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Human Relations 2000; 53; 387

Human Relations
[0018-7267(200003)53:3]
Volume 53(3): 387–417: 010809

SAGE Publications
London, Thousand Oaks CA,
New Delhi

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ABSTRACT

This study examined three models of the relationships between commitment foci and work outcomes such as turnover intentions, actual turnover, and absenteeism. The first is based on the traditional literature that argues that the relationship between commitment foci and outcomes is direct. The second is based on Morrow's model of universal forms of work commitment. According to this model, job involvement mediates the relationship between the other commitment foci and outcomes. The third model is based on the conceptualization proposed by Randall and Cote. According to their model organizational commitment and occupational commitment should mediate the relationship between commitment foci and outcomes. In the study 283 nurses from three small hospitals in Israel were surveyed with a response rate of 62 percent. The results of path analysis (LISREL VIII) showed a better fit to the data of the Randall and Cote model. The article concludes with implications regarding the continuing assessment of Morrow's conceptualization to establish an acceptable definition and measurement of universal forms of work commitment.

KEYWORDS

absenteeism ▪ commitment forms ▪ turnover ▪ turnover intentions ▪ work outcomes

Introduction

The concept of work commitment has received growing attention from researchers and practitioners, directed mainly at the broader concept, covering specific commitment objects such as the organization, work group, occupation, union and one's job (Blau et al., 1993; Cohen, 1993; Randall & Cote, 1991). Wiener and Vardi (1980) argue that past research has investigated outcome variables in relation to only one type of commitment at a time, whereas work outcomes may be better understood as a function of all such commitments combined rather than as a function of any commitment type separately. Moreover, a multivariate approach to work commitment could predict outcomes such as turnover, turnover intentions, performance, job satisfaction, absenteeism and tardiness (Becker, 1992; Blau, 1986; Cohen, 1993; Wiener & Vardi, 1980) better than each commitment separately. Yet Mueller et al. (1992) argue that we are still much in need of conceptual and empirical work in sorting out how forms of commitment are related and how they affect work behavior.

Morrow (1993) argues that a major question impeding understanding of work commitment is whether each commitment focus is independent, or whether some are antecedents and consequences of others. The issue has important implications for the nature of the interrelationships among commitment foci because they may affect the way these commitments relate to work outcomes. Randall and Cote (1991: 209) contend that models of the interrelationships among commitment foci may improve the 'disappointing correlation between work commitment constructs and dependent variables, such as performance, absenteeism, and tardiness'.

Most of the research was assumed a direct relationship between multiple commitments and work outcomes, so researchers have tested hypotheses on the relative magnitude of the relationship between the two. Only two models of the interrelationships among work commitment constructs have been advanced so far: the Randall and Cote (1991) model and Morrow's model (1993). No research has tested whether and how the proposed interrelationships among commitment foci in these models are related to work outcomes. This study therefore aims to empirically test and compare three alternative models: a direct relationship model, the Randall and Cote model and Morrow's model.

Thus, this research first focuses on testing the relationship between multiple commitments and multiple outcomes, whereas most research has tested either one outcome or one commitment; second, it proposes and tests three conceptualizations of the relationship between commitment foci and outcomes, whereas most research has relied on the assumption of a direct

relationship; third, it tests actual behaviors, turnover and absenteeism, and not attitudinal outcomes; fourth, it uses a longitudinal design where two work outcomes, actual turnover and absenteeism, were measured a year after the measurement of commitment foci.

Research models

Three models are proposed and tested, differing mainly in how they postulate the interrelationships among commitment foci. The first relies on the traditional approach that each commitment focus is directly related to outcome(s). It assumes no interrelationships among commitment foci. The Randall and Cote model proposes the following interrelationships among commitment foci: job involvement is the key commitment focus; it mediates the relationship between the exogenous variables, group commitment and work involvement, and the dependent variables, organizational commitment and career commitment. In Morrow's model more distant commitment foci from the employee's viewpoint are the exogenous variables (for example, work involvement and organizational and career commitment), and they are related to more proximal commitment foci (job involvement and group commitment).

Commitment foci and outcomes

As mentioned, researchers have assumed that the relationship between commitment foci and work outcomes is direct, following Becker's (1992) recommendation that they should attempt to match the focus of their independent variable with the focus of their work outcome variable. According to Cohen (1993), given that the object of organizational commitment is the employing organization, the most likely behavior to be affected by this commitment would be organization-oriented behavior. Similarly, the most likely behavior to be affected by job commitment would be task-oriented behavior, and that most likely to be affected by occupational commitment would be occupation/career-oriented behavior. Cohen (1993) found that organizational withdrawal intentions were affected by organizational and occupational commitment, job withdrawal intentions by job commitment and occupational commitment, and occupational withdrawal intentions by job commitment.

Job involvement and occupational commitment

By advancing the notion of multiple commitments, researchers expected that commitment foci other than organizational commitment would also explain

some variations in turnover. In fact, the effect on turnover of other work commitment (WC) forms, such as job involvement (Blau & Boal, 1989) and career commitment (Wiener & Vardi, 1980) was demonstrated. An interesting attempt to construct a conceptual framework for the effect of commitment foci on outcome variables was made by Blau & Boal (1989), who proposed utilizing combinations of high and low levels of job involvement and organizational commitment to predict withdrawal and absenteeism. Empirical examination revealed partial support for this model in terms of its effect on turnover and absenteeism (Blau, 1986; Blau & Boal, 1989). The main limitation of Blau and Boal's (1989) conceptualization is that it ignores other important commitment foci, particularly occupational commitment. For professionals, commitment to the occupation arguably has a strong effect on work outcomes, possibly even stronger than organizational commitment and job involvement, because professionals may be driven more by their occupational than by their organizational expectations. All this leads to the conclusion that occupational commitment should be included in any conceptualization of the relationship between commitment forms and outcome variables.

Work involvement

Wiener and Vardi (1980) suggest that additional commitment foci should be tested for their relationship to work outcomes. Two such commitments are tested here: work involvement and work-group commitment. These forms have rarely been examined in the context of work commitment in general and the commitment–outcomes relationship particularly. The concept of work involvement was developed by Kanungo (1979, 1982), who emphasized the difference between this construct and job involvement on the one hand and Protestant work ethic (PWE) on the other. Job involvement is a belief about the present job and tends to be a function of how much the job can satisfy one's present needs. But involvement in work in general is a normative belief about the value of work in one's life, and is more a function of one's past cultural conditioning or socialization (Kanungo, 1982). In this research the construct of work involvement represents the work ethic measures, because PWE is a multidimensional construct entailing the importance of work itself and also a rejection of leisure and excess money (Morrow, 1993). To have used this three-dimensional construct with the other commitment foci would have unnecessarily complicated the models and the analysis. Work involvement is a unidimensional construct, therefore a more appropriate scale to apply with other commitment foci as representing work values.

