Officer perceptions of reward fairness and withdrawal behaviour

Dr Amanda Allisey
Deakin University, Melbourne, Australia
Email: amanda.allisey@deakin.edu.au

Prof. John Rodwell
Australian Catholic University, Melbourne, Australia
Email: john.rodwell@acu.edu.au

Assoc. Prof. Andrew Noblet
Deakin University, Melbourne, Australia
Email: andrew.noblet@deakin.edu.au

The aim of this paper was to test the predictive capability of an expanded Effort-Reward Imbalance Model on employee absenteeism within the context of policing. Three separate reward systems were assessed for their contribution to officer withdrawal behaviour in the form of absenteeism frequency. Data was gathered from a sample of operational officers (n = 553) within a large Australian police agency. Findings indicate that there was a strong influence of social rewards on officer absenteeism rates. Low workload was associated with a higher frequency of absenteeism suggesting a loafing effect. There were a number of significant interactions providing support for the effort-reward imbalance mechanism and the separation of the reward construct. Implications and directions for future research are proposed.

Keywords: Effort-reward imbalance, law enforcement, absenteeism, work stress
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ABSTRACT

The aim of this paper was to test the predictive capability of an expanded Effort-Reward Imbalance Model on employee absenteeism within the context of policing. Three separate reward systems were assessed for their contribution to officer withdrawal behaviour in the form of absenteeism frequency. Data was gathered from a sample of operational officers (n = 553) within a large Australian police agency. Findings indicate that there was a strong influence of social rewards on officer absenteeism rates. Low workload was associated with a higher frequency of absenteeism suggesting a loafing effect. There were a number of significant interactions providing support for the effort-reward imbalance mechanism and the separation of the reward construct. Implications and directions for future research are proposed.

INTRODUCTION

Work stress or ‘strain’ is almost ubiquitous in the human services (Green & Lorne, 2005; Obholzer & Roberts, 1994). Risk factors associated with the nature of emergency and human services (e.g., dealing with trauma) are thought to be the main determinants of stress in these positions, however the less distinctive stressors that are common across many occupations are often considered more harmful to employee wellbeing (Cooper, 1983; Cooper & Kelly, 1993). Specific conditions such as work overload, poor social support, low job control and little influence in decision-making are often considered critical in determining employee stress levels, and their subsequent risk of stress-and health-related outcomes (e.g., Burke & Mikkelsen, 2006; Wang, Lesage, Schmitz, & Drapeau, 2008).

The ERI model is one of the most well-known job stress frameworks and has been utilized to assess and alter potentially damaging working environments (Siegrist, 2002; Siegrist, Wege, Puhlhofer, & Wahrendorf, 2009). The main hypothesis of the ERI model is that where an unequal relationship exists between employee perceptions of effort and reward in the workplace, job strain will result. Similarly, although the ERI model distinguishes between three main reward systems (i.e., esteem, security and monetary rewards) there is limited research that considers how these rewards
independently influence employee strain and how different reward contribute to the effort-reward relationship. Additionally, the ERI model specifies an individual difference component termed overcommitment. Overcommitment is thought to interact with an effort-reward imbalance to exacerbate the negative effects of an effort-reward imbalance (Siegrist & Peter, 1996). The vast majority of ERI research is focused on physical and psychological health outcomes and provides strong support for the ERI model hypotheses (for a review see van Vegchel, de Jonge, Bosma, & Schaufeli, 2005). The effectiveness of the ERI model in relation to behavioural strain outcomes is however, less frequently investigated. Therefore, the aim of this study is to assess the efficacy of an extended ERI model as a predictor of officer absenteeism.

**Absenteeism as an integral work stress outcome**

Behavioural measures of job strain provide valuable objective information on the effects of working conditions. A range of behavioural indicators can be used to operationalise job strain, such as absenteeism (Godin & Kittel, 2004), turnover (de Croon, Sluiter, Blonk, & Broersen, 2004), job performance (Beehr, Jex, Stacy, & Murray, 2000; Jex, 1998), and productivity (Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002). Absenteeism is a particularly important outcome for organisations and is associated with both direct and indirect costs. Previous estimates suggest that employee absence from work costs Australian employers over $7 billion annually (Wooden, 1993). Absenteeism is viewed as a multidimensional construct that reflects both voluntary and involuntary behaviour (Bakker, Demerouti, De Boer, & Schaufeli, 2003; Driver & Watson, 1989) and is related to a host of personal, organisational and attitudinal factors (Gellatly, 1995; Shaw, Delery, Jenkins, & Gupta, 1998). Involuntary absences are uncontrollable absences from work that occur because of factors considered outside of the employee’s influence such as illness or family commitments. Conversely, voluntary absences from the work role represent purposive action to avoid work (Hammer & Landau, 1981). Voluntary absences reflect withdrawal behaviour and are likely to be a reaction to poor working conditions (Chadwick-Jones, Nicholson, & Brown, 1982).

