



Latent burnout profiles: A new approach to understanding the burnout experience[☆]



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ABSTRACT

Latent profile analysis, with two large datasets, was used to identify multiple person-centered profiles across the burnout – engagement continuum, as assessed by the three dimensions of the Maslach Burnout Inventory (MBI). Five profiles emerged from this analysis: Burnout (high on all three dimensions), Engagement (low on all three), Overextended (high on exhaustion only), Disengaged (high on cynicism only), and Ineffective (high on inefficacy only). Each of these profiles showed a different pattern of correlates with organizational variables. The Disengaged profile was more negative than Overextended, and closer to the Burnout profile, which argues against the use of exhaustion alone as a proxy for burnout. The results have important implications for theory, research, and interventions.

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1. Introduction

The first phase of research on the phenomenon of burnout involved a lot of exploratory, qualitative field studies, which amassed many descriptions of the burnout phenomenon based on observations, interviews, case studies, and personal experience (for example, see Cherniss, 1980; Edelwich & Brodsky, 1980; Freudenberger & Richelson, 1980; Maslach, 1982; Pines, Aronson, & Kafry, 1981). Based on this exploratory work, psychometric research was carried out to establish a method for assessing the burnout experience. That research identified three basic dimensions: *exhaustion* (also described as wearing out, loss of energy, depletion, debilitation, and fatigue); feelings of *cynicism* and detachment from the job (also described as depersonalization, negative or inappropriate attitudes, detached concern, irritability, loss of idealism, and withdrawal); and a sense of professional *inefficacy* and lack of accomplishment (also described as reduced productivity or capability, low morale, and an inability to cope).

The measure that emerged from that psychometric research was the Maslach Burnout Inventory (MBI), which assessed these three dimensions and has been used in many research studies over the years (Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996).

The potential of having three interrelated dimensions of burnout was first discussed in terms of a sequence of stages over time. For example, the transactional model of burnout (Cherniss, 1980) proposed a first stage of an imbalance between work demands and individual resources (*job stressors*), a second stage of an emotional response of exhaustion and anxiety (*individual strain*), and a third stage of changes in attitudes and behavior, such as greater cynicism (*defensive coping*). A process model, which emerged from the earlier qualitative work, proposed a first stage of *emotional exhaustion*, in response to work demands that taxed people's emotional resources; a second stage of *depersonalization*, as people tried to cope by withdrawal and negative, cynical reactions; and a third stage of *reduced personal accomplishment*, when people began to experience inefficacy and failure (Maslach, 1982). A third approach was the phase model, in which the three burnout dimensions were split into high and low categories, yielding eight different patterns, or phases, of burnout (Golembiewski & Munzenrider, 1988). The phase model hypothesized that cynicism is the early minimum phase of burnout, followed by the additions of inefficacy, and finally by exhaustion.

What is noteworthy about all of these early approaches is the explicit assumption that people could experience various *patterns* of burnout, which might change at different points in time. However, the potential of these varying patterns has not been

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exploited very much in the more recent empirical literature. If anything, there has been a move towards simplifying burnout to a one-dimensional construct of exhaustion. Exhaustion is often considered the strongest, primary element of burnout, and thus a suitable proxy for the entire phenomenon. A single dimension is easier to measure, and exhaustion is easier to fit within existing systems of medical diagnosis and disability. But a focus on just exhaustion may ignore other aspects of the burnout experience, which go beyond chronic fatigue. People experiencing burnout are not simply exhausted or overwhelmed by their workload. They also have lost a psychological connection with their work, which has implications for their motivation and their identity. The cynicism and inefficacy aspects of burnout capture both people's disaffection with work and a crisis in their work-based efficacy expectations.

The three dimensions of exhaustion, cynicism and inefficacy do not always move in lock-step, which means that they are not so highly correlated as to constitute a single, one-dimensional phenomenon. The advantage of such distinct, but interrelated, burnout dimensions is that there could be several different patterns that are shown by people at varying times. In some instances, due to situational factors or personal qualities or their interaction, distinct patterns could emerge. Identifying these intermediate patterns would allow a clearer definition of the entire territory between the negative state of burnout and the positive state of engagement. For example, it may be that some people maintain a neutral stance towards work, experiencing neither joy nor despair. The exceptionally motivated condition of engagement might stand in contrast to both a humdrum existence as well as to chronic distress. Other person-centered patterns may identify distinct forms of distress, of which burnout represents only one particularly grievous state. Some progress on this point has been made by contrasting burnout and engagement with workaholism (e. g., [Schaufeli, Taris, & Van Rhenen, 2008](#)), suggesting the potential for further conceptual development.

2. A person-centered approach to multidimensional patterns

Such multidimensional patterns would fit well within a person-centered approach that considers the whole person, in contrast to an exclusive concern with single dimensions prioritized in variable-centered approaches ([Bergman, 2001](#); [Mäkikangas, Feldt, Kinnunen, & Tolvanen, 2012](#); [Mäkikangas & Kinnunen, 2016](#)). More specifically, a person-centered approach appreciates configurations of scores that depart from overall correlational patterns. Rather than de-emphasizing as error residuals the minority of respondents whose scores depart from the regression line, person-centered approaches entertain the possibility that these minority configurations reflect substantial concepts. Thus, for the current research, the strategy was to study the patterns that deviate from that overall norm, in addition to the correlations between the MBI scores for the entire sample.

The initial attempt to develop such a person-centered approach, for new MBI-scoring procedures, was to identify people whose pattern of MBI scores deviated from the standard correlational pattern. More specifically, this earlier research looked for patterns where only one dimension showed a high score, such as only exhaustion or only cynicism, as assessed by high or low scores on a median-split ([Maslach & Leiter, 2008](#)). A subsequent study identified a parallel set of "one high dimension" patterns by using within-subject standard deviations ([Leiter et al., 2013](#)). One pattern had a negative score on exhaustion, with positive or neutral scores on the other two dimensions, while the second had a negative score on cynicism, with positive or neutral scores on the others. Both patterns would not be clearly visible within a standard correlational analy-

sis. Although unstudied in this prior research, a third pattern of a negative score only on the inefficacy dimension would be another theoretically-relevant person-centered pattern.

For the current research, rather than a pre-selection of a few patterns to study, the goal was to explore a broader range of potential patterns that might exist between the endpoints of burnout and engagement. All of these patterns had to be measured by the scores on the three scales of the MBI: exhaustion, cynicism, and inefficacy (the reverse score of the positively worded professional efficacy scale). This conceptual framework was one of a continuum between burnout and engagement, as those two endpoints had been defined originally ([Leiter & Maslach, 1998](#)). Engagement was considered to be the opposite alternative of burnout and was defined in terms of the same three dimensions, but the positive end of those dimensions rather than the negative. From this perspective, an "engaged" pattern consists of no exhaustion or cynicism, but a strong sense of professional efficacy. This definition posits that this pattern appropriately describes a positive experience with work, given the absence of any signs of burnout.¹

The objective in the current research was to use a different technique, latent profile analysis (LPA), to identify the prevalence of various distinct patterns, or profiles, and to determine whether these new person-centered profiles provide an improved understanding of the range of workers' experience on the job. We hypothesized that the identified profiles would include the two standard patterns for the endpoints of the burnout – engagement continuum, and that these would be the same as those generated by the correlational approach between the three dimensions. Thus, the Burnout profile would contain highly negative scores on all three MBI scales, and the Engagement profile would contain highly positive scores on all three MBI scales.

But what might be the intermediate profiles that could emerge from the latent profile analyses? Based on prior longitudinal research ([Maslach & Leiter, 2008](#)), we hypothesized that there might be three "one high dimension" profiles, which have been renamed to better distinguish them. An Overextended profile would reflect a high score on exhaustion alone (and lower scores on the other two dimensions). A Disengaged profile would reflect a high score on cynicism alone (and lower scores on the other two dimensions). An Ineffective profile would reflect a high score on inefficacy alone (and lower scores on the other two dimensions). None of these "one high dimension" profiles would be fully appreciated in a correlational analysis. Theoretically, there could also be two "two high dimensions" profiles, but because these had not yet appeared in prior research, they were considered on a more exploratory basis.