Group commitment

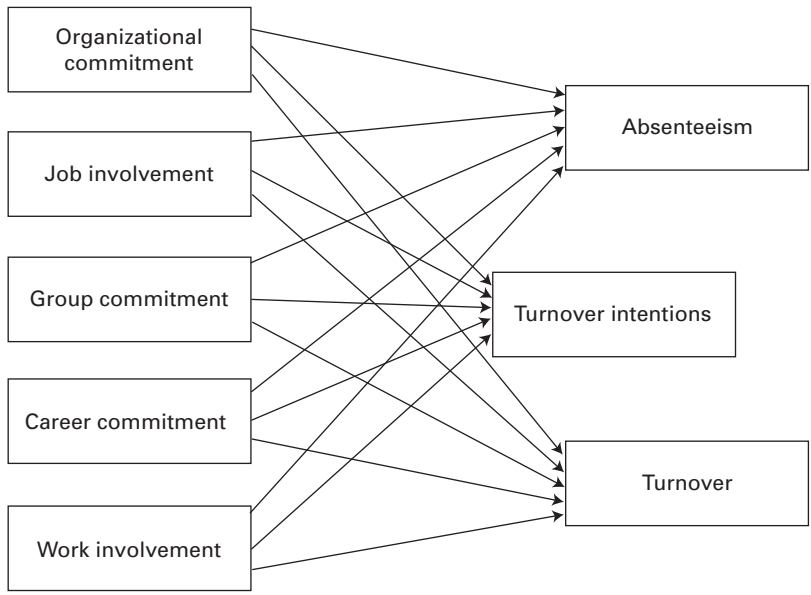
Reichers (1985), who advances the notion of a multidimensional perspective of the concept of commitment, proposes group commitment as one of the important dimensions to be considered in such a conceptualization. Group commitment, defined as an individual's identification and sense of cohesiveness with other members of the organization (Randall & Cote, 1991), is one of the new concepts in multiple commitment research (Morrow, 1993). Zaccaro and Dobbins (1989) focus on the differences between group and organizational commitment. The major correlates of group commitment were found to be group level variables such as cohesiveness, while organizational commitment was correlated more with variables such as role conflict and met expectations. They conclude that a conceptual distinction exists between group and organizational commitment.

Direct relationship model

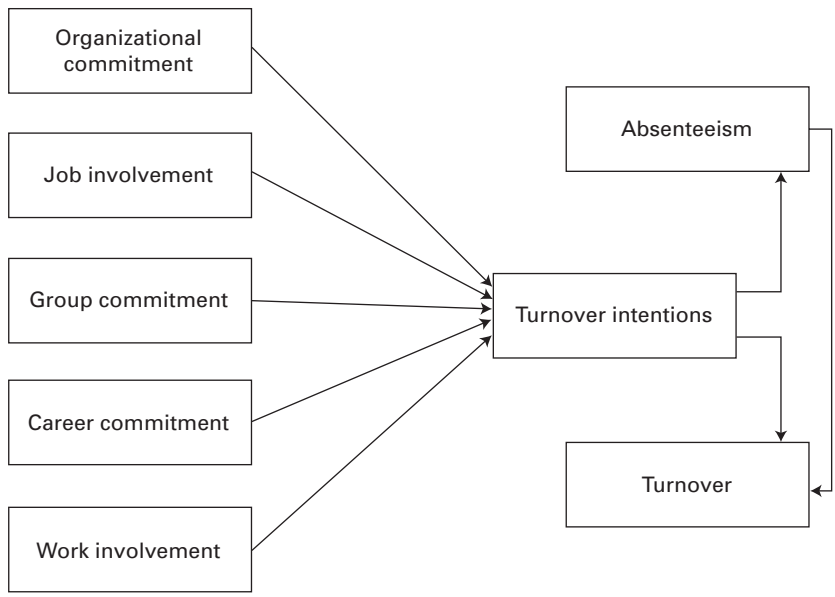
Accordingly, the direct relationship model includes the following commitment forms: the organization, the job, the occupation, the work and the group. This model, presented in Figure 1a, proposes no mediating process among the commitment foci. The expectation is that organizational commitment will be strongly related to turnover intentions, actual turnover and absenteeism. Job involvement is also expected to be related to the above outcomes, and perhaps to have a stronger relationship with absenteeism than organizational commitment, in keeping with previous empirical evidence (Blau, 1986). Occupational commitment is also expected to have a strong relationship to the outcome variable because of the nature of this sample, namely nurses, who are expected to strongly identify with their occupation. Thus, it is expected that this commitment focus will be related to the outcomes perhaps even more strongly than job involvement. The other work commitment foci, group commitment and work involvement, are also expected to be related to the three outcomes, but not as strongly as job involvement and occupational and organizational commitment.

Progressive withdrawal process

An alternative direct model is also tested here, presented in Figure 1b. The need for this arises from strong evidence that the relationship between attitudes – commitment foci in our case – and behaviors – turnover and absenteeism in our case – is not direct. Research (Mobley, 1977; Mobley et al., 1979) has generally supported the perspective that employees engage in a



(a) Direct model



(b) Direct model with progressive withdrawal process

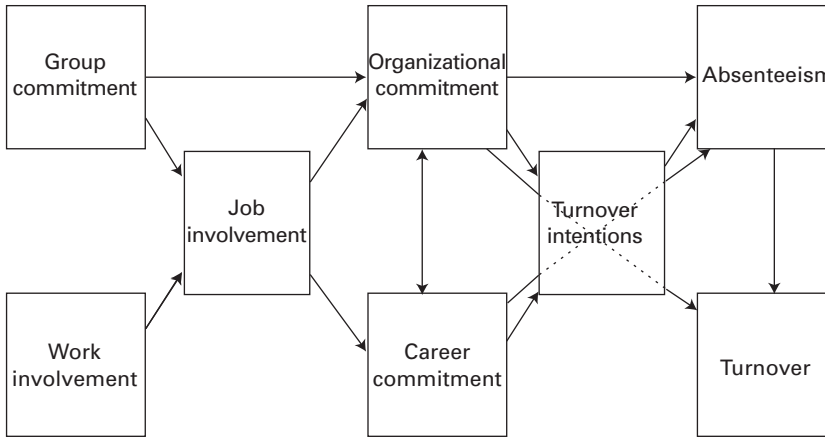
Figure 1 Research models

hierarchically-ordered sequence of withdrawal, where declining attitudes (for example, commitment, turnover intentions) precede temporary withdrawal (absenteeism), and these episodes foreshadow permanent withdrawal (actual turnover) (Farrell & Petersen, 1984; Parasuraman, 1982). The idea of a progressive withdrawal process is tested in this study by the paths from all commitment foci to turnover intentions. The notion that turnover intentions mediate the relationship between commitment and turnover was strongly supported by research (Jaros et al., 1993; Lee & Mowday, 1987). The next two paths, which are also in accordance with the logic of the progression of the withdrawal process, are from turnover intentions to actual turnover and to absenteeism.