Reducing habitual, voluntary absenteeism is particularly concerning and offers significant organisational benefits. Work-related factors are frequently reported as strong antecedents to
voluntary absenteeism (Bakker, et al., 2003; Dwyer & Ganster, 1991; Goff, Mount, & Jamison, 1990). Studies suggest that habitual absenteeism also may be related to between-person differences such as personality traits or coping styles and particular individuals may be more likely to use absenteeism for their own benefit (Martocchio & Jimeno, 2003). Recent work has also found support for a dispositional source of ‘absence proneness’ in addition to social or contextual sources (Harrison & Price, 2003; Iverson, Olekalns, & Erwin, 1998).

Understanding the antecedents to employee absenteeism is an important endeavour although there are a range of methodological issues that have affected previous research. The collection of absenteeism data and the construction of absenteeism indicators can have a considerable influence on the overall results (Steel, 2003). Absenteeism data has been shown to display non-normal distributions and typically utilised count indices (i.e., days off work) are often highly skewed. Frequency data tends to display the greatest level of reliability when compared with alternative measures of absenteeism such as total time lost or the duration of absences (Hammer & Landau, 1981; Muchinsky, 1977). Frequency measures of absenteeism are most often used to represent voluntary absenteeism, whereas time lost is most often used to represent involuntary absences (Hackett & Guion, 1985).

**The ERI model and employee absenteeism**

The ERI model is relevant to a large range of employee outcomes. Research suggests that the presence of an effort-reward imbalance is associated with greater psychological distress (Shimazu & de Jonge, 2008), higher rates of cardiovascular disease (Kuper, Singh-Manoux, Siegrist, & Marmot, 2002) and reduced satisfaction (Van Vegchel, De Jonge, Meijer, & Hamers, 2001). Only a small number of studies have assessed the relationship between the ERI model and absenteeism. The extent to which the full ERI model (i.e., including tests of the extrinsic, intrinsic and interaction hypotheses) was tested varied between studies while the measurement of absenteeism differed substantially. A study performed by Peter and Siegrist (1997) measured short- (i.e., ≤ 3 days) and long-term (>3 days) sickness absence, as well as the number of absence episodes. The results indicate that low levels of reward differentiated participants who were absent from work from those who were not. In particular, short-term absences were consistently associated with perceived low reward. However, a combined effort-reward indicator was not associated with any of the absenteeism measures. A similar study
conducted by Head et al. (2007) measured both short (<7 days) and long (>7 days) absences. The presence of an effort-reward imbalance was associated with increased short and long sickness absences. One further study (Godin & Kittel, 2004) utilised retrospective self-report data and focused on both frequency of absences (≥3 absence episodes) as well as duration of absences (>1 week and ≥1 long spell of 15-days or greater). The results indicated that an imbalance was associated with both measures of absence duration although was not associated with frequency of absences.

Very little research has investigated the effect of overcommitment or the potential moderating effects of overcommitment on the relationship between effort or reward and employee absenteeism, and available evidence provides mixed support. Some authors have identified a positive relationship between overcommitment and absenteeism (e.g., Godin & Kittel, 2004; Schreuder, Roelen, Koopmans, Moen, & Groothoff, 2010) and yet others report no direct relationship between the measures (e.g., Griep, Lucia, Chor, Toivanen, & Landsbergis, 2010; Hanebuth, Meinel, & Fischer, 2006). Further research is needed to test the ERI model components, and the ERI hypotheses, in relation to important behavioural outcomes such as absenteeism.

