Available online at www.sciencedirect.com
SCIENCE DIRECT®
International Journal of Nursing Studies 41 (2004) 599–605
INTERNATIONAL JOURNAL OF NURSING STUDIES
www.elsevier.com/locate/ijnurstu

Value congruence and job satisfaction among nurses: a human relations perspective

Bas Verplanken*

Department of Psychology, University of Tromsø, Tromsø N-9037, Norway

Received 11 November 2003; accepted 20 December 2003

Abstract

The relationship between job satisfaction and value congruence within four organizational value areas was studied among nurses at surgery wards. Congruence between perceived and desired human relations values and social climate independently determined attitudes toward the nurse's ward. Social climate was operationalized as the habit of chatting with colleagues, and was inversely related to time pressure. Ward attitudes predicted job satisfaction, although structural equation modeling suggested that human relations value congruence also predicted job satisfaction directly, in addition to its effect through ward attitudes. Human relations value congruence thus appeared as an important ingredient of person-organization fit in nursing.
© 2004 Elsevier Ltd. All rights reserved.

Keywords: Organizational values; Value congruence; Job satisfaction; Social climate; Person-organization fit; Nursing

1. Introduction

Although we may not think about values every day, most of us would acknowledge that values are important ingredients of our personal, social, and professional worlds. Values refer to abstractions of desired ways of behaving or desirable end states, such as freedom, equality, friendship, respect for tradition, doing one's best, openness, or loyalty (e.g., Feather, 1990; Quinn, 1988; Rokeach, 1973; Schwartz, 1992). Values may be used to characterize an individual, but may also describe a group, work unit, or organization. Values may have self-defining properties, and may have important consequences. At the individual level, particular values may be part of a person's self-concept, and may thus be used by this person to describe him or herself. Personal values may determine an individual's attitudes (e.g., Maio and Olson, 1994), personal norms (e.g., Thorgersen, 1999), preferences (e.g., Feather, 1995), or choices and behavior (e.g., Verplanken and Holland, 2002). At the group or organizational level values may represent the group's or organizational's culture (e.g., Ashforth and Mael, 1989; Barley et al., 1988; Chatman, 1991; Entz, 1988; O'Reilly et al., 1991; Quinn, 1988; Rousseau, 1990). For instance, some organizations may have a competitive and strictly task-oriented culture, whereas others may promote loyalty, flexibility or individual growth. Values may thus not only be important determinants of organizational features like power structures and behavioral norms, but also of less obvious but important aspects like employees' expectations of the organization, organizations' expectations of their employees, social climate, and social identities. In all, values seem important ingredients of the psychology of the work environment. The present study focuses on organizational values, and in particular on the match between values an employee desires and the values this person experiences at the work place. This match is further referred to as *value congruence*.

Several instruments to assess organizational values have been developed. For instance, O'Reilly et al. (1991) presented the Organizational Culture Profile, which consists of a set of value statements that can be used

*Fax: +47-776-452-91.
E-mail address: verplanken@psyk.uit.no (B. Verplanken).

0020-7489/$ - see front matter © 2004 Elsevier Ltd. All rights reserved.
doi:10.1016/j.ijnurstu.2003.12.011

to generate organizational value profiles as well as individual preferences, and is thus used to assess the fit between organizations and persons. Quinn and colleagues developed another instrument, which was based on their Competing Values Framework, which formed the basis of the present study (Quinn, 1988; Quinn and Rohrbaugh, 1983; Quinn and Speitzer, 1991). According to this model organizational values are arranged along two main dimensions, i.e., flexibility versus control, and internal versus external focus, respectively. These dimensions thus yield four sets of values. *Human Relations* values (high on flexibility and internally focused) refer for instance to empowerment, participation, and teamwork. *Open Systems* values (high on flexibility and externally focused) relate for instance to creative problem solving, innovation and change. Examples of *Internal Process* values (high on control and internally focused) are centralization and promoting continuity. *Rational Goal* values (high on control and externally focused) are values such as efficiency, task orientation, and outcome excellence. Of course, an organization or work unit will usually be characterized as a combination of these four value types, while one of these might be the dominant profile.

