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**RUNNING HEAD: VALUES, VALUE CONFLICT AND STRESS  
THE PREDICTION OF STRESS BY VALUES AND VALUE CONFLICT**

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## **ABSTRACT**

The aim of this paper was to investigate the relationship between stress, values, and value conflict. Data collected from 400 people working in a wide variety of companies in Flanders indicated that the values openness to change, conservation, self-transcendence, self-enhancement, and value conflict were important predictors of stress. Participants open to change reported less stress, while respondents scoring high on conservation, self-enhancement, and self-transcendence perceived more stress. People reporting high value conflict also experienced more stress. Separate analyses for the male and female subsamples demonstrated that sex differences regarding the relationship between the four value types and stress cast new light on the findings for the total sample. The article concludes with a discussion of the results and future research directions.

## **THE PREDICTION OF STRESS BY VALUES AND VALUE CONFLICT**

Considerable skepticism exists in the research field on values because of the plethora of questionnaires and definitions which have been used in the past (e.g. Hofstede, 1984; Kluckhohn, 1951; Super, 1980; Schwartz & Bilsky, 1987; Rokeach, 1973). This situation resulted in the use of different value dimensions lacking universal replicability (Roe & Ester, 1999). In his path-breaking work Schwartz (1994, 1994) addressed this issue and generated a comprehensive typology based on a theoretical analysis of the universal requirements of the human conditions. This comprehensive typology includes 10 types of values and has been replicated in more than 60 countries. The 10 basic values are stimulation, self-direction, security, conformity, tradition, universalism, benevolence, power, achievement and hedonism. These 10 values can be organized into two sets of opposing higher order value types, arrayed on two bipolar dimensions. The first dimension--openness to change versus conservation--opposes values that emphasize one's own independent thought and action and favour change (self-direction and stimulation) to values that emphasize submissive self-restriction, preservation of traditional practices, and protection of stability (security, conformity, and tradition). The second dimension--self-transcendence versus self-enhancement--opposes values that emphasize acceptance of others as equals and concern for their welfare (universalism and benevolence) to values that emphasize the pursuit of one's relative success and dominance over others (power and achievement). The value hedonism includes elements of both openness to change and self-enhancement.

In previous studies, values have been examined in relation to job satisfaction (e.g. Burke, 2001; Knoop, 1994a; Meglino, Ravlin, & Adkins, 1989), although values in relation to another well-being measure like stress have hardly been addressed. The lack of research assessing the effects of this personality characteristic on stress is strange because a myriad of stress conceptualizations emphasize the importance of personality features in explaining experienced stress (e.g. Bheer & Bhagat, 1985; French, 1963; Ivancevich & Matteson, 1980; Lazarus & Folkman, 1984; Quick & Quick, 1984; Seyle, 1976; Summers, Decottiis, & Denisi, 1995). Furthermore, research into the effects on stress of such personality variables as the Type A behavior pattern, negative affectivity, locus of control, dispositional optimism, extraversion versus introversion, and neuroticism on stress is extensive (e.g. Chang, 1998; Chen & Spector, 1991; Kirkcaldy, Cooper & Furnham, 1999; Spector & O'Connell, 1994; Vogelaar, Eurlings-Bontekoe, & Van de Velde, 1991).

It is important to study the link between individual values and stress, because values contain a motivational component (Schwartz, 1992, 1994), and therefore can act as a positive energy source to cope with stress. However, the scant empirical evidence on the relationship between values and well-being shows that high scores on values do not always predict higher well-being (e.g. Kasser & Ahuvia, 2002; Sagiv & Schwartz, 2000). For instance, a recent inquiry pointed out that materialism was related to lowered self-actualization, vitality, happiness and increased physical symptomatology (Kasser & Ahuvia, 2002). In a similar study Sagiv and Schwartz (2000) found no relation between the value power and several well-being measures.