An extension of the ERI model

The reward component of the ERI model is a multi-dimensional construct. Three distinct reward systems are identified as essential to employee wellbeing: esteem rewards, financial rewards, and promotion prospects/job security (Siegrist & Marmot, 2004). Although Siegrist and Peter (1996) advocate the use of an aggregate measure, more recent research tends to investigate each of these reward structures independently (van Vegchel, de Jonge, Bakker, & Schaufeli, 2002). For instance, van Vegchel et al., (2002) identified that esteem and security rewards had a stronger effect on psychosomatic complaints and physical health symptoms than the salary component whereas Lang et al. (2010) identify financial reward as the strongest predictor of employee depression. Similar inconsistencies are identified regarding employee withdrawal. For instance, Schrueder et al. (2010) identified that only items from the esteem rewards component were associated with sickness absences. In contrast, Lang et al. reported that turnover intentions were associated with intrinsic rewards although they were unrelated to esteem or financial rewards. That is, the relevance of these reward systems to employee absenteeism has not been adequately tested. The current research
therefore aims to add to the ERI literature by examining the influence of differential rewards as a direct antecedent to employee absenteeism as well as a moderator as a combined effort-reward indicator.

**Hypotheses**

The current study utilises an extended version of the ERI model testing for both main effects and interactions between the variables. Accordingly, five hypotheses were developed to assess the applicability of the ERI model to recorded rates of officer absenteeism:

- **Hypothesis 1:** Low rewards will be associated with higher frequencies of absenteeism,
- **Hypothesis 2:** High effort will be associated with higher frequency of absenteeism,
- **Hypothesis 3:** A combination of high effort and low rewards will be associated with higher frequencies of absenteeism,
- **Hypothesis 4:** High overcommitment will be associated with high frequency of absenteeism,
- **Hypothesis 5:** Overcommitment will exacerbate the effects of high effort and low rewards on officer absenteeism.

**METHOD**

**Participants**

Participants were operational staff sampled from two regions of a large police agency within Australia. In order to, match rates of absenteeism with employee responses to the survey required participants to provide their employee number on the survey. A total of 553 employees provided their employee number along with their survey responses. Of the respondents, 81% were male, 45% were aged 39 years or less and 40% had been working with the police agency for 20 years or more.
Measures

*Effort-reward imbalance.* The questionnaire used to measure the ERI model consisted of three parts: effort, reward, and overcommitment and was a modified version of the self-report scales developed by Siegrist et al. (2004). Effort was measured with five items (e.g., “I have a lot of responsibility in my job”) that assessed employee perceptions of time pressures, number of interruptions, responsibilities, pressure to work overtime, and increases in their work demands. Rewards were measured with a composite scale of eleven items (e.g., “I receive the respect I deserve from my superiors”). Summed scores were created with high scores related to high effort and reward. Overcommitment was measured with the recommended six-item overcommitment scale (Siegrist, et al., 2004). Participants were asked to rate their agreement with the statements on a five-point Likert-type scale, with responses ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5). High scores indicated high levels of overcommitment. An example item is, “I get easily overwhelmed by time pressures at work”.

*Absenteeism.* Employee absenteeism rates were obtained through the Police Agency’s internal HR records. The Agency provided data corresponding to the year directly after the survey period and was matched to survey data by employee number. The absenteeism measure utilised in this research was operationalised as the frequency of absences rather than a count of time lost.

*Control Variables.* Age (39 years or less, 40-49 years, 50 years or more), gender (males versus females) and tenure (less than 9 years, 10-19 years and 20 years or more) were included as potential confounding variables of the relationship between effort-reward imbalance, overcommitment and absenteeism. Prior to their inclusion in the regression analyses the control variables were dummy coded (0, 1).

**RESULTS**

Prior to conducting the regression analyses, a preliminary factor analysis was conducted to test for the existence of separate reward systems. The results of the factor analysis confirmed a three-factor structure with five items representing the esteem component (e.g., I receive the respect and prestige I deserve at work), three items representing employee perceptions of salary and current
position (e.g., my salary/ income is adequate), and three items representing perceptions of job security and promotion prospects (e.g., my job promotion prospects are poor). These variables were named esteem rewards, status rewards and security rewards, respectively. Analyses were thus conducted using these three reward factors. Descriptive statistics and correlations are provided in Table 1.

Table 1 about here

Hierarchical multiple regression analyses were conducted to test the association between the extended ERI model and officer absenteeism. Variables were entered into the regression in the following order: 1) control variables; 2) effort, esteem rewards, status rewards and security rewards; 3) overcommitment; 4) two-way interactions (e.g., effort × esteem rewards); and 5) three-way interactions (e.g., effort × esteem rewards × overcommitment). The final step of the regression did not reach significance and was therefore removed from the analyses. The results of the regression are presented in Table 2.