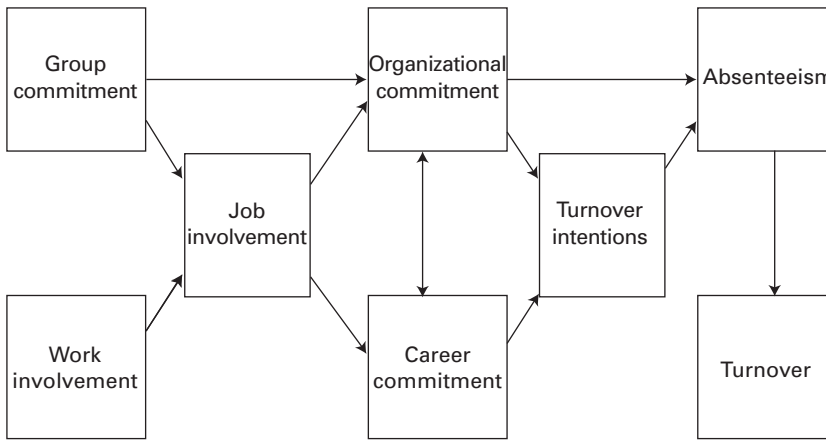
The testing of both behaviors in the same model is supported by several writings. First, Rosse and Hulin (1985) argue that there is sufficient evidence to conclude that job attitudes underlie a spectrum of withdrawal or adaptive behaviors. Gupta and Jenkins (1991) contend that examination of absenteeism and turnover individually suffers from criterion contamination and criterion deficiency in that both absenteeism and turnover encompass voluntary and involuntary behaviors, and in that the two behaviors might serve as alternatives, depending on organizational and other constraints. The final path in the linear withdrawal process model is from absenteeism to turnover. Mitra et al.'s (1992) meta-analysis supported the progressive course of the withdrawal process model, and particularly the positive effect of absenteeism on turnover.

The Randall and Cote model

The model tested here, and presented in Figure 2a is the exact model presented by Randall and Cote except that work involvement replaces PWE. The Randall and Cote model relies heavily on the role of job involvement as an important mediator in the interrelationships. It postulates that job involvement influences both organizational commitment and career salience directly and strongly. It affects organizational commitment because situational factors have been identified as potentially the most important set of antecedents to organizational commitment (Mowday et al., 1982). Job involvement was also found to predict career salience because it fosters job challenge, which in turn leads to career identification. Job involvement itself is strongly affected by work involvement, which has a key role in influencing an employee's affective responses in the workplace; it was less affected by work group attachment. Randall and Cote do not provide sufficient conceptual justification for what they term the pivotal role of job involvement, or for the implications of their model for the relationship between work



(a) Randall and Cote's model



(b) Randall and Cote's model with progressive withdrawal process

Figure 2 Research models

commitment foci and outcomes. Our study attempts to clarify and justify the above relationships.

PWE and group commitment as exogenous variables

Randall and Cote apply a strong situational approach. Accordingly, experiences in the work setting as represented in the level of job involvement will

determine affective reactions toward other constituents in the workplace. In their model, PWE and work group commitment are the exogenous variables that affect job involvement. Schnake (1991) explained that people with a strong work ethic tend to have contempt for idleness and self-indulgence.

People with a strong work ethic may be motivated to apply more effort, to continue to do so even when bored or tired, and to take responsibility for their work. They may feel a moral obligation to perform the task to the best of their ability. Thus they are more likely to be job-involved than people with lower levels of PWE. In this research, work involvement replaces PWE but the conceptual arguments outlined above are relevant for both concepts representing work values (Morrow, 1993).

In the Randall and Cote model, group commitment too is related to job involvement. The rationale for such a relationship is the importance of the work group in forming an employee's orientation to work. For example, Lodhal and Kejner (1965) found that job involvement was correlated with the number of people contacted per day on the job and the need to work closely with others. According to Randall and Cote, group commitment is also related to organizational commitment in accordance with social involvement theory (Kanter, 1968). The social bond exerts an important environmental influence on organizational commitment. As socially involved individuals may be reluctant to break social ties, they may choose to remain in the organization.

Job involvement

How does job involvement mediate the relationship among work involvement, group commitment, organizational commitment and occupational commitment? Witt (1993) suggests that employees given unsatisfactory work assignments may develop unfavorable and durable attitudes to the organization, arguing that the reactions to one's work assignment(s) may be salient in the commitment decision. His results are consistent with previous findings showing that early work experiences contribute to later commitment (Pierce & Dunham, 1987). Witt's conclusion that work experiences and attitudes are an important factor in later job attitudes supports the notion of job involvement as a mediator in work commitment interrelationships. Job involvement can be perceived as a reflection of work experiences. The more positive these experiences, the higher the job involvement, which will lead to positive attitudes to the organization and the occupation.

By inference, Randall and Cote seem to conceptualize job involvement as a mediator based on the social exchange theory, namely that given certain conditions, people seek to reciprocate those who benefit them. Employees who are involved in their job have positive work experiences, which they

attribute to the organization or their career. To the extent that positive experiences are attributed to the efforts of organizational officials, these are reciprocated by increased commitment to those who made them. Finally, a person closely involved in a job will also attribute this intense involvement to the occupation, and will reciprocate with high occupational commitment.

Occupational and organizational commitment as dependent variables

In the Randall and Cote model, occupational commitment and organizational commitment mediate the relationship between the other three commitment foci (i.e. work commitment, group commitment and job involvement) and work outcomes. The literature strongly supports the relationship between organizational commitment and turnover (Cohen, 1993; Mowday et al., 1982; Mathieu and Zajac, 1990). By definition, highly committed employees want to remain with the organization (Mowday et al., 1982). Therefore, a strong relationship should be expected between organizational commitment and turnover intentions and actual turnover.

