

The relative importance of psychological acceptance and emotional intelligence to workplace well-being

EMMA J. DONALDSON-FEILDER

EJD Associates, UK

FRANK W. BOND

Department of Psychology, Goldsmiths College, University of London, New Cross, London SE14 6NW, UK. E-mail: FBond@gold.ac.uk

ABSTRACT *Psychological acceptance (acceptance) and emotional intelligence (EI) are two relatively new individual characteristics that are hypothesised to affect well-being and performance at work. This study compares both of them, in terms of their ability to predict various well-being outcomes (i.e. general mental health, physical well-being, and job satisfaction). In making this comparison, the effects of job control are accounted for; this is a work organisation variable that is consistently associated with occupational health and performance. Results from 290 United Kingdom workers showed that EI did not significantly predict any of the well-being outcomes, after accounting for acceptance and job control. Acceptance predicted general mental health and physical well-being but not job satisfaction, and job control was associated with job satisfaction only. Discussion focuses on the theoretical and applied implications of these findings. These include support for the suggestion that not controlling one's thoughts and feelings (as advocated by acceptance) may have greater benefits for mental well-being than attempting consciously to regulate them (as EI suggests).*

For many years, psychologists have studied individual characteristics in an attempt to find explanations as to why similar work and organisational characteristics are associated with varying degrees of well-being amongst people (Grimshaw, 1999). Type A behaviour pattern (Type A; Friedman & Rosenman, 1974), locus of control (Rotter, 1966) and negative affectivity (Watson & Pennebaker, 1989) have, in particular, received a great deal of attention in the field of occupational psychology (Jex, 1998). The goal of the current study is to compare two newer individual characteristics, psychological acceptance and emotional intelligence, in terms of their ability to predict well-being (i.e. general mental health, physical well-being, and job

satisfaction). Psychological acceptance (also referred to as *acceptance*) refers to a willingness to experience thoughts, feelings, and physiological sensations, especially those which are negatively evaluated (e.g. fear), without having to avoid them, or let them determine one's actions (e.g. Hayes, 1987; Hayes *et al.*, 1999). Emotional intelligence (EI) describes people's ability to perceive, understand, assimilate and regulate their emotions (Mayer & Salovey, 1997).

The way that work is organised also affects well-being (e.g. Quick *et al.*, 1997). As a result, we wished to examine the predictive effects of acceptance and EI, whilst accounting for those of job control, as research consistently shows that this work organisation variable is associated with occupational health and well-being (e.g. Terry & Jimmieson, 1999).

Psychological acceptance and workplace well-being

Acceptance involves a willingness to experience all psychological events (i.e. thoughts, feelings, and sensations), without changing, avoiding, or otherwise controlling them (Hayes, 1987; Hayes *et al.*, 1996). By accepting these internal events, people can more effectively use their energies, formerly given over to resignation, avoidance, or control of these events, to act in a way that is congruent with their values and goals (Hayes *et al.*, 1996). In other words, acceptance involves the transfer of scarce, attentional resources from controlling internal events to observing one's environment and deciding on, and completing, the right course of action for goal attainment (e.g. paying more attention to task requirements). In order to enact this transfer, people need to be willing to experience even unwanted internal events (e.g. sadness), so that they do not use their attentional resources to change or control them; but, instead, to make and enact overt behavioural choices on the basis of what will lead to their own valued goals (e.g. having a meaningful, intimate relationship), and not on the basis of what emotions or thoughts they may be experiencing.

Consistent with this conceptualisation of psychological acceptance, there is a great deal of research that implicates this individual characteristic in a wide range of psychological problems, from substance abuse to depression and suicide (see Hayes *et al.*, 1996, for a review). There is also a large literature that shows an association between acceptance and positive outcome in psychotherapy (see Hayes *et al.*, 1996; Linehan, 1993). It may not be surprising, therefore, that acceptance-based treatments are now used in relation to many types of psychological problems (see Hayes *et al.*, 1994). Despite its growing popularity in theories of psychopathology, the concept of acceptance is only just beginning to have an impact on occupational health psychology.

For example, a randomised, controlled experiment by Bond and Bunce (2000) evaluated the effectiveness of an acceptance-based worksite stress management intervention (SMI) in a large media organisation. Bond and Hayes (2002) developed this SMI for use in the work environment, from the strategies and techniques found in the psychotherapy version of Acceptance and Commitment Therapy (ACT; Hayes

et al., 1999). Results indicated that the ACT SMI improved employees' general mental health (General Health Questionnaire), depression (Beck Depression Inventory), and innovation potential (Propensity to Innovate), relative to a control group. According to Cohen's (1977) criteria for the effect size index of eta-squared (η^2), these improvements ranged from medium (depression, $\eta^2 = 0.21$) to large (general mental health, $\eta^2 = 0.25$; propensity to innovate, $\eta^2 = 0.43$) magnitudes of effect. Moreover, results showed that ACT produced these improvements, because it increased people's acceptance levels. That is, acceptance was the mechanism, or mediator, by which ACT affected levels of general mental health, depression, and propensity to innovate. This suggests that psychological acceptance is very much associated with not only mental health-related variables (e.g. depression), but a performance-related variable (propensity to innovate) as well.

This conclusion is also consistent with a longitudinal study by Bond and Bunce (2003), who showed that higher acceptance levels predict better mental health and an objective measure of performance 1 year on, even after controlling for Type A behaviour pattern, locus of control, and job control. Furthermore, they found that the beneficial effects of having more job control, in terms of better mental health and performance, are enhanced when people have higher levels of acceptance. It appears, then, that acceptance, developed to explain mental health and performance in a way that is most relevant to clinical psychology, can also help us to understand these outcomes in a context that can inform organisational behaviour.