Our hypotheses concerning the relationship between the four higher order values of Schwartz (openness to change, conservation, self-transcendence, and self-enhancement) and stress focused on growth-related and deficiency-related values (Bilsky & Schwartz, 1994) and on self-determination (Deci & Ryan, 1985). Self-Determination theory makes a distinction between intrinsic and extrinsic values. According to this theory, autonomy, relatedness, and competence are innate, basic psychological needs. Their pursuit leads directly to intrinsic satisfaction, the presumed source of true, noncontingent personal well-being. In contrast, pursuing extrinsic values (e.g. money, fame, public image, control over others) provides only indirect satisfaction of these innate needs, at best, and may even interfere with their fulfilment. This theory assumes that people will experience more well-being to the extent that they pursue intrinsic rather than extrinsic needs or goals. Extrinsic goals may also relate to poorer well-being because strongly pursuing them often requires stressful, ego-involved engagement in activities.

It is apparent that this Self-Determination theory is related to the ideas of Herzberg's Motivator-Hygiene theory (2003). In his goal to test Herzberg's Motivator-Hygiene theory, Knoop (1994a) examined the relationship between work values and job satisfaction. Knoop (1994b) also used Herzberg's theory to test the link between work values and work stress. In the former study Knoop (1994a) found that the strongest predictors for satisfaction were the intrinsic values. These intrinsic work values contributed to the variance of nearly all job satisfaction dimensions. In the latter study Knoop (1994b) found that only the intrinsic work-related values explained a significant amount of variance for each stress dimension, whereas extrinsic work values did not add to the variance explained in physical, emotional, and mental stress.

According to Sagiv and Schwartz, (2000) a strong correspondence exists between intrinsic values and benevolence, universalism (the higher order value self-transcendence),

and self-direction (the higher order value openness to change). The extrinsic goals are those of the power value type (the higher order value self-enhancement).

In the theory of growth- and deficiency-related needs, values that represent growth needs (e.g. self-actualization) become more important the more a person attains goals toward which the values are directed, while values that represent deficiency needs (e.g. health and safety) are especially important to those who are unable to attain goals toward which they are directed (Bilsky & Schwartz, 1994). As a result, priority given to growth related values ought to correlate in a positive way with well-being and negatively with experienced stress, while a priority given to deficiency- related values ought to correlate in a positive way with stress. In the first dimension of Schwartz (1992, 1994), the values of openness to change--stimulation and self-direction--are growth-related and are likely to alleviate stress, while the values of the opposite pole from this dimension, particularly conservation--security, conformity and tradition--are deficiency related and should have an opposite impact on experienced stress. In the second dimension, all self-transcendence values--universalism and benevolence--are growth related. A special case, however, is the higher order value self-enhancement. This higher order value consists of the achievement and the power value. The power value is a deficiency-related value, and the achievement value is a growth-related value (Bilsky & Schwartz, 1994). In previous research both kinds of values were presumed to have opposite effects on stress (Kasser & Ahuvia, 2002; Sagiv & Schwartz, 2000). The power value should raise experienced stress, while the achievement value should lower the stress. As a result, the opposite effects of these deficiency- and the growth-related values of self-enhancement should cancel each other out and result in a nonsignificant correlation.

In summary, these theories suggested the following hypotheses (a) openness to change should correlate negatively with stress (hypothesis 1a), (b) conservation should correlate positively with stress (hypothesis 1b), (c) self-enhancement should not correlate significantly with stress (hypothesis 1c), (d) and self-transcendence should correlate negatively with stress (hypothesis 1d).

## PERSON-ORGANIZATION FIT

It is possible, however, that not only the value profile of a person influences experienced stress. This idea would contradict the person-organization fit theory of stress (Büssing & Glaser, 1999; French, 1963; Lazarus & Folkman, 1984). According to Büssing and Glaser (1999) job stress in person-organization fit models either results from a misfit between individual values and environmental opportunities to fulfil those values or from environmental demands that exceed the individual's capacity. Some empirical studies have accounted for personality characteristics and organizational characteristics as antecedents of experienced stress (e.g. Frew & Bruning, 1987; Hendrix, Steel, Leap, & Summers, 1995; Summers, Decottiis, & Denisi, 1995). These studies, however, have not fully applied the fit or congruence idea. They gauged the personality and organizational component separately, instead of asking the perceived fit between both.