2. Value congruence

Values that an individual employee holds may not always match the dominant values in the organization or work unit he or she is part of. Thus, given an organization that is characterized by a particular set of values, there may be a degree of incongruence between values an individual thinks are important and values that are prevalent at the work place (e.g., Chatman, 1991; Kalliath et al., 1999; O'Reilly et al., 1991). There are many reasons why one might find strong value congruence between employees and the organization (Chatman, 1991). For instance, value congruence might be the result of selection during personnel recruitment. Value congruence may also develop during the time an employee gradually socializes into an organization. However, there may also be reasons for value *in*congruence. For example, an employee may be recruited on the basis of a small number of task-related attributes, such as experience and education, but may adhere to values that do not match those which are prevalent in the organization. It may be difficult to communicate about values during recruitment, especially if values are discussed in relatively vague terms as 'work climate', or 'personal chemistry', which leaves room for unclarities and misunderstandings. Value incongruence may also arise during employment, for example, as a result of personal growth, conflicts, or changes in the organization.

It is not unreasonable to suggest that value congruence is related to how employees perceive and evaluate their job. Indeed, some studies in the domain of marketing and business suggested that value congruence has consequences for job satisfaction, organizational commitment, and turnover (e.g., Chatman, 1991; O'Reilly et al., 1991). For instance, Chatman (1991) followed newly recruited employees in accounting firms. Their desired profile of organizational values was compared to the firm's profile, which was assessed by senior partners. The results suggested that selection contributed significantly to value congruence at job entry, while socialization experiences contributed to value congruence during the first year. Value congruence appeared to be related to job satisfaction and intent to stay one year later, and to turnover two and one-half years later. Importantly, the *congruence* between personal and organizational values was a better predictor than either of these variables alone. However, Kalliath et al. (1999) measured discrepancies between perceptions of own versus organizational values in a study among hospital employees, but did not find a relation between value congruence and job satisfaction. Because these studies differed in many ways, it is difficult to draw unequivocal conclusions.

One complicating factor might be that organizations such as universities, large companies, or hospitals consist of different departments and work units, each of which may be characterized by different subcultures. For example, Lok and Crawford (2000) found in a hospital setting that ward culture was more predictive of job satisfaction and organizational commitment than was the hospital culture. Job satisfaction may thus be more strongly related to value congruence concerning the direct work unit, rather than the organization as a whole.

The present study addressed the question how value congruence relates to job satisfaction, and was conducted among nurses on three small surgery wards of a regional hospital in northern Norway. Job satisfaction is not only an important outcome factor that is worth studying in its own right. It has also been found an important mediator between a variety of person- and job-related variables (e.g., age, pre-employment expectations) and outcome variables such as organizational commitment and turnover (e.g., Williams and Hazer, 1986). In the domain of nursing, job satisfaction has been found to be an important factor in the organizational process leading, for example, to patient satisfaction (Tzeng et al., 2002).

3. Overview of concepts and their assumed relationships

The study focused on the relationship between value congruence and job satisfaction. Although job satisfac-