Emotional intelligence and workplace well-being

According to Mayer and Salovey (1997; Mayer *et al.*, 2000, p. 401), EI refers to 'the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in self and others'. The term 'emotional intelligence' has received a great deal of attention in the applied psychology and popular press (e.g. Goleman, 1998), and there are a variety of alternative models of this construct. Many of them do not conceptualise EI, as Salovey and Mayer (1990; Mayer & Salovey, 1997) do, as a cognitive ability that involves the processing of emotion. Instead, these alternative models define EI in terms of behaviours and skills, including stress management skills (e.g. stress tolerance and impulse control), self-management skills (e.g. self-control, conscientiousness and adaptability) as well as social skills (e.g. conflict management, leadership and communication) (e.g. Bar-On, 2000; Bar-On *et al.*, 2000; Boyatzis *et al.*, 2000; Goleman, 1998; Higgs & Dulewicz, 1999). The problem with defining EI primarily in terms of overt behaviours and skills is that the cognitive mechanisms, which presumably produce them, remain inadequately operationalised. As a result, these models are less developed than is Salovey and Mayer's, in terms of specifying scientific theories that underlie them. For this reason, we use Salovey and Mayer's cognitive processing model of EI as the theoretical basis for this construct in the present study.

The overriding focus of the EI literature has been on the hypothesised ability of this individual characteristic to affect individual success (e.g. Goleman, 1998; Higgs & Dulewicz, 1999); and, indeed, there is now empirical support for at least a positive association between EI and work performance (e.g. Kaipiainen & Fletcher, 2001; Slaski, 2001). Furthermore, Salovey and Mayer (1990) and Mayer and Salovey (1995) hypothesise that higher levels of EI result in better psychological and physical well-being, and evidence for this proposition is growing. For example, You *et al.* (1999) found a cross-sectional relationship between lower levels of EI, as measured by the Trait Meta-Mood Scale (TMMS; Salovey *et al.*, 1995), and psychological burnout, using the Maslach Burnout Inventory (Maslach & Jackson, 1986). In addition, Salovey *et al.* (2002) showed, in a series of cross-sectional studies, that higher levels of EI (TMMS) were associated with better psychophysiological coping (e.g. lower levels of cortisol, passive coping, rumination, and blood pressure) when facing various laboratory-based stressors. Research has not yet examined, however, the relative effects of EI on well-being outcomes, in a work environment (e.g. when accounting for levels of job control), and so this is an objective of the current study.

Psychological acceptance and emotional intelligence: similarities and differences

Acceptance and EI, as defined by Salovey and Mayer (1990; Mayer *et al.*, 2000), are similar in that both are meta-cognitive and meta-mood constructs; that is, they both emphasise people's abilities to perceive their thoughts and feelings. The importance of meta-cognition on well-being has received a great deal of theoretical attention over the past 15 years (e.g. Hayes, 1987; Wells, 1995; Zindel *et al.*, 2002) and, consistent with this literature, research has indicated that higher levels of meta-cognition (or mindfulness or acceptance) are associated with better mental health and behavioural effectiveness (e.g. improved job performance) (Bond & Bunce, 2000, 2003; Hayes *et al.*, 1996; Wells & Carter, 2001).

Although both acceptance and EI emphasise the importance of meta-cognition as a fundamental tool for promoting well-being and performance, they differ in their hypotheses as to how it is used to promote these outcomes. Specifically, acceptance theory (e.g. Hayes *et al.*, 1999) emphasises meta-cognition as the means by which people can be aware of their unwanted internal events (e.g. fears) so that they do not attempt to change, avoid, or otherwise control them. (In this way, people's actions can be better guided by their overarching goals and values.) In contrast, the function of meta-cognition for EI is that it should allow people better to perceive, assimilate, understand, and hence regulate (or control) their emotions. This issue of control over cognition and emotion is the key distinction between acceptance and EI. In fact, acceptance, in direct contrast to EI, goes so far as to maintain that attempts to regulate, or control, internal events, such as emotions, will serve only to diminish mental ill-health and performance.

To our knowledge, no research has compared the relative validity of these two very different meta-cognitive theories of well-being and performance. It appears,

though, that acceptance theory, rooted in the post-Skinnerian behavioural perspective of functional contextualism (see Hayes, 1993), stems from a well-tested, empirical, and theoretical tradition of human behaviour and emotion. In contrast, EI, based upon theories of social intelligence (e.g. Gardner, 1983; see also Walker & Foley, 1973) and a diversity of studies on how people appraise and communicate emotion (e.g. Jones, 1964; Notarius & Levenson, 1979; Salovey & Mayer, 1990), has not yet received the empirical exploration that functional contextualism has undergone. More specifically to the current study, acceptance theory has an established literature that supports its hypotheses as to the degree to which, and the mechanisms by which, acceptance predicts well-being and improved behavioural performance (e.g. Bond & Bunce, 2000, 2003; Hayes *et al.*, 1996). As noted above, in contrast, EI has very limited evidence as to the extent to which it predicts these outcomes (e.g. Salovey *et al.*, 2002; You *et al.*, 1999), and we can find no research that has tested the putative mechanisms by which it does so.

As a result of the comparative theoretical and empirical strength of acceptance theory over EI, we predict that, in the current study, acceptance will have a stronger association with general mental health, physical health symptoms, and job satisfaction, than will EI. Nevertheless, we still hypothesise that the latter variable will be associated these outcomes, as it involves meta-cognition, and, as noted above, prior theory and research points to the importance of this construct in promoting well-being.