3. Latent profile analysis as a new approach

A recent discussion of profile analysis, as it pertains to commitment, identified the advantages and disadvantages of median splits, cluster analysis, and latent profile analysis ([Meyer, Stanley, & Vandenberg, 2013](#)). Median splits trade the advantages of simplicity against the limitations inherent in any arbitrary division of a sample. First, median splits may be misleadingly labelled as

¹ It should be noted that arguments have been raised against identifying positive scores on the MBI as "engagement," given the subsequent research that has been done on the phenomenon of work engagement and the development of a measure (the Utrecht Work Engagement Scale (UWES); [Schaufeli, Bakker, & Salanova, 2006](#)). The UWES assesses the active presence of positive states, such as vigor, rather than assuming a positive state from the absence of a negative one like exhaustion. Furthermore, the UWES definition of engagement is not framed as being the "opposite" of burnout, as was done with the MBI. However, for the purposes of this study, which relied on analyses of MBI scores, the original conceptualization of engagement as the opposite pattern of scores on the MBI is the one that is being used.

high and low when meaningful distinctions are associated only with extreme scores rather than scores slightly above or below the split point. Second, the differences between scores slightly above from those slightly below the median are given equal weight to the differences of scores on the extreme range of the measure. These problems may mask meaningful associations with other constructs.

Cluster analysis (Tryon, 1939) brings more sophistication to defining groups by identifying individuals with distinct patterns of correlations among the variables under consideration. However, the procedure tends to favor clusters of relatively equal size. An additional problem is that cluster analysis has no agreed-upon metric for identifying the number of clusters that best fit the data (Meyer, Stanley, & Vandenberg, 2013).

Latent profile analysis (LPA; Muthén & Muthén, 2010; Vermunt & Magidson, 2002) brings the capacity to accommodate a variety of data types, as well as fit metrics, to guide identifying the ideal number of profiles for a given construct (Vandenberg & Stanley, 2009). LPA creates latent variables based on the measures within the analysis; significant differences among the intercepts of latent variables guide profile membership. LPA analysis through MPLus (Muthén & Muthén, 2010) provides fit statistics that guide identification of the ideal number of profiles. It also permits one to contrast a hypothesized model specifying qualitative differences among profiles against a null model in which profiles differ only quantitatively on the level of constructs. The disadvantage of LPA is that it is a complex procedure that is specific to a sample. It does not provide a simple formula that one may apply to a new sample.

Profile analysis, as a form of person-centered approach, identifies qualitative differences among people (Meyer, Stanley, & Vandenberg, 2013). This differs from a quantitative contrast, which would differentiate people who score in the burnout direction on all three dimensions, from those who have average scores on all three, and from those who score in the engagement direction on all three. These groups would differ only on the scores on the scales; the relationships among the scales would remain consistent throughout. A qualitative contrast, however, would be between people who score in the burnout direction on one dimension (e.g., exhaustion, but positive on the other two dimensions) from people who score in the burnout direction on another dimension (e.g., cynicism, but positive on the other two). These two groups would differ in the relationships among the scales.

The importance of profile analysis with the MBI scales goes beyond identifying people with unusual patterns of scores. The rationale for the MBI follows from the notion that burnout reflects a fundamental crisis in the psychological connections that people establish with work. The exhaustion dimension captures the problem of lacking sufficient energy to make a useful and enduring contribution at work. The cynicism dimension captures the difficulty in dealing with other people and activities in the work world. Efficacy captures the core self-evaluation people make regarding the value of their work and the quality of their contribution. Although the correlational evidence demonstrates these dimensions rise and fall together much of the time (Maslach, Schaufeli, & Leiter, 2001), they do not do so entirely all of the time. A profile perspective builds on the idea that departures from that basic pattern have meaningful implications. For example, people with negative scores on only one dimension may be experiencing a transitional state toward the more complete experience of burnout, so the single dimension may serve as an early warning of a developing problem with the job (Maslach & Leiter, 2008).

4. Current research

The goal of the current research was to conduct latent profile analysis on a large dataset, and then replicate the process

with a second large dataset, in order to determine if this procedure would be able to identify the hypothesized multiple profiles: Burnout, Engagement, Overextended (high exhaustion only), Disengaged (high cynicism only), and Ineffective (high inefficacy only). To confirm that the resulting profiles reflect meaningful differences among employees' experiences, we contrasted the profiles on relevant organizational qualities. The rationale for these contrasts is to explore whether these profiles differ not solely on the clustering of MBI scores, but on distinct patterns of worklife experiences. If the new profiles—Overextended, Disengaged, and Ineffective—are associated with identical experiences of worklife, they would have little utility. However, distinctions would point towards unique strategies for intervention, such that the specific changes that would alleviate the strain of Overextended would differ from the changes that would alleviate the strains of Disengaged.

We identified three groups of relevant organizational qualities to include in our hypotheses. First, research has recognized six areas of worklife (workload, control, reward, community, fairness, and values) on which mismatches contribute to experiencing burnout (Leiter & Maslach, 2004). Of these six areas, workload has a strong relationship with exhaustion, which mediates the relationship of exhaustion with the other two dimensions of burnout (Bentzen, Lemyre, & Kenttä, 2016; Maslach, Schaufeli, & Leiter, 2001; Tayfur & Arslan 2013). In contrast, the other five areas of worklife reflect resources that are less closely related to exhaustion. We propose to investigate the extent to which the levels of these areas of worklife differ among MBI profiles.

Second, research has identified many links between burnout and the quality of the social work environment. The extent to which employees' perceptions of social relationships differ across profiles would also reflect on the profiles' utility. For example, multilevel analyses have confirmed close links of exhaustion with workload, in contrast to close associations of cynicism with teamwork (Consiglio, Borgogni, Vecchione, & Maslach, 2013). It follows that the Disengaged profile would be more characterized by distress regarding the community area of worklife than would the Overextended profile.

Third, we contrast indicators of job satisfaction among the profiles. Job satisfaction that is conceptually distinct from work engagement (Schaufeli, Bakker, & Van Rhenen, 2009) provides a positive contrast to burnout that has been shown to have direct relationships with the MBI scales (Hayes, Douglas, & Bonner, 2015; Rothmann, 2008). Significant, consistent differences among the profiles would support our proposition that profiles represent meaningful differences in employees' workplace experiences.

5. Hypotheses

Previous research gives direction regarding the expected differences among profiles. First, the close association of exhaustion with work overload suggests that an Overextended profile would reflect workload scores that would be similar to those with the Burnout profile, and also more negative than the workload scores associated with other profiles. In contrast, the Disengaged profile would be less concerned with workload, but would experience other mismatches with the workplace. The cynicism dimension of burnout concerns employees' capacity to connect emotionally, socially, or cognitively with their job and the people in it, including both colleagues and clientele. Thus, we expect the Disengaged profile to show more negative scores on the social work environment, job resources, and satisfaction – a pattern that would be similar to that of the Burnout profile, and also more negative than the other profiles on this same set of scores.

Hypotheses for the Ineffective profile are less clear. Not only does this reflect the fact that there has been less prior research on

the efficacy dimension, but the existing findings do not show strong relationships between this dimension and the kind of workplace variables assessed in the datasets utilized for the current studies. However, a crisis in efficacy, even without accompanying problems of exhaustion and cynicism, should still reflect a more negative set of scores than would be shown by the Engagement profile.

More specifically, we propose the following hypotheses:

Hypothesis 1. Scores on the MBI will cluster to include at least five distinct profiles, which will either follow the standard correlational pattern between the three scales of exhaustion, cynicism, and inefficacy, or show an intermediate, inconsistent pattern in which one scale deviates from the standard.

Hypothesis 1a. The two standard profiles will be the endpoints of Burnout (all three scales show high scores) and Engagement (all three scales show low scores).

Hypothesis 1b. The three transitional profiles will each show a pattern of one high score: Overextended (high score on exhaustion only), Disengaged (high score on cynicism only), and Ineffective (high score on inefficacy only).

Hypothesis 2. The two endpoint profiles will have opposite patterns of overall worklife experience, as assessed by the organizational constructs.

