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**A Two Process Model of Burnout and Work Engagement: Distinct Implications of Demands and Values**

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**ABSTRACT.** A model of job burnout proposes two distinct processes. The first process concerns balance of demands to resources. A poor balance leads to chronic exhaustion, an integral aspect of the burnout syndrome. The second process concerns the congruence of individual and organizational values. The model proposes that value conflicts have implications for all three aspects of burnout. It also proposes that the impact of value conflicts has only minor implications for the exhaustion aspect of burnout; they are more relevant for the cynicism and inefficacy aspects of the syndrome. The model considers distinct processes at work that concern employees’ perception of organizational justice and their trust in leadership. With a sample of 725 nurses, the analysis tested one component of the theory: the extent to which value congruence enhances the prediction of burnout beyond the prediction provided by demands and resources. Future directions are discussed.

**Key words:** burnout syndrome, demand, resource, exhaustion.
When broadening the burnout syndrome beyond human services in the MBI-General Scale (Leiter & Schaufeli, 1996), the three-component framework continued. Although exhaustion continued to be an important part of the framework, burnout encompassed both employees' capacity for involvement in their work and the sense of profession efficacy they derived from their contribution.

From this perspective, workload leading to exhaustion is only one process to consider with burnout. The Job/Demand Resources (JD/R) model of burnout (Bakker, Demerouti, & Schaufeli, 2002) that considers the imbalance of demands to resources, includes more relevant information but remains incomplete. The balance of demands and resources primarily concerns employees' energy levels. The model includes broadly relevant qualities of worklife, but by considering them only as resources, it neglects their implications for involvement and efficacy. A complete perspective on the organizational context of burnout considers value congruence as well (Leiter & Maslach, 2004; Maslach & Leiter, 1997).

At issue is the correspondence of two distinct set of values. One set includes individual values of employees. Individuals through various processes, including personal experience, cultural background, or professional training, develop a set of values pertaining to their work. Some people can clearly articulate their work values as a structured framework, assigning relative importance to activities, settling ethical conflicts, and guiding plans. Others have only a general idea of values. They may not be aware of their values until they encounter an event that offends their expectations. Through their encounters with events at work, they gradually discover their values about work.

The corporate values of the organization directly contrast with employees’ personal values. Corporate values are expressed through organizational mission, vision, and values statements. These may be prominently displayed, guiding major organizational policy decisions and influencing the organization’s day-to-day operational decisions. In other situations, corporate values are poorly articulated in a generic fashion, including nothing unique to the specific organization. Organizational stakeholders deduce the organization’s values through observing events that define priorities: capital investments, promotions, and executive recruitment. The values-in-action that guide the organization’s important decisions may differ considerably from the documented values.

A central proposition presented here is that employees monitor the congruence of their personal values with those of the organization. Their judgments of congruence are a defining factor in their psychological relationship with work. Congruence of personal and organizational values confirms within individuals their relevance to the organization. It also assures them that they are properly positioned to pursue what is truly important in their careers. Organizations provide the resources, networks, and opportunities through which people can have a significant impact in their careers. The lone individual has only a modest impact in a post-industrialized work world. People working in an organization with congruent values are motivated to pursue shared objectives and are reassured that they posses the efficacy to achieve those objectives.

In contrast, the experience of value conflicts with an employer can be the occasion for a career crisis. When in conflict, pursuing personal values at work incurs risk. Employees may encounter conflict with supervisors or other organizational personnel for neglecting organizational priorities for other activities. When complying with organizational values, employees may judge that they are wasting their talents and time on trivial matters. In extreme situations, they may conclude that pursuing organizational values requires them to behave unethically.

Research (Laschinger & Finegan, 2005; Siegall & McDonald, 2004; Verplanken, 2004) found strong correlations of value incongruence and burnout. They also found that burnout mediated relationships of value incongruity with outcomes, such as the amount and quality of work. Value congruence of employees with the organization played a much greater role than did value congruence among co-workers in predicting job satisfaction (Ostroff, Shin, & Kinicki, 2005). A large-scale Swedish study found the relationship between value congruence and burnout to be evident across a wide range of occupations across the country (Lindblom, Linton, Fedeli, & Bryngelsson, 2006).