Job control and workplace well-being

Job control, as defined here, is a perceived ability to exert some influence over one's work environment, in order to make it more rewarding and less threatening. For years, theories of occupational health and performance have hypothesised that providing people with perceived and real control over their work serves to improve mental health, job satisfaction, and performance—e.g. the job characteristics model (Hackman & Lawler, 1971), the sociotechnical systems approach (e.g. Emery & Trist, 1960), action theory (Frese & Zapf, 1994; Hacker *et al.*, 1968), and the demands-control model (Karasek, 1979). In line with these theories of work control and employee health, Terry and Jimmieson (1999) noted, in their review of this research literature, that there appears to be 'consistent evidence' that high levels of worker control are associated with low levels of stress-related outcomes, including anxiety, psychological distress, burnout, irritability, psychosomatic health complaints, and alcohol consumption (p. 131). In addition, Bosma *et al.* (1997) showed that low levels of job control longitudinally predict new reports of coronary heart disease, amongst London-based civil servants. Furthermore, Bond and Bunce (2001) showed, using a longitudinal, quasi-experimental design, that a work reorganisation intervention could improve people's mental health, absenteeism levels, and self-rated performance, by increasing their job control.

We believe that it is important to account for job control in the present study, as it is one of the most heavily researched work and organisational characteristics examined in studies of occupational health (e.g. Parker & Wall, 1998). Therefore, it is not possible to begin gauging the incremental validity, and hence the importance, of acceptance and EI to organisational behaviour and occupational health psychology, unless we know the degree to which they can predict well-being, over and above this work design characteristic.

We specifically hypothesised that:

1. When accounting for job control, acceptance and EI will cross-sectionally predict general mental health, physical health symptoms, and job satisfaction, although the former individual characteristic will serve as a better predictor of these outcomes than will the latter.
2. Job control will also significantly predict the above outcomes, and we make no prediction as to the extent to which it will do so, in relation to acceptance and EI.

Design and participants

Questionnaire packs, comprised of the measures detailed below, were distributed to 570 participants across five organisations: a manufacturing company based on the south coast of England; the London office of an overseas government; the management consultancy arm of a large accountancy firm; the corporate headquarters of an insurance broker; and a financial services consultancy. In total, 290 sets of completed questionnaires were returned, a 51% response rate. Of this sample, 51% of respondents were men and 44% women (5% did not respond to this question); 96% worked full-time, 2% part-time and 1% on contract (1% non-response); 43% were manual/skilled, 11% clerical/administrative, 30% middle management/technical, 13% senior management/professional (3% non-response). Mean age was 38.19 years (SD 10.55), mean organisational tenure 6.72 years (SD 6.06) and mean job tenure 3.68 years (SD 3.98).

Measures

Outcome variables. Three types of well-being outcomes were measured: job satisfaction, physical well-being and general mental health. The relevant scales of the Pressure Management Inventory (PMI; Williams & Cooper, 1996, 1998) were used to measure the first two, and a separate questionnaire to measure the third.

Job satisfaction. This PMI scale consists of six items that measure how satisfied participants are feeling with the type of work they do (e.g. 'The kind of work tasks you are required to perform'). Each item is rated on a 6-point Likert-type scale that runs from 'very much dissatisfaction' (1) to 'very much satisfaction' (6). Higher scores indicate higher levels of job satisfaction, and a Cronbach's alpha of 0.90 was obtained for this sample.

Physical well-being. Two PMI scales, each assessing the frequency of symptoms in the last 3 months, the first asking about physical symptoms (three items, for example: 'Shortness of breath or feeling dizzy') and the second about energy level (four items, for example: 'Feeling unaccountably tired or exhausted'), comprised this measure. Each of these seven items were rated on a 6-point Likert-type scale that ranged from 'never' (1) to 'very frequently' (6), with higher scores indicating better physical well-being. A Cronbach's alpha of 0.80 was obtained for this sample.

General mental health: General Health Questionnaire—12 (GHQ; Goldberg, 1978). This is a 12-item scale that is widely used for measuring general mental health (McDowell & Newell, 1996). Items include: 'Have you recently . . . felt constantly under strain?', and each is scored on a 4-point Likert scoring system, ranging from 'not at all' (0) to 'much more than usual' (3). Higher scores indicate poorer general mental health, in contrast to the other three outcome variables. A Cronbach's alpha of 0.85 was obtained for this sample.

Predictor variables

Acceptance and action questionnaire (AAQ; Hayes, 1996; Hayes et al., submitted). This is a nine-item scale that assesses participants' ability to accept their undesirable thoughts and feelings, while still pursuing the goals they wish to achieve (e.g. 'I am not afraid of my feelings', 'I am able to take action on a problem even if I am uncertain what is the right thing to do', 'When I feel depressed or anxious, I am unable to take care of my responsibilities' (reversed item), 'Anxiety is bad' (reversed item)). Responses were given on a 7-point Likert scale from 'never true' (1) to 'always true' (7). Higher scores indicate greater psychological acceptance. A Cronbach's alpha of 0.53 was obtained.

Trait Meta-Mood Scale (TMMS; Salovey et al., 1995). A 'reasonable operationalisation of aspects of emotional intelligence' (Salovey *et al.*, 1995, p. 147), the shorter version of this scale has 30 items (e.g. 'I don't usually care much about what I'm feeling' and 'Feelings give direction to life'). It aims to measure the underlying mental abilities linked to emotional intelligence and looks at the attention individuals give to their emotions, the clarity with which they distinguish between feelings and the extent to which they make efforts to repair their mood. Each item was rated on a 5-point Likert scale from 'strongly disagree' (1) to 'strongly agree' (6) with negative items being reverse scored, such that a higher score indicates higher levels of emotional intelligence. A Cronbach's alpha of 0.84 was obtained for this sample.