The application of the person-organization fit theory in the context of values is relevant to the value congruence hypothesis. Congruity between people's values and their environment promotes well-being regardless of the particular values to which people ascribe importance. People are likely to experience a positive sense of well-being when they emphasize the same values that prevail in their environment, and when they inhabit an environment that allows them to attain the goals to which their values are directed (Sagiv & Schwartz, 2000).

Several studies have examined the impact of value congruence on well-being and noted that value congruence leads to greater job satisfaction, greater career satisfaction, higher family satisfaction, stress reduction, higher emotional well-being and fewer psychosomatic symptoms (Burke, 2001; Joiner, 2001; Meglino, Ravlin & Adkins, 1982; Sagiv & Schwartz, 2000; Taris & Feij, 2001).

Sagiv and Schwartz (2000) have proposed three different mechanisms why value conflict ought to have a negative effect on the well-being of people. The first mechanism is environmental affordances. Incongruent environments don't afford people opportunities to express their important values and block goal attainment. Living in such environments is likely to produce negative well-being.

The second mechanism concerns social sanctions. When most people in an environment share a set of value priorities, they are likely to communicate clearly which beliefs, values and behaviors are normative. People, who reject the prevailing normative

definitions, because these definitions oppose their own values, may be ignored or punished and undermine their sense of well-being.

The third mechanism is internal conflict. One's sense of well-being may be undermined by conflict between values acquired earlier and values whose internalisation is advocated in a new environment. When one must make decisions, highly valuing incompatible sets of values are likely to provoke internal value conflict and as a result undermining subjective well-being.

Based on the congruence hypothesis, speculations about the mechanism of value conflict, and empirical findings, a second hypothesis was formulated. Value conflict would correlate positively with stress (hypothesis 2)

## METHOD

### Participants

A total of 400 Flemish working people responded to a questionnaire measuring the dependent variable (stress) and the five independent variables (four values and value conflict).

The distribution of gender in this sample was 50 percent male and 50 percent female participants. Different occupations were represented in this sample: police officers ( $n = 85$ ), bank clerks ( $n = 33$ ), teachers ( $n = 75$ ), nursing staff ( $n = 41$ ), manufacturing workers ( $n = 56$ ), entrepreneurs ( $n = 32$ ), other occupations ( $n = 78$ ). Finally, the mean age in this sample was 41.8 years ( $SD = 9.8$  years).

### Measurement instrument

Dependent variable stress. A scale was constructed from important findings in the stress literature and items from the General Health Questionnaire (Koeter & Ormel, 1991). Thirteen items measured the stress variable. The respondents were asked: "How often did you experience following problems last year?" A four-point scale was used, with anchors labelled not at all (1)-a lot (4). The 13 items met the minimum item-total correlation threshold .30 (Kring, Smith, & Neale, 1994). The internal consistency was good ( $\alpha = .83$ ). In assessing the dimensional nature of the scale a factor analysis was conducted and a single factor was retained based upon the scree test. In Table 1 it is displayed that all items had sufficiently high factor loadings (Hair, Anderson, Tatham, & Black, 1998).

Independent variables. A questionnaire developed by Van den Broeck, Vanderheyden, and Cools (2003) was used to measure self-enhancement, self-transcendence, openness to change, and conservation. The main reason not to use the existing Dutch version of the Schwartz Values Inventory was that the instrument was too long to use in a survey. Stern, Dietz, and Guagnano (1998, p. 986) also stated that, "Administrating the full 56-item instrument is impractical for some investigators, such as survey researchers, because it takes an unacceptably large amount of the space or time available for administrating a research instrument." This instrument is a 40-item five-point Likert scale, and has already proven its usability in the organizational context (Van den Broeck & Vanderheyden, 2000). The reliability of the four scales was good: self-enhancement ( $\alpha = .78$ , 14-item scale), self-transcendence ( $\alpha = .72$ , 11-item scale), openness to change ( $\alpha = .73$ , nine-item scale), and conservation ( $\alpha = .61$ , six-item scale). The last scale met the threshold .60 proposed by Robinson, Shaver, and Wrightsman (1991). Additionally, these Cronbach alphas were higher than the values found using the Schwartz Values Inventory (e.g. Sagiv & Schwartz, 2000).