In light of these considerations, it is predicted that value incongruity has implications for all three aspects of burnout. First, the strain of ongoing conflict with the organization or central people within that organization depletes employees’ energy. Both the strain of conflict and the futility of wasted talent are exhausting. Second, value conflicts decrease employees’ involvement in their work. Employees experience a de-motivating situation in which they are discouraged from pursuing what they truly value. Third, they lose their sense of efficacy and accomplishment as they devote their time and talents to activities of little personal importance. The combined impact of value congruence constitutes a major process in the development of burnout. By going beyond an exclusive focus on the exhausting effect of excessive work demands (or the balance of demands to resources), the model provides a deeper consideration of employees’ application of personal values in order to understand their worklife.

The theory contribution is a two process model of burnout. One process is the generally observed impact of demand/resource imbalance on employees’ energy. Excessive demand creates exhaustion. The second process concerns values. Work that requires actions or attitudes contrary to personal values undermines employees’ involvement in their work leading to cynicism. It further undermines their sense of efficacy. Together, the two processes of demand/resource imbalance and value conflicts aggravate burnout and reduce work engagement.

These considerations lead to the following hypothesis:

Hypothesis 1: Value congruence will enhance the prediction of exhaustion beyond the prediction provided by (a) work overload and (b) workplace resources.

Hypothesis 2: Value congruence will enhance the prediction of cynicism beyond the prediction provided by (a) exhaustion and (b) workplace resources.
Hypothesis 3: Value congruence will enhance the prediction of efficacy beyond the prediction provided by (a) cynicism and (b) workplace resources.

Two Process Model

Figure 1 displays the Two Process Model in terms of the four areas of worklife, the three aspects of burnout, and an outcome indicator, organizational rating. As discussed previously, the model proposes that values mediate most of the relationships of worklife areas with energy, involvement, and efficacy. The one exception is the path from manageable workload to exhaustion which captures the relationship of work demands to experienced stress ((Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Karasek & Theorell, 1990). The Model also depicts control as having a foundational role in the model. There are direct paths from control to two other areas of worklife (workload and fairness) and an indirect path to values.

With burnout and work engagement defined in terms of energy, involvement, and efficacy, a complete model considers ways in which the three elements relate to one another. The Two Process Model proposes exhaustion as contributing to cynicism which mediates exhaustion’s relationship with efficacy. This structure requires that any consideration of the relationship of worklife to cynicism account as well for the contribution of exhaustion which mediates some of those relationships.

The Model stipulates that the three aspects of burnout and engagement relate to the outcome variable of organizational rating. It may be that with a specific outcome, only one or two aspects of burnout will have a significant path. For example, previous research has found stronger relationships of exhaustion and cynicism with negative outcomes and stronger relationships of professional efficacy with positive outcomes (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Also, in light of the central role of values in this approach, the Model includes a direct path from values to organizational rating, indicating that value congruence has an influence on employees’ experience of worklife beyond its implications for burnout and work engagement.