Job control: Work Control Scale (WCS; Dwyer & Ganster, 1991). This 22-item scale assesses the general control and predictability participants identify in their job. Items such as 'How much control do you have over the variety of methods you use in completing your work?' were rated on a 5-point Likert scale that ranges from 'very little' (1) to 'very much' (5). Higher scores indicate higher perceived control, and a Cronbach's alpha of 0.83 was obtained for this sample.

Data analysis

We examined our hypotheses by testing the fit, and partial regression coefficients, of a path analytic model (using AMOS 4.0; Arbuckle & Wothke, 1999). This model, shown in Fig. 1, specified paths from each of the predictor variables (i.e. acceptance, EI, and job control) to each of the well-being outcomes (i.e. general mental health, physical well-being, and job satisfaction). Based upon the zero-order correlations, discussed below, we controlled for gender by specifying it as an exogenous variable with paths to each of the predictor and outcome variables. Consistent with Jöreskog (1979), we allowed each of the disturbances (or residual errors) of the three predictor variables to correlate; in addition, based upon previous research (Bond, 2000), we allowed the disturbances of general mental health and physical well-being to correlate. Finally, our analysis strategy was to constrain to zero (or remove) any non-significant paths from the model, just described, if its fit to the data was not very good.

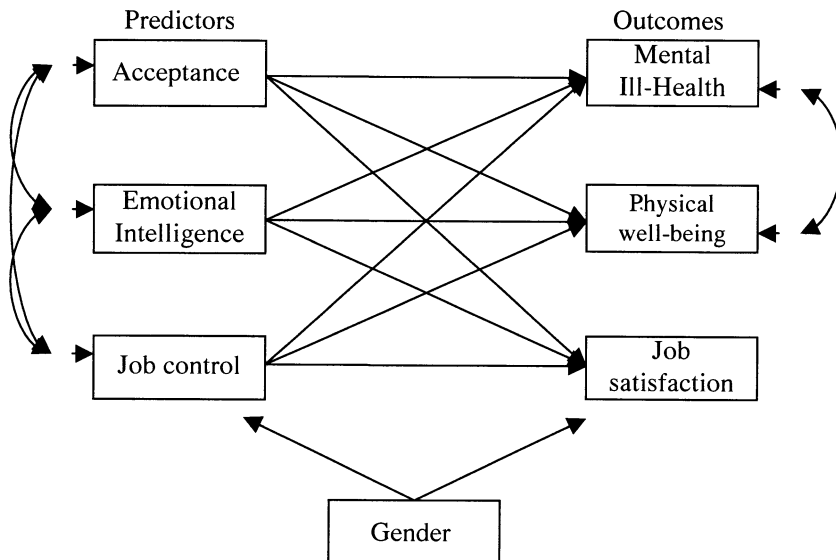


FIG. 1. The hypothesised path analysis model. In this model, all paths are unconstrained. Greater levels of acceptance, emotional intelligence, and job control are hypothesised to be associated with better mental health, physical well-being, and job satisfaction. Gender is specified to be associated with each of the predictors and outcomes, but the direction of these associations is not hypothesised.

Results

Zero-order correlations

Zero-order correlations are displayed in Table 1, and these are largely consistent with the relevant theories, research, and hypotheses, noted above. Means and standard

TABLE 1. Means, standard deviations, and zero-order correlations

Variable	M	SD	1	2	3	4	5	6	7	8
1. Gender ^a										
2. Age	38.19	10.55	-0.12							
3. Acceptance	0.31	6.38	-0.15*	0.07						
4. EI	14.60	12.93	0.11	-0.06	0.40**					
5. Job control	62.96	13.09	-0.14*	0.03	0.27**	0.29**				
6. Job satisfaction	22.16	5.34	0.00	0.01	0.12	0.10	0.48**			
7. Physical well-being	28.88	6.73	-0.10	0.10	0.32**	0.16**	0.19**	0.25**		
8. General mental ill-health	11.02	4.67	0.07	-0.10	-0.36**	-0.16**	-0.11	-0.22**	0.52**	

^a Gender was coded such that 1 = male and 2 = female.

* $p < 0.05$, ** $p < 0.01$.

deviations are also shown in Table 1. As can be seen, both acceptance and EI are correlated with mental health and physical well-being (although neither of these predictors is associated with job satisfaction). The partial regression coefficients from the path analysis model will reveal the effect size, and significance level, for each of these predictors, once the other one, and job control, is partialled. In this way, we can better compare the relative importance of each of these individual characteristics for general mental health, physical well-being, and job satisfaction. As gender is correlated with both acceptance and job control, we control for this variable in the path analysis model, in the manner noted above (see Fig. 1).

Path analysis models

Covariance matrices were used to analyse the hypothesised path analysis model, and full information maximum likelihood (FIML) estimation was used to assess its fit. We based our interpretation of the magnitude of the standardised, partial regression (or path) coefficients on Cohen (1988); thus, coefficients of 0.10, 0.30, and 0.50 represent small, medium, and large effects, respectively.

Based upon criteria by Bollen (1989) and Byrne (2001), results indicated that the fit of the hypothesised model (shown in Fig. 1) was poor, $\chi^2(2) = 17.3$, $p < 0.001$, χ^2 degrees of freedom (df) = 8.66, comparative fit index (CFI) = 1.00, root mean square error of approximation (RMSEA) = 0.16. Examination of the path coefficients revealed that higher levels of acceptance were significantly associated with better general mental health ($\beta = -0.34$) and physical well-being ($\beta = 0.28$), and the magnitude of these effects were approximately medium in size. In addition, higher levels of job control predicted, to a large extent, better job satisfaction ($\beta = 0.50$). Finally, women were more likely to have lower levels of acceptance ($\beta = -0.14$) and job control ($\beta = -0.15$), although the size of these associations was small. All of the other specified paths were not significant, including those that ran from EI to each of the three outcomes. All of the specified correlations between disturbances were significant.