Overall, the model tested in this study explained 15.4% of the variance in employee absenteeism (Adj R² = .127, F (17, 536) = 5.746, p<.000). The findings indicate that officers who were younger than 50 reported fewer absences. Males also reported fewer absences. The introduction of the effort and reward variables in step 2 of the regression improved prediction of absenteeism by 7% (p<.000). In the final step of the model effort was negatively related to absenteeism (B=-.15, p<.000). Esteem rewards and status rewards were also negatively related to absenteeism frequency (β=-.12, p<.05; β=-.15, p<.01).

Overcommitment was not related to employee absenteeism either directly or indirectly. Two interactions were significant in the final step of the model, the relationship between effort and employee absenteeism was moderated by perceived status rewards and perceived esteem rewards. The interactions were investigated visually and the results are presented in Figure 1 and Figure 2 below. The figures show that when esteem rewards were high and effort was also high, absenteeism was at its lowest (Figure 1). Further, when employees reported a high level of status rewards and a low level of effort, levels of absenteeism were greater (Figure 2).

Figure 1 about here

Figure 2 about here
DISCUSSION

The ERI model has been used extensively within the field of stress and employee wellbeing (Bonde, 2008; Calnan, Wainwright, & Almond, 2000; Godin, Kittel, Coppeters, & Siegrist, 2005) however few previous studies have considered the applicability of the ERI model to employee behavioural withdrawal. The little research there has been on the relationship between effort, reward and absenteeism has provided inconsistent support (Godin & Kittel, 2004; Head, et al., 2007; Peter & Siegrist, 1997) although the results of the results presented here suggest that an extended ERI model that distinguishes between forms of reward is likely to reveal important relationships. Consistent with the findings reported by Peter and Siegrist (1997), the results of this research were more supportive of an additive ERI model when predicting absenteeism, although the direction of the relationship between effort and absenteeism was negative indicating that lower levels of effort are associated with greater absenteeism, in contrast to expectations (Hypothesis 2).

Testing an expanded ERI model identified that esteem rewards and status rewards had a direct relationship with employee absenteeism frequency. However, security rewards were not related to absenteeism providing only partial support for Hypothesis 1. Supporting Hypothesis 3, the results indicated that the relationship between effort and absenteeism was moderated by rewards, however the interactions were not in the expected direction. A high effort, high esteem reward condition was associated with the lowest levels of absenteeism in contrast to the traditional ERI model proposition (e.g., beneficial outcomes are associated with a low effort-high reward indicator). Further, the interaction between status rewards and effort suggests that absenteeism was greatest when employees perceived a high level of status rewards and a low level of effort. Hypothesis 4 and Hypothesis 5 of this study were not supported as there was no relationship between overcommitment and the frequency of absenteeism reported by officers.

The finding that a low level of effort was associated with increased absenteeism is consistent with the notion of underutilisation, or underload, as a stressor (Frankenhaeuser & Gardell, 1976; Noblet, Rodwell, & Allisey, 2009). The measure of absenteeism used in this research was based on the frequency of absences, and may represent both voluntary and involuntary absences. One possible
explanation is that employees who are chronically ill are more likely to hold lower positions that are lower in work demand, however habitual absences from work because of perceived underutilisation may represent a purposeful decision to avoid the workplace. Consistent with the conceptualisation that frequent absences represent a voluntary, conscious decision (McShane, 1984), the finding that a high level of perceived effort is related to fewer absences suggests that employees with significant workplace demands cannot afford unnecessary time away from work. Similarly, absenteeism rates increased where workplace demands were low and status rewards were high, suggesting that where employees feel under-utilised, they are more likely to engage in behavioural withdrawal. Bearing in mind the nature of the absenteeism measure used in the current research, the findings suggest that employees may take advantage of positions that are financially rewarding and yet low in effort, voluntarily withdrawing from the job where their work demand allows. Maintaining adequate workloads and job complexity would therefore be a fundamental concern for management.

A further finding of this research was the interaction between effort and esteem rewards as a predictor of employee absenteeism. A high level of esteem reward combined with a high level of effort produced the lowest level of absenteeism. This finding suggests that social support and workplace recognition are important resources in an occupational setting. The finding that high levels of effort were again associated with fewer absences confirms the importance of challenge in the work role and the potentially stressful nature of underutilisation. Recognition of high performance is likely to lead to more motivated (Locke & Latham, 1990) and satisfied employees (Bauer, 2004), and as evidenced in this study, a higher level of workplace participation.