Strong evidence also exists that occupational commitment is related to work outcomes too. One explanation for this relationship is offered by Jauch et al. (1980) and Bedeian et al. (1991). They suggest that an individual's attachment to a specific organization may result from identification with that organization and also from identification with either a specific career or a particular set of peers. If individuals are committed to a specific career, but not a specific organization or peer group, these orientations may be comparatively unimportant in predicting either turnover or turnover intentions, as long as the organization provides career opportunities.Occupational commitment was found to be an important determinant of nurses' turnover, stronger than other work-related commitments such as the organization and work (Mueller et al., 1992). Gardener (1992) emphasized the importance of occupational commitment in nursing because it relates to the attraction of nursing as a lifelong occupational choice and a valued career option.

As with the direct model, an alternative model that adopts the notion of a progressive withdrawal process is also tested. This model is presented in Figure 2b. According to it, organizational and occupational commitment are not related to the two behavioral outcomes but to turnover intentions. The direct model presented above explains the rationale for the expected relationship between commitment and behavioral intentions. The difference is that in the Randall and Cote model this relationship is relevant only for two commitment foci and not all five, as in the direct model. Finally, the two mediators in the Randall and Cote model, organizational commitment and

occupational commitment, are expected to correlate on grounds of strong evidence that they are related (Morrow, 1993). However, no causal relationship is expected between the two mediators.

Morrow's model

Universal forms of commitment

Morrow (1993) suggests that among all foci of work commitment five are basic in that they are relevant to as many employees as possible; she terms them *universal forms of work commitment*. These are affective commitment to the organization, continuance commitment to the organization, work ethic endorsement, occupational commitment, and job involvement. Morrow's model and the Randall and Cote model differ in one commitment form: in Morrow's model the fifth commitment focus is another organizational commitment form, calculative organizational commitment, in addition to the affective one proposed by both Morrow and Randall and Cote. In the Randall and Cote model group commitment is the fifth commitment form. Because the only way to make a meaningful comparison between the models is for both to have the same commitment foci, it was decided to use Randall and Cote's commitment foci and to adjust Morrow's model to these forms. Thus, group commitment replaces calculative organizational commitment. The differences between the models in one particular commitment form should not affect the comparison because the two models differ in their conceptual arguments as to the interrelationships among the forms, rather than as to whether any particular commitment focus should or should not be included in the models.

Morrow (1993) suggests that one way to think about the interrelationships among the five commitment forms is to locate each within a series of five concentric circles, with work ethic innermost, followed by occupational commitment, continuance organizational commitment, affective organizational commitment, and job involvement outermost. The concentric circle model facilitates thinking about the composition of a given employee's work commitments. According to Morrow, commitment forms are positioned in this manner to reflect the idea that the inner circles are more dispositional, cultural and cohort-based in nature, and therefore relatively stable over time. The outer circles are thought to be more situationally determined and therefore more subject to change and influence. Morrow argues that the inner circles impact the outer circles. 'Work ethic endorsement, as an illustration, would be expected to exhibit a stronger relationship with career commitment than affective organizational commitment, controlling for other

factors' (Morrow, 1993: 163). Morrow's model does not explain why and how each affects the other. This article elaborates on these issues in previous conceptual and empirical research.

Work involvement and organizational and occupational commitment as exogenous variables

In Morrow's model three commitment foci are the exogenous variables: work involvement, occupational commitment and organizational commitment. These three are not related to work outcome directly, but to job involvement and group commitment, which mediate the relationship between the exogenous variables and work outcomes. The logic behind Morrow's model seems similar to that in models proposed by Gregerson (1993) and Yoon et al. (1994). According to Yoon et al. (1994) the mechanism that leads to stronger commitment to proximal targets is stronger interpersonal attachment among members of such targets. Interpersonal attachment produces a stronger commitment to subgroups than to the larger group, because the credit for positive affect from interpersonal bonds is likely to be attributed to the proximal subgroups, while the blame for negative affects is likely to be attributed to the large group (Lawler, 1992). One can develop stronger attachment to the work group, which is a proximal target in one's immediate work unit, than to one's career, which is a much more distant target.

Gregerson's (1993) argument is based primarily on the idea that proximal variables exert the most significant influence on employees' actions because proximity provides more opportunities for exchange relationships. According to Gregerson, individuals can come to identify strongly with and become significantly attached to proximal and potentially influential foci. Gregerson's (1993) argument can easily be applied to the interrelationships among the commitment forms, and it seems to provide another explanation for the way the commitment foci are positioned in Morrow's model. The most proximal to the employee, namely job involvement and the work group, are the exogenous variables, and the more distant, namely work involvement, occupational commitment, and organizational commitment, are the exogenous variables.

Job involvement and group commitment as mediators

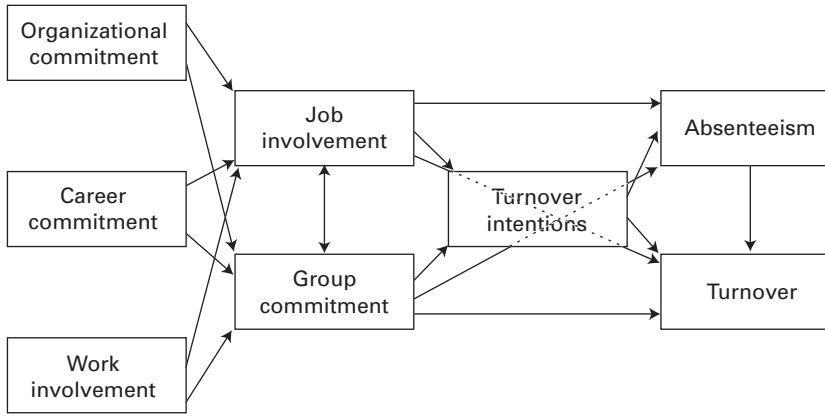
More explanation is warranted about the role of job involvement and group commitment as mediators. Job involvement is the outer circle in Morrow's model. Here the time line and the proximity rationale strongly support placing this construct as mediator. Job involvement is viewed by Kanungo

(1982) as a cognitive or belief state of psychological identification with one's job. Of all forms of commitment the job is the closest, and most immediate, tangible and concrete focus. Job involvement was found to be affected by work situation variables (Morrow, 1993). Therefore changes in the work setting will have an immediate effect on job involvement.