To check the conflict between individual values and organizational values, we constructed our own three-item five-point Likert-scale. The three included items are: "My personal values sometimes conflict with the values in my job or function."; "My personal values sometimes conflict with the organizational values."; "I must compromise my values at work." The internal consistency of the total scale was .74, and the inter-item correlations between the three items exceeded .50. Factor analysis on these items demonstrated the homogeneity of the scale with loadings ranging between .60 and .75. The scree test indicated that the retention of one factor was the most appropriate solution. This one-factor solution explained 49.37% of the variance.

The advantage in this measure was that value conflict was gauged by one measurement instrument, instead of inferring value conflict from two indirect measures, as has been the case previously (Joiner, 2001; Meglino, Ravlin, & Adkins, 1989; Sagiv & Schwartz, 2000; Taris & Feij, 2001). It is important to measure directly the fit or conflict between individual values and organizational values because people will differ in their perception of value conflict resulting from the deviation between individual values and organizational values.

### Data collection

To reach a heterogeneous and broad sample as possible we addressed several public and private companies settled in two agglomerations of Flanders. These organizations were randomly chosen from the telephone directory. The organizations were asked their willingness to participate. The participating organizations were quite diverse in their nature of core activities involving a large financial institution, a police department, a hospital, two secondary schools, several small businesses, a manufacture of furniture, a department store etc. From employee lists in each organization, candidates were selected randomly. A total of 600 candidates were personally handed over the questionnaire with postage-paid return envelope. In total 400 respondents completed and returned the survey. Because of the personal contact in the distribution process, the response rate was high (Fowler, 1993).

### Data-analysis

Hierarchical regression analysis was conducted to test the hypotheses. The procedure as proposed by Cohen and Cohen (1983) was applied. The advantage of such an analysis is that the increment in the explained variance of an extra set of predictors added to the model can be checked. By applying this statistical technique, it was possible to trace if value conflict was more important in predicting experienced stress in comparison to values. In model one the four values were taken into account, while model two added the predictor value conflict to model one.

## **RESULTS**

### Descriptive statistics and bivariate correlations

Table 2 presents the means, standard deviations and correlations of all scales.

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Insert Table 2 About Here

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Respondents in this sample scored high on conservation and openness to change, while medium high on self-transcendence and self-enhancement. A lower mean was found for stress and value conflict. This means that the participants on average reported experiencing moderate stress and value conflict. The Pearson correlations between the values were rather low indicating that the four values were distinct constructs.

Independent sample t-tests were conducted to determine whether there were sex differences on the dependent and/or independent variables. Regarding the independent variables, sex differences only appeared for the value self-transcendence ( $t(389) = -3.15$ ,  $p < .01$ ). Male respondents reported lower self-transcendence ( $\underline{m} = 2.63$ ) compared to female counterparts ( $\underline{m} = 2.81$ ). Sex differences were also found for the outcome variable stress ( $t(378) = -4.04$ ,  $p < .001$ ). Women in this sample experienced more stress ( $\underline{m} = 1.58$ ) compared to male respondents ( $\underline{m} = 1.42$ ). Because of the sex differences on both variables it seemed incumbent to conduct separate analyses for males and females.

### Effects on stress

In the first step, regression analysis was conducted on the total sample ( $N = 400$ ). A first exploration of the regression analysis (Table 3) tested model one (four values included) as a better predictor of stress than the default zero model ( $\Delta R^2 = .08$ ;  $F(4, 343) = 7.90$ ,  $p < .001$ ). Model two in its turn was a better predictor than model one ( $\Delta R^2 = .07$ ;  $F(1, 342) = 29.24$ ,  $p < .001$ ). When we looked at our hypotheses in the full model we determined significant effects of the five independent variables on stress. Three out of the five hypotheses were confirmed (hypotheses 1a, 1b and 2). People reporting openness to change experienced less stress ( $\beta = -.24$ , hypothesis 1a), while scoring high on conservation resulted in more stress ( $\beta = .12$ , hypothesis 1b). Conflict between individual values and organizational values raised the probability of experiencing more stress ( $\beta = .27$ , hypothesis 2). Hypotheses 1c and 1d were rejected. People with high scores on self-enhancement ( $\beta = .15$ , hypothesis 1c) and self-transcendence ( $\beta = .13$ , hypothesis 1d) reported more stress.