As the fit of our hypothesised model was poor, we respecified it by removing all of its non-significant paths. This had the effect of producing a constrained model in which we hypothesised that EI did not predict any of the outcomes; acceptance predicted only general mental health and physical well-being; and job control predicted only job satisfaction. As with our unconstrained hypothesised model, we analysed this constrained one, using covariance matrices, and assessed its fit with FIML estimation. We then compared the chi-square goodness of fit between the unconstrained and constrained models by examining the statistical significance of the difference in chi-squares, and degrees of freedom, between them (Jöreskog & Sörbom, 1996).

These analyses revealed that the constrained model, despite not specifying any effects of EI, had a chi-square ($\chi^2(12) = 26.97$, $p < 0.01$) that was not significantly worse than the constrained one, χ^2 difference (10) = 9.65, $p > 0.05$. In fact, other indices of fit suggested that this constrained model provided a reasonable to good fit

to the data, χ^2 $df = 2.25$, CFI = 1.00, RMSEA = 0.07. This finding, taken together with the non-significant EI paths identified in the original model, indicate that EI does not appear to be associated with general mental health, physical well-being, and job satisfaction, once we control for the variance accounted for by acceptance and job control.

Findings regarding the individual paths in the constrained model were consistent with those from the unconstrained one. Specifically, as can be seen in Fig. 2, greater levels of acceptance predicted, to a medium extent, better general mental health and physical well-being. In addition, higher levels of job control were associated with greater job satisfaction, to a moderately large degree. Once again, women were more likely to have lower levels of acceptance and job control than were men, and the size of these associations were small to moderate. Finally, all of the correlations specified amongst the disturbances were significant.

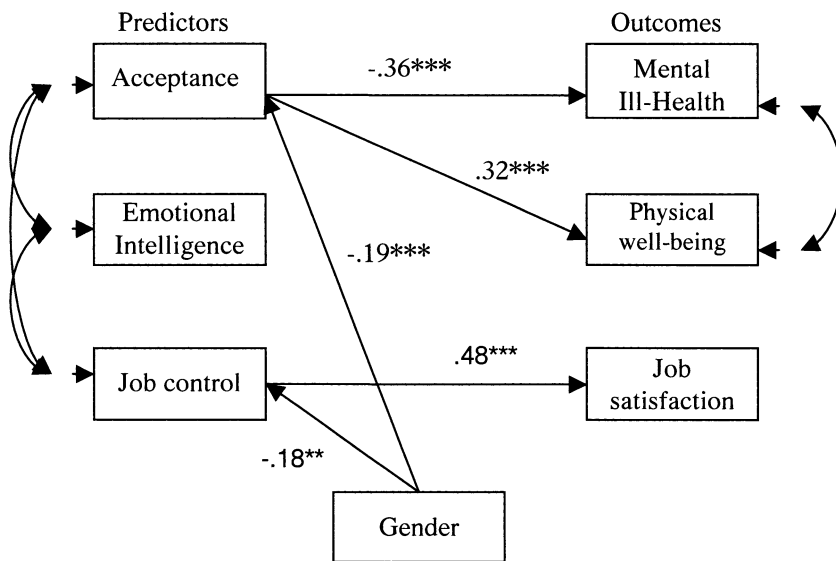


FIG. 2. The constrained path analysis model. In this model, non-specified paths from the predictors to the outcomes were non-significant in the unconstrained model and were, thus, not included here. All specified correlations amongst the disturbances are significant. ** $p < 0.01$. *** $p < 0.001$.

Discussion

To our knowledge, this study is the first to explore the relative abilities of acceptance and EI to predict well-being outcomes (general mental health, physical well-being and job satisfaction). These individual difference constructs are both fairly new to the field of occupational health psychology and may prove of equal, if not greater, importance than longer established constructs, such as Type A behaviour pattern, locus of control and negative affectivity (e.g. Bond & Bunce, 2003). Acceptance

occurs when people are willing to experience their unwanted psychological events, whilst basing their actions not on those events, but on the values and goals that they hold (Hayes *et al.*, 1996). EI refers to the capacity to perceive, assimilate, understand, analyse and regulate emotion (Mayer *et al.*, 2000). Acceptance and EI are both meta-cognitive and meta-mood constructs that emphasise the extent to which people can perceive their thoughts and feelings. However, the two constructs differ in their hypotheses of how meta-cognition is used to promote well-being outcomes.

Our study, therefore, provides an opportunity to compare two very different meta-cognitive theories of well-being and performance. The first, underlying acceptance, is that meta-cognition functions to help people be aware of unwanted internal events (e.g. fears), and it is through this awareness that people can consciously decide not to attempt to change, avoid or otherwise control them. In this way, they are better able to ensure that their actions are guided by their overarching goals and values, unimpeded by unhelpful cognitive and emotional content. The suggestion is that this acceptance process benefits well-being directly, by reducing the distress caused by unwanted cognitive content, and indirectly, via the satisfaction resulting from goal attainment. The contrasting theory, underlying EI, is that meta-cognitive perception of emotions enables people to assimilate them in thought, understand them, analyse them and regulate them, in order to affect well-being and performance outcomes. It is in the regulation (or control) of emotions that the key distinction between the two meta-cognitive theories lies. While acceptance maintains that regulating or controlling emotions will diminish mental well-being and performance, EI proposes the regulation of emotions as a mechanism for generating positive well-being and performance outcomes. Our results appear to support the former theory, as acceptance has a greater association with general mental health and physical well-being than does EI. Moreover, the correlations initially found between EI and the outcomes disappear, once acceptance is controlled. These findings are consistent with previous research that shows the longitudinal benefits of acceptance for workplace well-being and performance (e.g. Bond & Bunce, 2000, 2003).