Hypothesis 2a. The Burnout profile will have the most negative overall experience of worklife, regarding workload, resources, social context, and satisfaction, than will any of the other profiles.

Hypothesis 2b. The Engagement profile will have the most positive overall experience of worklife, regarding workload, resources, social context, and satisfaction, than will any of the other profiles.

Hypothesis 3. The two profiles with high exhaustion (Burnout, Overextended) will have more negative workload scores than those for Disengaged and Ineffective.

Hypothesis 4. The two profiles with high cynicism (Burnout, Disengaged) will have similar views on resources, social context, and satisfaction, but both of these sets of scores will be more negative than those for Overextended and Ineffective.

Hypothesis 5. The profile with high inefficacy (Ineffective) will have a more negative view of worklife regarding workload, resources, social context, and satisfaction than will the Engagement profile.

We tested these hypotheses against two data sets with 1766 and 1166 participants respectively. The LPA requires large data sets to attain sufficient power to identify multiple profiles. It is important to use multiple data sets to demonstrate the variation in profiles. Due to the person-oriented perspective of LPA, it is expected that the relative prevalence of profiles will vary across samples, especially when samples differ in their scores on the variables that define the profiles.

6. Method

The same methodology was used in both Study 1 and Study 2, although the samples differed.

6.1. Measures

6.1.1. Burnout

Burnout was measured with the 16-item Maslach Burnout Inventory—General Scale (MBI—GS; Maslach, Jackson, & Leiter, 1996) assessing exhaustion, cynicism, and efficacy. Participants used a 7-point frequency scale (ranging from 0—never to 6—daily) to indicate the extent to which they experienced each item (e.g., “I

feel emotionally drained from my work.”). Cronbach’s alphas were $\alpha = 0.94$ for Emotional Exhaustion; $\alpha = 0.81$ for Cynicism; and $\alpha = 0.88$ for Professional Efficacy. As noted earlier, the scores for Professional Efficacy were reversed, so that high scores reflected high inefficacy.

6.1.2. Workload and resources

The Areas of Worklife Scale (AWS; Leiter & Maslach, 2011) includes six scales on which participants indicate the extent to which their experience aligns with their expectations or aspirations for work, within six different areas. Items are worded as statements of perceived congruence or incongruence between oneself and the job with higher scores indicating a better fit. All items are rated on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. This survey included a short version of the AWS which uses three items for each scale (Leiter & Maslach, 2011).

In the current study, the measure for Workload was the AWS scale for workload (e.g., “I do not have time to do the work that must be done”). Workload is scored positively such that a high score on workload reflects a better fit. The internal consistency was: $\alpha = 0.79$. The measure for Resources was a combined index of the five resource scales of the AWS: control, reward, community, fairness, and values. For control (e.g., “I have control over how I do my work”), internal consistency was: $\alpha = 0.87$. For reward (e.g., “I receive recognition from others for my work”), internal consistency was: $\alpha = 0.81$. For community (e.g., “I am a member of a supportive network of colleagues”), internal consistency was: $\alpha = 0.80$. For fairness (“Resources are allocated fairly here”), internal consistency was: $\alpha = 0.65$. For values (e.g., “My values and the organization’s values are alike”), internal consistency was: $\alpha = 0.77$. The average of the standardized values for these five scales is the final score for the Resource cluster.

6.1.3. Social context

The measure of social relationships at work was a combined index of workplace incivility and workgroup civility. Incivility was measured with the 12-item Straightforward Incivility Scale (Leiter & Day, 2013) that included two scales: supervisor and co-worker incivility. Participants used a 7-point frequency scale (ranging from 0—never to 6—daily) to indicate the extent to which they experienced uncivil behaviors from supervisors and coworkers, (e.g., “Spoke rudely to you.”). Cronbach’s alphas were $\alpha = 0.82$ for supervisor incivility and $\alpha = 0.94$ for co-worker incivility. Workgroup civility was measured with the 8-item CREW civility scale (Osatuke et al., 2009). Participants used a 5-point Likert-type scale (ranging from 1—strongly disagree to 5—strongly agree) to indicate the extent to which they endorsed each item (e.g., “People treat each other with respect in my work group.”). Cronbach’s alpha was $\alpha = 0.89$. The average of the standardized values for civility, coworker incivility (reversed), and supervisor incivility (reversed) is the final score for the Social Context cluster.

6.1.3. Satisfaction

Job satisfaction and turnover intention defined the satisfaction cluster. The Job Satisfaction scale evaluated the total satisfaction with respect to several aspects of a job: co-workers, supervisor, compensation, feelings of accomplishment, recognition, and overall job satisfaction (Hackman & Oldham, 1975). Internal consistency for the six items was: $\alpha = 0.81$. Each item is measured on a 7-point, Likert-type scale, ranging from 1 (very dissatisfied) to 7 (very satisfied). Items were averaged to produce one score. Following the lead text, “Please indicate how satisfied you are with” each aspect is listed (e.g., compensation). The Intention to Quit scale (Kelloway, Gottlieb, & Barham, 1999) was used to assess turnover intention. This measure rates four items from 1 (strongly disagree) to 5 (strongly agree). A sample item is “I want to remain in my job.” Internal consistency was: $\alpha = 0.92$. The average of the standardized

values for job satisfaction and turnover intention (reversed) is the final score for the Satisfaction cluster.

6.1.4. *Test of organizational construct patterns*

A factor analysis evaluated the plan to combine the organizational variables into these four patterns of workload, resources, social context, and satisfaction. A confirmatory factor analysis using EQS (Bentler & Chou, 1987) based on the data from Study 1 found a poor fit ($\chi^2_{(66)} = 933.70, p < 0.001; CFI = 0.83; RMSEA = 0.11$). However, a revised analysis excluded fairness (from resources) and supervisor incivility (from social context) because these two variables appeared to define a separate justice factor. That analysis confirmed a good fit for the remaining constructs ($\chi^2_{(29)} = 344.97, p < 0.001; CFI = 0.95; RMSEA = 0.08$). In the CFA, factors were freed to correlate and no error terms were freed. Factor loadings ranged from 0.67 to 0.88. Thus, the revised four patterns were used in both Studies 1 and 2.

6.2. *Data analytic strategy*

Latent profile analysis (LPA) in Mplus 7.11 (Muthén & Muthén, 2010) was used to identify groups of participants who showed similar patterns on burnout variables. This is a person-centered approach that assigns each participant to a latent class based on the data. Total mean scores of cynicism, exhaustion, and inefficacy were used as the latent class indicators. A robust maximum likelihood estimator (MLR) was used to account for slight deviations from the multivariate normality assumption. Missing data were handled using a full information maximum likelihood approach.

A series of nested LPA models were fit and compared to determine the best number of clusters. The analysis began with a 1-class model, and proceeded adding one additional class at each step until there was no further improvement in the model fit. Model fit was assessed using criteria outlined in Berlin, Williams, & Parra (2014). Specifically, we used the Akaike Information criterion (AIC), the sample size adjusted Bayesian Information Criterion (BICa), the Lo-Mendell-Rubin test (LMRT), and the bootstrapped Lo-Mendell-Rubin test (BLRMT). Generally speaking, models with lower AIC and BICa values fit better. The LMRT and BLRMT compare the estimated model to a model with k-1 profiles; if the p-value of this test is < 0.05, then the k-1 model should be rejected and the model with more profiles preferred. We also assessed entropy, which refers to the average accuracy in assigning people to profiles; entropy values range from 0 to 1, with higher values indicating more accu-

racy. Latent class probabilities are similar, and represent predicted probabilities for the most likely latent class combinations. Models with higher entropy and latent class probabilities are generally regarded as better models (Celeux & Soromenho, 1996). Nylund, Asparouhov and Muthén (2007) found that the BIC and the BLRMT perform best in simulation studies. In addition to fit indices, each model was assessed for interpretability in light of prior theory, to avoid selecting too many profiles. Finally, we also rejected models that contained small profiles (e.g., less than 1% or n = 25), as these profiles are typically spurious (Lubke & Neale, 2006).