tion may be determined by many variables (e.g., pay, working hours), I assumed that when the influence of values is concerned the most relevant unit of analysis would be the ward at which a nurse is working, rather than the hospital at large (Lok and Crawford, 2000). As was argued above, specific work units (such as a ward in the case of nursing) may have their own routines, rules, and culture. The study thus focused on a number of concepts that were measured with respect to the ward at which participants worked. Participants were asked to indicate the degree to which a number of organizational values were prevalent at their ward, as well as the degree to which they desired these values. *Value congruence* was thus determined by the difference between these ratings. It was assumed that value congruence would be related to job satisfaction through its impact on nurses' *attitude toward the ward*. An attitude refers to an evaluative judgment, and can be defined as "… a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (e.g., Eagly and Chaiken, 1993, p. 1). It was thus expected that those who experienced a discrepancy between desired and perceived values would have relatively unfavorable ward attitudes, which would lower their job satisfaction. Ward attitudes are determined by other factors than value congruence as well. In the present study indicators of the social climate at the ward as well as experienced time pressure were included in addition to the value measures. *Social climate* was operationalized as the habit of chatting with colleagues. Habits are behaviors that are performed frequently and automatically (e.g., Verplanken and Aarts, 1999; Verplanken and Orbell, 2003). Chatting habits were assumed to contribute to a positive attitude toward the ward. It was expected that the prevalence of chatting habits was dependent on the available time nurses had during work. *Time pressure* may take many forms. For instance, having to do many activities within a fixed period of time leaves little time for each activity. Time pressure may also take the form of working against deadlines. Because time pressure has been found an important strain factor in nursing in general (e.g., Demerouti et al., 2000; Rout, 2000), I thus expected that high time pressure would attenuate the prevalence of chatting habits. Summarizing, it was expected that the attitude toward the ward was a direct predictor of job satisfaction, and that value congruence, social climate and time pressure were related to job satisfaction through their impact on ward attitudes.

4. Method

4.1. Participants and procedure

Participants were 56 nurses at three surgical wards of a regional hospital in northern Norway. There were 44 female and seven male nurses, while five participants did not disclose their gender. Twenty-nine participants were between 21 and 30 years, 11 participants were between 31 and 40 years, ten participants were between 41 and 50 years, three participants were over 50 years old, while three participants did not disclose their age. Because the study was conducted at relatively small wards, no more details of participants' background were collected in order to protect their anonymity. The data were collected by means of a questionnaire, which participants filled out at work or at home.

4.2. Measures

Job satisfaction was measured with seven items, asking for instance for the degree to which one was satisfied with the job, whether the job was interesting and matched expectations, and whether one would like to change jobs. Responses were given on seven-point Likert scales. Coefficient α was 0.82.[1]

The attitude toward the ward was measured with four items ("I am proud to work at this ward", "I am happy that I chose for this ward", "No matter what kind of work I have to do, I want to stay on this ward", "This ward makes me do my very best in my job"). Responses were given on seven-point Likert scales. Coefficient α was 0.83.

Values were measured with the Competing Values Framework (e.g., Quinn, 1988). In this case an extended version was used, which was presented by Kalliath et al. (1999). Instead of the original four values per quadrant, Kalliath et al. included four additional values per quadrant in order to increase the reliability of this measure. Thus, 32 values were used that represented the four quadrants of the model, eight values per quadrant, i.e., Human Relations (e.g., empowerment of employees to act, participation and open discussion, trust and openness), Open Systems (e.g., innovation and change, creative problem solving, new ideas), Internal Process (dependability and reliability, maintaining existing systems and structure, rules and regulations), and Rational Goal (e.g., setting objectives, outcome excellence, getting the job done). The 32 values were presented twice under different instructions. Participants were first asked to indicate the extent to which each value characterized their ward on seven-point scales ranging from 1 (does not characterize my ward) to 7 (characterizes my ward very much). Participants were then asked to indicate the extent to which they found each value important for a ward, ranging from 1 (not at

[1] Two items actually measured turnover intentions. Because these items were highly correlated with the job satisfaction items, these were included in the job satisfaction measure. Including the two turnover items in the job satisfaction scale raised coefficient alpha of that scale from 0.79 to 0.82.