In a second step, separate regression analyses were conducted for males and females. For the females ( $n = 200$ ) a similar pattern emerged as for the total group (see Table 3). So, for this particular group it was found that females scoring high on self-transcendence ( $\beta = .15$ ) and self-enhancement ( $\beta = .25$ ) also experienced more stress. Women reporting openness to change experienced less stress ( $\beta = -.30$ ), while high scores on conservation resulted in more stress ( $\beta = .18$ ). Finally, value conflict raised the probability of experiencing more stress ( $\beta = .30$ ).

The separate analysis for males ( $n = 200$ ) showed somehow a different pattern (see Table 3). If we have a look at model one, we may conclude that a model with four values was not a better predictor than the default zero model ( $\Delta R^2 = .05$ ;  $F(4, 172) = 2.09$ ,  $p = .08$ ). According to model two, males reporting openness to change experienced less stress ( $\beta = -$

.19), while those in a constant struggle with individual and organizational values reported more stress ( $\beta = .29$ ). Three out of the five hypotheses were confirmed for the male sample. Openness to change was associated with less stress (hypothesis 1a), value conflict with more stress (hypothesis 2), and finally self-enhancement was not associated significantly with stress (hypothesis 1c).

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Insert Table 3 About Here

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## DISCUSSION

A first important conclusion that could be inferred from the overall and separate analyses is that value conflict may be an important predictor in explaining experienced stress of male and female employees. As a matter of fact this variable added important variance to a model with four individual values explaining stress. This result gives support to the congruence hypothesis. Experiencing incongruence between individual values and dominating values in the job or organization may result in more stress symptoms. This result corresponds to outcomes of similar studies (e.g. Sagiv & Schwartz, 2000; Taris & Feij, 2001). Finding this outcome also fits the stress conceptualizations from Büssing and Glaser (1999), French (1963), and Lazarus and Folkman (1984). According to these authors job stress either results from a misfit between individual values and environmental opportunities to fulfil these values or from environmental demands that exceed the individual's capacity to cope with these excessive demands. Consequently, this inquiry supports the person-environment fit idea of stress. Future research ought to examine which of the three earlier discussed mechanisms (Sagiv & Schwartz, 2000)--environmental affordances, social sanctions, internal conflict--are the main cause of the negative impact of value conflict on stress.

An interesting finding from the separate regression analyses is the different pattern that emerged for males and females. For males the content of values seemed almost not related to stress, with exception for openness to change, which correlated negatively with stress. For the female counterparts, however, all values were associated in a significant way with stress. Similar to the total sample of participants, openness to change was associated in a negative way with stress, while self-enhancement, self-transcendence and conservation in a positive way.

A third important outcome in this study are the partially confirmed hypotheses on the relationship between values and stress. In the total sample of 400 participants, hypotheses

concerning the values openness to change and conservation received support. People, who have their own independent thought and action, who favour change, who are innovative and adventurous, who pursue autonomy, growth and creativity in work, those people will probably experience less stress than people who emphasize self-restriction, preservation of traditional practices, job security, and maintenance of order in their lives. In the context of globalization, and the rapidly changing environment and society, in which flexibility and adaptivity are central pillars, this outcome is clearly not surprising.

The hypotheses on self-transcendence and self-enhancement with stress are rejected for the total sample as for the female subsample. People who emphasize the importance of others as equals, who are altruistic, experience more stress. This finding completely contrasts our assumption. In addition the self-enhancement value correlates positively with stress. Consequently, the results in this paper give limited support to the self-determination theory (Deci & Ryan, 1985) and the theory of growth related values and deficiency related values (Bilsky & Schwartz, 1994), because only two out of the four hypotheses are confirmed.