Interestingly, our results suggest that neither EI nor acceptance is associated with job satisfaction. This finding is consistent with previous research showing no significant association between acceptance and job satisfaction (Bond & Bunce, 2000, 2003). In contrast, job control shows a clear relationship with job satisfaction, but not with physical well-being or general mental health. The association between job control and job satisfaction is consistent with research suggesting a link between job control and a range of well-being outcomes (Terry & Jimmieson, 1999). However, the lack of association between job control and physical/mental health, in this study, would not have been predicted from theory and previous empirical findings (Terry & Jimmieson, 1999). We believe that this study, and the previous ones that examine the role of acceptance and job control in the workplace (e.g. Bond & Bunce, 2000, 2003), are showing that particular individual and work characteristics are differentially related to well-being and performance at work. Future

research may wish to explore these distinct effects, and their implication for theory, in greater depth.

Methodological issues and limitations

There are certain limitations of the current research, which future studies in this area should seek to overcome. First, its cross-sectional design means that causal inferences cannot be made as to the relationships amongst the variables that we examined. It is possible that well-being outcomes affect levels of acceptance and EI rather than vice versa. However, consistent with Hayes' (1987) theory of acceptance, Bond and Bunce (2003) found that acceptance and job control longitudinally predicted well-being and performance, and there was no evidence for any reversed, or reciprocal, causal relationships. Nevertheless, future studies should be longitudinal in nature to allow causal relationships to be more thoroughly explored.

Second, the use of self-report measures for assessing EI, in particular, is a potential confound, because EI is strongly related to self-awareness. Thus, those who are self-aware may be most conscious of the gaps in their EI and inclined to rate themselves low on EI levels; whereas those who are not self-aware are in a poor position to judge their EI and may be inclined to rate themselves highly. Future research should aim to use a 360° measure of EI; that is, using multiple raters to judge an individual's EI levels (e.g. Bar-On EQ-360, in development), or one that aims to give a more objective view of emotional intelligence skills (e.g. the ability-based Mayer–Salovey–Caruso Emotional Intelligence Test, MSCEIT; Mayer *et al.*, in press).

Third, the reliability of the AAQ was low in this study (i.e. $\alpha = 0.53$), even given that the measure only has nine items. Previous research using this version of the AAQ demonstrates satisfactory levels of reliability (see Hayes *et al.*, submitted), so we are unclear as to why the reliability for this sample was less than good. Nevertheless, we believe that this nine-item version of the AAQ is assessing psychological acceptance as Bond and Bunce (2003) used a similar, 16-item version of the AAQ that has good reliability, and whose factor structure is consistent with acceptance theory. Furthermore, research indicates that the nine- and 16-item versions of the AAQ are very highly correlated (i.e. ≈ 0.97) (Hayes *et al.*, submitted). As a result, we believe that the nine-item version of the AAQ is assessing psychological acceptance, but that the 16-item version may be a better one to use, in terms of reliability.

The way forward

As we are not familiar with other research that compares the relative effects of acceptance and EI, there is clearly a need to examine further the association of these two variables with well-being, as well as objective measures of performance and productivity. In the light of the limitations outlined above, future research should, if

possible, be longitudinal in design, using more objective measures of EI, and the 16-item version of the AAQ.

In particular, there is a need to test more directly the validity of the theories underlying acceptance and EI, especially those aspects concerning the mechanisms by which meta-cognition generates benefits for well-being and performance. It would be helpful, therefore, to manipulate levels of acceptance and EI, in randomised controlled outcome experiments. In this way, we could examine their relative effects on well-being (and performance) outcomes, which would provide a stringent test of the hypothesis that acceptance and EI affect well-being; furthermore, it would permit a robust investigation into the mechanisms by which these two variables affect their outcomes (see Bond & Bunce, 2000), and this would help to test the relative efficacy of their respective theories. In particular, such a study should explore the benefits of being willing to experience unwanted thoughts and feelings *without changing, avoiding or otherwise controlling* them, as compared to the helpfulness of perceiving, assimilating, understanding, analysing and *regulating* emotions.

If the findings of the present study are replicated, the implication for practitioners is that interventions that increase psychological acceptance may be more helpful than those that promote EI in reducing occupational ill-health. Already, as noted above, there is evidence that an acceptance-based SMI can be useful in improving people's overall mental health, depression, and propensity to innovate, because it increases their levels of acceptance (Bond & Bunce, 2000). It would be useful to see if this acceptance-based intervention is more effective than an EI-based SMI in affecting these types of outcomes. The findings from this study would suggest that this may be the case. It would also be useful to compare the effect of acceptance-based and EI-based one-to-one interventions on mental well-being outcomes. If, as this study suggests may be the case, one-to-one interventions that increase acceptance are more helpful for improving clients' mental well-being than those based on raising EI levels, counselling and guidance professionals should consider building acceptance-based methodologies into their interventions. Such methodologies could build on the psychotherapy version of ACT mentioned above (i.e. Hayes *et al.*, 1999) or the stress management one (i.e. Bond & Hayes, 2002).