Table 1
Means, standard deviations, and pearson correlations of job satisfaction, ward attitude, chatting habits, time pressure and value congruence concerning human relations (HR), open systems (OS), internal process (IP), and rational goal (RG)

	Mean	SD	1	2	3	4	5	6	7	8
1. Job satisfaction	4.87	0.99	1.00	0.52***	0.16	−0.19	0.43***	0.15	0.37**	0.33*
2. Ward attitude	4.73	0.92		1.00	0.35**	−0.17	0.39**	−0.02	0.15	0.27*
3. Chatting habit	4.90	1.10			1.00	−0.43***	−0.03	−0.15	0.08	−0.01
4. Time pressure	4.11	1.02				1.00	0.07	−0.02	−0.07	−0.01
5. HR values congruence	−1.21	1.09					1.00	0.45***	0.70***	0.79***
6. OP values congruence	−0.46	1.04						1.00	0.56***	0.64***
7. IP values congruence	−1.17	1.31							1.00	0.80***
8. RG values congruence	−1.01	1.13								1.00

*$p<0.05$, **$p<0.01$, ***$p<0.001$.

all important) to 7 (very important). The items belonging to the four respective quadrants were tested for internal reliability. Items were removed when these attenuated the reliability. Coefficient αs for Human Relations, Open Systems, Internal Process, and Rational Goal were 0.87, 0.83, 0.76, and 0.88, respectively, for the perceived ward values, and 0.82, 0.70, 0.81, and 0.77 for the desired values, respectively. The items were averaged into the respective scales for each of the two value rating tasks. In order to obtain a measure of value congruence, difference scores were calculated between each respective set of values, such that negative numbers indicate that the ward fell short of participants' desired values. Coefficient αs for these value congruence scales were 0.88, 0.77, 0.83, and 0.85, for Human Relations, Open Systems, Internal Process, and Rational Goal values, respectively.

The habit of chatting with colleagues was measured with the Self-Report Habit Index (Verplanken and Orbell, 2003). This is a generic twelve-item instrument to measure habit strength. This scale breaks down the habit construct into a number of specific features of habitual behavior, such as a history of repetition, the absence of deliberation, limited awareness, familiarity, and lack of control. Responses were given on seven-point Likert scales. Coefficient α was 0.94.

Time pressure was measured with 14 items, which asked whether participants had sufficient time to perform a number of activities, e.g., perform the necessary work with patients, take frequent breaks, form a good overview of a patient's condition, and do administrative work. Responses were given on seven-point Likert scales. Coefficient α was 0.94. The items were coded such that high numbers indicate high time pressure.

5. Results

In Table 1 means, standard deviations and intercorrelations of the variables included in this study are presented, i.e., job satisfaction, ward attitude, chatting habits, time pressure and value congruence concerning human relations (HR), open systems (OS), internal process (IP), and rational goal (RG) values. All variables were checked on outliers and normality. It was expected that job satisfaction would be predicted by ward attitudes. The correlation between these two variables was indeed the largest, but human relations and rational goal value congruence were also significantly correlated with job satisfaction. Job satisfaction was regressed on ward attitude and the four value congruence variables simultaneously, $R^2 = 0.37$. Only ward attitude retained a statistically significant regression weight, $\beta = 0.46$, $p<0.001$, whereas none of the value congruence βs were statistically significant, $\beta =$ 0.19, 0.04, 0.33, and −0.22, for HR, OS, IP, and RG value congruence, respectively. This suggests that the attitude toward the ward was the most direct predictor of job satisfaction.

It was expected that value congruence would predict the attitude toward the ward together with chatting habits and time pressure. Inspection of the correlations shows that ward attitude was significantly correlated with chatting habits, HR value congruence and RG value congruence, but not with time pressure, OS value congruence, and IP value congruence. Ward attitude was regressed on all these variables simultaneously, $R^2 = 0.36$. β weights of chatting habits and HR value congruence were statistically significant, $\beta = 0.33$, $p<0.02$, and $\beta = 0.57$, $p<0.005$, respectively. None of the other β weights were statistically significant, $\beta =$ −0.17, −0.37, 0.22, and −0.09, for OS, IP, and RG value congruence and time pressure, respectively.[2] Time

[2] In these analyses HR value congruence thus appeared the dominant values of the four value type quadrants. In order to be sure that value *congruence*, rather than the constituting variables themselves, carried this effect, the respective four perceived and desired value scales were entered into the regression equation together with the value congruence variables. As expected, only HR value congruence (and chatting