Thus, not all growth-related and intrinsic values are stress relieving. Moreover self-transcendence, a presumed growth related value, has an opposite effect. However, the deficiency-related value conservation correlates positively with stress. An acceptable explanation why self-transcendence is positively related to stress is that people scoring high on this value invest a lot of energy in the interaction with others. In the long term this may lead to emotional exhaustion and depersonalization. Another explanation is that people scoring high on this value may after some time get the impression that the return on investment in others is very small, leading to negative affectivity. Also worthy of consideration is that respondents with high scores on self-transcendence tend to experience more value conflict, and thus indirectly experience more stress. In the current sample this is pointed out. Also important to mention is that the self-transcendence-stress relationship could be influenced by gender. The analysis for males showed a non-significant association, whereas the female subsample indicated a positive relationship. Additionally from the descriptive statistics section we know that the female group in this sample attaches more importance to self-transcendence in comparison to the male subgroup. Taking this into account it is possible to state that the self-transcendence-stress relationship is influenced by sex differences.

An explanation for the significant relationship between self-enhancement and stress is the following. As mentioned earlier the higher order value self-enhancement exists out of two values--power and achievement--with opposite effects on stress. Previous research

demonstrated that the value achievement--a growth related value--correlated positively with affective well-being (Sagiv & Schwartz, 2000), while Kasser and Ahuvia (2002) found a negative relation between materialism--a deficiency related value--and well-being. As a result it is possible that the dominance of the deficiency-related value over the growth-related value in self-enhancement leads to distress. This effect may appear when people experience a lack of power, making this value more important than achievement. This condition is probably met in this study. However, the interaction between these values is still to be investigated, because this study only paid attention to higher order values. Another noteworthy finding and important in context of the self-enhancement-stress relationship, is the non-significant relationship found between stress and self-enhancement for the group of males. Thus the separate analysis for this subsample revealed an outcome confirming hypothesis 1c. So, gender could possibly influence the relationship between stress and self-enhancement.

Although this study yields some important findings, it has some limitations like the correlational character of the design. This non-experimental research strategy is suspect to low internal validity making it difficult to draw causal inferences like "stress is caused by value conflict". It is also possible that stressed people experience value conflict rather as an outcome than a cause. Experimental designs should adhere this issue.

Secondly it ought to be mentioned that a substantial part of the variance in strains is not predicted by the independent variables. In future research other factors should be included when explaining stress (e.g. cognitive styles, organizational climate etc.).

In summary, the present study is the first one conducted among working people in Flanders trying to receive more insight in the correlational nature of values, value conflict and stress. Results demonstrated that the person-organization fit theory is a powerful theory in explaining the relation between value conflict and stress. Henceforth, a very important implication for the work setting is that employers should be aware of employees not perceiving a match between their own values and organizational values, sometimes report higher stress levels. Therefore preventive actions should be undertaken to ensure that employees perceive such fit. Furthermore, it should be stressed that women and men display different patterns regarding the values-stress relation. This inquiry pointed out that the content of values is more related to stress for the female subsample in comparison to the male subsample. As a consequence for future research regarding the relationship between values and well-being, sex differences should be considered because they can cast new light on unexpected outcomes.

## REFERENCES

- Beehr, T. A., & Bhagat, R..S. (1985). Human stress and cognition in organizations. New York: Wiley.
- Bilsky, W., & Schwartz, S. (1994). Values and personality. *European Journal of Personality*, 8, 163-181.
- Burke, R. (2001). Organizational values, work experiences and satisfactions among managerial and professional women. *Journal of Management Development*, 20, 346-353.
- Büssing, A., & Glaser, J., (1999). Work stressors in nursing in the course of redesign: Implications for burnout and interactional stress. *European Journal of Work and Organizational Psychology*, 8, 401-426.
- Chang, E. (1998). Does dispositional optimism moderate the relation between stress and psychological well-being? A preliminary investigation. *Personality and Individual Differences*, 25, 233-240.
- Chen, P., & Spector P. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. *Journal of Applied Psychology*, 76, 398-407.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression. Correlation analysis for the behavioral sciences*. Hillsdale: Lawrence Erlbaum Associates.
- Deci, E., & Ryan R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Ellison, G. (1998). Introduction to symposium: Religion, health and well-being. *Journal for the Scientific Study of Religion*, 37, 692-694.
- Fowler, F. Jr. (1993). *Survey research methods*. Beverly Hills: Sage.
- French, J.R.C. (1963). The social environment and mental health. *Journal of Social Issues*, 19, 39-56.

