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The structure of occupational well-being: A study among Dutch teachers

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This study examined the structure of occupational well-being among 1,252 Dutch teachers. Building on Warr (1994) and Ryff (1989), a multidimensional model for occupational well-being (including affective, cognitive, professional, social and psychosomatic dimensions) was proposed and tested. Confirmatory factor analysis supported the distinction between these dimensions. A second-order factor analysis revealed that affect was the most central dimension, supporting earlier conceptualizations of subjective well-being that mainly focused on affect.

The literature on subjective well-being usually construes well-being as a primarily affective state (Diener, Suh, Lucas, & Smith, 1999). However, over the past 15 years several broader conceptualizations of well-being have been proposed, including not only affect, but also behaviour and motivation (Ryff, 1989; Ryff & Keyes, 1995; Warr, 1987, 1994). This raises the question how subjective well-being should be understood: does well-being mainly refer to an affective judgement regarding the events that occur in people's lives (Diener *et al.*, 1999), or should well-being be considered a broader phenomenon that involves other, non-affective aspects as well?

This issue seems especially relevant in the context of occupational well-being. Some of the key outcome variables in work and occupational psychology tap aspects of affective well-being (e.g. job satisfaction, commitment and depression), whereas other outcomes measure aspects of these broader conceptualizations of well-being (e.g. motivation, competence and efficacy). More insight into the interrelations among these concepts is not only scientifically interesting in that research dealing with this issue may reveal whether particular concepts (e.g. satisfaction and commitment) tap a common underlying construct, but is also important in a practical way. Potentially, multidimensional approaches to measuring well-being may result in more precise

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assessments of the relationships among well-being and other concepts than 'affect-only' approaches, thus contributing to our understanding of the nature, causes and consequences of occupational well-being. This, in turn, may have implications for the design of workplace interventions.

This research examines the structure of occupational well-being in the context of a cross-sectional study among 1,252 Dutch teachers. Occupational well-being is construed as a positive evaluation of various aspects of one's job, including affective, motivational, behavioural, cognitive and psychosomatic dimensions. The choice for these dimensions is largely based on the two broad conceptualizations of psychological well-being mentioned above (i.e. those of Ryff, 1989, and Warr, 1994). The central issues addressed in this study are (a) whether occupational well-being can be understood as a multidimensional phenomenon, and (b) how the commonly used outcome measures such as job satisfaction, commitment, mental health complaints and burnout fit this multidimensional conceptualization of well-being. We first discuss Ryff's (1989) and Warr's (1994) conceptualizations of well-being. Then we present a five-dimensional model for occupational well-being.

Ryff's model of well-being

Over the last decade, Ryff and her co-workers have developed a general, context-free model of well-being (Ryff, 1989; Ryff & Keyes, 1995). Building on the multidimensional frameworks of positive psychological functioning proposed by Erikson (1959) and Maslow (1959), Ryff presented a six-dimensional model of well-being. These dimensions are: (1) *Self-acceptance*: a positive evaluation of oneself and one's past life; (2) *Environmental mastery*: the capacity to effectively manage one's life and the surrounding world; (3) *Autonomy*: a sense of self-determination and the ability to resist social pressures to think and act in certain ways; (4) *Positive relations* with others, expressed by, for instance, a genuine concern about the welfare of others; (5) *Personal growth*: the sense of continued growth and development as a person as well as openness to new experiences; and (6) *Purpose in life*: the belief that one's life is purposeful and meaningful and that one has something to live for. Confirmatory factor analysis supported the distinctions between these concepts, demonstrating that the relations among them could be accounted for by a latent second-order factor (Ryff & Keyes, 1995). Thus, although different dimensions of well-being can be distinguished empirically and theoretically, at a higher level of abstraction they seem to tap the same underlying phenomenon.