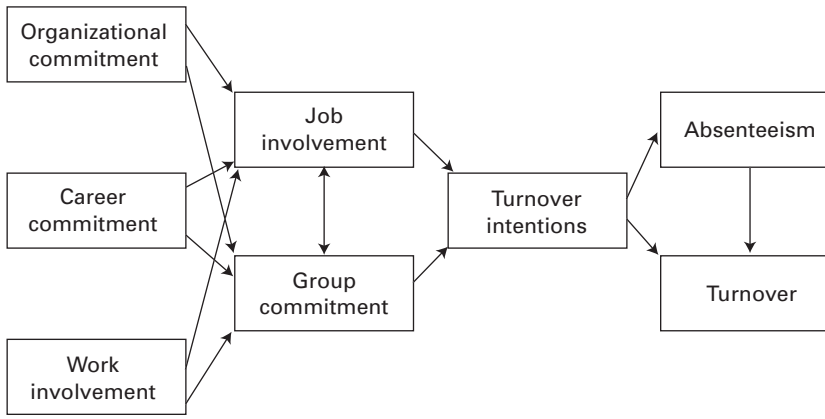
How are the three commitment foci related to job involvement? Witt (1993), on the basis of Schneider's (1983) attraction–selection–attrition (ASA) framework, explained that people select themselves into and out of organizations. In other words, people seek the organization that fits them. In the ASA framework, individuals highly committed to their work and occupation may have carefully selected an organization as an appropriate work place. Hence they may be highly committed to the organization. Less occupationally committed employees may have taken positions with organizations out of convenience. ASA argues that because the occupationally committed employees may have selected their organization carefully, and thus may be more concerned with the long term, initial work assignments and the fairness of current work assignments may be less salient for them. They will be highly involved in their job to justify their occupational and organizational choice, either because their high affective organizational commitment compensates for unfavorable job assignments or because they have no employment alternatives.

The placement of group commitment as the second mediator is based on a similar rationale as job involvement. Group commitment, like job involvement, can also be perceived in Morrow's terms as a close, immediate, tangible and concrete focus. The placement of group commitment with job involvement is supported by the arguments raised by Yoon et al. (1994) mentioned above. According to the logic of this argument one will develop stronger personal attachment to one's group than to one's career or work because the group is a proximal target in one's immediate work unit, while the career, work, and even the organization, for example, are more distant targets. Gregerson's (1993) argument mentioned above can easily be applied to group commitment as the group is closer to the employee than her/his career, work or organization.

According to Morrow's model, job involvement and group commitment should mediate the relationship between the other commitment foci and work outcomes. As with the Randall and Cote model, in this article two alternative models are proposed: one with a direct relationship between job involvement and group commitment to work outcomes (Figure 3a) and one representing the progressive withdrawal process, where job involvement and group commitment will be related to turnover intentions related to actual turnover and absenteeism (Figure 3b).



(a) Morrow's model



(b) Morrow's model with progressive withdrawal process

Figure 3 Research models

In the relationship between job involvement and work outcomes a cognitive state of identification with the job, based on perceptions of its potential for satisfying salient psychological needs, is expected to precede and then trigger motivational processes that influence motivation, effort, and ultimately performance, absenteeism, and turnover (Brown, 1996). According to Brown, this implies that some work behaviors are more proximally related to job involvement, whereas others, like absenteeism and turnover, are more distally related. This argument fits the suggestion of a path from job involvement to turnover intentions, as in Figure 3b, not a path

directly to absenteeism and performance, as in Figure 3a. The path from job involvement to turnover intentions follows the progressive withdrawal process and is very relevant to this model. This path is supported by Brown's (1996) meta-analysis findings of stronger correlations between job involvement and turnover intentions ($r = -.31$) than between job involvement and actual turnover ($r = -.13$) or absenteeism ($r = -.14$).

Hardly any theory or findings exist on the relationship between group commitment and work outcomes. Becker's (1960) side-bet theory provides some rationale for expecting such a relationship. Becker suggests that commitment to a course of action develops as one makes side bets that will be lost if the action is discontinued. These side bets represent potential costs of leaving the organization. Leaving a work group one feels attached to represents such a cost. Therefore, one will tend not to leave the organization so as not to leave one's work group. Thus a negative relationship between group commitment and turnover can be expected. Finally, as in models 2a and 2b, the two moderators, job involvement and group commitment, are expected to correlate with each other in both models 3a and 3b.

Method

Participants

Nurses from three small hospitals in Israel were surveyed. Questionnaires were distributed to all nurses in the three hospitals. A total of 283 usable questionnaires were returned, a response rate of 62 percent; a reasonable rate considering that the respondents had to write their employee numbers on the questionnaires so that the researchers could determine actual absenteeism and turnover during the following year. Eighty-five percent of the nurses were females. The mean age of the respondents was 33.8 years and the mean tenure in the organization and occupation was 9 and 12 years respectively. Twenty percent of the nurses had completed university studies. Registered nurses constituted 55.5 percent of the sample; 67.5 percent of the nurses were married, 72.3 percent worked in a full-time positions, and 28.1 percent were in managerial positions.

Measures

Commitment foci

Organizational commitment was measured by the shorter 9-item version of the Organizational Commitment Questionnaire (OCQ) (Porter et al., 1974).

Occupational commitment was measured by the 8-item measure developed by Blau (1985). Job involvement (10 items) and work involvement (6 items) were measured by the scales developed by Kanungo (1979, 1982). Group commitment was measured by the 6-item measure developed by Randall and Cote (1991). All work commitment constructs were measured on a 5-point scale (1 = strongly disagree, to 5 = strongly agree). Except for the group commitment scale all the scales applied in this research were mentioned by Morrow (1993) as the most commonly used and the most reliable and valid work commitment scales.

Work outcome

Turnover intention

Three items that encompass either thinking about leaving one's employer or searching for another job were used to measure turnover intention. Examples are 'I think a lot about leaving the organization' and 'I am actively searching for an alternative to the organization'. Respondents were asked to indicate their agreement on a 5-point scale.

Turnover

The hospitals provided the employment status of each nurse one year after the questionnaires had been completed. A score of 0 was assigned to nurses who continued to be employed and a score of 1 was assigned to those who were no longer employed at the hospital.

Absenteeism

The hospitals also provided absenteeism records for the following year. From this information, absence duration (the total number of days absent from the job in one year) was determined for each nurse.