Frew, D.R., & Bruning, N.S. (1987). Perceived organizational characteristics and personality measures as predictors of stress/strain in the work place. *Journal of Management*, 13, 633-646.

Guilford, J.P. (1959). *Personality*. New York: McGraw-Hill.

Hair, J., Anderson, R., Tatham, R. & Black, W. (1998). *Multivariate data-analysis*. New Jersey: Prentice-Hall.

Hendrix, L., Steel, R., Leap, T., & Summers, T. (1995). Antecedents and organizational effectiveness outcomes of employee stress and health. In P. Perrewé & R. Crandall (Eds.), *Occupational stress: A handbook* (pp. 73-92). Washington DC: Taylor & Francis.

Herzberg, F. (2003). One more time: How do you motivate employees? *Harvard Business Review*, 81, 87-96.

Hofstede, G. (1984). The cultural relativity of the quality of life concept. *Academy of Management Review*, 9, 389-398.

Ivancevich, I., & Matteson, M. (1980). *Stress and Work: A managerial perspective*. Glenview, IL: Scott-Foresman.

Joiner, T. (2001). The influence of national culture and organizational culture alignment on job stress and performance. Evidence from Greece. *Journal of Managerial Psychology*, 16, 229-242.

Kasser, T., & Ahuvia (2002). Materialistic values and well-being in business students. *European Journal of Social Psychology*, 32, 137-146.

Kirkcaldy, B., Cooper, C., & Furnham, A. (1999). The relationship between Type A, internality-externality, emotional distress and perceived health. *Personality and Individual Differences*, 26, 223-235.

Kluckhohn, C. (1951). Values and value-orientations in the theory of action: An exploration in definition and classification. In T. Parsons & E. Shils (Eds.), *Toward a general theory of action*. Cambridge, MA: Harvard University Press.

Knoop, R. (1994a). Work values and job satisfaction. *Journal of Psychology*, 128, 683-690.

- Knoop, R. (1994b). Relieving stress through value rich work. *Journal of Social Psychology*, 134, 829-836.
- Koeter, M.W.J., & Ormel J. (1991). *General Health Questionnaire: Nederlandse bewerking*. Swets Test Services.
- Kring, A.M., Smith, D.A., & Neale, J.M. (1994). Individual differences in dispositional expressiveness: Development and validation of the Emotional Expressivity Scale. *Journal of Personality and Social Psychology*, 66, 934-949.
- Lazarus, R., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Meglino, B., Ravlin, E.C., & Adkins, C.L. (1989). A work values approach to corporate culture: A field test of the value congruence process and its relationship to individual outcomes. *Journal of Applied Psychology*, 74, 424-432.
- Quick, J.C., & Quick J.D. (1984). How good working relationships can help relieve pressures on the job. *Management Review*, 73, 43-45.
- Robinson, J., Shaver, P., & Wrightsman, L. (1991). Criteria for scale selection and evaluation. *Measures of personality and social psychological attitudes* (pp. 1-16). San Diego: Academic Press.
- Roe, R., & Ester, P. (1999). Values and work. Empirical findings and theoretical perspective. *Applied Psychology: An International Review*, 48, 1-21.
- Rokeach, M. (1973). *The nature of human values*. New York: The Free Press.
- Sagiv, L., & Schwartz, S. (2000). Value priorities and subjective well-being. Direct relations and congruity effects. *European Journal of Social Psychology*, 30, 177-198.
- Schwartz, S. (1992). Universals in the content and the structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1-65). New York: Academic Press.
- Schwartz, S. (1994). Are there universal aspects in the structure and content of values? *Journal of Social Issues*, 50, 19-45.
- Seyle, H. (1976). *Stress in Health and Disease*. Reading: MA Butterworth.