References

- ARBUCKLE, J.L. & WOTHKE, W. (1999). *Amos 4.0: User's Guide*. Chicago: SmallWaters.
- BAR-ON, R. (2000). Emotional and social intelligence: insights from the Emotional Quotient Inventory. In: BAR-ON, R. & PARKER, J.D.A. (Eds), *The Handbook of Emotional Intelligence*. San Francisco: Jossey-Bass.
- BAR-ON, R., BROWN, J.M., KIRKALDY, B.D. & THOME, E.P. (2000). Emotional expression and implications for occupational stress: an application of the Emotional Quotient Inventory (EQ-I). *Personality and Individual Differences*, 28, 1107–1118.
- BOLLEN, K.A. (1989). *Structural Equations with Latent Variables*. New York: Wiley.
- BOND, F.W. (2000). Working with measures of workplace stress. Unpublished teaching manuscript.
- BOND, F.W. & BUNCE, D. (2000). Mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of Occupational Health Psychology*, 5 (1), 156–163.
- BOND, F.W. & BUNCE, D. (2001). Job control mediates change in a work reorganization intervention for stress reduction. *Journal of Occupational Health Psychology*, 6, 290–302.

- BOND, F.W. & BUNCE, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology*, 88, 1057–1067.
- BOND, F.W. & HAYES, S.C. (2002). Acceptance and commitment therapy at work. In: BOND, F.W. & DRYDEN, W. (Eds), *Handbook of Brief Cognitive Behaviour Therapy*. Chichester: John Wiley.
- BOSMA, H., MARMOT, M.G., HEMINGWAY, H., NICHOLSON, A.C., BRUNNER, E. & STANSFELD, S.A. (1997). Low job control and risk of coronary heart disease in the Whitehall II (prospective cohort) study. *British Medical Journal*, 314, 558–564.
- BOYATZIS, R.E., GOLEMAN, D. & RHEE, K.S. (2000). Clustering competence in emotional intelligence: insights from the Emotional Competence Inventory. In: BAR-ON, R. & PARKER, J.D.A. (Eds), *The Handbook of Emotional Intelligence*. San Francisco: Jossey-Bass.
- BYRNE, B.M. (2001). *Structural Equation Modelling with Amos*. Hillsdale, NJ: Erlbaum.
- COHEN, J. (1977). *Statistical Power Analysis for the Behavioral Sciences*. San Diego, CA: Academic Press.
- COHEN, J. (1988). *Statistical Power Analysis* (2nd ed). Hillsdale, NJ: Erlbaum.
- DWYER, D.J. & GANSTER, D.C. (1991). The effects of job demands and control on employee attendance and satisfaction. *Journal of Organizational Behavior*, 12, 595–608.
- EMERY, F.E. & TRIST, E.L. (1960). Socio-technical systems. In: CHURCHMAN, C.H. & VERHULST, M. (Eds), *Management Science, Models and Techniques*, Volume 2 (pp. 83–97). New York: Pergamon.
- FRESE, M. & ZAPF, D. (1994). Action as the core of work psychology: a German approach. In: TRIANDIS, H.C., DUNNETTE, M.D. & HOUGH, J.M. (Eds), *Handbook of Industrial and Organizational Psychology*. Palo alto, CA: Consulting Psychologists.
- FRIEDMAN, M. & ROSENMAN, R.H. (1974). *Type A Behaviour and Your Heart*. New York: Knopf.
- GARDNER, H. (1983). *Frames of Mind*. New York: Basic Books.
- GOLDBERG, D. (1978). *Manual of the General Health Questionnaire*. Windsor: National Foundation for Educational Research.
- GOLEMAN, D. (1998). *Working with Emotional Intelligence*. London: Bloomsbury.
- GRIMSHAW, J. (1999). *Employment and Health: Psychosocial Stress in the Workplace*. London: The British Library.
- HACKER, W., SKELL, W. & STRAUB, W. (1968). *Arbeitspsychologie und wissenschaftlich-technische revolution*. Berlin: Deutscher Verlag der Wissenschaften.
- HACKMAN, J.R. & LAWLER, E.E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, 55, 259–286.
- HAYES, S.C. (1987). A contextual approach to therapeutic change. In: JACOBSON, N. (Ed.), *Psychotherapists in Clinical Practice*. New York: Guildford Press.
- HAYES, S.C. (1993). Analytic goals and the varieties of scientific contextualism. In: HAYES, S.C., HAYES, L.J., REESE, H.W. & SARBIN, T.R. (Eds), *Varieties of Scientific Contextualism (1–27)*. Reno, NV: Context Press.
- HAYES, S.C. (1996). Acceptance and action questionnaire. Unpublished test (available from Steven C. Hayes, University of Nevada, Reno, NV 89557-0062, USA).
- HAYES, S.C., JACOBSON, N.S., FOLLETTE, V.M. & DOUGHER, M.J. (1994). *Acceptance and Change: Content and Context in Psychotherapy*. Reno, NV: Context Press.
- HAYES, S.C., WILSON, K.G., GIFFORD, E.V., FOLLETTE, V.M. & STROSAHL, K. (1996). Experiential avoidance and behavioral disorders: a functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64, 1152–1168.
- HAYES, S.C., STROSAHL, K.D. & WILSON, K.G. (1999). *Acceptance and Commitment Therapy*. New York: Guildford Press.
- HAYES, S.C., STROSAHL, K.D., WILSON, K.G., BISSETT, R.T., PISTORELLO, J., TOARMINO, D., POLUSNY, M.A., DYKSTRA, T.A., BATTEN, S.V., BERGAN, J., STEWART, S.H., ZVOLENSKY, M.J., EIFERT, G.H., BOND, F.W., FORSYTH, J.P., KAREKLA, M. & MCCURRY, S.M. (in press). Measuring experimental avoidance: A preliminary test of a working model. *The Psychological Record*.
- HIGGS, M. & DULEWICZ, V. (1999). *Making Sense of Emotional Intelligence*. Windsor: ASE.
- JEX, S.M. (1998). *Stress and Job Performance*. London: Sage.
- JONES, E.E. (1964). *Ingratiation: a Social Psychological Analysis*. New York: Appleton Century Crofts.