Warr's model of mental health

Unlike Ryff and her colleagues, Warr (1987, 1994) focused on well-being *in a particular context* (i.e. at work). The advantage of conceptualizing well-being as a job-specific rather than as a context-free phenomenon is that relationships with job-related antecedents are stronger for job-related well-being, thus potentially offering a better understanding of how particular work characteristics affect employees' well-being Warr (1987, 1994) distinguished between four primary dimensions (affective well-being, aspiration, autonomy and competence) and a secondary fifth dimension ('integrated functioning') that encompasses the four primary dimensions and reflects the person as a whole.

Research on the structure of emotions and mood has shown that *affective well-being* consists of several different major classes of affective experience, such as

anxiety–comfort, depression–pleasure, boredom–enthusiasm, tiredness–vigour and anger–placidity (Daniels, 2000). A number of underlying dimensions may account for the relationships between these affects, but in the context of occupational well-being, empirical evidence indicates that the pleasure–displeasure axis accounts for most of the covariance between aspects of affective well-being (Daniels, 2000). Many current instruments for measuring occupational well-being (e.g. job satisfaction, organizational commitment, tension at work and fatigue) primarily tap the affective dimension of well-being.

Aspiration refers to people showing interest in their environment, engaging in motivated activity, and seeking to extend themselves in ways that are personally significant. Low aspiration is reflected in apathy and acceptance of the *status quo*, no matter how unsatisfactory. Job-related aspiration refers to the degree to which a person pursues challenging goals in the job. Related terms are intrinsic motivation and growth-need strength. *Autonomy* refers to the degree to which people can resist environmental demands and follow their own opinions and actions. Too much as well as too little autonomy may have adverse effects on well-being (e.g. Warr, 1987). Finally, *competence* covers a person's (psychological) ability to cope with problems and act on the environment with at least a moderate amount of success. Related concepts are self-efficacy (Bandura, 1997) and personal accomplishment (Maslach, 1993).

Employee well-being: Integration and extension of models

Ryff's (1989) conceptualization of well-being is somewhat more comprehensive than that of Warr (1994), focusing not only on affect and motivation but also including a behavioural dimension. Warr's (1994) approach has the important advantage that it specifically focuses on employee well-being. However, in spite of these differences and although the labels attached to particular concepts differ, the conceptualizations proposed by Ryff and Warr overlap quite substantially. As both approaches would seem valuable in conceptualizing occupational well-being, we decided to combine both models. We distinguished among five dimensions. Three of these (affective, social and professional well-being) may be considered as covering aspects of the Ryff and Warr models. Two other dimensions (cognitive and psychosomatic well-being) were added to our model, because previous research provided evidence that these two dimensions are related to the three dimensions of well-being mentioned above, especially the affective component (e.g. Broadbent, Cooper, FitzGerald, & Parkes, 1982; Taris, Schreurs, & Van Iersel-Silfhout, 2001). Table 1 presents our model in relation to the Warr and Ryff models.

The *affective dimension* is more differentiated in our approach than in the other approaches. Besides affect, our model includes emotional exhaustion, job satisfaction, and organizational commitment. Emotional exhaustion represents Warr's (1987) enthusiasm–depression axis, referring to feelings of being overextended and depleted of one's emotional resources (Maslach, 1993). Although recent research has suggested that job satisfaction has not only affective, but also behavioural and cognitive dimensions (Brief & Weiss, 2002), it is usually considered to tap affective well-being, representing the pleasure–displeasure axis (Warr, 1987). Finally, organizational commitment (referring to employee identification with and involvement in the organization they work for) also represents the pleasure–displeasure axis. Therefore, this concept was assigned to the affective well-being dimension as well. The *professional well-being* dimension is covered by autonomy, aspiration (Warr, 1987, 1994), and professional competence (Maslach, 1993). These concepts tap aspects of job-related motivation,

Table 1. Comparison of three models for the structure of (general or occupational) well-being