Method

Participants

The sample consisted of 725 nurses from acute care facilities in Canada. Most of the sample (n=667) were female (25 respondents did not specify their gender). Respondents included Registered Nurses (n=589), Licensed Practical Nurses (n=85), Clinical Nurse Specialists (n=5), Clinical Nurse Educators (n=5), Nurse Practitioners (n=3), and “other” (n=15; 23 respondents did not specify their job title). Participants worked in Tertiary Hospitals (n=226), Regional Hospitals (n=362), Community Hospitals (n=89), or other settings (24; 24 respondents did not specify their work environment). The majority of participants worked full time (n=437), with 135 respondents working part time, and 46 respondents working casual (107 did not specify their work status). The majority of respondents were staff nurses (n=601), and there were 29 managers and 68 classified as “other” (27 respondents did not indicate their position). Respondents included members of the District Nurse Advisory Council (n=19) and members of the Practice Council (n=37), but most respondents were not members of either type of council (n=669). Of the participants, 54 of them had worked at their present organization for less than a year; 240 had worked at their organization for 2-10 years, 210 had worked for 11-20 years, and 199 had worked at their present organization for over 20 years (22 participants did not specify their time with their organization). The sample represents a 29% response rate for the 2500 surveys distributed to acute care settings in Atlantic Canada. The large proportion of full time, female, point-of-care Registered Nurses is representative of the population in this region (Canadian Institute for Health Information, 2005a, 2005b).

Procedure

Participation in the study involved completion of the questionnaire package. The researchers distributed paper questionnaire packages to nurse managers at selected hospitals in all four Atlantic Provinces in Canada. Nurse Managers were responsible for distributing the packages to point-of-care nurses working on their units either during unit meetings, by placing the packages in mailboxes, or by leaving a stack of packages with ward clerks to help distribute. All of the packages included the survey; an
information letter detailing the procedures and reason for the study, a flyer to advertise the online version of the survey, and a ballot and ballot envelope. As an incentive to participate, all nurses who completed the survey were given the opportunity to enter their name into a prize draw.

Measures

**Burnout/Work Engagement.** Burnout was measured using the Maslach Burnout Inventory-General Scale (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). The MBI-GS measures the three dimensions of the burnout-engagement continuum: exhaustion-energy, cynicism-involvement, and inefficacy-efficacy. The items are framed as statements of job-related feelings (e.g., “I feel burned out from my work”); “I feel confident that I am effective at getting things done”), and are rated on a 6-point frequency scale (ranging from 0=“never” to 6=“daily”). Burnout is reflected in higher scores on exhaustion and cynicism, and lower scores on efficacy, whereas the opposite pattern reflects greater engagement. Developed from the original MBI (Maslach, Jackson, & Leiter, 1996), which was designed for human service occupations, the MBI-GS is a 16-item measure that evaluates burnout among people in all occupations.

**Areas of Worklife.** The Areas of Worklife Scale (AWS) (Leiter & Maslach, 2004) comprises 29 items that produce distinct scores for each of the six areas of worklife: manageable workload (6), control (3), reward (4), community (5), fairness (6), and values (5). Reward and community were not used in this analysis. The items are worded as statements of perceived congruence or incongruence between oneself and the job. Each subscale includes positively worded items of congruence, e.g., “I have enough time to do what’s important in my job” (manageable workload) and negatively worded items of incongruence, e.g., “Working here forces me to compromise my values” (values). Respondents indicate their degree of agreement with these statements on a 5-point Likert-type scale ranging from 1 (strongly disagree), through 3 (hard to decide), to 5 (strongly agree). The scoring for the negatively worded items is reversed. For each of the six subscales, the AWS measure defines congruence as a high score (greater than 3.00), indicating a higher degree of perceived alignment between the workplace and the respondent’s preferences. Conversely, it defines incongruence as a low score (less than 3.00), indicating more perceived misalignment or misfit between the worker and the workplace. The AWS items were developed from a series of staff surveys conducted by the Centre for Organizational Research & Development (Leiter & Harvie, 1998; Maslach & Leiter, 1997) as a means of assessing the constructs underlying our analysis of the six areas of worklife. The scale has yielded a consistent factor structure across samples (Leiter & Maslach, 2004).

**Organizational Rating.** Participants evaluated three issues regarding the extent to which they had changed in the past year. The specific issues were workload, hours of work, and workplace health. The questions used a five-point scale from (1) Much Worse, (2) Worse, (3) No Change (4) Better, and (5) Much Better. Intercorrelations among the scales were greater than .35 with an acceptable alpha level for a three point scale (Green, Lissitz, & Mulaik, 1977).