- JÖRESKOG, K.G. (1979). Statistical estimation of structural models in longitudinal-developmental investigations. In: NESSELROADE, J.R. & BALTES, P.B. (Eds), *Longitudinal Research in the Study of Behavior and Development* (303–352). New York: Academic Press.
- JÖRESKOG, K. & SÖRBOM, D. (1996). *LISREL 8: User's Reference Guide*. Chicago: Scientific Software International.
- KAIPIAINEN, S. & FLETCHER, C. (2001). Emotional intelligence and performance. Paper to the British Psychological Society Occupational Psychology Conference, Winchester.
- KARASEK, R.A. (1979). Job demands, job decision latitude, and mental strain: implications for job redesign. *Administrative Science Quarterly*, 24, 285–308.
- LINEHAN, M.M. (1993). *Cognitive Behavioral Treatment of Borderline Personality Disorder*. New York: Guilford Press.
- MASLACH, C. & JACKSON, S.E. (1986). *MBI: the Maslach Burnout Inventory: Manual Research Edition*. Palo Alto, CA: Consulting Psychologists Press.
- MAYER, J.D. & SALOVEY, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology*, 4, 197–208.
- MAYER, J.D. & SALOVEY, P. (1997). What is emotional intelligence? In: SALOVEY, P. & SLUYTER, D.J. (Eds), *Emotional Development and Emotional Intelligence: Educational Implications*. New York: Basic Books.
- MAYER, J.D., SALOVEY, P. & CARUSO, D. (2000). Models of emotional intelligence. In: STERNBERG, R.J. (Ed.), *Handbook of Intelligence*. Cambridge: Cambridge University Press.
- MAYER, J.D., SALOVEY, P., CARUSO, D.R. & SITARENIS, G. (in press). Modeling and measuring emotional intelligence with the MSCEIT V2.0. *Emotion*.
- MCDOWELL, I. & NEWELL, C. (1996). *Measuring Health*. Oxford: Oxford University Press.
- NOTARIUS, C.I. & LEVENSON, R.W. (1979). Expressive tendencies and physiological response to stress. *Journal of Personality and Social Psychology*, 37, 1201–1204.
- PARKER, S. & WALL, T. (1998). *Job and Work Design*. London: Sage.
- QUICK, J.C., QUICK, J.D., NELSON, D.L. & HURRELL, J.J. (1997). *Preventative Stress Management in Organisations*. Washington, DC: American Psychological Association.
- ROTTER, J.B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1, whole no. 609), 1–28.
- SALOVEY, P. & MAYER, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9 (3), 185–211.
- SALOVEY, P., MAYER, J.D., GOLDMAN, S.L., TURVEY, C. & PALFAI, T.P. (1995). Emotional attention, clarity and repair: exploring emotional intelligence using the Trait Meta-Mood Scale. In: PENNEBAKER, J.W. (Ed.), *Emotional Disclosure and Health*. Washington, DC: American Psychological Association.
- SALOVEY, P., STROUD, L.R., WOOLERY, A. & EPEL, E.S. (2002). Perceived emotional intelligence, stress reactivity, and symptom reports: further explorations using the Trait Meta-Mood Scale. *Psychology and Health*, 17 (5), 611–627.
- SLASKI, A.M. (2001). An investigation into emotional intelligence, managerial stress and performance in a UK supermarket chain. PhD thesis, UMIST.
- TERRY, D.J. & JIMMIESON, N.L. (1999). Work control and employee well-being: a decade review. In: COOPER, C.L. & ROBERTSOON, I.T. (Eds), *International Review of Industrial and Organizational Psychology* Vol. 14. Chichester, UK: John Wiley & Sons.
- WALKER, R.E. & FOLEY (1973). Social intelligence: its history and measurement. *Psychological Reports*, 33, 839–864.
- WATSON, D. & PENNEBAKER, J.W. (1989). Health complaints, stress and distress: exploring the central role of negative affectivity. *Psychological review*, 96, 234–254.
- WELLS, A. (1995). Meta-cognition and worry: a cognitive model of generalized anxiety disorder. *Behavioural and Cognitive Psychotherapy*, 23, 301–320.
- WELLS, A. & CARTER, K. (2001). Further tests of a cognitive model of generalized anxiety disorder: metacognitions and worry in GAD, panic disorder, social phobia, depression, and nonpatients. *Behavior Therapy*, 32, 85–102.

- WILLIAMS, S. & COOPER, C.L. (1996). *Pressure Management Indicator*. Harrogate: RAD.
- WILLIAMS, S. & COOPER, C.L. (1998). Measuring occupational stress: development of the Pressure Management Indicator. *Journal of Occupational Health Psychology*, 3, 306–321.
- YOU, J.H., LEE, S.J. & LEE, H.K. (1999). The influence of on individual's emotional characteristics on work-related burnout experience: the emotional intelligence as a mediator to experience burnout feeling. *Korean Journal of Industrial and Organizational Psychology*, 11 (1), 23–52.
- ZINDEL, V., SEGAL, J., WILLIAMS, M.G. & TEASDALE, J.D. (2002). *Mindfulness-based Cognitive Therapy for Depression: a New Approach to Preventing Relapse*. New York: Guilford Press.

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