Limitations and further research

The results of this research suggest that the ERI model can be utilized to assess more work-related, objective outcomes and future research could include these outcome measures. Future ERI research may also benefit if an extended model is examined whereby the independent and conditional effects of the reward sub-components are tested. This study did not distinguish between voluntary and involuntary absenteeism although the results suggest that employee withdrawal from the work role is intentional where work demands allow. Nonetheless, future research may wish to assess the
differences between distinctly voluntary and involuntary absences. Further, the current study was based on a very specific sample of operational law enforcement officers. The context of the research may therefore have influenced the results. In order to test the cross-validity of the study findings, future research should utilize more heterogeneous samples.

**Implications**

The present research provides a number of theoretical and practical implications. Firstly, the ERI model appears to be a useful explanatory framework to examine employee absenteeism. Secondly, the separation of the reward component may also provide more practically valuable information. Increased social support and recognition in the workplace, along with more effective performance management methods are likely to reduce voluntary episodes of absenteeism and potential ‘loafing’ amongst employees. Absenteeism appeared to increase with the availability of discretionary time suggesting that management of workloads is a critical issue within policing. Introducing more effective means of resource allocation are likely to provide significant benefits to both individuals and the organisation. Although the ERI model variables explained a relatively small proportion of the variance in absenteeism frequency (11%), a reduction in absenteeism of even 5% in a large workforce such as a law enforcement agency has the potential to reduce a significant amount of time-lost due to employee voluntary withdrawal. Programs designed to improve communication channels that simultaneously address work demands, such as improved performance management systems, are likely to promote employee engagement and integration in the work role.
REFERENCES


### Table 1. Descriptives and correlations among the study variables

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<tr>
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<th>M</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>1. Absenteeism frequency</td>
<td>4.68</td>
<td>4.00</td>
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<td></td>
<td></td>
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<td>2. Effort</td>
<td>18.48</td>
<td>3.60</td>
<td>-.12**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Security reward</td>
<td>8.71</td>
<td>2.40</td>
<td>-.08</td>
<td>-.12**</td>
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<td></td>
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<tr>
<td>4. Esteem reward</td>
<td>17.24</td>
<td>3.63</td>
<td>-.17**</td>
<td>-.07</td>
<td>.45**</td>
<td>-</td>
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<tr>
<td>5. Status reward</td>
<td>9.83</td>
<td>2.37</td>
<td>-.20**</td>
<td>-.13**</td>
<td>.31**</td>
<td>.39**</td>
<td>-</td>
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<tr>
<td>6. Overcommitment</td>
<td>16.65</td>
<td>5.24</td>
<td>.09*</td>
<td>.38**</td>
<td>-.24**</td>
<td>-.28**</td>
<td>-.28**</td>
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Note: *p<.05, **p<.01

### Table 2. Regression analyses predicting officer absenteeism frequency

<table>
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<th>Independent variable</th>
<th>Absenteeism Frequency</th>
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<tr>
<td></td>
<td>B</td>
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<tr>
<td>Gender - Male</td>
<td>-1.37</td>
</tr>
<tr>
<td>Age – 39 years or less</td>
<td>-2.30</td>
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<tr>
<td>Age – 40 to 49 years</td>
<td>-2.54</td>
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<tr>
<td>Tenure – 9 years or less</td>
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</tr>
<tr>
<td>Tenure – 10 to 19 years</td>
<td>.04</td>
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<td>Effort</td>
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<tr>
<td>Security Reward</td>
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<tr>
<td>Esteem Reward</td>
<td>-.16</td>
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<td>Status Reward</td>
<td>-.34</td>
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<tr>
<td>Overcommitment</td>
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<tr>
<td>Effort × Status Reward</td>
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<tr>
<td>Effort × Security Reward</td>
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<tr>
<td>Effort × Esteem Reward</td>
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<tr>
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<td>Security Reward × Overcommitment</td>
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<tr>
<td>Effort × Overcommitment</td>
<td>-.00</td>
</tr>
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</table>

Total R²: .15***
Adj R²: .13***

Note: *p<.05, **p<.01
Figure 1. Interaction Between Effort and Esteem Reward Predicting Absenteeism Frequency

Figure 2. Interaction Between Effort and Status Reward Predicting Absenteeism Frequency