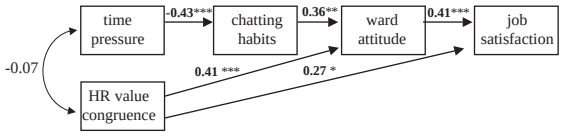


Fig. 1. Path model of a human relations view on job satisfaction. *Note*: Bold numbers are standardized path coefficients. The two-headed arrow indicates a correlation. Significance tests are based on the unstandardized estimates, * = $p<0.05$, ** = $p<0.01$, *** = $p<0.001$. HR value congruence stands for perceived versus desired human relations values.

pressure appeared to be a strong predictor of chatting habits in the sense that time pressure reduced the strength of chatting habits, and thus indirectly had a negative effect on ward attitude and job satisfaction.

On the basis of the present variables and the previous analyses a model of job satisfaction was tested using structural equation modeling. In this model job satisfaction was predicted by ward attitude. Ward attitude was predicted by chatting habits and HR value congruence, while time pressure was expected to relate negatively to chatting habits. This model was subjected to path analysis, using Amos 4 and maximum likelihood estimation. Although the sample size was small, the model tested was simple, and the ratio of the number of free parameters to the number of cases (10/56) did not drop under 1:5, which might just be considered acceptable (e.g., Kline, 1998). The fit between the data and the model was reasonable, as was indicated by a number of fit-indicators, i.e., $\chi^2(5) = 6.80$ ($p = 0.24$), GFI = 0.96, AGFI = 0.87, CFI = 0.96, RMR = 0.07, RMSEA = 0.08, NFI = 0.87. However, modification indices suggested that the model would be improved by estimating an additional path from HR value discrepancy to job satisfaction. Adding this path improved the fit between the model and the data, as was shown by a statistically significant χ^2-difference, χ^2-difference(1) = 4.93 ($p<0.03$). This modification resulted in excellent fit indices, $\chi^2(4) = 1.86$ ($p = 0.76$), GFI = 0.99, AGFI = 0.95, CFI = 1.00, RMR = 0.04, RMSEA < 0.01, NFI = 0.97. It is important to note that the CFI is less dependent on sample size, which thus gave confidence in the model given the small sample size. The model suggests that value congruence has both a direct effect on job satisfaction and an indirect effect via ward attitude. The resulting model and estimates are presented in Fig. 1.

(*footnote continued*)
habit, when these were included) retained significant beta weights. This supported the suggestion that it is indeed the discrepancy between perceived and desired HR values which influences ward attitudes, and not the perceived or desired values per se.

6. Discussion

This study focused on the relationship between organizational values and job satisfaction among a sample of nurses at surgery wards. The study focused in particular on *value congruence*: the match between prevalent and desired organizational values. The results showed that organizational values do play an important role in employees' job satisfaction. This was in particular the case for values that relate to human relations. These values concern issues such as empowerment, participation and open discussion, sensitivity for employees' ideas, loyalty, and trust. The results suggested that those who adhered to human relation values and perceived these values to prevail at their ward held positive attitudes toward the ward and showed high levels of job satisfaction in general. These results are important, because values represent basic needs and motivations, which may influence people's choices and behavior (Schwartz, 1992; Verplanken and Holland, 2002). The social climate at the ward was found as another factor that influenced nurses' attitude toward their ward and thus job satisfaction in addition to value congruence. Social climate was measured as the strength of the habit to chat with colleagues. It can be assumed that chatting with colleagues is a significant indicator of a good social climate. The strength of this habit appeared associated with the amount of experienced time pressure such that when nurses experienced they had little time to do their duties they had less strong chatting habits.