Dimensions	Ryff (1989); Ryff & Keyes (1995)	Warr (1987, 1990a, 1994)	Present appro ch
1. Affective well-being (affect)	Self-acceptance	Affective well-being (anxiety, depression)	Affective well-being Commitment (Lack of) emotional exhaustion
2. Professional well-being (motivation)	Personal growth Purpose in life Autonomy	Aspiration Competence Autonomy	Aspiration Competence Autonomy
3. Social well-being (behaviour)	Environmental mastery Quality of relations with others		(Lack of) depersonalization (students and colleagues) Quality of social functioning (students and colleagues)
4. Cognitive well-being			(Lack of) cognitive weariness
5. Psychosomatic well-being			(Lack of) psychosomatic complaints

ambition, self-efficacy and achievement. The *social well-being* (or behaviour) dimension included two types of concepts. The first of these is depersonalization, referring to an indifferent and negative attitude towards the people one works with (Maslach, 1993). The second concept concerns the degree to which one functions well in one's social relations at work. As the present study was conducted among teachers, both concepts were measured separately for students and colleagues.

Cognitive weariness was devised as an analogue to Maslach's (1993) emotional exhaustion concept. Whereas the latter concept taps feelings of work-related fatigue (thus reflecting the tiredness–vigour dimension of affect), cognitive weariness specifically reflects employees' cognitive functioning (especially the degree to which workers are able to take up new information and able to concentrate on their work). Empirical research has shown that (affective) well-being on the one hand and indicators of cognitive functioning (e.g. the number of minor everyday errors people make; Broadbent *et al.*, 1982) and self-reports about one's ability to concentrate and decision-making skills (e.g. Goldberg, 1972; Wissing & Van Eeden, 2002), on the other, are correlated. As cognitive functioning is relevant for many of today's jobs (e.g. 56% of European workers report that they are required to solve complex tasks; Merllié & Paoli, 2001), we felt that this dimension deserved a separate place in our model of occupational well-being.

Finally, the *psychosomatic dimension* of our model refers to the presence or absence of psychosomatic complaints, such as headaches and back pains. This dimension was added to our model because somatic complaints and (affective) well-being are usually strongly interrelated (e.g. Kinunnen, Parkatti, & Rasku, 1994; Taris *et al.*, 2001), supporting the idea that psychosomatic well-being constitutes an important dimension of a broad conceptualization of well-being. As somatic complaints can often be traced to unfavourable work circumstances such as long working hours (Van der Hulst, 2003) or high job demands and/or low job control (de Lange, Taris, Kompier, Houtman, & Bongers, 2003), it would seem to be justified to include this dimension as part of occupational well-being.

Method

Sample

Although in the Netherlands there is a formal distinction between private and public schools, in practice both types of schools depend equally on government funding. The difference between the two systems in terms of working conditions is negligible: levels of stress and burnout are high among Dutch teachers, and the interaction with students is a major stressor (Van Horn, Schaufeli, & Taris, 2001). In the present study, a random sample of 1,308 Dutch teachers from various types of schools (52.3% response) completed a structured questionnaire addressing health, well-being and work characteristics. Listwise deletion of missing values resulted in a final sample of 1,252 teachers (49% male, M_{age} = 45.0 years, SD = 8.1; $M_{teaching\ experience}$ was 19.0 years, SD = 8.3; average number of hours employed per week = 31 hours, SD = 9.0; 59% were employed in primary schools, 28% in secondary schools and 13% in vocational schools).

Measures

Affective well-being

This dimension included four scales. *Affective well-being* was measured with 12 mood items devised by Warr (1990a). The participants were asked to indicate how often

their job had made them feel, for instance, optimistic or cheerful over the past month (1 = never, 5 = always; negative items were reversed). As previous research failed to confirm Warr's (1990a) distinction between items tapping anxiety–contentment versus depression–enthusiasm (Daniels, Brough, Guppy, Peters-Bean, & Weatherstone, 1997), a global score for affective well-being was computed (α = .92).