We also assessed an alternative set of comparison models where the means (but not the variances) were constrained to equality across all three latent class indicators. That is, the means of all three indicators were required to move together in unison on the clusters. These models functioned as a comparison “null” model. If one of these null models were to fit better than cluster models with freely estimated means, then this would suggest that cynicism, exhaustion, and efficacy are all measuring the same underlying construct. These models can be compared to the initial, unconstrained models using AIC, BICa and Entropy.

Using the latent class assignments as a predictor, and composite variables of other measures in the studies as outcomes, we conducted one-way ANOVAs with post-hoc Tukey HSD tests in SPSS 21.

7. **Study 1: initial test**

7.1. *Participants*

Participating organizations were four healthcare districts in Eastern Canada. Participants included 1766 health care employees, including a wide range of clinical, administrative, and support areas with nursing as the largest single occupational group (385, 21.8%). Participants included first line managers (N = 161, 9.1%) and staff members (1605, 90.9%). The average age was 43.20 years (SD = 10.60) with an average of 15.98 years (SD = 12.60) working in healthcare. There were 160 male, 1586 females, and 19 not reporting gender. The data were originally collected as part of a study on first line managers in health care (Leiter, Day, & Price, 2015).

7.2. *Procedure*

After receiving ethics approval from all participating hospitals and universities, the research team distributed surveys to health-

Table 1
Study 1: Comparing Model Fit for Different Profiles in Unconstrained Models.

Solution	LMRT (p)	BLRT (p)	AIC	BICa	Latent class Probabilities [range]	Entropy
Unconstrained (alternative hypothesis) models						
1 class	–	–	17087.33	17101.13	–	–
2 class	$p < 0.001$	$p < 0.001$	15932.90	15955.90	[0.91–0.97]	0.854
3 class	$p < 0.001$	$p < 0.001$	15635.62	15667.83	[0.84–0.92]	0.778
4 class	$p < 0.001$	$p < 0.001$	15449.89	15491.29	[0.79–0.91]	0.768
5 class	$p = 0.014$	$p < 0.001$	15360.23	15410.83	[0.75–0.89]	0.734
6 class	$p = 0.036$	$p < 0.001$	15270.55	15330.35	[0.77–0.89]	0.772
7 class	$p = 0.25$	$p < 0.001$	15223.27	15292.27	[0.75–0.88]	0.791
Constrained (null hypothesis) models						
2 class	$p < 0.001$	$p < 0.001$	16729.37	16743.17	[0.86–0.94]	0.722
3 class	$p < 0.001$	$p < 0.001$	16647.50	16665.91	[0.79–0.89]	0.702
4 class	$p = 0.26$	$p = 0.67$	16650.16	16673.16	[0.64–0.89]	0.719

Note. LMRT = Lo-Mendell-Rubin Test, BLRT = Bootstrapped Lo-Mendell Rubin Test, AIC = Akaike Information Criterion, BICa = sample size-adjusted Bayesian Information Criterion. Significant p-values for the LMRT and BLRT indicate that the model is a worse fit than a model with 1 fewer class. Lower AIC and BICa values indicate better fitting models. Latent class probabilities represent the range of predicted probabilities for the most likely latent class combinations. Entropy is a measure of how accurate a model is at classifying people into latent profiles. Higher numbers for both latent class probabilities and entropy indicate higher classification accuracy. For the constrained models, the 5, 6 & 7 class models did not converge due to a not positive definite matrix; thus, results for these models are not reported.

care providers in four hospital districts in eastern Canada. The project was presented as focusing on first line managers in health-care and their challenges in managing the social environment of their workgroups during major organizational change. Participants had the option of completing the survey online or on paper. The response rate was 14.2% (1766 responses/12,436 invited).

7.3. Study 1: results

First, a set of unconstrained, nested LPA models were run, and their fit indices examined (see Table 1). The AIC and BICa values and the BLRT test suggested that adding new clusters improved model fit, with the 7-cluster model fitting best.² The LMRT test suggested a 6-class model fit best. Classification accuracy as measured by entropy was adequate for all models (ranging from 0.734 to 0.854). When class size was assessed, the 6-class and 7-class models had small profiles that contained <5% of the sample; thus, to avoid specifying spurious profiles, the 6 and 7-class models were rejected. When a 6-profile model was examined, the Engagement, Ineffective, Overextended, and Disengaged profiles from the 5-profile model emerged in a virtually identical fashion. The additional 6th class primarily split the Burnout category down the middle, placing ~40% of the Burnout participants into a “Severe Burnout” profile (very high on exhaustion, cynicism, and inefficacy) and ~60% of Burnout participants into a “Moderate Burnout” category (high on exhaustion, cynicism, and inefficacy, but slightly less so than the Severe Burnout profile). Because both profiles were still high on all three measures, this new categorization did not seem to produce a theoretically useful nor practical 6th class – especially since the Burnout profile was among the smallest to begin with. Thus, the more parsimonious 5-profile model with only one Burnout profile was retained rather than a 6- or 7-profile model. A 5-profile solution is consistent with our depiction of the range of patterns as including Burnout, Engagement, and profiles in which one MBI dimension is negative while the other two dimensions are positive or neutral.

When the null models (i.e., means constrained to equality) were estimated, a clear pattern favoring the 3-class model with low, medium, and high values of all three variables emerged based on all 5 fit indices. However, AIC and BICa values were higher, and the entropy values lower than all of the alternative models ranging from 2 to 7 profiles. This suggests that allowing the means to vary is an important feature for achieving model fit, and these null models were rejected.

The final accepted LPA model was the 5-class model. A graphical display of the means can be found in Fig. 1, and a 3-D scatterplot of the data can be found in Fig. 2. Based on the patterns observed in these figures, we labelled the 5 profiles as follows: (1) Burnout, (2) Disengaged (high cynicism, moderate other), (3) Overextended (high exhaustion, moderate other), (4) Ineffective (high inefficacy, moderate other), and (5) Engagement.

7.3.1. Relative prevalence of profiles

Table 2 displays the overall scores for each of the MBI scales for the five profiles. The most frequent profiles are Ineffective (31%; n = 542) and Engagement (44%; n = 771) that comprise 75% of the sample between them. Burnout (8%; n = 136), Overextended (7%; n = 199), and Disengaged (10%; n = 118) make up the remaining 25% with roughly equal numbers of each profile. The appearance of all

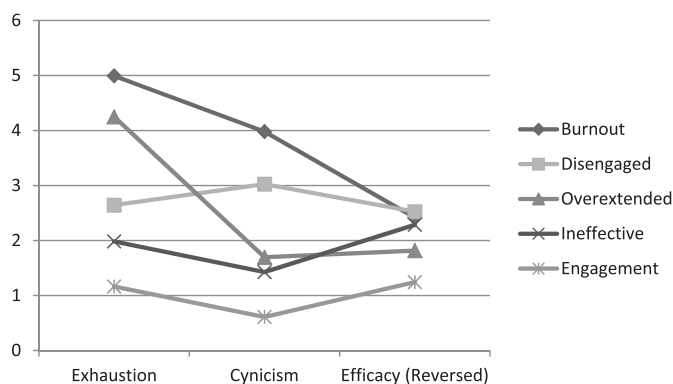


Fig. 1. Study 1: Plot of Means for the 5-Profile, Unconstrained Solution.

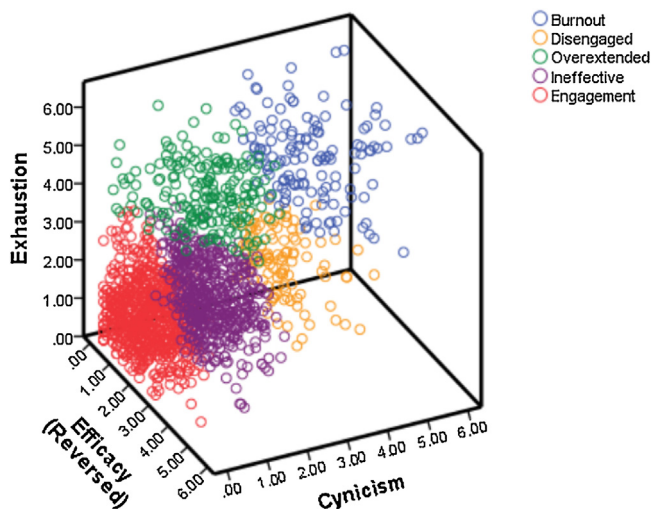


Fig. 2. Study 1: 3-D Scatterplot of Exhaustion, Cynicism, and Efficacy, Separated by Profile.