Of course, the present study is not *the* description of reality with respect to determinants of nurses' job satisfaction. Undoubtedly other aspects, such as for instance salary and work conditions, are important determinants as well. This study shows a slice of reality, in particular one that demonstrates the importance of human relations values and the quality of the social climate at the work place. Human relation values in the organization thus appeared to be important ingredients of how nurses experience and evaluate their job situation. It is also noteworthy that other values, such as open systems values (e.g., flexibility, innovation and change) were *not* related to ward attitudes and job satisfaction. This might be explained by the type of work that is done on in a hospital, which requires for instance strict routines and a clear power structure. Frequent innovations and changes may put a great strain on such an organization, and may lead to stress and burnout among employees (Maslach et al., 2000).

The fulfillment of human relations values, together with a favorable social climate, may be considered as valuable job resource variables. Demerouti et al. (2000) distinguished between *job demands* and *job resources* in the context of burnout among nurses. Job demands relate to conditions that may overtax nurses' personal limits and abilities, such as work load and time pressure.

Job demands have been found related to exhaustion. Job resources are conditions that may strengthen nurses' resilience, and refer to aspects like task variety, performance feedback, and financial reward. A lack of job resources has been found to cause disengagement. Exhaustion and disengagement are both indicators of burnout and low job satisfaction (Demerouti et al., 2000; Maslach et al., 2000). The present results thus suggest that these variables may thus function as important buffers for nurses against burnout and general dissatisfaction with their job or with life in general (Demerouti et al., 2000).

The present study is limited in a number of ways. First, the cross-sectional correlational design only provides a static picture of how the measured variables relate to each other. It is therefore not possible to make strong claims about causalities. For instance, value congruence was hypothesized as a determinant of ward attitudes and job satisfaction. However, it is conceivable that there might be a reverse process as well: once a nurse likes a ward, he or she may adopt values together with the routines and habits that are prevalent on that ward (Chatman, 1991). Likewise, job satisfaction and ward attitudes may be important in establishing a good social climate. Other types of studies such as those with longitudinal designs are necessary to gain more insight in such causal processes. Another limitation is the relatively small sample size, which gives the study little statistical power. Nevertheless, in spite of the small sample, some strong relations were found.

This study is a demonstration of research in the person-organization fit tradition (e.g., George, 1992; Pfeffer, 1998). In this tradition the focus is not so much on features of the work environment per se, but on the interaction of the work environment and employees' attitudes and values. The present results underscore the need for continuous attention to human relations and social climate at the work place. It is not enough to provide opportunities for social contact, such as coffee rooms or off-work activities. Human relations values also refer to the way the work is organized, such as the degree of autonomy and influence workers have, and the general morale in an organization or work unit. The present results showed that attention should especially be focused on the degree to which employees' expectations concerning these matters match the actual work situation.

Acknowledgements

The author wishes to thank Per Angermo, Per Hasvold, and Molly van der Weij at the National Center for Telemedicine, UNN, Tromsø, Norway, as well as Kirurgen I, II, and III at UNN, Tromsø, Norway, for providing the opportunity to conduct this study. Please address correspondence to Bas Verplanken, Department of Psychology, University of Tromsø, N-9037 Tromsø, Norway, email: verplanken@psyk.uit.no. This project was supported by Norges Forskningsråd (project nr. 135852/330).

References

Ashforth, B., Mael, F., 1989. Social identity theory and the organization. Academy of Management Review 14, 20–39.

Barley, S., Meyer, G., Gash, D., 1988. Cultures of culture: academics, practitioners, and the pragmatics of normative control. Administrative Science Quarterly 33, 24–60.

Chatman, J.A., 1991. Matching people and organizations: selection and socialization in public accounting firms. Administrative Science Quarterly 36, 459–484.

Demerouti, E., Bakker, A.B., Nachreiner, F., Schaufeli, W.B., 2000. A model of burnout and life satisfaction amongst nurses. Journal of Advanced Nursing 32, 454–464.

Eagly, A.H., Chaiken, S., 1993. The Psychology of Attitudes. Harcourt Brace Jovanovich, Orlando, FL.

Entz, C., 1988. The role of value congruity in intraorganizational power. Administrative Science Quarterly 33, 284–304.