Data analysis

Path analysis

First, three indicators were established for each multi-item measure by fitting a single-factor solution to each set of items and then averaging the items with highest and lowest loadings to form the first indicator, averaging the items with the next highest and lowest loadings to form the second

indicator, and so on, until all items were assigned to one of the three indicators for each variable. As a result each commitment focus had three items. This was necessary to reduce the number of parameters and to reduce the scale items to three parallel indicators of each construct, as in developing parallel test forms (Nunnally, 1978). The above analysis was performed following the procedure outlined by Brooke et al. (1988) and Mathieu and Farr (1991).

The models regarding the interrelationships among the five commitment forms as presented in Figures 1, 2 and 3 were assessed by path analysis using LISREL VIII (Joreskog & Sorbom, 1993). The models were evaluated by the two-stage approach to structural equation modeling suggested by Anderson and Gerbing (1988). This approach entails comparing the goodness-of-fit indices of a sequence of nested models. The three competing models of this research were compared with the measurement model. Because the models compared are nested models, a chi-square difference test (Bollen, 1989) was applied to compare them. These models (unrestricted models) are compared with each of the alternative models (restricted models). A significant chi-square indicates that the constraints imposed on the restricted models reduce their fit in comparison with the saturated or the hypothesized models. Note that because Morrow's model and the Randall and Cote model are not nested they are not identical models (Bollen, 1989), so they are not compared with each other but each of them is compared with the measurement/saturated model.

Model evaluation

Fit indices

The fit of the models was assessed by means of 8 indices. The chi-square is the most basic test and is essential for the nested model comparison. Because the chi-square test is sensitive to sample size, the ratio of the model chi-square to degrees of freedom was used as another fit index. Although there is no consensus regarding what ratio constitutes an acceptable fit, a value below 2 falls within the most conservative estimates (Bollen, 1989: 278). The following fit indices are reported as less sensitive to sample size differences and to the number of indicators per latent variable increase (Medsker et al., 1994). The relative fit index (RFI) was proposed by Bollen (1989) and the comparative fit index (CFI) was proposed by Bentler (1990). The closer their value to 1, the better the fit.

The normed fit index (NFI) was proposed by Bentler and Bonett (1980). Importantly, NFI is additive for nested model comparison. The closer

its value to 1, the better the fit. A disadvantage is that NFI is affected by sample size. This difficulty was resolved with the modified index called the non-normed fit index (NNFI or TLI) (Bentler & Bonett, 1980). A value closer to 1 reflects better fit. The Root Mean Square Error of Approximation (RMSEA) proposed by Browne and Cudeck (1989) is a measure used to test the null hypothesis of close fit, which is much more meaningful than the null hypothesis of perfect fit. An RMSEA lower than .05 indicates 'very good' fit; a value from .05 to .08 indicates 'fair to mediocre' fit; a value from .08 to .10 indicates 'poor' fit; and a value greater than .10 indicates 'very bad' fit (Browne & Cudeck, 1989).

Magnitude of the path coefficients

The path coefficients, their significance and their magnitude provide an important criterion for model evaluation, termed the plausibility criterion, referring to a judgement made about the theoretical argument underlying the specified model (Saris & Sronkhorst, 1984). According to this criterion the decision regarding the correct model should also be based on the theoretical correctness of the model demonstrated by its path coefficients. Accordingly, a model that fits the data well, but many of whose theoretical paths do not support its theoretical arguments, cannot be defined as correct. There has to be some balance between the fit indices and the theoretical predictions regarding the relationships among research variables. The accuracy of the theoretical predictions can be tested by the path coefficients in each of the models.

A correlation matrix among the indicators of the commitment forms using listwise deletion of missing values formed the input for the path analysis.

Results

Correlations

Table 1 shows the descriptive statistics, reliabilities and intercorrelations among research variables. Results show acceptable reliabilities of the measures of this study. The correlations among the work commitment scales show that the job involvement dimension had the highest correlation with other commitments such as work involvement (r = .67) and occupational commitment (r = .57). Occupational commitment was the only commitment focus related to all three work outcomes: turnover intentions, absenteeism and actual turnover. This finding strengthens arguments raised earlier in the article about the importance of this construct for professionals.

Table 1 Descriptive statistics, reliabilities and intercorrelations among research variables (reliabilities in parentheses)

	Mean	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1 Organizational commitment	3.80	0.66	(.92)							
2 Work involvement	3.26	0.74	.42***	(.74)						
3 Career commitment	3.92	0.67	.48***	.36***	(.83)					
4 Group commitment	3.58	0.63	.37***	.18**	.25***	(.71)				
5 Job involvement	3.52	0.59	.49***	.67***	.57***	.34***	(.76)			
6 Turnover intentions	1.97	1.14	–.54***	–.22***	–.44***	–.22***	–.26***	(.94)		
7 Absenteeism	7.41	17.93	–.19**	–.07	–.13*	–.10	–.11	.14*		
8 Turnover	0.70	0.25	–.07	–.02	–.13*	–.10	–.02	.16*	.10	

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

Table 2 Overall fit indices for the work commitment models

Model/description	*d.f.*	χ^2	χ^2/*d.f.*	*Model comparison*	$\Delta\chi^2$	*AGFI*	*RFI*	*NFI*	*TLI*	*CFI*	*RMSEA*
1 Measurement/saturated model	144	323.32***	2.25			0.85	0.86	0.90	0.92	0.94	0.067
2 Direct model	147	325.82***	2.22	1 vs. 2	2.50	0.85	0.86	0.90	0.92	0.94	0.066
3 Direct model with progressive withdrawal process	154	338.76***	2.20	1 vs. 3	15.44	0.86	0.87	0.89	0.92	0.94	0.066
4 Morrow's model	153	382.00***	2.50	1 vs. 4	58.68***	0.84	0.85	0.87	0.90	0.92	0.073
5 Morrow's model with progressive withdrawal process	157	386.25***	2.46	1 vs. 5	62.93***	0.84	0.85	0.88	0.91	0.92	0.072
6 Randall and Cote model	156	357.04***	2.29	1 vs. 6	33.72***	0.85	0.86	0.88	0.92	0.93	0.068
7 Randall and Cote model with progressive withdrawal process	160	358.44***	2.24	1 vs. 7	35.12**	0.85	0.86	0.88	0.92	0.93	0.066

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

Path analysis

Fit indices

The results in Table 2 show that the two direct models fitted the data very well in themselves, and better than Morrow's models and the Randall and Cote models. This is strongly demonstrated in the nonsignificant chi-square of the two direct models as compared with the measurement/saturated model. The chi-square difference test was 2.5 (d.f. = 3) for the direct model and 15.44 (d.f. = 10) for the direct model with the progression withdrawal process. Both chi-squares were not significant. The chi-squares in all the difference tests were significant, as can be seen in Table 2. Also, the fit indices of the direct models were consistently better than those of Morrow and of Randall and Cote. This is demonstrated in all most of the fit indices, particularly the Comparative Fit Index (CFI) and the NFI. A comparison between the models reveals that the Randall and Cote models fitted the data slightly better than Morrow's models. This is demonstrated in the lower chi-square of the two Randall and Cote models. The fit indices of the Randall and Cote models are also slightly better than those of Morrow's models.

