotional exhaustion, which can have devastating results. This is especially true in cultures with strong power distances and hierarchies. To improve our model and learn more about how work engagement might lead to undesirable results, future research should investigate these extraneous influences.

Furthermore, if workers are feeling more emotionally drained, they may be less able to put out their best effort in areas like corporate citizenship behavior and organizational creativity, which are both valued by the company (Piehler et al., 2016; Shantz et al., 2013). Even though we conducted the study from two industry settings, a longitudinal design would enable us to monitor the process of resource depletion and aid us to appreciate the interactions between work engagement, emotional exhaustion, and workplace deviance over time (Hur et al., 2015). Subsequent research can look at testing extensions of our framework in other industry settings other than banking and mining to evaluate its generalizability.

More so, while the focus of this article was to present a new, simpler model that sheds light on the connection between engagement and emotional exhaustion—with serious consequences for unproductive workplace behavior—there is room for further exploration of other types of personal cognitive differences (Bowling & Eschleman, 2010; Gramstad et al., 2013; Mullola et al., 2018). The COR theory has indicated that elements such as conscientiousness and emotional stability are well-founded in management disciplines, and can be applied to individuals (Chen et al., 2020a; Hobfoll et al., 2018). Therefore, we suggest that future researchers could consider conscientiousness and emotional stability – as an individual’s capacity to cope with depressive conditions and remain functional under such conditions. These ideas might be useful for an upcoming study on the relationship between engagement and emotional exhaustion.

References