### Results

**Descriptive Statistics and Correlations**

Table I displays the means, standard deviations, alphas, and correlations among the measures. The alpha levels are all above .70, except for the rating measure. Due to the direct relationship of alpha to the number of items, a two-or three-item scale, a coefficient alpha of .60 (Cortina, 1993) or .50 (Nunnally & Bernstein, 1994) is acceptable as a minimum standard. The correlations among the three aspects of burnout followed the expected pattern of results, with exhaustion being strongly correlated with cynicism (r = .60, p<.001) and with efficacy (r = .28, p<.001), and cynicism being strongly correlated with efficacy (r = −.39, p<.001).

**Structural Model: Analysis Plan**

A structural equation analysis evaluated the Hypothesized Model using EQS (EQUaTionS) (Bentler & Chou, 1987). Whereas some items showed a moderate kurtosis, the analysis used the robust analysis option of EQS, which corrects for multivariate kurtosis (Byrne,

### Table I. Means, Standard Deviations, Cronbach's Alpha Values, and Correlations among Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D</th>
<th>Cronbach's Alpha</th>
<th>Cynicism</th>
<th>Efficacy</th>
<th>Workload</th>
<th>Control</th>
<th>Fairness</th>
<th>Values</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaustion</td>
<td>2.65</td>
<td>1.47</td>
<td>.60</td>
<td>–.28</td>
<td>–.61</td>
<td>–.36</td>
<td>–.39</td>
<td>–.32</td>
<td>–.37</td>
<td></td>
</tr>
<tr>
<td>Cynicism</td>
<td>1.82</td>
<td>1.41</td>
<td>.76</td>
<td>–.39</td>
<td>–.38</td>
<td>–.41</td>
<td>–.44</td>
<td>–.42</td>
<td>–.31</td>
<td></td>
</tr>
<tr>
<td>Efficacy</td>
<td>4.46</td>
<td>.98</td>
<td>.86</td>
<td>.23</td>
<td>.40</td>
<td>.28</td>
<td>.35</td>
<td>.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td>2.76</td>
<td>.74</td>
<td>.80</td>
<td>.38</td>
<td>.34</td>
<td>.28</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.08</td>
<td>.79</td>
<td>.71</td>
<td>.51</td>
<td>.46</td>
<td>.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fairness</td>
<td>2.75</td>
<td>.65</td>
<td>.76</td>
<td>.55</td>
<td>.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Values</td>
<td>3.23</td>
<td>.62</td>
<td>.74</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>2.58</td>
<td>.64</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note: N=687. Correlations > .07; p < .05; Correlations > .10; p < .01
The following section reports the robust statistics for Chi Square (Satorra-Bentler Scaled Statistics, Satorra & Bentler, 1988), the Bentler-Bonett Non-normed Fit Index (BBNNFI), Comparative Fit Index (CFI), and Root Mean-Square Error of Approximation (RMSEA). In all models the first item of each factor is fixed to establish the factor’s scale.

For this analysis, a subset of items that have relatively low correlations among their item errors was selected from the Areas of Worklife Scale (Leiter, Day, Harvie, & Shaughnessy, in press): manageable workload (Workload-3, Workload-4, Workload-6); control (Control-1, Control-2, Control-3); fairness (Fairness-1, Fairness-2, Fairness-6); values (Values-1, Values-2, Values-3). Only two correlated error terms were freed in the analysis: MBI-3 with MBI-4 and Control-1 with Control-2. The analysis also restricted items in the three aspects of burnout to those with low error correlations: exhaustion (MBI-3, MBI-4, MBI-6); cynicism (MBI-9, MBI-13, MBI-15); professional efficacy (MBI-10, MBI-11, MBI-12). The constructs based on the restricted set of items correlated very strongly with their full-scale counterparts, ranging from .86 for efficacy to .95 for workload, indicating a close correspondence between the two item sets.