Job satisfaction was measured using four items. Each of these referred to the extent to which teachers were satisfied with their students, colleagues, the school and teaching in general, respectively (e.g. 'Taken together, how satisfied are you with your students', 1 = very dissatisfied, 5 = very satisfied; α = .68).

Organizational commitment was measured with six items of Mowday, Steers, and Porter's (1979) Organization Commitment Questionnaire that had been slightly adapted to make them more suitable for the present sample of teachers, e.g. 'I care for the school' (1 = completely disagree, 5 = completely agree; α = .89).

Finally, *emotional exhaustion* was assessed using the corresponding subscale of the Dutch version of the Maslach Burnout Educator Survey (MBI-NL-ES; Schaufeli & Van Dierendonck, 2000). The MBI-ES taps the three dimensions of Maslach and Jackson's (1986) burnout concept (emotional exhaustion, depersonalization and personal accomplishment) and is especially devised for use among teachers. The emotional exhaustion scale consists of eight items, such as 'I feel emotionally drained by my work' (0 = a few times a year, 6 = every day; α = .92).

Professional well-being

This dimension was represented by three scales. Adopting Warr's (1990b) *aspiration* concept, the aspiration scale consists of six items (e.g. 'In my work I seek new challenges', 1 = strongly disagree, 5 = strongly agree; α = .75). Two items were added to the original scale to fit the work setting of teachers. *Competence* was assessed using the personal accomplishment scale of the MBI-ES (Schaufeli & Van Dierendonck, 2000). Items from this seven-item scale refer to the extent to which teachers feel they deal effectively with problems of students (0 = a few times a year, 6 = every day, α = .86). *Autonomy* was measured using a seven-item adaptation of Warr's (1990b) Autonomy scale. Three items were reworded or added to the original scale to make them more suitable for use among teachers (e.g. 'At school I make my own decisions', 1 = strongly disagree, 5 = strongly agree; α = .74).

Social well-being

Four scales tapped aspects of this dimension. *Depersonalization toward students* was assessed using the seven-item Depersonalization scale from the MBI-ES (Schaufeli & Van Dierendonck, 2000), e.g. 'I don't care what happens to some students' (1 = a few times a year, 6 = every day; α = .86). *Depersonalization toward colleagues* was devised by the present authors as an analogue to Maslach and Jackson's (1986) depersonalization towards students scale, focusing on attitudes toward colleagues rather than towards students. The seven items of this scale are variations on the items of the depersonalization towards students scale (e.g. 'I don't care what happens to my colleagues', α = .85). *Social functioning in relationships with students* was measured using six items (e.g. 'I feel comfortable in interactions with students', 1 = never, 5 = always, α = .76). *Social functioning in relationships with colleagues* was measured using 11 items (e.g. 'My colleagues ask me for advice and support', 1 = never, 5 = always; α = .86).

Cognitive well-being

This dimension was represented by a self-developed seven-item *cognitive weariness* scale. The scale refers to the capacity to take up new information and loss of concentration at work, for instance, 'I have trouble concentrating' (0 = a few times a year, 6 = every day; $\alpha = .92$).

Psychosomatic well-being

This dimension was assessed using a 23-item scale tapping psychosomatic health complaints (Dirken, 1969). This scale measures the presence of a variety of health complaints such as headaches, symptoms of possible cardiovascular problems, and stomach-aches (0 = absent, 1 = present; $\alpha = .83$).

Procedure

The data were analysed using confirmatory factor analysis. As Table 1 shows, three of the five dimensions (affect, motivation and behaviour) were covered by at least three scales. For each of these three dimensions a latent variable was specified on which the corresponding scales were expected to load, separating random measurement error from true-score variance. For cognitive and psychosomatic well-being there was only one indicator for each dimension, meaning that in these cases there was a one-to-one correspondence between the manifest variable (scale) and the underlying latent dimension. In these cases usually no distinction is made between random error variance and true score variance, meaning that the correlations among these one-indicator latent variables and other latent variables may be biased. This problem was overcome using a procedure proposed by Bagozzi and Heatherton (1994). First a one-factor model was fitted for all items belonging to a particular scale/dimension. Then separate indicators for each scale were formed by selecting items on the basis of their loadings, alternating items with high and low loadings. In this vein, three parcels of items were created for the cognitive dimension of well-being and four for the psychosomatic dimension of well-being.