Table 2 Study 1: Descriptive Statistics MBI Scale by Profile.

Profile	N	Exhaustion	Cynicism	Inefficacy
Burnout	136 (8%)	5.00	3.98	2.40
Disengaged	118 (7%)	2.62	3.15	1.79
Overextended	199 (11%)	4.33	1.68	2.55
Ineffective	542 (31%)	2.03	1.51	2.41
Engagement	771 (44%)	1.13	0.56	1.18
Overall	1766	2.16	1.41	1.81
SD		1.46	1.16	1.05

of these profiles provides support for Hypothesis 1 and Hypothesis 2.

7.3.2. Relationship of profiles to organizational constructs

To determine the extent to which the five profiles of MBI scores differentiated among related constructs, we conducted one-way analyses of variance on the four organizational constructs: workload, resources, social context, and satisfaction. The relationships of the five profiles with these constructs are depicted in Fig. 3.

7.3.2.1. Workload. Profiles were significantly related to workload ($F_{(4,1761)} = 105.69, p < 0.001; \eta_p^2 = 0.19$). Standardized means, from most to least negative, were: Burnout (-0.91), Overextended (-0.79), Ineffective (-0.02), Disengaged (0.11), and Engagement (0.37). Tukey tests ($ps < 0.05$) demonstrated that (a) the Burnout profile had a more negative view of workload than the Disengaged profile, but was not significantly different from the Overextended

² An 8-class model was tried, but this model did not converge due to a non-positive definite matrix. This is most likely because too many profiles were extracted, with too few people in each class, resulting in near-zero estimates of variance. Thus, we do not discuss models with more than 7 profiles.

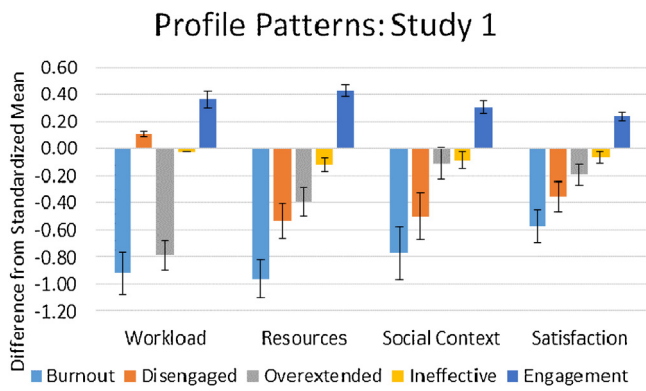


Fig. 3. Study 1: Contrasts and 95% CIs Among Profiles on Organizational Constructs.

group; and (b) the Overextended profile had a more negative view of workload than the Disengaged profile, supporting Hypothesis 3. Ineffective was more negative on workload than was Engagement, supporting Hypothesis 5.

7.3.2.2. *Resources.* An ANOVA confirmed the relationship of profiles with the composite resources measure ($F_{(4,1761)} = 189.80$, $p < 0.001$; $\eta_p^2 = 0.30$). Standardized means, from most to least negative, were: Burnout (-0.96), Disengaged (-0.53), Overextended (-0.39), Ineffective (-0.11), and Engagement (0.43). Tukey tests demonstrated that the mean value for resources in the Disengaged group was not more negative than the Overextended group ($p = 0.35$), although it was in the right direction. Thus, this finding failed to support Hypothesis 4. Ineffective was more negative on resources than was Engagement, supporting Hypothesis 5.

7.3.2.3. *Social context.* An ANOVA confirmed the relationship of the composite social context construct with profiles ($F_{(4,1761)} = 77.78$, $p < 0.001$; $\eta_p^2 = 0.15$). Standardized means, from most to least negative, were: Burnout (-0.77), Disengaged (-0.50), Ineffective (-0.11), Overextended (-0.08), and Engagement (0.43). Tukey tests ($ps < 0.05$) demonstrated that mean for social context in the Burnout group was more negative than the Disengaged and Overextended groups; and (b) the Disengaged group was more negative than the Overextended group, supporting Hypotheses 3 and 4. Ineffective was more negative on social context than was Engagement, supporting Hypothesis 5.

7.3.2.4. *Satisfaction.* An ANOVA confirmed the relationship of the composite satisfaction measure with profiles ($F_{(4,1761)} = 106.60$, $p < 0.001$; $\eta_p^2 = 0.20$). Standardized means, from most to least negative, were: Burnout (-0.57), Disengaged (-0.35), Overextended (-0.19), Ineffective (-0.07), and Engagement (0.24). Tukey tests

demonstrated that (a) the Burnout group had significantly less job satisfaction than the Disengaged and Overextended groups, supporting Hypothesis 2; and (b) the Disengaged group differed in satisfaction from the Overextended group, supporting Hypothesis 4. The Ineffective group was more negative on satisfaction than was Engagement, supporting Hypothesis 5.

8. Study 2: replication

We conducted a Latent Profile Analysis with a separate sample to consider the extent to which the five-profile model applied more broadly. As a person-oriented analysis, LPA is sensitive to the distinct patterns of responses across samples. Although one may not expect an exact replication across samples that differ systematically, a replication provides a perspective on the applicability of the core concepts reflected in a profile structure.

8.1. Participants

The sample included 1166 health-care workers from three district health authorities in Nova Scotia and two hospitals in Ontario. Participants were predominantly female ($N = 1009$, 86.0%; male: $N = 139$, 11.8%, 18 no response), with an average age of 42.54 years ($SD = 10.12$). Employment status was full-time ($N = 833$, 71.0%), part-time ($N = 232$, 19.8%), casual ($N = 85$, 7.2%), and temporary ($N = 8$, 0.7%) employment with 8 no response. The most prevalent occupational group was nursing. Participants had worked in healthcare for an average of 16.13 years ($SD = 11.34$). The data were the basis of a study on a workplace civility intervention (Leiter, Laschinger, Day, & Gilin-Oore, 2011).

8.2. Procedure

After receiving ethics approval from all participating hospitals and universities, the research team distributed surveys to health-care providers in four hospital districts in Canada. The project was presented as focusing on workplace civility in healthcare and on the challenges in maintaining collegial workgroup environments. Participants had the option of completing the survey online or on paper. The response rate was 37% (1166 responses/3151 invited).

8.3. Study 2: results

As in Study 1, a set of unconstrained, nested LPA models were run, and their fit indices examined (see Table 3). Overall, the various criteria for selecting a model did not agree. The AIC, BICa and BLRT test suggested the 7-class model fit best. The LMRT test suggested a 4-class model fit best. Classification accuracy as measured by entropy was adequate for all models (ranging from 0.69

Table 3
Study 2: Comparing Model Fit For Different Profiles In Unconstrained Models.

Solution	LMRT (p)	BLRT (p)	AIC	BICa	Latent class Probabilities [range]	Entropy
1 profile	–	–	11217.02	11228.33	–	–
2 profile	$p < 0.001$	$p < 0.001$	10642.80	10661.65	[0.90–0.96]	0.801
3 profile	$p = 0.014$	$p < 0.001$	10502.88	10529.27	[0.83–0.92]	0.762
4 profile	$p = 0.016$	$p < 0.001$	10438.73	10472.66	[0.74–0.87]	0.692
5 profile	$p = 0.076$	$p < 0.001$	10377.08	10418.55	[0.73–0.86]	0.719
6 profile	$p = 0.297$	$p < 0.001$	10346.34	10395.35	[0.68–0.87]	0.720
7 profile	$p = 0.639$	$p < 0.001$	10324.24	10380.79	[0.66–0.85]	0.720

Note. LMRT = Lo-Mendell-Rubin Test, BLRT = Bootstrapped Lo-Mendell Rubin Test, AIC = Akaike Information Criterion, BICa = sample size-adjusted Bayesian Information Criterion. Significant p -values for the LMRT and BLRT indicate that the model is a worse fit than a model with 1 fewer class. Lower AIC and BICa values indicate better fitting models. Latent class probabilities represent the range of predicted probabilities for the most likely latent class combinations. Entropy is a measure of how accurate a model is at classifying people into latent profiles. Higher numbers for both latent class probabilities and entropy indicate higher classification accuracy.