Using few items has the advantage of focusing the analysis on the structural relationships among constructs. The model retains its factor analytic component, assigning it a secondary role. This approach is appropriate for this analysis of the structural equation underlying the Hypothesized Model. The model analysis that follows contrasts the EQS Independence Model (including all items, but assigning no factor loadings and no structural relationships) with a Structural Null Model (assigning items to their respective independent factors) and with the hypothesized Two Factor Model.

In addition to contrasting the Two Process Model against a Structural Null Model, the analysis contrasted it against a No Value to Burnout Model that deleted the paths from values to each aspect of burnout. This analysis tested the extent to which values makes a distinct contribution to explaining the three aspects of burnout beyond that provided by workload.

<table>
<thead>
<tr>
<th>Model Analysis</th>
<th>Chi Square</th>
<th>DF</th>
<th>BB-NNFI</th>
<th>CFI</th>
<th>RM-SEA</th>
<th>Chi Square Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence Model</td>
<td>4799.20</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Null Model</td>
<td>1716.56</td>
<td>273</td>
<td>.647</td>
<td>.679</td>
<td>.090</td>
<td>3082.64</td>
</tr>
<tr>
<td>No Value to Burnout Model</td>
<td>513.34</td>
<td>265</td>
<td>.938</td>
<td>.945</td>
<td>.038</td>
<td>1203.22</td>
</tr>
<tr>
<td>Two Process Model</td>
<td>470.29</td>
<td>262</td>
<td>.947</td>
<td>.954</td>
<td>.035</td>
<td>43.05</td>
</tr>
</tbody>
</table>

Theoretical Model Analysis

One criterion for model fit was an absolute reference point of a CFI ≥ .900; another is RMSEA less than .05 (Byrne, 1994). The model was also assessed through increments in explained Chi Square that provide a metric for the relative contributions made by each of a model’s distinct components. The Structural Null Model made a significant improvement over the Independence Model (Difference $\chi^2_{(27 \text{ df})} = 3082.64, p < .001$; see Table II). Including the pathways specified in the No Value to Burnout Model improved the fit significantly (Difference $\chi^2_{(16 \text{ df})} = 1203.22, p < .001$) beyond the criterion level of CFI ≥ .900 ($\chi^2_{(265)} = 513.34, p < .001$; CFI = .945, RMSEA = .038, see Table II). Including the three pathways from values to burnout in the two factor Model improved the fit significantly (Difference $\chi^2_{(3 \text{ df})} = 43.05, p < .001$) beyond for an excellent fit ($\chi^2_{(262)} = 470.29, p < .001$; CFI = .954, RMSEA = .035, see Table II). Two paths in the model were not significant: cynicism to rating and professional efficacy to rating. Only exhaustion and values predicted efficacy.

Figure 2 displays the modified Two Process Model with path coefficients and error values. The solid lines indicate paths that were confirmed from the hypothesized Two Process Model. The dashed lines indicate paths that failed to attain the stipulated significance level ($p<.05$). The factor loadings (see Table III) showed that the items loaded on their appropriate factor.
The approach includes an energy depletion process that goes beyond the prediction of burnout provided by information on the balance of work demands and resources. The analysis confirmed previous work indicating a strong contribution of demand-resource imbalances and value congruence to predicting all three aspects of burnout. As an extension of the AWS model, the analysis focused primarily on the specific contribution of value congruence that goes beyond the prediction of burnout provided by information on the balance of work demands and resources. The analysis confirmed previous work indicating a strong path from workload imbalance to exhaustion; it also acknowledged an additional role for value congruence in predicting both exhaustion and value congruence contributed to predicting energy depletion and value congruence. The analysis confirmed previous work indicating a strong contribution of demand-resource imbalances and value congruence to predicting burnout. The analysis focused primarily on the specific contribution of value congruence to predicting burnout. The analysis confirmed previous work indicating a strong contribution of demand-resource imbalances and value congruence to predicting burnout. As an extension of the AWS model, the analysis focused primarily on the specific contribution of value congruence that goes beyond the prediction of burnout provided by information on the balance of work demands and resources. The analysis confirmed previous work indicating a strong contribution of demand-resource imbalances and value congruence to predicting all three aspects of burnout. As an extension of these dual processes, the analysis found that both exhaustion and value congruence contributed to predicting employees' overall rating of organizational processes.