Path coefficients

Here the findings are more complex and less conclusive than those regarding the fit indices. The direct model showed some interesting paths, for example, strong and significant paths from work involvement to turnover intentions (.28) and absenteeism (.41). That is, higher work involvement increased turnover intentions and absenteeism. This finding contradicts the hypothesis that expected the opposite direction in both paths. Organizational commitment had a direct and negative path with turnover intentions (–.49) and job involvement had a strong and negative path with absenteeism (–.57). Group and occupational commitment had no significant paths with any of the three work outcomes. The direct model with the progressive withdrawal process had only three significant paths out of the eight hypothesized paths: from work involvement to turnover intentions (.29), from organizational commitment to turnover intentions (–.49), and from turnover intentions to actual turnover (.14). Morrow's model was only partially supported by the path coefficient. This model expected a mediated effect of two commitment foci: job involvement and group commitment. The finding showed that job involvement mediated the relationship as expected. It was related to the three exogenous variables, work involvement (.34), organizational commitment (.28) and occupational commitment (.49). It was also related to one of the outcome variables, turnover intentions, and thereby supported the

Table 3 Structural coefficients for research models

Parameters	*Direct model*	*Direct model with progressive withdrawal process*	*Morrow's model*	*Morrow's model with progressive withdrawal process*	*Randall and Cote model*	*Randall and Cote model with progressive withdrawal process*
Path coefficients						
Work involvement → Career commitment						
Work involvement → Job involvement			.34*	.34*	.61*	.61*
Work involvement → Organizational commitment						
Work involvement → Group commitment			–.00	.01		
Work involvement → Turnover intentions	.28*	.29*				
Work involvement → Absenteeism	.41*					
Work involvement → Turnover	–.00					
Organizational commitment → Job involvement			.28*	.28*		
Organizational commitment → Group commitment			.31*	.30*		
Organizational commitment → Turnover intentions	–.49*	–.49*			–.46*	–.46*
Organizational commitment → Absenteeism	.09				.09	
Organizational commitment → Turnover	–.13				–.04	
Career commitment → Job involvement			.49*	.49*		
Career commitment → Group commitment			.16	.16		
Career commitment → Organizational commitment					.55	.55
Career commitment → Turnover intentions	–.14	–.14			–.20*	–.20*
Career commitment → Absenteeism	.19				–.06	
Career commitment → Turnover	–.17				–.01	

Table 3 continued

Parameters	*Direct model*	*Direct model with progressive withdrawal process*	*Morrow's model*	*Morrow's model with progressive withdrawal process*	*Randall and Cote model*	*Randall and Cote model with progressive withdrawal process*
Job involvement → Organizational commitment					.63*	.63*
Job involvement → Career commitment					.74*	.74*
Job involvement → Group commitment			.44	.44		
Job involvement → Turnover intentions	–.18	–.20	–.45*	–.45*		
Job involvement → Absenteeism	–.57*		.02			
Job involvement → Turnover	.27		.07			
Group commitment → Job involvement					.29*	.29*
Group commitment → Organizational commitment					.11	.11
Group commitment → Turnover intentions	–.04	–.04	–.11	–.11		
Group commitment → Absenteeism	.00		–.05			
Group commitment → Turnover	–.16		–.15			
Turnover intentions → Absenteeism		.06	.04	.06	.08	.05
Turnover intentions → Turnover		.14*	.11	.13*	.10	.13*
Absenteeism → Turnover		–.08	–.09	–.08	–.08	–.08

* $p < .05$

progression withdrawal process model. The findings, however, did not support the inclusion of group commitment as one of the mediators. Only one exogenous variable, organizational commitment (.31), was related to group commitment. Moreover, group commitment was not related to any of the outcome variables.

In terms of the path coefficients, Morrow's model with the progressive withdrawal process fitted the data better than the model without it. As a nested constrained model, the model with the progression process was compared with that without it. The nonsignificant chi-square (4.25; d.f. = 4) showed that the constraints imposed on the model with the progression process did not worsen its fit, and therefore support its usefulness. Also the ratio of significant paths was better in the model with the progressive withdrawal process (6/12) than in the model without it (6/16). All this supports the usefulness of the progressive withdrawal process in Morrow's model compared with the model without it.

The path coefficients seem to support the Randall and Cote model more than the direct model or Morrow's model. The weaknesses of the direct model were path coefficients that contradicted the hypothesis (work involvement to work outcome relationships) and low ratio of significant paths compared with nonsignificant. The weaknesses of Morrow's model were that one of the mediator variables, group commitment, did not mediate, and the model had few significant paths in comparison with nonsignificant ones. The Randall and Cote model, in particular that with the progressive withdrawal process, overcame these problems. According to the Randall and Cote model there were two mediation processes. Both were supported by the data. First, job involvement mediated the relationship of group commitment and work involvement to occupational commitment and organizational commitment. All four path coefficients were significant: from group commitment to job involvement (.29); from work involvement to job involvement (.61); from job involvement to occupational commitment (.74); and to organizational commitment (.63). Second, organizational commitment and occupational commitment mediated the relationship between the other commitment foci and work outcomes. In the progressive withdrawal process model, both had a significant relationship with turnover intentions: –.20 with occupational commitment; –.46 with organizational commitment. The only path that was not significant was that between group commitment and organizational commitment.

The Randall and Cote model with the progressive withdrawal process was superior to the model without it. First, all the additional paths added to the progressive withdrawal model were not significant. Second, as a nested constrained model the comparison of the model with the progression process with the one without it yielded a nonsignificant chi-square (1.4; d.f. = 4),

which showed that the constraints imposed on the model with the progression process did not worsen its fit and therefore support its usefulness. Also, the ratio of significant paths was better in the model with the progressive withdrawal process (7/11) than in the model without it (6/15). All this supports the usefulness of the progression withdrawal process in the Randall and Cote model compared with the one without it.