Table 4
Study 2: Descriptive Statistics MBI Scale by Profile.

Class	N	Exhaustion	Cynicism	Inefficacy
Burnout	48 (4%)	5.04	4.19	2.98
Disengaged	136 (12%)	4.67	3.78	1.22
Overextended	201 (17%)	4.18	1.62	0.92
Ineffective	235 (20%)	2.54	1.99	2.43
Engagement	546 (47%)	1.81	0.87	0.82
Overall	1166	2.83	1.70	1.30
SD		1.46	1.30	0.92

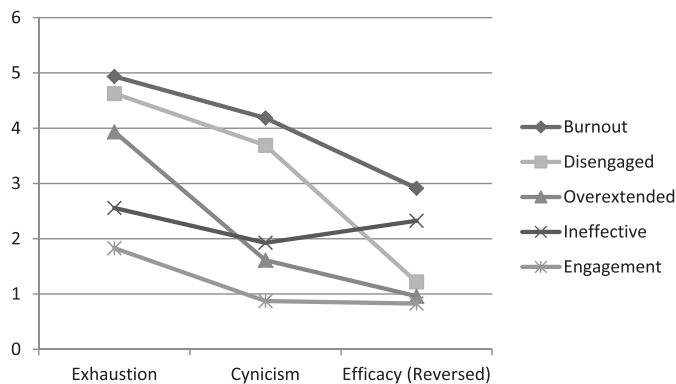


Fig. 4. Study 2: Plot of Means for the 5-Profile, Unconstrained Solution.

to 0.80). When class size was assessed, the 5, 6 and 7-class models had small profiles that contained <5% of the sample. When a 6-profile model was examined, the Engagement, Ineffective, Overextended, and Disengaged profiles from the 5-profile model emerged in a virtually identical fashion. The 6th class primarily split the Ineffective category, placing ~50% of the Ineffective participants into a new “Average” profile (mid-range values on all measures), with the remaining ~50% of Ineffective participants keeping the same pattern (i.e., high inefficacy, low cynicism and exhaustion). Thus, moving to a 6-profile model does not appear to yield further understanding of the high-exhaustion Disengaged profile. Given the somewhat ambiguous, conflicting results suggested by the selection criteria, we interpreted results in light of Study 1, and accepted the 5-profile model as our final model. Accepting the 5-profile model has the advantage of facilitating comparisons across datasets. Overall, the analysis provided partial support for Hypothesis 1 and Hypothesis 2.

8.3.1. Relative prevalence of profiles

Table 4 displays the MBI subscale means for the 5-profile solution. The results are generally consistent with the profiles identified in Study 1, but with a few differences. First, although the Disengaged profile has a distinctly high score on cynicism, it also has a high score on exhaustion. Indeed, the Disengaged exhaustion score is even higher than the exhaustion score for Overextended (although not significantly so). Second, the Overextended profile is more prevalent in Study 2, representing 17% ($n=201$) of the sample (in contrast to 11% in Study 1) and Disengaged is also more frequent with 12% ($n=136$; in contrast to 7% in Study 1). However, Ineffective is less prevalent (20%; $n=325$) in contrast to Study 1 (31%). These patterns may be related to the worse scores in Study 2 for two of the burnout dimensions: exhaustion (Study 1, $M=2.16$; Study 2, $M=2.83$, $t_{(1164)}=11.04$, $p<0.01$, $d=0.65$), cynicism (Study 1, $M=1.41$; Study 2, $M=1.70$, $t_{(1164)}=5.68$, $p<0.01$, $d=0.33$), and the better score for inefficacy (Study 1, $M=1.81$; Study 2, $M=1.30$, $t_{(1164)}=21.47$, $p<0.01$, $d=1.26$). As indicated in Table 3, the most frequent profile was Engagement (47%), as it was also in Study 1.

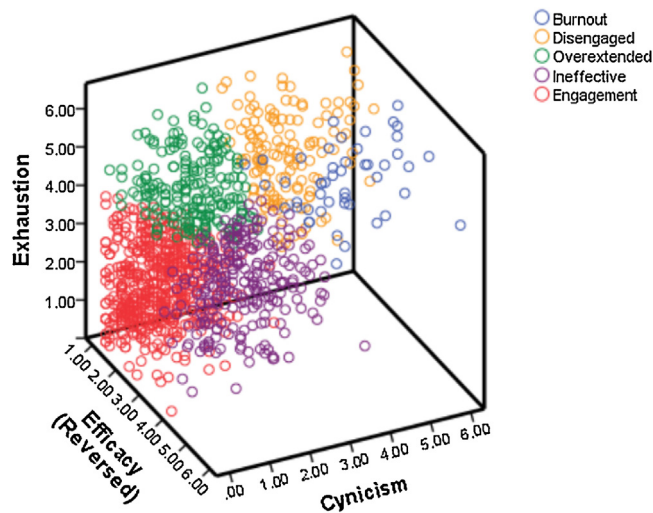


Fig. 5. Study 2: 3-D Scatterplot of Exhaustion, Cynicism and Efficacy, Separated by Profile.

Profile Patterns: Study 2

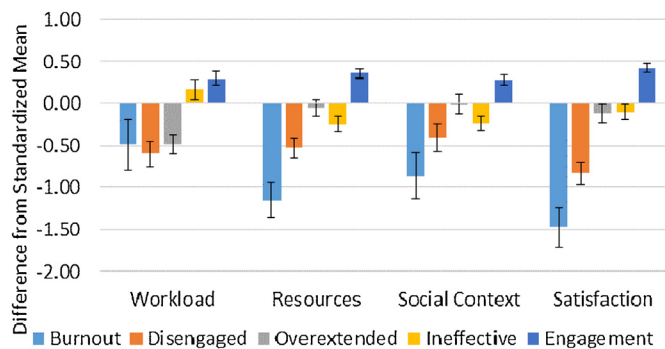


Fig. 6. Study 2: Contrasts and 95% CIs Among Profiles on Organizational Constructs.

A graphical display of the means can be found in Fig. 4, and a 3-D scatterplot of the data can be found in Fig. 5.

8.3.2. Relationship of profiles to organizational constructs

To determine the extent to which the five profiles of MBI scores differentiated among related constructs, we conducted one-way analyses of variance on the four organizational constructs: workload, resources, social context, and satisfaction. The relationships of the five profiles with these constructs are depicted in Fig. 6.

8.3.2.1. Workload. Profiles were significantly related to workload ($F_{(4,1154)}=46.49$, $p<0.001$; $\eta_p^2=0.14$). Means, from most to least negative, were: Disengaged (-0.60), Burnout (-0.49), Overextended (-0.48), Ineffective (0.16), and Engagement (0.30). Tukey tests demonstrated that (a) the Burnout group was no different than the Overextended and Disengaged groups ($p=0.857$); and (b) the Overextended group was no different than the Disengaged group ($p=0.857$), both failing to support Hypotheses 3 and 4. The Ineffective group was more negative on workload than was Engagement, supporting Hypothesis 5.

8.3.2.2. Resources. An ANOVA confirmed the relationship of profiles with the composite resources measure ($F_{(4,1156)}=97.37$, $p<0.001$; $\eta_p^2=0.25$). Means, from most to least negative, were: Burnout (-1.15), Disengaged (-0.53), Ineffective (-0.25), Overextended (-0.05), and Engagement (0.36). Tukey tests established that: (a) the Burnout group had significantly more negative evalu-

ations of resources than the Overextended and Disengaged groups; and (b) the Disengaged group had significantly lower evaluations of resources than the Overextended group, supporting Hypotheses 3 and 4. The Ineffective group was more negative on resources than was Engagement, supporting [Hypothesis 5](#).