Approaching job burnout as a dual process phenomenon has extensive implications for the concept. The approach includes an energy depletion process that begins with a chronic mismatch of demands over resources. The mismatch in itself has the potential to discourage employees by negatively affecting their capacity to do their jobs. The position of lacking sufficient resources to fulfill job responsibilities is stressful. It is the sort of situation that prompts people to remain tense and uncertain when on the job and to worry and obsess when away from the workplace. Secondly, an imbalance of demands and resources depletes employees' energy. Sincere employees will attempt to bridge the gap between demands and resources. They may exert extra effort, leading to exhaustion in the long run. They may attempt to cut corners - reducing quality or violating safety standards - with implications for productivity and health. Demand-resource imbalances may prompt a breakdown of the boundary between work and personal life. Although there is an immediate gain for work from additional, usually unpaid, employee time, there is a costs in employees' disrupted recovered periods. Without the capacity to relax, build supportive relationships, and participate in activities, people increase their vulnerability to chronic exhaustion.

The values process runs parallel to the energy process. It begins with control, as employees with a sense of control over their work lives have a greater ability to pursue their personal values at work. Those lacking any control have no option but to follow the dictates of organizational systems. The model analyzed here is incomplete regarding the full range of experiences that inform employees' evaluation of value congruence. The issue of control is an essential part of worklife. The contribution of values to all three aspects - energy, involvement, and efficacy - confirms its broad relevance to employees' experience of worklife.

The dual processes continue with the prediction of organizational rating. The ratings resonated with both employees' sense of value congruence and their experience of energy v. exhaustion. This pattern suggests that employees' feelings about their organization are consistent with both their current stress levels as well as their confidence in the organization to make a meaningful contribution. For employees who are feeling the strain of challenging work, conviction that it is for a meaningful cause can be critical.

Limitations

This study was limited by its reliance on a single source of data: employees' responses on a questionnaire administered only once. The analysis controlled to some extent for response bias by limiting items to those with low correlations among its item errors. There remained evidence of response bias in the analysis of a response factor, but the factor did not substantially weaken the relationships confirmed in the analysis.

The limitations identified in the current analysis of the AWS model have implications for its further refinement. Future research will consider the extent to which the departures from the model regarding converging relationships and mediation are replicated in other samples or sustained over time in repeated measures designs. The findings have implications for subsequent research on job burnout and work engagement, especially the potential for developing an integrated perspective on the areas of work environments that are important for the full range of psychological relationships.
employees develop with their work. The ongoing research agenda includes interventions focusing on key areas of worklife, such as control, workload, or fairness, to examine their impact on burnout and other outcome measures.

Subsequent development of the theory will consider processes associated with the cynicism and efficacy dimensions of burnout more thoroughly. One general hypothesis considers the lack of involvement reflected in cynicism as employees actively distance themselves from the organization. This is more likely to occur when employees perceive the organization to have values that are in direct opposition to personal values. In contrast, when employees perceive the organization as holding values that employees consider irrelevant or trivial, they are expected to react more mildly through lower commitment rather than cynicism.

**Conclusion**

The analysis found support for a Two Process Model of burnout and work engagement. The dual processes suggest that the relationships people develop with their work are tied into both their energy levels and their confidence in that the relationships people develop with their work are tied into both their energy levels and their confidence in dimensions of burnout more thoroughly. One general hypothesis considers the lack of involvement reflected in cynicism as employees actively distance themselves from the organization. This is more likely to occur when employees perceive the organization to have values that are in direct opposition to personal values. In contrast, when employees perceive the organization as holding values that employees consider irrelevant or trivial, they are expected to react more mildly through lower commitment rather than cynicism.

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