Feather, N.T., 1990. Bridging the gap between values and action: recent applications of the expectancy-value model. In: Higgins, E.T., Sorrentino, R.M. (Eds.), Handbook of Motivation and Cognition: Foundations of Social Behavior, Vol. 2. Guilford Press, New York, pp. 151–192.

Feather, N.T., 1995. Values, valences, and choice: the influence of values on the perceived attractiveness and choice of alternatives. Journal of Personality and Social Psychology 68, 1135–1151.

George, J.M., 1992. The role of personality in organizational life: issues and evidence. Journal of Management 18, 185–213.

Kalliath, T.J., Bluedorn, A.C., Strube, M.J., 1999. A test of value congruence effects. Journal of Organizational Behavior 20, 1175–1198.

Kline, R.B., 1998. Principles and Practice of Structural Equation Modeling. Guilford, New York.

Lok, P., Crawford, J., 2000. Antecedents of organizational commitment and the mediating role of job satisfaction. Journal of Managerial Psychology 16, 594–613.

Maio, G.R., Olson, J.M., 1994. Value-attitude-behavior relations: the moderating role of attitude functions. British Journal of Social Psychology 33, 301–312.

Maslach, C., Schaufeli, W.B., Leiter, M.P., 2000. Job burnout. Annual Review of Psychology 52, 397–422.

O'Reilly, C.A., Chatman, J., Caldwell, D.F., 1991. People and organizational culture: a profile comparison approach to assessing person-organization fit. Academy of Management Journal 34, 487–516.

Pfeffer, J., 1998. Understanding organizations: concepts and controversies. In: Gilbert, D.T., Fiske, S.T., Lindzey, G. (Eds.), The Handbook of Social Psychology. McGraw-Hill, Boston, MA, pp. 731–777.

Quinn, R.E., 1988. Beyond Rational Management: Mastering the Paradoxes and Competing Demands of high Performance. Jossey-Bass, San Francisco.

Quinn, R.E., Rohrbaugh, J., 1983. A spatial model of effectiveness criteria: toward a competing values approach to organizational analysis. Management Science 29, 363–377.

Quinn, R.E., Speitzer, M.G., 1991. The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life. Research in Organizational Change and Development 5, 115–142.

Rokeach, M., 1973. The Nature of Human Values. Free Press, New York.

Rousseau, D., 1990. Quantitative assessment of organizational culture: the case for multiple measures. In: Schneider, B. (Ed.), Frontiers in Industrial and Organizational Psychology, Vol. 3. Jossey-Bass, San Francisco, pp. 153–192.

Rout, U.R., 2000. Stress amongst district nurses: a preliminary investigation. Journal of Clinical Nursing 9, 303–309.

Schwartz, S.H., 1992. Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries. Advances in Experimental Social Psychology 25, 1–65.

Thorgersen, J., 1999. Spillover processes in the development of a sustainable consumption pattern. Journal of Economic Psychology 20, 53–81.

Tzeng, H.-M., Ketefian, S., Redman, R.W., 2002. Relationship of nurses' assessment of organizational culture, job satisfaction, and patient satisfaction with nursing care. International Journal of Nursing Studies 39, 79–84.

Verplanken, B., Aarts, H., 1999. Habit, attitude, and planned behaviour: is habit an empty construct or an interesting case of goal-directed automaticity? European Review of Social Psychology 10, 101–134.

Verplanken, B., Holland, R.W., 2002. Motivated decision making: Effects of activation and self-centrality of values on choices and behavior. Journal of Personality and Social Psychology 82, 434–447.

Verplanken, B., Orbell, S., 2003. Reflections on past behavior: a self-report index of habit strength. Journal of Applied Social Psychology 33, 1313–1330.

Williams, L.J., Hazer, J.T., 1986. Antecedents and consequences of satisfaction and commitment in turnover models: are-analysis using latent variable structural equation methods. Journal of Applied Psychology 71, 219–231.