Spector, P., & O'Connell, B. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to subsequent reports of job stressors and job strains. *Journal of Occupational and Organizational Psychology*, 67, 1-11.

Stern, P., Dietz, T., & Guagnano, G. (1998). A brief inventory of values. *Educational and Psychological Measurement*, 58, 984-1001.

Summers, T., Decotiis, T., & Denisi, A. (1995). A field study of some antecedents and felt consequences of felt jobstress. In P. Perrewé & R. Crandall (Eds.), *Occupational Stress: A handbook* (pp. 113-128). Taylor & Francis.

Super, D. (1980). A life span, life space approach to career development. *Journal of Occupational Psychology*, 52, 129-148.

Taris, R., & Feij, J.A.(2001). Longitudinal examination of the relationship between supplies-values fit and work outcomes. *Applied Psychology: An International Review*, 50, 52-80.

Van den Broeck, H., & Vanderheyden, K. (2000). *Mensen maken waarden, waarden maken mensen: Vacature waarde-enquête*. Leuven: Acco.

Van den Broeck, H., Vanderheyden, K., & Cools, E. (2003). Linking cognitive styles and values. Working paper series Vlerick Leuven Gent Management School. Retrieved May 5, from <http://www.vlerick.be/research/workingpapers/2003-9.pdf>

Vogelaar, A., Eurelings-Bontekoe, E., & Van de Velde, I. (1991). Persoonlijkheidsstructuur en gevoeligheid voor werkstress. *Gedrag en Organisatie*, 4, 100-112.

**TABLE 1****Factor loadings on factor strains**

Items	strains
1. stress	.545
2. stomach ache	.521
3. an oppressed feeling	.744
4. heart palpitations	.612
5. sleeping disorders	.454
6. absenteeism	.508
7. depressiveness	.505
8. a low physical condition	.409
9. back pain, neck pain or shoulder pain	.779
10. lack of appetite	.745
11. concentration problems	.634
12. an increased blood pressure	.453
13. easier irritated	.646
Eigenvalue factor	4.571
Percentage explained variance	35.165

**TABLE 2****Descriptive statistics and bivariate correlations (N = 400)**

	<u>M</u>	<u>SD</u>	1	2	3	4	5
1.Self-transcendence	2.780	.510					
2.Self-enhancement	2.719	.579	-.180***				
3.Conservation	4.275	.556	.106*	.130*			
4.Openness to change	3.581	.527	.123*	.140**	.251***		
5.Value conflict	2.755	.520	.120*	.045	.003	-.014	
6.Strains	1.497	.396	.123*	.094	.064	-.142**	.304***

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**TABLE 3**

**Hierarchical regression analyses (dependent variable stress) for total sample, female subsample and male subsample.**

Independents	Model one		Model two	
Total sample ( $N = 400$ )	$\beta$	<u>t-test</u>	$\beta$	<u>t-test</u>
Self-transcendence	.168	3.148**	.132	2.566*
Self-enhancement	.179	3.345***	.154	2.978**
Openness to change	-.244	-4.203***	-.241	-4.315***
Conservation	.112	1.934	.116	2.091*
Value conflict			.271	5.407***
$R^2$	.084***		.156***	
$\Delta R^2$			.072***	
Female subsample ( $n = 200$ )	$\beta$	<u>t-test</u>	$\beta$	<u>t-test</u>
Self-transcendence	.201	2.691**	.153	2.127*
Self-enhancement	.299	3.904***	.251	3.410**
Openness to change	-.288	-3.378**	-.302	-3.717***
Conservation	.173	2.032*	.184	2.268*
Value conflict			.301	4.315***
$R^2$	.142***		.205***	
$\Delta R^2$			.087***	
Male subsample ( $n = 200$ )	$\beta$	<u>t-test</u>	$\beta$	<u>t-test</u>
Self-transcendence	.112	1.454	.070	.932
Self-enhancement	.063	.829	.048	.662
Openness to change	-.212	-2.613*	-.188	-2.408*
Conservation	.023	.289	.023	.299
Value conflict			.290	4.007***
$R^2$	.046		.128***	
$\Delta R^2$			.082***	

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$