The present study evaluated the following four models:

(1) *A one-factor model* in which all facets of occupational well-being load on one underlying factor (Model 1 or M_1). A distinction is made between scales tapping affect, motivation, behaviour, cognition or psychosomatic health. This model implies that occupational well-being is a one-dimensional (but not necessarily affective) phenomenon.
(2) *A five-factor orthogonal model* representing the five factors described in our model of occupational well-being (M_2). The factors are uncorrelated. As the dimensions of occupational well-being have literally nothing in common, this model questions whether it is meaningful to speak of occupational well-being as a single concept.
(3) *A five-factor oblique model* representing five factors as described in our model of occupational well-being (M_3). This model is similar to M_2, except that the factors are correlated.
(4) *A five-factor orthogonal model* with a second-order overall factor on which the five first-order factors load (M_4). This model corresponds best with our notion of occupational well-being as a concept that manifests itself in various facets.

Table 2. Comparison of the fit of several factor models for occupational well-being

Model	*df*	χ^2	NNFI	CFI	AGFI	RMSR
One-factor (M_1)	135	5623.99	.60	.61	.49	.12
Five-factor orthogonal (M_2)	135	5526.29	.23	.32	.37	.31
Five-factor oblique (M_3)	125	2299.23	.96	.97	.96	.07
Five-factor orthogonal (M_4) with one overall second-order factor	130	2810.32	.94	.95	.95	.08

Note. CFI = Comparative fit index; AGFI = Adjusted goodness-of-fit index; RMSR = root mean squared residual; NNFI = non-normed fit index.

Results

Table 2 presents the fit indices for the four models described above. The association among the scales cannot be accounted for by a single underlying dimension (model M_1) or a five-factor orthogonal model (M_2). The oblique five-factor model (M_3) fitted the data best, suggesting that occupational well-being is best understood in terms of five empirically related dimensions.

To examine whether these five factors tapped the same dimension, a second-order confirmatory factor analysis was conducted (model M_4). Although this model fitted the data less well than the oblique five-factor model M_3, its fit was still quite acceptable. Table 3 presents the first- and second-order factor loadings of the scales on the underlying dimensions. All scales load quite substantially on their respective first-order factor. The loadings of the five first-order factors on the common second-order factor were substantial as well. The highest loadings were found for professional, social, and especially affective well-being, suggesting that these dimensions constitute the core of occupational well-being. Cognitive and psychosomatic well-being take a less central place. Thus, occupational well-being may be construed as a single concept that manifests itself in various facets—some of which are more important than others.

Discussion

The present study was designed in an attempt to gain more insight into the structure of occupational well-being. Based on Warr's (1987, 1994) and Ryff's (1989; Ryff & Keyes, 1995) approaches, a five-dimensional model for occupational well-being was proposed, including an affective, professional, social, cognitive and psychosomatic dimension. Confirmatory factor analysis supported the distinction among these five dimensions, simultaneously showing that these dimensions tap different aspects of a more general underlying concept. These results are consistent with our conceptualization of occupational well-being as a phenomenon that manifests itself in different facets.