8.3.2.3. Social context. An ANOVA confirmed the relationship of profiles with the composite social context measure ($F_{(4,1157)} = 48.98, p < 0.001; \eta_p^2 = 0.14$). Means, from most to least negative, were: Burnout (-0.86), Disengaged (-0.41), Ineffective (-0.24), Overextended (-0.003), and Engagement (0.28). Tukey tests established that: (a) the Burnout group had significantly lower evaluations for social context than the Overextended and Disengaged groups; and (b) the Disengaged group had significantly lower evaluations of social context than the Overextended group, supporting Hypotheses 3 and 4. The Ineffective group was more negative on social context than was Engagement, supporting [Hypothesis 5](#).

8.3.2.4. Satisfaction. An ANOVA confirmed the relationship of profiles with the composite satisfaction measure ($F_{(4,1161)} = 154.79, p < 0.001; \eta_p^2 = 0.35$). Means, from most to least negative, were: Burnout (-1.47), Disengaged (-0.83), Overextended (-0.12), Ineffective (-0.10), and Engagement (0.42). Tukey tests established that: (a) the Burnout group had significantly lower satisfaction than the Overextended and Disengaged groups; and (b) the Disengaged group had significantly lower evaluation of satisfaction than the Overextended group, supporting Hypotheses 3 and 4. The Ineffective group was more negative on satisfaction than was Engagement, supporting [Hypothesis 5](#).

9. Discussion

The current research was an initial attempt to test hypotheses about multiple, person-centered profiles, on the burnout to engagement continuum, using a new data modeling approach of Latent Profile Analysis (LPA). The findings of both studies provide fairly consistent empirical support for the hypotheses about these newly proposed profiles.

9.1. Overall summary of results

The LPA approach did generate both of the two standard, endpoint profiles of Burnout and Engagement, as well as the three intermediate profiles of Disengaged, Overextended, and Ineffective. The three intermediate profiles, which each displayed a pattern of a high score on only one aspect of burnout, were clearly less negative than the Burnout profile, but more negative than the positive endpoint of Engagement. Furthermore, these three profiles were also differentiated from each other in terms of their negative scores on the organizational constructs. Disengaged showed the most negative profile, with respect to social context and satisfaction, and (in Study 2) with resources. Overextended was only moderately negative, reflecting a singular concern with workload. Ineffective was even less negative (although it was still significantly less positive than Engagement). Thus there was support for most of the five hypotheses.

The one inconsistency was that the Disengaged profile in Study 2 was actually not the “high cynicism only” profile that we had predicted (and had found in Study 1). Rather, it was a new profile of two high dimensions (high on both cynicism and exhaustion). This was a rather serendipitous event, as we had not expected to find such a profile, but the empirical findings were consistent with Hypotheses 3 and 4, in that the additional high score on exhaustion showed the same relationship to workload as had been predicted for the other “high exhaustion” profiles of both Overextended and Burnout. It is

unclear whether this “two high dimension” profile was problematic in terms of defining the Disengaged profile within two studies, or whether it actually reflected another potential profile that would be worthy of study in future research.

As noted earlier, there was less clarity about what to predict for the Ineffective profile, given the relative lack of prior research and the limitation to the variables included in the datasets that we utilized for the current analyses. But the results of both Study 1 and 2 confirm that: 1) there is indeed an identifiable “high ineffective only” profile, which is distinctly 2) more negative than the Engagement profile, but 3) more positive than Burnout and the other “partial burnout” profiles (Disengaged and Overextended). What is noteworthy about the Inefficacy profile is that it represented a larger percentage of the population in both studies, as compared to the other burnout profiles, which suggests that it is a more typical sub-optimal experience for employees, and is therefore more deserving of both theoretical and empirical attention.

9.2. Limitations of the research

Although the initial findings are encouraging, they clearly need to be replicated in future research. The challenge will be to identify other large data sets that include all of the same measures (including all of the MBI dimensions), as well as other measures. There were some other limitations of the current studies, and it would be good to address these in the future as well.

First, one limitation is that the analyses were based on cross-sectional self-report surveys. Although such samples are the best starting point for exploring latent profiles, given that they can provide some foundational work on defining the potential structure of profiles, it is critical that future research build on this foundation and develop the necessary (and more complex) procedures for longitudinal profile analyses, and for relating these profiles to other types of variables, such as job behaviors or health outcomes.

A second limitation of the current research was the inconsistency of the Disengaged profile from its anticipated elevation on only cynicism in Study 1, to its elevation on both exhaustion and cynicism in Study 2. As indicated above, this inconsistency, although falling outside of the initial hypotheses, did show a coherent pattern of results that were consistent with our initial theorizing. We note this unexpected development and will monitor its potential emergence in future analyses. Examining profile structures across more samples, including larger samples and those with longitudinal data, will help to clarify the prevalence of both the “one high dimension” profiles we had predicted and the “two high dimension” possibilities. For the following discussion, however, the focus remains on the originally proposed framework: Burnout, Engagement, and a positive score on only one of the three MBI subscales.

A third limitation involved the inconsistent pattern of LPA analyses for Study 2, in which there was not a consistent set of findings for the 5-profile model, or any alternative. The noteworthy difference between the two samples was that the Study 2 sample did not have a profile with high scores only on cynicism; instead both exhaustion and cynicism were high in the Disengaged profile. One potential reason for this difference is the more negative scores on exhaustion and cynicism in Study 2. This sample had more people scoring high on exhaustion such that high exhaustion scores appeared in more profiles. Examining other large samples that differ on MBI scale scores would help to determine the prevalence either or both of these profiles.

The relative frequency of profiles differed between Study 1 and Study 2, with both Overextended and Disengaged more prevalent in Study 2. This sort of variation is consistent with a person-oriented approach, especially given that the two samples differed significantly on the overall mean levels of each of the MBI subscales.

However, it does pose some challenges in terms of the opportunity for a pure replication. A further limitation with Study 2 was the low number of cases in the Burnout profile. This limitation reduced the power of tests contrasting other profiles with the Burnout one, increasing the probability of Type 2 error. Again, more and larger datasets will be important to utilize in future studies in order to deal with this variability.

A fourth limitation was the low response rate in Study 1, which indicates caution regarding the representativeness of the sample. The response rate reflected that survey's primary focus on first line managers, although it had also invited staff members in their units to complete the survey. The sample's strength is its large number of participants and the fact that they were drawn from four separate health care districts.

9.3. Implications for multidimensional models of burnout

The current analyses do not support alternative arguments that exhaustion is the equivalent of burnout. The Burnout profile (the combination of negative scores on all three MBI scales) is associated with a decidedly more negative experience of worklife than is the experience of exhaustion alone (the Overextended profile). Furthermore, the Disengaged profile (cynicism only) appears to be more negative than the Overextended profile on important aspects of worklife, suggesting that the experience of cynicism may be more of a core part of burnout than exhaustion. Therefore, exhaustion alone does not seem to be a sufficient proxy for burnout.

As noted earlier, the research literature on burnout has consistently found a correlation between the exhaustion and cynicism dimensions (Maslach & Leiter, 2008). This is not unexpected, given that they are presumed to be aspects of the larger syndrome of burnout, but it would be a mistake to assume that a correlation means that the two dimensions are basically the same thing, and that therefore one dimension is sufficient to assess burnout. The current data show that the patterns of worklife are quite different for the two dimensions, when considered separately in their distinct profiles. This suggests that the correlation between the two dimensions might reflect some causal links, where the development of one dimension could precipitate the other.

Clearly, the relationship of work overload with the MBI exhaustion scale does replicate the relationship of work overload with experienced strain. However, this parallel underplays the distinct quality of burnout as reflecting a crisis of meaning or values. People experiencing burnout are not simply tired, they are discouraged and alienated (Cherniss, 2014; Light, 2015). Those defining qualities have a more extensive basis in worklife than fatigue. Engaged employees seek out interesting and meaningful work; they do not reflect a single-focused desire to minimize their energy output (Hornung, Rousseau, Glaser, Angerer, & Weigl, 2010).