Discussion

The goal of this study was to compare three models of the relationship between commitment foci and work outcomes. Each of the three was tested with a progressive withdrawal process and without it. Altogether six different models were advanced and tested. The data strongly supported the progressive withdrawal process, which are the more parsimonious models in all the models that were tested. This eliminates consideration of the three models without the progression process as fitting the data. Among the three models left, the data did not provide empirical support for Morrow's model. The data were less conclusive about which of the two remaining models with the progressive withdrawal process, the Randall and Cote model or the direct model, was superior in terms of the fit to the data. However, there are some indications for the superiority of the Randall and Cote model, as the following arguments will attempt to show.

The direct model was strongly supported by the fit indices, which were better than those of the Randall and Cote model. However, the main problem of the direct model is its path coefficients, which represent the conceptual arguments of this model. Only two commitments were related to turnover intentions: work involvement and organizational commitment. Therefore, while this model had better fit indices than that of Randall and Cote, the data did not support many of its conceptual relationships. The conceptual problem of this model was demonstrated even more by the unexpected positive relationship between work involvement and turnover intentions, which contradicts the hypothesis. In contrast to this problem, the strength of the Randall and Cote model is the strong support its anticipated path coefficients received from the data. All three mediation processes suggested by the model were supported: job involvement mediated the interrelationships among commitment foci; occupational commitment and organizational commitment mediated the relationship between commitment foci and turnover intentions; and turnover intentions mediated the relationship of organizational commitment and occupational commitment to actual turnover.

Is this enough to prefer this model over the direct one? Two findings

might lead to such a conclusion. First, the fit indices of the Randall and Cote model were very close to those of the direct model. Second, the chi-square difference test of the Randall and Cote model was significant at .01, and not at .001 like Morrow's models or the Randall and Cote model without the progressive withdrawal process. That is, while the fit of this model is not as good as that of the direct model, it is not very far from it. This, together with the marked superiority of the Randall and Cote model over the direct model in all conceptual expectations as demonstrated in its path coefficients, leads to the conclusion that the Randall and Cote model is better supported by the data than the direct model. Naturally, more research is needed to replicate the findings here in order to determine more precisely which of the models better represents the relationship between work commitment foci and work outcomes.

Morrow's model

The findings of this study do not provide empirical support for Morrow's model. The main reason for rejecting it is the role of job involvement and group commitment. Morrow suggested that job involvement is more situation-affected than any other commitment form and is therefore the endogenous variable. Based on this rationale, group commitment also was tested as the second mediator. The data strongly rule out this argument by the poor fit of Morrow's model with the data. Possibly job involvement and group commitment are not situational dependent variables, as Morrow argued. Blau and Boal (1989) argue from other research that job involvement is a more stable work attitude than organizational commitment. They argue that several behavioral scientists (for example, Lodhal, 1964; Siegal, 1969) note that individual differences in job involvement can be traced back to orientations toward work early in the person's socialization process such as early school experiences. Longitudinal research designs are needed to deal with the issue of which commitment focus is more stable than the others. Future research should also test Morrow's model without group commitment, which was found to have a poor relationship with all other commitment foci that were tested.

The Randall and Cote model

The findings here support Randall and Cote's argument that job involvement seems to be a key mediating variable in the interrelationships among work commitment constructs. The proximity and time line explanations regarding the commitment foci interrelationships therefore seem to lack empirical

support. Instead, the notion of exchange is supported as the main rationale for the mediating role of job involvement. That is, job involvement is affected by commitment foci that represent cultural and socialization effects such as work involvement. However, its relationship with the other commitment foci, in particular the two organizational commitment forms, is affected by the kind of exchange relationship developed in the work setting. Employees who are highly involved in their job have more positive work experiences, attributed to organizational officials or their career decision, and will reciprocate with high commitment to these foci. Such high commitment will result in lower intentions to leave the organization, and eventually in lower turnover.

Group commitment

The findings here question the usefulness of group commitment as one of the commitment foci in terms of the relationship with work outcomes. This was demonstrated by the very few significant paths of this focus with any other commitment foci and by the nonsignificant relationship of this focus with any of the work outcomes. This finding was quite consistent across all the models tested. Randall and Cote (1991) themselves raised some doubts about the need to include group commitment as one of the commitment foci in a work commitment model. They suggested that group commitment is related to organizational commitment only when work-group and organizational goals are compatible.

The findings here, together with those of Randall and Cote, suggest that in what Morrow termed a universal model of commitment forms, group commitment is not an essential focus. The findings here strengthen such a conclusion because they were collected from a sample of nurses, for whom the work group is an essential component of the work setting. Thus, one cannot argue that the reason for the weak place of group commitment is that this focus is not relevant in this particular work setting. An interesting dilemma for future research and theoretical developments is which commitment focus should replace group commitment. Is it continuance organizational commitment, as Morrow suggested, is it another form of commitment, or are four commitment foci perhaps enough for a universal model of commitments?

Suggestions for future research

Several other steps are desirable in future research to establish the validity of the Randall and Cote model. First, the findings here should be replicated in other samples and work settings. Consistent results across different settings are important to support the discriminant validity of these forms and

the nature of their interrelationships. Vandenberg and Scarpello (1994) argue that some settings may value an occupation more or less than others, and the strength of the occupational/organizational commitment relationship may vary as a function of setting. Future studies need to identify the moderating characteristics of the setting and how they influence this relationship.

Finally, a limitation of this research should be mentioned. Because the study is based on self-report data it carries the possibility of source bias or general method variance. Crampton and Wagner (1994) argue that the problem of percept–percept inflation in self-report data is a complex one. Some areas of organizational research appear to be relatively free of effect–size inflation, and several other areas appear especially susceptible to inflationary effects. Crampton and Wagner (1994) add that between these two extremes lies nearly half of the different areas of research investigated in their study where percept–percept effect is neither dominant nor absent. They found that job involvement, a concept examined here, is free of effect–size inflation. All the other commitment foci belong to the third group, where percept–percept effect is neither dominant nor absent. Taking the above findings into consideration means that there is no particular bias in this study as a result of the measures it used. The fact that this study does not rely only on self-report data but on behavioral data too (for example, absenteeism, turnover) increases the validity of the research design applied here and the validity of the findings.

Acknowledgement

The author thanks two anonymous reviewers for their helpful comments and suggestions.

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