Study limitations

Results presented in this study are limited in several respects. First, some of the measures employed here were specifically designed for use among teachers, suggesting that generalization to other occupational groups might be difficult. For example,

Table 3. Means, standard deviations, and standardized first- and second-order loadings of the scales on the corresponding first- and second-order factors

	M	*SD*	Loadings on first-order factor	Loadings of first-order factors on second-order factor
Affective well-being				
• affective well-being	3.72	0.58	.86	92
• satisfaction	3.69	0.67	.75	
• organizational commitment	3.48	0.82	.60	
• emotional exhaustion*	4.18	1.09	.83	
Professional well-being				
• aspiration	3.71	0.60	.70	79
• competence	4.14	0.84	.64	
• autonomy	3.59	0.53	.59	
Social well-being				
• depersonalization students*	4.81	0.78	.65	83
• depersonalization colleagues*	4.03	0.58	.59	
• social functioning students	4.02	0.41	.58	
• social functioning colleagues	3.74	0.47	.66	
Cognitive well-being				
• cognitive weariness (1)*	4.66	0.93	.85	68
• cognitive weariness (2)*			.95	
• cognitive weariness (3)*			.88	
Psychosomatic well-being				
• psychosomatic complaints (1)*	0.79	0.17	.84	60
• psychosomatic complaints (2)*			.73	
• psychosomatic complaints (3)*			.69	
• psychosomatic complaints (4)*			.78	

* = scale reversed.
Note. All loadings significant at $p < .001$.

the relative importance of a first-order dimension might change between occupational groups, as might the pattern of correlations between first-order dimensions.

More importantly, the present research was *a priori* designed to examine occupational well being as a five-dimensional phenomenon, meaning that any conclusions regarding the dimensionality of well-being apply to the items and scales that have been included in this study. These may or may not cover all key aspects of occupational well-being. Thus, it would be incorrect to conclude that occupational well-being *must* be construed as a five-dimensional phenomenon; all that the present study shows is that the present set of scales and items is well accounted for in terms of such a model. Although we have tried to circumvent the problem of possible idiosyncrasy of our results by basing our model largely on Ryff (1989) and Warr's (1994) theoretical notions, it remains possible that the inclusion of other scales and items would have resulted in a somewhat different model. In spite of this consideration, the present study shows that occupational well-being does have a multidimensional structure, and it seems feasible that a single underlying factor accounts for the relationships between more specific dimensions.

Finally, we used self-report measures in the present study, implying that the correlations among the variables could be biased upwards due to common method variance. It would, however, seem difficult to employ valid non-subjective measures for most of the dimensions of occupational well-being included in this study.

Implications

Despite these limitations, we believe that this study enhances our understanding of occupational well-being in several respects. First, this study showed that many of the outcome measures employed in occupational psychology can be construed as tapping an aspect of employee well-being: lower well-being manifests itself in many aspects, ranging from exhaustion and lower work commitment to lack of concentration and psychosomatic complaints. Second, the present study revealed that occupational well-being, like general well-being, may be understood as a multi-dimensional phenomenon. Thus, occupational well-being comprises more than affect; it manifests itself in employee cognitions, motivations, behaviours, and self-reported physical health as well. Finally, although occupational well-being can be construed as a multidimensional phenomenon, the present study revealed that affective well-being was the most central aspect of occupational well-being. This is consistent with Warr's (1987) and Maslach's (1993) assumption that well-being is especially reflected in the emotional and affective state of a person, and may be taken to support earlier approaches that examined occupational well-being in terms of affect only (e.g. by focusing on job satisfaction).

For practitioners, broad conceptualizations of occupational well-being present a major challenge. In such conceptualizations, occupational well-being is not merely construed as the absence of stress/fatigue or the presence of job satisfaction (i.e. affective well-being), implying that interventions designed to improve employee well-being may (and perhaps should) enhance employee functioning, motivation, cognition and health as well. Although the five dimensions of well-being distinguished in the present study tend to covary, it does not follow that measures that improve affective well-being automatically boost worker well-being on these other domains too. Thus, broad conceptualizations of well-being may lead occupational health professionals to develop a correspondingly broad repertoire of intervention strategies. Although some may consider this a drawback, others will recognise that multidimensional conceptualizations of employee well-being are more flexible than unidimensional approaches and that they offer more handles for improving employee well-being (Warr, 1994). It is in this sense that broad conceptualizations enrich both theory and practice of occupational psychology.

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