The current empirical findings suggest that cynicism is a more distinctive and central aspect of burnout, as this is where more of the work experience goes wrong. Cynicism seems to be more linked to the job environment, in terms of the poor quality of social relationships at work and the lack of critical resources, all of which can lead to reduced job satisfaction and poor job performance. This pattern is underscored by the references to incivility, "socially toxic workplaces," and poor treatment of clients, in various discussions of burnout (Holm, Torkelson, & Bäckström, 2016; Leiter & Maslach, 2015). As noted earlier, the role of cynicism was a major theme of the early qualitative research on burnout, and so it is somewhat surprising that there has been a relative neglect of theory and research that could further elucidate what is going on here. A conclusion to draw from this analysis is that more attention needs to be paid to the impact of cynicism in the burnout experience. We need to gain

a better understanding of its unique sources and outcomes, and of its relationship to both exhaustion and inefficacy.

9.4. A new focus on inefficacy

This third MBI dimension has been even more neglected in burnout research. Not only is less known about it, but it has often been viewed as something less related to the experience of cynicism or exhaustion. However, the current results suggest that feeling more negatively about how well one is doing on the job is also a sub-optimal experience, and so the Ineffective profile deserves more research attention. Ineffective was consistently more negative than Engagement, although not as negative as the other profiles. But it may be that the more standard organizational variables (such as workload) are not the ones that are most relevant to a person's sense of professional efficacy. What this suggests is that some new theorizing is needed about the potential sources and outcomes of a sense of inefficacy. And this, in turn, could lead to some different research questions. For example, is inefficacy a more critical issue for certain kinds of employee roles, such as managers or start-up tech founders, or for certain occupations where personal responsibility for success or failure is greater? There are many possible ideas to explore here, and relevant research literatures (e.g., self-efficacy, Bandura, 1982) with specific considerations regarding the relationship of self-efficacy with burnout (Ventura, Salanova, & Llorens, 2015). More in-depth interviews and qualitative data could be especially helpful in filling in some of the missing information about this profile.

The Ineffective profile reflects a psychological relationship with work that is not distressed but is also not fully engaged. Ineffective is clearly preferable to the distress inherent in Burnout, Overextended, and Disengaged, but it lacks the fulfilling qualities of Engagement. Although Ineffective may not be a state of quiet desperation, it does suggest an experience of worklife that falls short of self-actualization. It appears to be a state that is somewhat less than neutral. Lacking clear demarcations between engaged versus non-engaged or burned out versus not burned out, conceptual development would benefit from considerations of those whose experience lies outside of those connections with work.

The Ineffective profile turned out to be a relatively large percentage of the employee populations in both Studies 1 and 2—larger, in fact, than any of the other three sub-optimal groups (Burnout, Disengaged, and Overextended). This pattern of findings suggests that the Ineffective profile is actually a far more common experience among workers, even if not as well understood. It would be interesting to know how often this pattern occurs in other studies; the implication is that empirical findings about "burnout" may be driven less by those people who are fully experiencing burnout than by those who are in one of the intermediate states. Innovations in future research will be critical for providing new insights in to those employees who lack engagement with their jobs, despite avoiding distress in their connections with the workplace.

9.5. Implications for future profile research

An interesting question that emerges from the current research is: what is the relationship of these three new profiles to the standard two profiles of Burnout and Engagement? In our earlier research (Maslach & Leiter, 2008), we postulated that two profiles (which we called Exhaustion-Only and Cynicism-Only) would be an early warning sign of a later, more complete experience of burnout. Our theorizing at that time was that the appearance of only one dimension of burnout would be indicative of an emerging, but not yet full-blown, crisis in the workplace. If our theory were correct, then these two profiles should have predicted a greater likelihood of burnout a year later. However, our longitudinal data revealed

a different pattern. Both of these profiles predicted that the person would change over the course of the year, but the change was just as likely to be in a positive direction (engagement) as in a negative direction (burnout). The variable that predicted the direction of change was actually the degree of job–person fit in one of the work resources: a mismatch predicted burnout a year later, a match predicted engagement. Using a similar analysis, [Leiter et al. \(2013\)](#) also identified a work resource as the predictor of the change to either burnout or engagement.

Our current results suggest a modification of our original thinking. Although these two profiles could be an earlier, less negative forerunner of burnout, they could also be a stage prior to a restoration of a more positive pattern of average or engaged experiences. Although the appearance of these two profiles could still be interpreted as an “early warning,” they could be followed by either a negative change over time, or a positive change (presumably because of improvements in the workplace, or sufficient coping by the individual, etc.). Another possibility is that these profiles could be understood as a partial aftermath of burnout, where things are getting better, but one aspect is still problematic. In both cases, this would mean that both the Disengaged and Overextended profiles, and possibly the Ineffective one as well, could be viewed as either steps toward or away from a full-blown experience of burnout on all three dimensions (Burnout profile).

An important question for future research is determining the relative stability of various profiles. The optimal time lag for evaluating stability in profiles may be much shorter than the usual one or two year interval in most panel studies ([Dormann & Griffin, 2015](#)). In light of the correlations of the MBI subscales with one another and with relevant constructs, a lag of two or three months may be more appropriate to evaluate profile stability.

Clearly, our current findings need to be replicated in future studies, ideally with even larger samples and with longitudinal ones. The latter would provide opportunities for tracking changes over time, and for testing hypotheses about more stable and more transitory profiles. If future LPA findings replicate the profiles that we have identified here, this would confirm that the MBI could function not only as a measure of both the Burnout and Engagement patterns but for other problematic psychological connections with work. Then the next task would be to develop a procedure for easier scoring of these multiple profiles, so that researchers could identify them in their future studies, as well as in any past datasets.

In this article we have depicted engagement as the opposite of burnout, defining engagement as positive scores on the three MBI subscales. Future research should conduct latent profile analyses on large data sets that include both the MBI and the UWES subscales, to determine the extent to which the combination of these measures creates a distinct pattern of profiles.

9.6. Implications for interventions

These profiles could also have implications for interventions. For example, the pattern of correlations for people with the Overextended profile shows that their major issue is workload. Thus, the most relevant interventions for addressing this problem would be strategies to manage workplace demands and to develop resilience. In contrast, making workload more manageable is less likely to be as relevant for those in the Disengaged profile. Rather, their primary concerns seem to focus on values and social relationships, so effective interventions would need to address these problems. Tailoring interventions to address the specific challenges for each profile might be the best use of organizational resources to alleviate departures from Engagement.

The confirmation of the Overextended profile is especially timely, as some surveys are reporting very high levels of burnout in some samples, such as medical residents (e.g., [Gopal, Glasheen,](#)

[Miyoshi, & Prochazka, 2005](#); [Shanafelt, Bradley, Wipf, & Back, 2002](#)). If the burnout assessments are relying heavily on assessing only exhaustion, then it may be that some people identified as burned out are actually Overextended, due to excessive workloads or insufficient recovery (e.g., sleep deprivation). A positive quality of this explanation is that Overextended is a more straightforward problem, in that it is uniquely associated with work overload.

10. Conclusion

The current research raises some interesting new issues for the burnout field. First, it suggests what might be occurring between the endpoints of burnout and engagement. There are at least three (and possibly more) intermediate states that could be viewed as distinct experiences in the workplace, which deserve further attention. Second, it provides an innovative person-centered approach to assessing these workplace experiences, by going beyond a simpler model of correlations between the three MBI dimensions. Third, it challenges the idea that exhaustion is all there is to burnout. This could have important implications for both research and practice, in terms of how best to assess burnout. Fourth, it points to evidence for the stronger importance of cynicism to the burnout experience. High cynicism alone appears to be closer to the negative Burnout profile than high exhaustion alone. Fifth, it suggests that the greater prevalence of high inefficacy alone justifies more attention to this particular dimension of the burnout experience. Sixth, the presence of different profiles suggests a more customized approach to interventions for burnout – clearly, “one size does not fit all,” and future solutions for burnout may need to take in to account what are the key underlying problems for different groups of people. In sum, this new focus on burnout profiles points to some new paths for future research and intervention on this important global problem.

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